



SM No. CHSIP9999012541

PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

07

Installation of Intersection Conflict Warning Systems at numerous intersections across the District, known as Federal Aid Project No. HSIP-9999-01(254) / 107530301 in District 1.

Project Completion: 110 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: HSIP-9999-01(254)/107530301 - District 1

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

06/27/2018 01:16 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, July 24, 2018, from the Bid Express Service and shortly thereafter publicly read on the Sixth Floor For:

Installation of Intersection Conflict Warning Systems at numerous intersections across the District, known as Federal Aid Project No. HSIP-9999-01(254) / 107530301 in District 1.

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.

MELINDA L. MCGRATH
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, relocates, 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

HSIP-9999-01(254)

107530-301000

Districtwide -D1

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

None.

ASBESTOS CONTAMINATION STATUS OF BUILDINGS
TO BE REMOVED BY THE CONTRACTOR
HSIP-9999-01(254)
107530-301000
District 1
May 3, 2018

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.

STATUS OF POTENTIALLY CONTAMINATED SITES

HSIP-9999-01(254)

107530-301000

District 1

May 3, 2018

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.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Inter-Departmental Memorandum

TO: ROW Division
Trudi Loflin

DATE: June 13, 2018

FROM: District 1
Jamie McDonald *JM*

SUBJECT OR PROJECT NO: HSIP-9999-01(254)
107530/301000

INFORMATION COPY TO:

COUNTY: District 1 Districtwide

Asst. Chief Engineer – Pre Construction
District Engineer (Holley)
Project Engineer
Project File

District 1 Status Report

1. STATUS OF RIGHT OF WAY: All Construction is within existing ROW
2. RIGHT OF WAY CLEARANCE: There are no encroachments on the Right of Way.
3. STATUS OF AFFECTED RAILROAD OPERATING FACILITIES: None affected.
4. STATUS OF REQUIRED UTILITY RELOCATIONS: None required
5. STATUS OF CONSTRUCTION AGREEMENT: None required.

Improvements to be included in Notice to Bidders to be removed by the Construction Contractor
FMS Construction Project No: 107530-301000
External ROW No: HSIP-9999-01(254)

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 as 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

SUPPLEMENT TO NOTICE TO BIDDERS NO. 7

DATE: **01/17/2017**

The goal is 5 percent for the Disadvantaged Business Enterprise. The low bidder is 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:

<http://sp.gomdot.com/Contract%20Administration/BidSystems/Pages/letting%20calendar.aspx>

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

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 7

CODE: (IS)

DATE: 03/01/2017

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 "Part 26, Title 49, Code of Federal Regulations". Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

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

Copies of the program may be obtained from:

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

POLICY

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

ASSURANCES THAT CONTRACTORS MUST TAKE

MDOT will require that each contract which MDOT signs with a 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, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate.”

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

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

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. 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.

The apparent lowest responsive bidder 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 GoMDOT.com, then Divisions, Civil Rights, Forms, DBE, MDOT Projects, 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 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 work may be re-advertised.

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.

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 "Part 26, Title 49, Code of Federal Regulations" 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.gomdot.com. 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 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.

GOOD FAITH EFFORTS

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

- (1) 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.

- (2) 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.
- (3) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.
- (4) 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.
- (5) 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.
- (6) 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.
- (7) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (8) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

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

PRE-BID MEETING

A pre-bid meeting will be held in Amphitheater 1 & 2 of the Hilton Jackson located at I-55 and County Line Road, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

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

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) Bidder 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 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: 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-03-09-01-483. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).
- (4) OCR-484: Each month, the 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. It should be returned 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.gomdot.com under Divisions, Civil Rights, and Forms.

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.

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_wghts/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. 10

CODE: (IS)

DATE: 03/01/2017

SUBJECT: DUNS Requirement for Federal Funded Projects

Bidders are advised that the Prime Contractor must maintain current registrations 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 in the System for Award Management.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 12

CODE: (IS)

DATE: 03/01/2017

SUBJECT: MASH Compliant Devices

Bidders are hereby advised that the Standard Specifications may require certain traffic control and permanent safety hardware devices to meet the requirements of the Manual for Assessing Safety Hardware (MASH). However, devices meeting the requirements of NCHRP Report 350 will be allowed until the mandatory effective date for MASH compliance. The following table shows the effective dates for MASH compliant devices.

Device	Effective Date for MASH Compliance
W-beam barriers, cast-in-place concrete barriers	December 31, 2017
W-beam terminals	June 30, 2018
Cable barriers, cable barrier terminals, crash cushions	December 31, 2018
Bridge rails, transitions, all other longitudinal barriers including portable barriers installed permanently, all other terminals, sign supports, all other breakaway hardware	December 31, 2019

Temporary work zone devices, including portable barriers manufactured after December 31, 2019, must have been successfully tested to the 2016 Edition of MASH. Such devices manufactured on or before this date and successfully tested to NCHRP Report 350 or the 2009 Edition of MASH may continue to be used throughout their normal service lives.

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. 401

CODE: (SP)

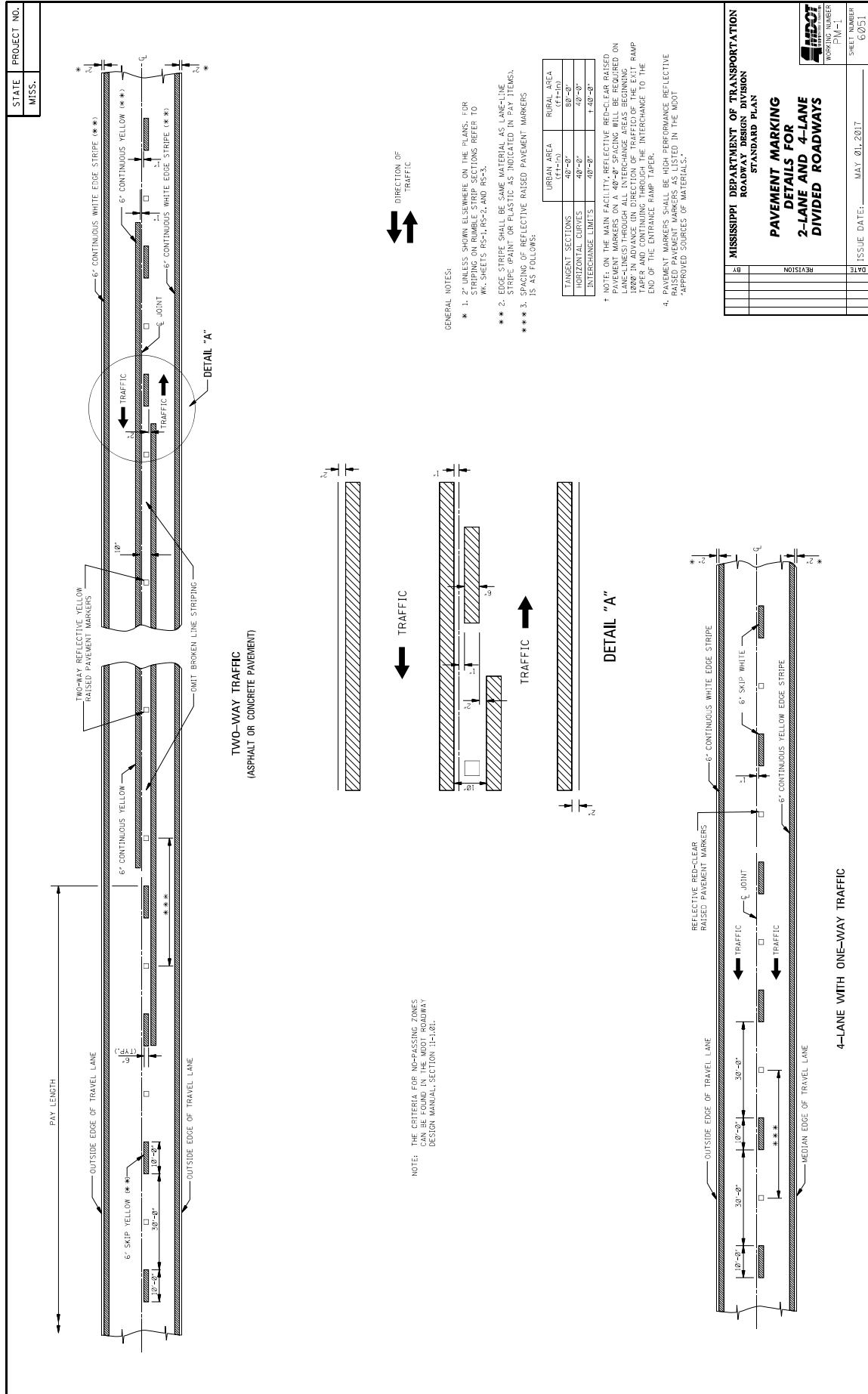
DATE: **09/12/2017**

SUBJECT: Standard Drawings

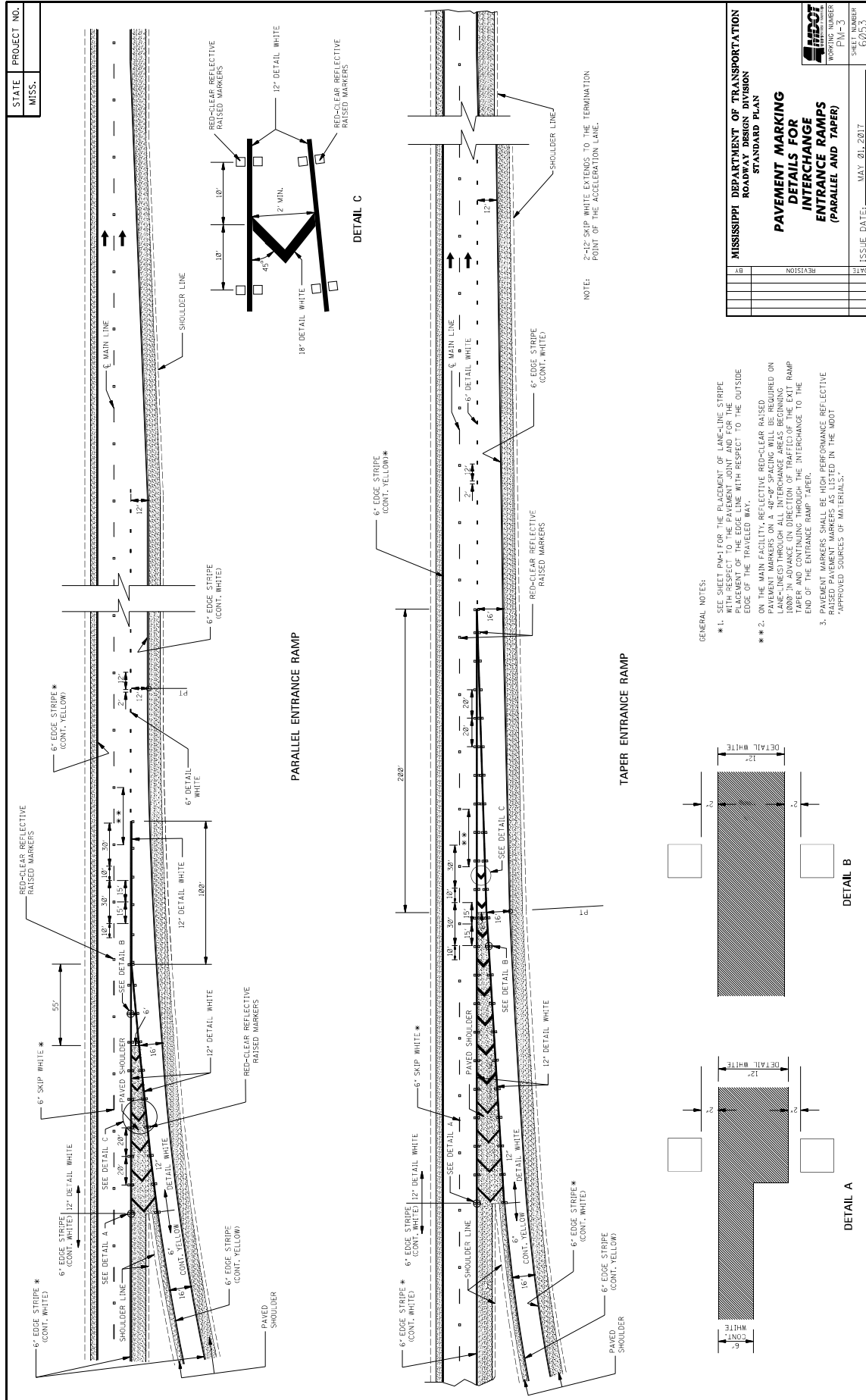
Standard Drawings attached hereto shall govern appropriate items of required work.

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.		
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8'-4"

6'-4"

4"

8'-4"

7'-8"

4"

8'-4"

8'-0"

4"

8'-4"

9'-8"

4"

8'-4"

6'-4"

4"

8'-4"

5'-4"

4"

8'-4"

7'-8"

4"

8'-4"

6'-4"

4"

8'-4"

8'-8"

4"

8'-4"

6'-4"

4"

GENERAL NOTES:

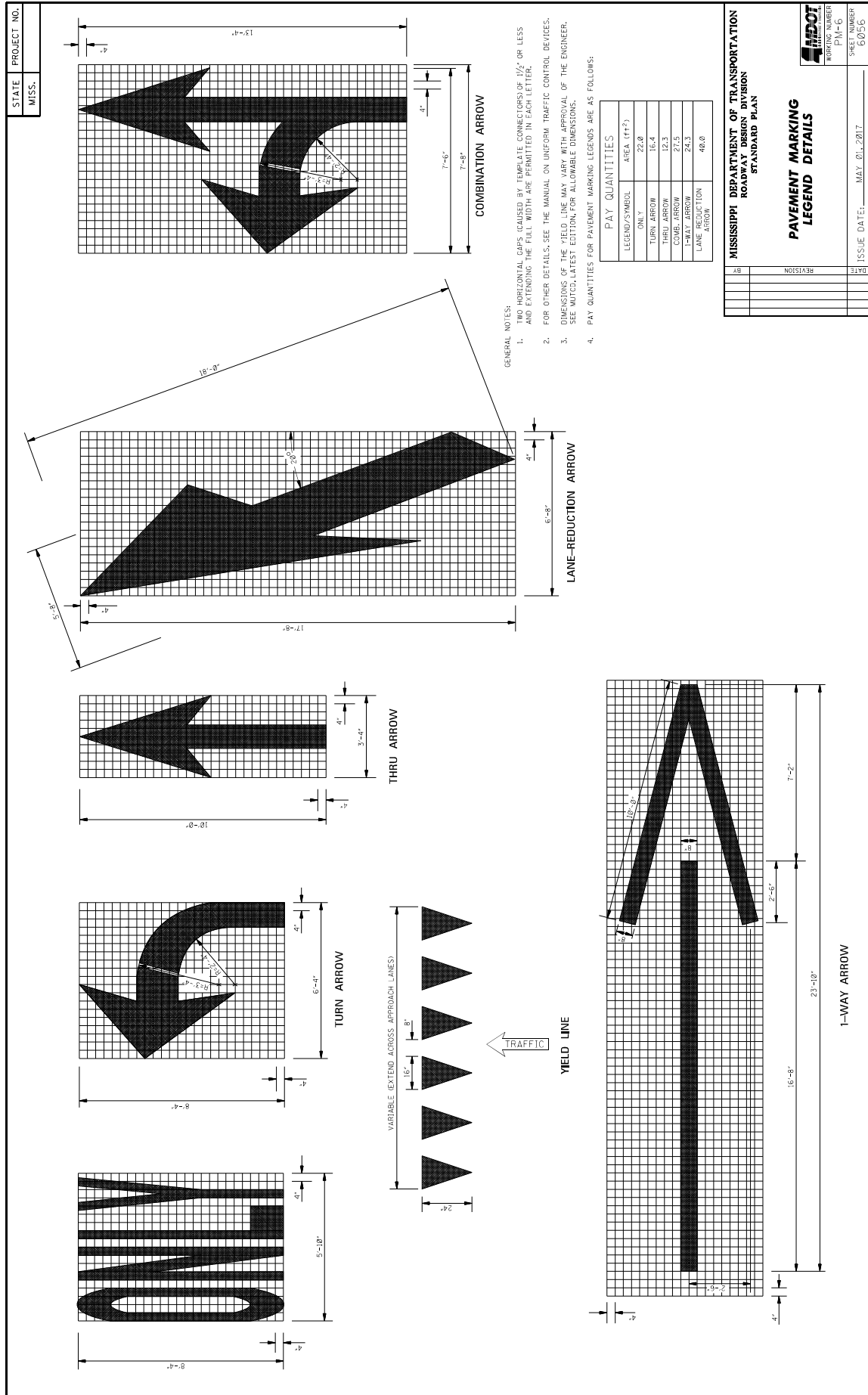
- TWO HORIZONTAL GAPS (CAUSED BY TEMPLATE CONNECTIONS OF 1/2" LESS) ARE EXTENDING FROM ALL WIDTH OF SIGNING LETTERS.
- FOR OTHER DETAILS SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

LEGEND	AREA (sq. ft.)
STOP	24.6
RIGHT	28.6
LEFT	19.5
TURN	23.5
AHEAD	32.3
YIELD	26.8
EXIT	18.5
SIGNAL	32.5
SCHOOL	35.5

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

**PAVEMENT MARKING
LEGEND DETAILS**

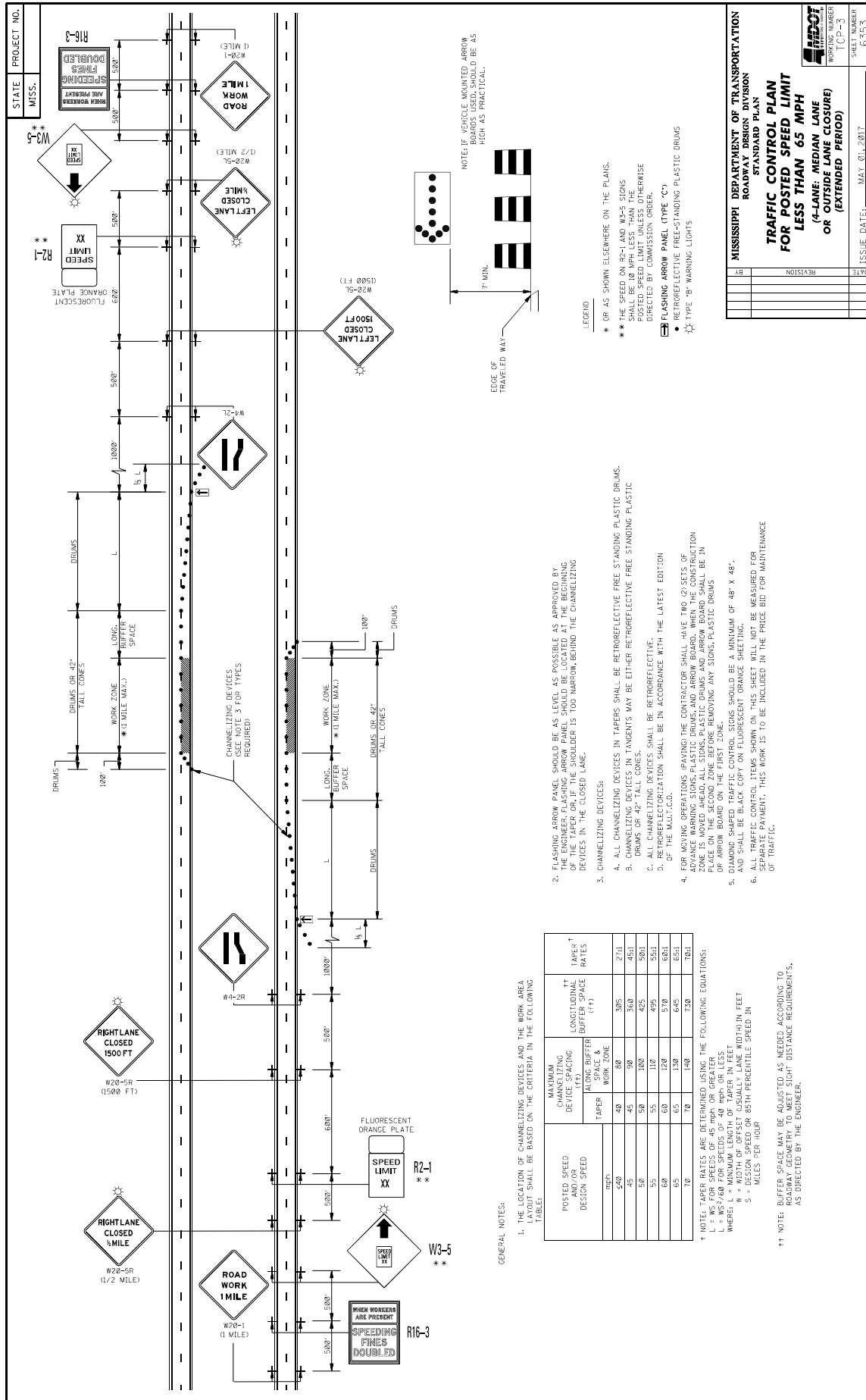
ISSUE DATE: MAY 01, 2017



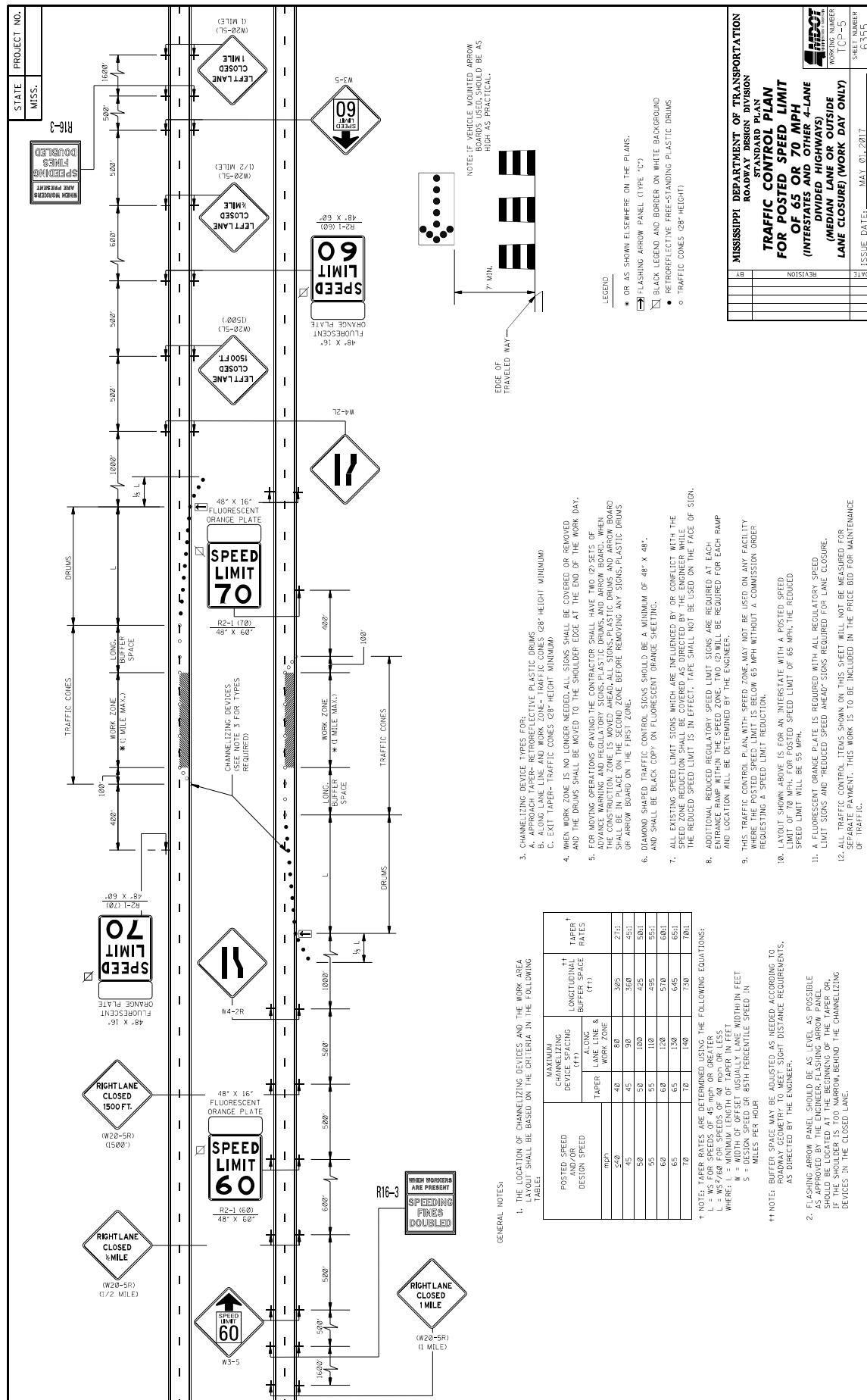


33









WING BARRICADES

- WING BARRICADES ARE TYPE III BARRICADES ERECTED ON THE SHOULDER ON ONE OR BOTH SIDES OF THE PAVEMENT TO GIVE "THE SENSATION OF A NARROWING OR RESTRICTED ROADWAY". WING BARRICADES MAY BE USED AS A WARNING FOR THE ADVANCE WARNING SIGNS OR FLASHERS.
- WING BARRICADES SHOULD BE USED:
 - IN ADVANCE OF A CONSTRUCTION PROJECT EVEN WHEN NO TRAFFIC CONTROL DEVICES ARE REQUIRED BY MUTCD.
 - 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 PROJECTIONS PER RAIL FACE	2 (ONE EACH DIRECTION)	4 (TWO EACH DIRECTION)	3 IF FACING TRAFFIC IN ONE DIRECTION 6 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 sq ft 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 MUTCD, LATEST EDITION.
- BARRICADES ARE CLASSIFIED BY FHWA AS CATEGORY II WORK ZONE DEVICES WHICH REQUIRE CRASHWORTHINESS ACCEPTANCE LETTERS. TO DATE, 2-IN THICK TIMBER RAILS HAVE NOT BEEN SUCCESSFULLY GRASS 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/pdfs/guide/roadhardware/cot2.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'-6" BEHIND THE LANE TRANSITION STRIPE.

PLASTIC DRUM STRIPPING DETAIL

- PLASTIC DRUMS SHALL BE ON END AND USED AS AN EXPEDIT METHOD FOR APPLYING MARKINGS TO THE SURFACE OF THE PAVEMENT. THEY SHALL BE CONSIDERED EQUIVALENT WITH MARKING STANDARDS FOR BARRICADES. THE PREDOMINANT COLOR ON DRUMS SHALL BE ORANGE WITH FOUR (4) RETROREFLECTIVE-HORIZONTAL-CIRCUMFERENTIAL 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 DEEMED NECESSARY BY THE ENGINEER.
- THE OM-3R IS SHOWN. THE OM-3L IS SIMILAR EXCEPT THE STRIPES ARE WHITE ON A BLACK BACKGROUND. THE MARKER SHALL BE PLACED UNDER 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.

STATE PROJECT NO.
MISS.

MOBILE OPERATIONS ON TWO-LANE ROAD

WORK VEHICLE

SHADOW VEHICLE

TRUCK-MOUNTED FLASHING ARROW PANEL

TRUCK-MOUNTED ATTENUATOR

OPTIONAL SIGN FOR SHORT DURATION OPERATION

USE SIGN SHAPE AND LEGEND APPROPRIATE TO TYPE OF WORK

MOBILE OPERATIONS ON MULTILANE ROAD

WORK VEHICLE

SHADOW VEHICLE 1

SHADOW VEHICLE 2

TRUCK-MOUNTED FLASHING ARROW PANELS

TRUCK-MOUNTED ATTENUATOR

LEFT LANE CLOSED AHEAD

NOTE: USE OF CHANGEABLE MESSAGE SIGN IS OPTIONAL

MOBILE OPERATIONS ON TWO-LANE ROAD

NOTES FOR TWO-LANE OPERATION:

- WHERE PRACTICAL AND WHEN NEEDED, THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS. IF THIS CAN NOT BE DONE FREQUENTLY AS AN ALTERNATIVE, A "DO NOT PASS" SIGN MAY BE PLACED ON THE REAR OF THE VEHICLE BLOCKING THE LANE.
- THE DISTANCE BETWEEN THE WORK AND SHADOW VEHICLES MAY VARY ACCORDING TO TERRAIN, PAINT DRYING TIME, AND OTHER FACTORS. SHADOW VEHICLES ARE USED TO WARN TRAFFIC OF THE OPERATION AHEAD. WHENEVER ADEQUATE WARNING CANNOT BE MAINTAINED, THE SHADOW VEHICLE SHOULD BE USED TO MAINTAIN THE MINIMUM DISTANCE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. THE SHADOW VEHICLE SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ADDITIONAL SHADOW VEHICLES TO WARN AND REDUCE THE SPEED OF ONCOMING OR OPPOSING TRAFFIC MAY BE USED. POLICE PATROL CARS MAY BE USED FOR THIS PURPOSE.
- A TRUCK-MOUNTED ATTENUATOR (TMA) SHOULD BE USED ON THE SHADOW VEHICLE AND MAY BE USED ON THE WORK VEHICLE.
- THE WORK VEHICLE SHALL BE EQUIPPED WITH BEACONS, AND THE SHADOW VEHICLE SHALL BE EQUIPPED WITH BEACONS, LIGHTS, AND WORK LIGHTS MOUNTED ON THE REAR, ADJACENT TO THE SIGN, SHADOW, AND WORK VEHICLES SHALL DISPLAY FLASHING OR ROTATING BEACONS BOTH FORWARD AND TO THE REAR.
- VEHICLE-MOUNTED SIGNS SHOULD BE MOUNTED WITH THE BOTTOM OF THE SIGN LOCATED AT A MINIMUM HEIGHT OF 48" ABOVE THE PAVEMENT AND SHALL NOT BE OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
- ARROW BOARD TO BE USED IN CAUTION MODE.
- 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.

MOBILE OPERATIONS ON MULTILANE ROAD

NOTES FOR MULTILANE LANE OPERATION:

- VEHICLES USED FOR THESE OPERATIONS SHOULD BE MADE HIGHLY VISIBLE WITH APPROPRIATE EQUIPMENT, SUCH AS FLASHING LIGHTS, ROTATING BEACONS, FLAGS, SIGNS, OR ARROW PANELS.
- SHADOW VEHICLE 2 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK MOUNTED ATTENUATOR (TMA), AN APPROPRIATE LANE CLOSURE SIGN SHOULD BE PLACED ON SHADOW VEHICLE 2 SO AS NOT TO OBSCURE THE ARROW PANEL.
- SHADOW VEHICLE 1 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK-MOUNTED ATTENUATOR (TMA).
- SHADOW VEHICLE 2 SHOULD TRAVEL AT A VARYING DISTANCE FROM THE WORK OPERATION SO AS TO PROVIDE ADEQUATE SIGHT DISTANCE FOR TRAFFIC APPROACHING FROM THE REAR.
- WHEN ADEQUATE SHOULDER WIDTH IS NOT AVAILABLE, SHADOW VEHICLE 2 SHOULD BE ELIMINATED.
- ON HIGH-SPEED ROADWAYS, A THIRD SHADOW VEHICLE SHOULD BE USED (I.e., VEHICLE 3 ON THE SHOULDER (IF PRACTICAL), VEHICLE 2 IN THE CLOSED LANE, AND VEHICLE 1 IN THE CLOSED LANE).
- ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60" X 30" IN ACCORDANCE WITH THE CRITERIA PRESENTED IN THE MUTCD.
- WORK SHOULD NORMALLY BE DONE DURING OFF-PEAK HOURS.
- VEHICLE-MOUNTED SIGNS SHOULD BE MOUNTED WITH THE BOTTOM OF THE SIGN LOCATED AT A MINIMUM HEIGHT OF 48" ABOVE THE PAVEMENT AND SHALL NOT BE OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
- 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.

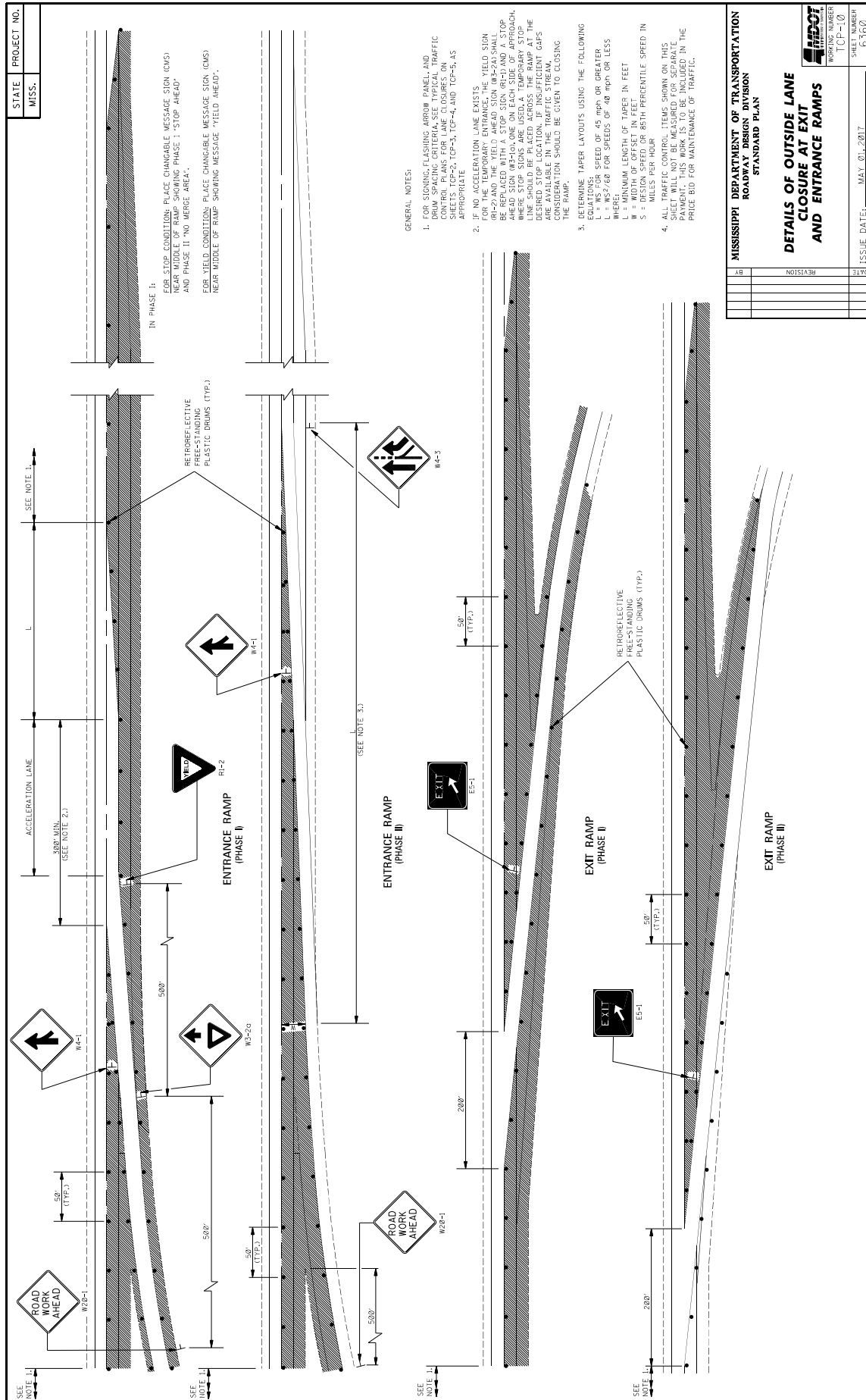
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TRAFFIC CONTROL PLAN
MOBILE OPERATIONS
MULTILANE ROADS
TWO-LANE ROADS

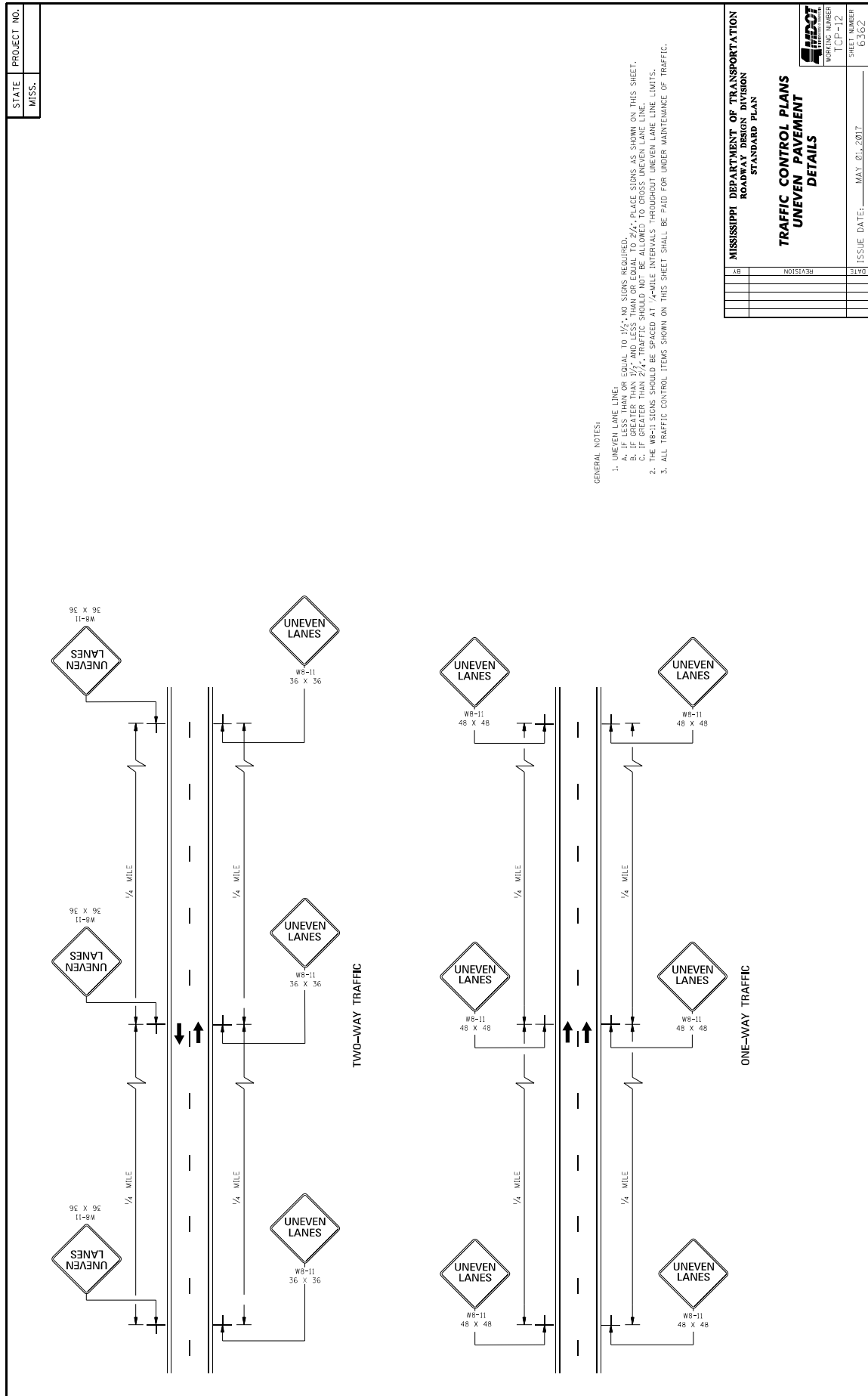
WORKING NUMBER
TCP-9

SHEET NUMBER
6339

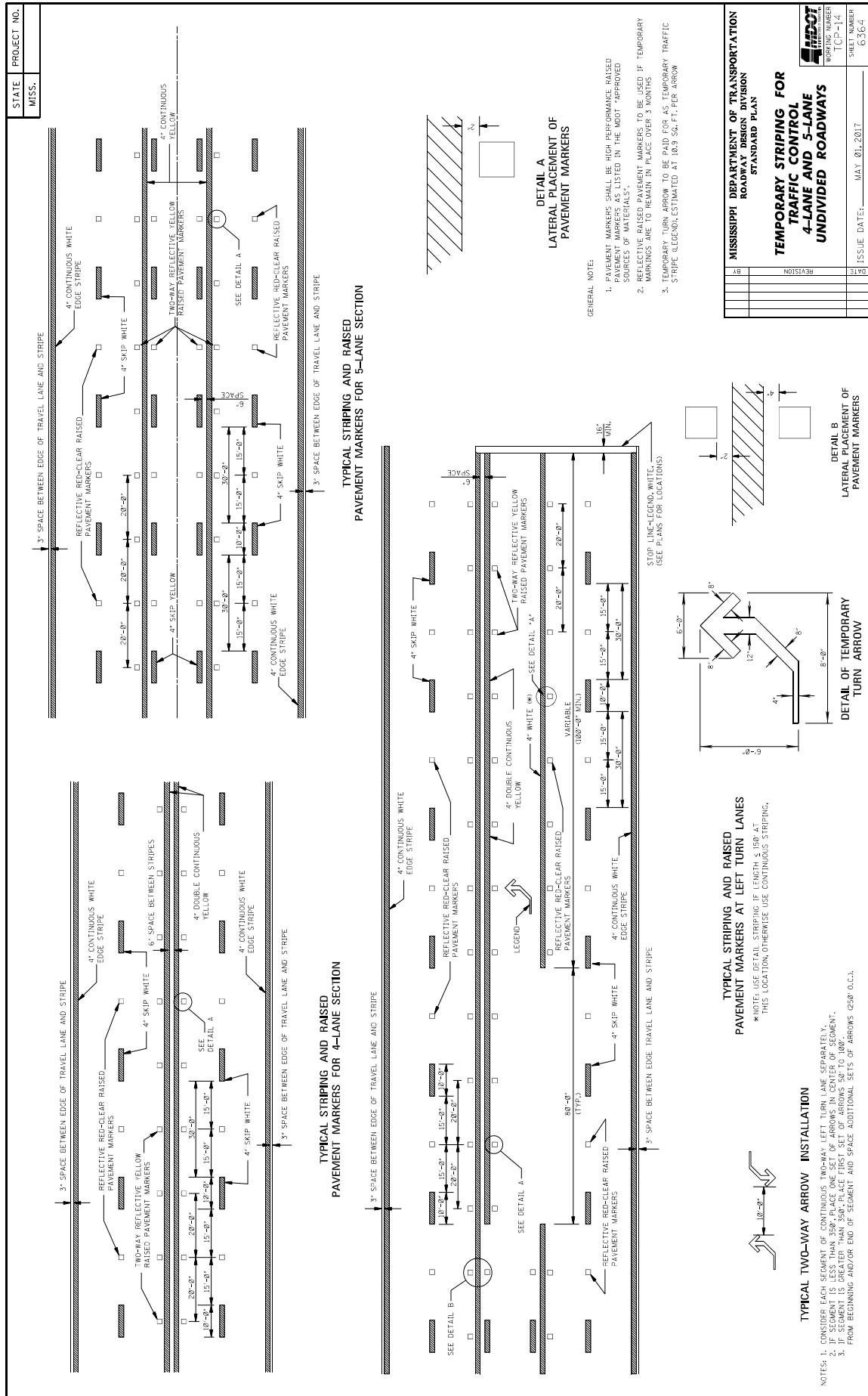
ISSUE DATE: MAY 01, 2017

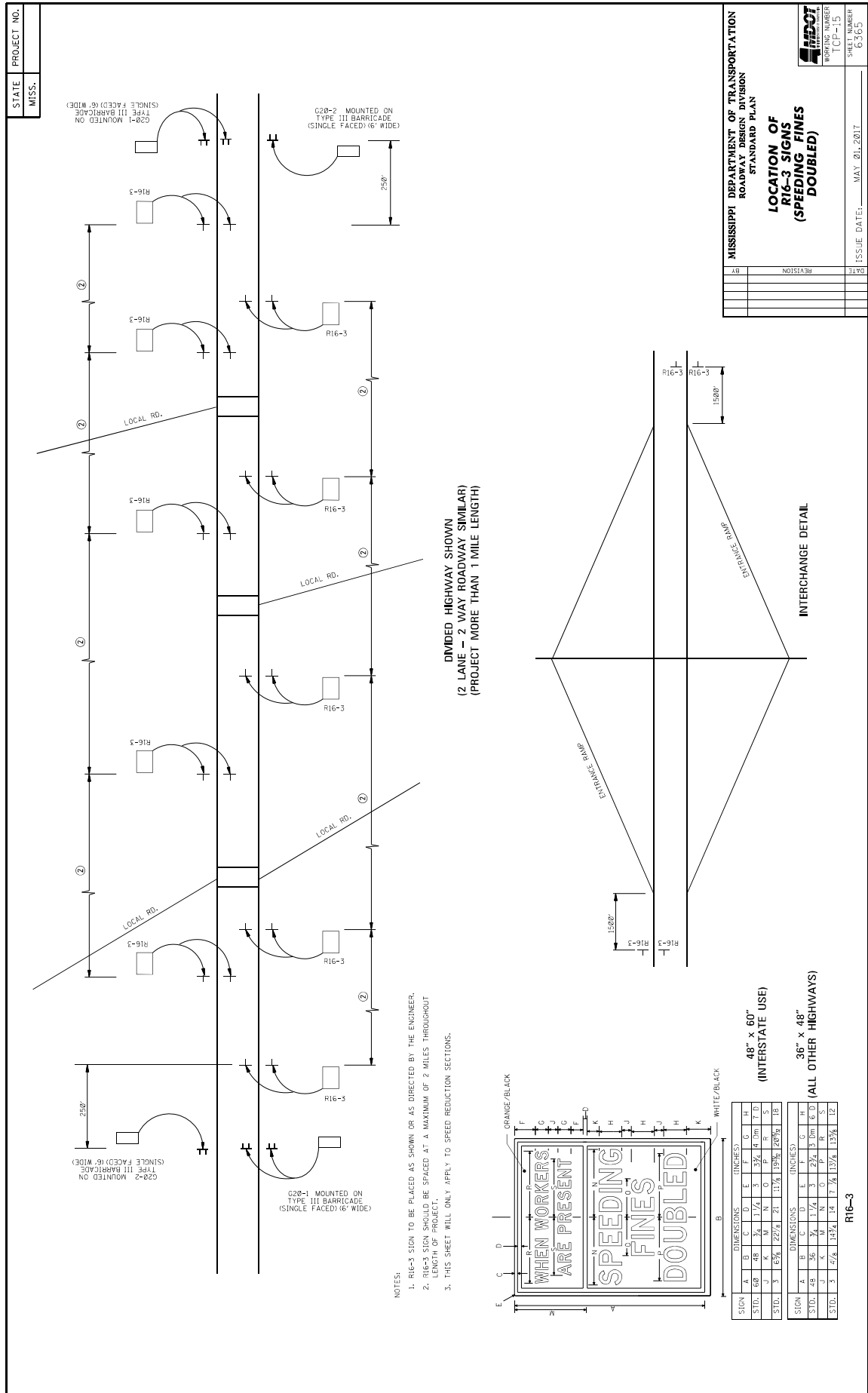












MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

**LOCATION OF
R16-3 SIGNS
(SPEEDING FINES
DOUBLED)**

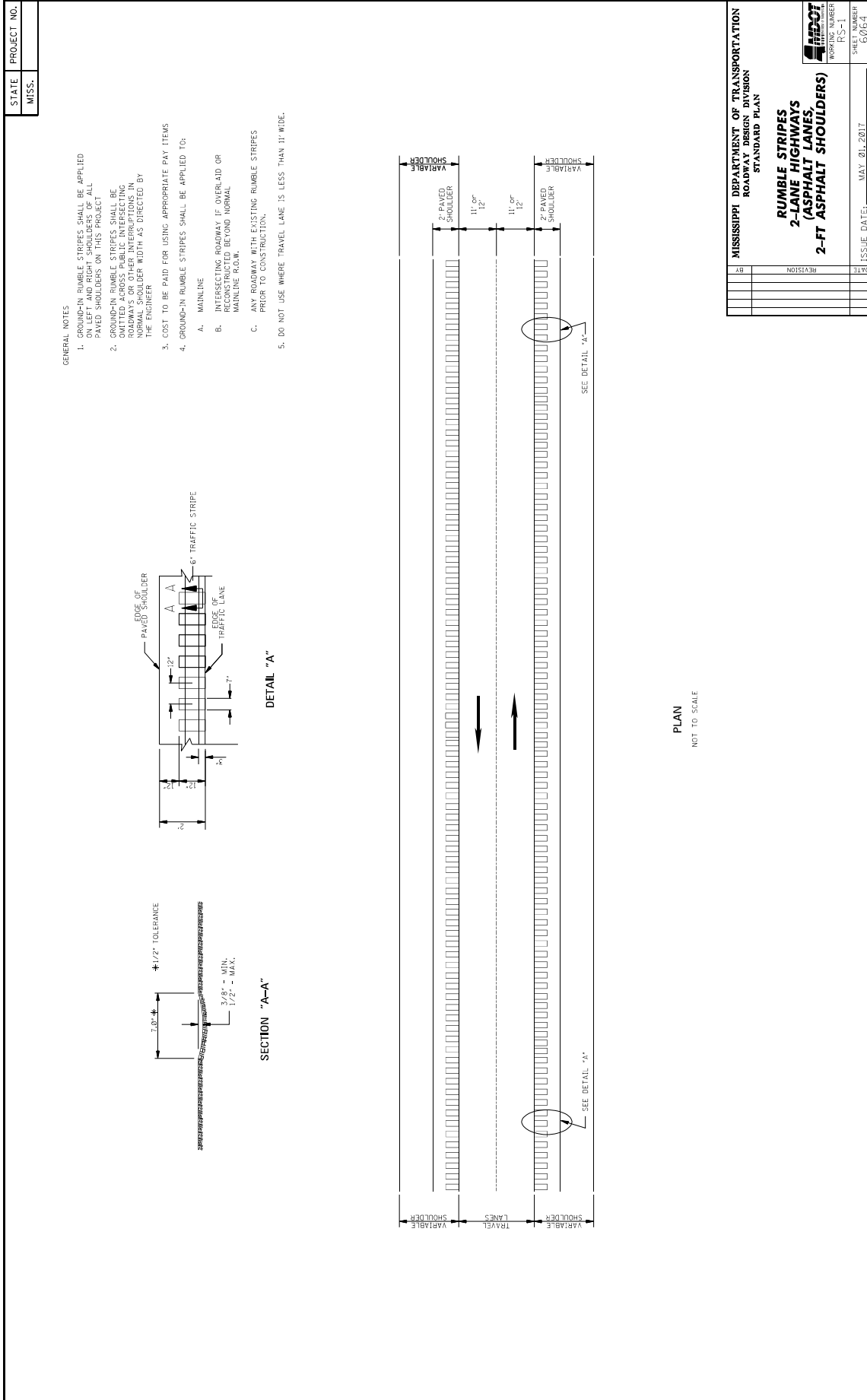
WORKING NUMBER
TCP-15

SHEET NUMBER
6365

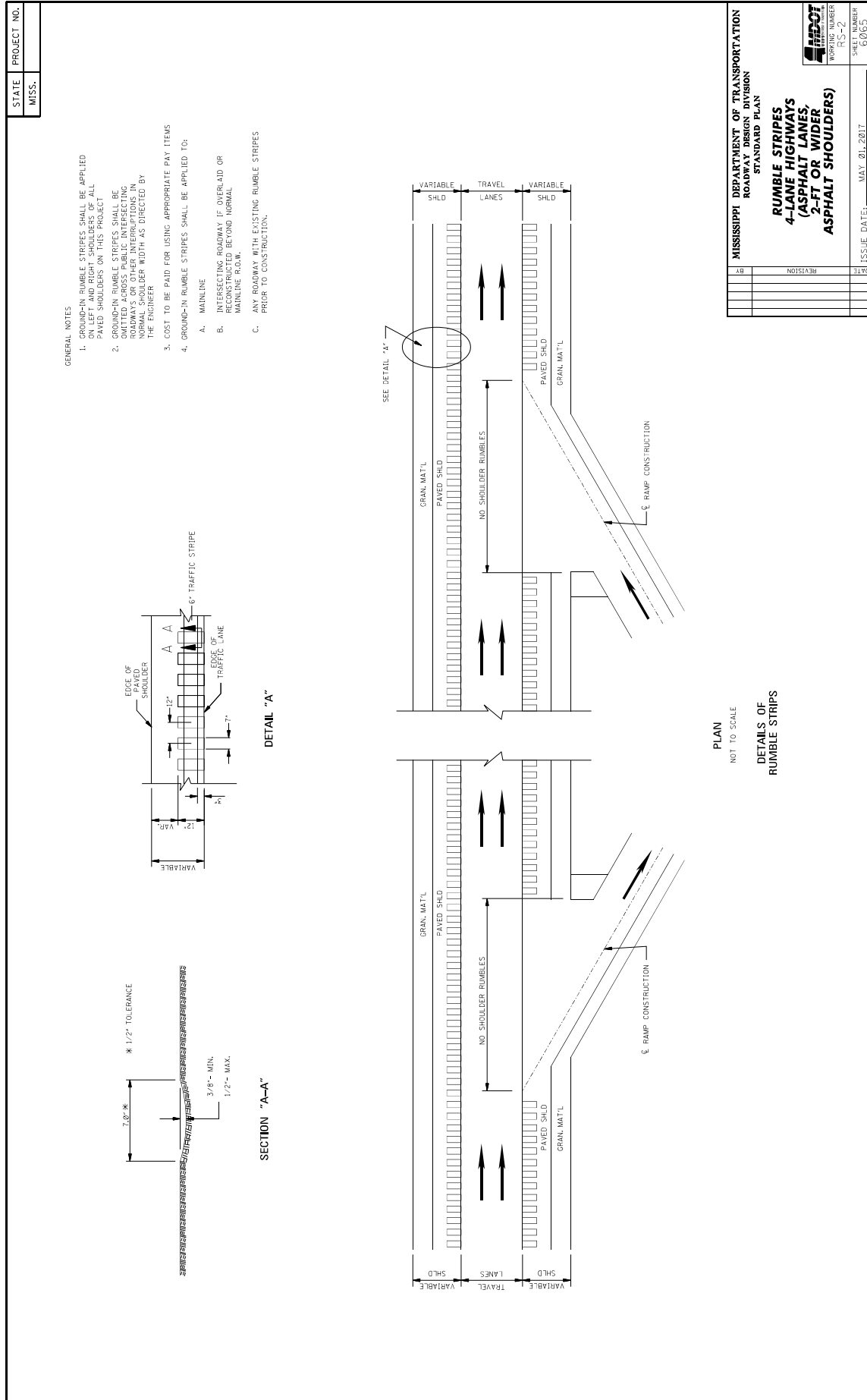
DATE	REVISION	BY

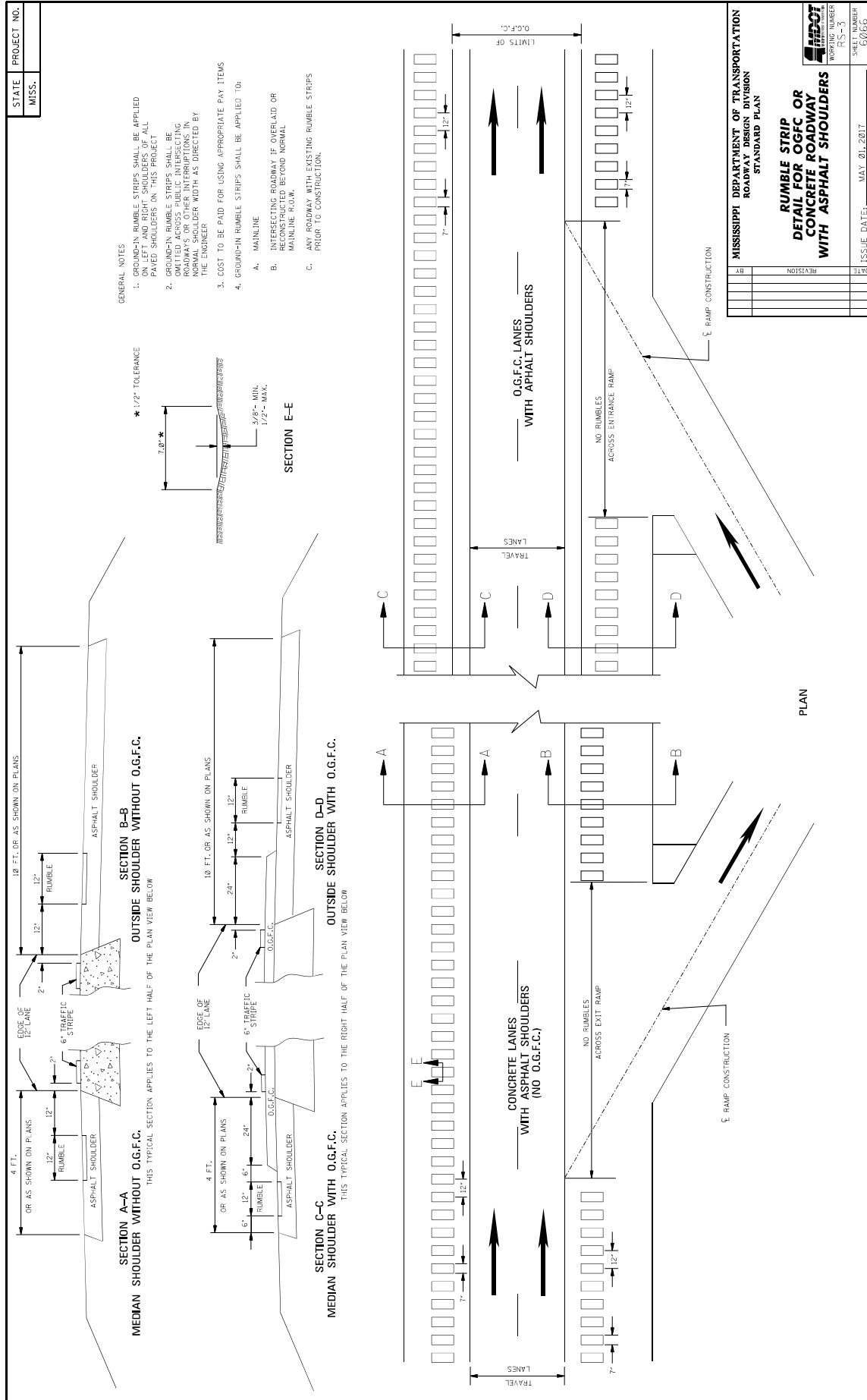
ISSUE DATE: MAY 01, 2017

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
ROADWAY DESIGN DIVISION	
STANDARD PLAN	
RUMBLE STRIPES	
2-LANE HIGHWAYS	
(ASPHALT LANES,	
2-FT ASPHALT SHOULDERS)	
BY	REVISION
DATE	ISSUE DATE: MAY 01, 2017
SHEET NUMBER	RS-1
WORKING NUMBER	6064





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. 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 “AASHTO’s <u>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. 961

CODE: (SP)

DATE: 06/12/2018

SUBJECT: Contract Time

PROJECT: HSIP-9999-01(254) / 107530301 – District 1

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 **August 14, 2018** and the date for Notice to Proceed / Beginning of Contract Time will be **September 13, 2018**.

Should the Contractor request a Notice to Proceed earlier than **September 13, 2018** and it is agreeable with the Department for an early Notice to Proceed, the requested date will become the new Notice to Proceed date.

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

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 962

DATE: June 12, 2018

SUBJECT: Specialty Items

PROJECT: HSIP-9999-01(254)/107530301 - DISTRICT 1

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: PAVEMENT STRIPING AND MARKING

Line No	Pay Item	Description
0140	625-F003	Legend, High Build
0150	626-A003	6" Thermoplastic Traffic Stripe, Skip White
0160	626-B003	6" Thermoplastic Traffic Stripe, Continuous White
0170	626-C003	6" Thermoplastic Edge Stripe, Continuous White
0180	626-D002	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow
0190	626-E003	6" Thermoplastic Traffic Stripe, Continuous Yellow
0200	626-F004	6" Thermoplastic Edge Stripe, Continuous Yellow
0210	626-G002	Thermoplastic Detail Stripe, White
0220	626-G003	Thermoplastic Detail Stripe, Yellow
0230	626-H004	Thermoplastic Legend, White
0240	626-H005	Thermoplastic Legend, White
0250	627-J001	Two-Way Clear Reflective High Performance Raised Markers
0260	627-K001	Red-Clear Reflective High Performance Raised Markers
0270	627-L001	Two-Way Yellow Reflective High Performance Raised Markers
0570	907-624-B002	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White
0580	907-624-D002	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow
0590	907-624-E001	Inverted Profile Thermoplastic Detail Traffic Stripe, White
0600	907-624-E003	Inverted Profile Thermoplastic Detail Traffic Stripe, Yellow
0610	628-H001	6" High Performance Cold Plastic Traffic Stripe, Continuous White
0620	628-J001	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow
0630	628-K001	High Performance Cold Plastic Detail Stripe, White
0640	628-K002	High Performance Cold Plastic Detail Stripe, Yellow

CATEGORY: TRAFFIC CONTROL - PERMANENT

Line No	Pay Item	Description
0280	630-A001	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness
0290	630-A003	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness
0300	630-C002	Steel U-Section Posts, 2.0 lb/ft
0310	630-C003	Steel U-Section Posts, 3.0 lb/ft
0320	630-D008	Structural Steel Beams, W6 x 9
0330	630-E001	Structural Steel Angles & Bars, 3 1/2" x 3 1/2" x 1/4" Angles
0340	630-E004	Structural Steel Angles & Bars, 7/16" x 2 1/2" Flat Bar
0350	630-K001	Welded & Seamless Steel Pipe Posts, 3 1/2"

CATEGORY: TRAFFIC CONTROL - PERMANENT

Line No	Pay Item	Description
0360	630-K002	Welded & Seamless Steel Pipe Posts, 3"
0370	630-K003	Welded & Seamless Steel Pipe Posts, 4"
0380	638-A002	Flashing Assembly, Advanced Warning
0390	638-A004	Flasher Assembly, ICWS, Watch For Traffic
0400	638-A005	Flasher Assembly, ICWS, Watch For Entering Traffic
0410	660-A003	Equipment Cabinet, Type B
0430	907-630-O001	Remove and Reset Sign Assembly
0460	907-634-F002	Detector Pole with Foundation, 35' Pole
0470	907-634-F004	Detector Pole with Foundation, 25' Pole
0480	907-636-B014	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor
0490	907-636-B028	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 8, 3 Conductor
0500	907-637-A002	Pullbox Enclosure, Type 2
0510	907-637-A003	Pullbox Enclosure, Type 3
0520	907-637-C028	Traffic Signal Conduit, Underground, Type 4, 2"
0530	907-637-D002	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"
0540	907-641-A002	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2
0550	907-641-B002	Signal Advanced Radar Vehicle Detection Sensor, Type 2
0560	907-641-D001	Radar Vehicle Detection Cable

CATEGORY: TRAFFIC CONTROL - TEMPORARY

Line No	Pay Item	Description
0060	619-A1002	Temporary Traffic Stripe, Continuous White
0070	619-A2002	Temporary Traffic Stripe, Continuous Yellow
0080	619-A3002	Temporary Traffic Stripe, Skip White
0090	619-A4001	Temporary Traffic Stripe, Skip Yellow
0100	619-A5001	Temporary Traffic Stripe, Detail
0110	619-A6001	Temporary Traffic Stripe, Legend
0120	619-A6002	Temporary Traffic Stripe, Legend
0420	907-619-B001	Temporary Portable Rumble Strips

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 – NOTICE TO BIDDERS NO. 963

CODE: (SP)

DATE: 06/12/2018

SUBJECT: Scope of Work

PROJECT: HSIP-9999-01(254) / 107530301 -- Districtwide 1

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.” All other references to plans in the contract documents and Standard Specification for Road and Bridge Construction are to be disregarded.

Work on the project shall consist of the installation of Intersection Conflict Warning Systems (ICWS) at four intersections in the District 1 area. These intersections are located in Oktibbeha and Prentiss Counties. In addition to the installation of ICWS devices, these intersections will also receive various low cost improvements, including the upgrading of existing signs, installation of additional advisory signs, restriping of the intersections, the reapplication of raised pavement markers and other items as specified in the contract. These low cost improvements will also be applied at a fifth intersection, located in Pontotoc County, as a part of the project.

The attached drawings do not include pay item no. 618-B001, Additional Construction Signs. This is in error. The correct quantity is **1 SF**. The bid sheets are correct.

The attached drawings indicate pay item no. 620-A001, Mobilization, has a quantity of 50 LS. This is in error. The correct quantity is **1 LS**. The bid sheets are correct.

The attached drawings include references to pay item no. 625-F003, Legend, High Build. **This is in error.** Any reference to High Build, Legend shall be understood to mean pay item no. 626-H005, Thermoplastic Legend, White. The bid sheets are correct.

The attached drawings include references to pay item no. 626-D002, 6” Thermoplastic Double Drop Traffic Stripe, Skip Yellow. **This is in error.** The correct pay item no. is 626-D004, 6” Thermoplastic Traffic Stripe, Skip Yellow. The bid sheets are correct.

The attached drawings indicate pay item no. 626-H005, Thermoplastic Legend, White, has a quantity of 484 LF. This is in error. The correct quantity is **1144 LF**. The bid sheets are correct.

The attached drawings indicate pay item no. 907-619-B001, Temporary Portable Rumble Strips, has a quantity of 240 LF. This is in error. The correct quantity is **330 LF**. The bid sheets are correct.

GENERAL INDEX

INCLUDED THIS PROJECT	BEGIN THIS SHEET	1
<input checked="" type="checkbox"/>	ROADWAY	PERMANENT SIGNS
<input type="checkbox"/>	TRAFFIC SIGNALS	2001
<input type="checkbox"/>	ITS COMPONENTS	2001
<input type="checkbox"/>	LIGHTING	3001
<input type="checkbox"/>	(RESERVED)	4001
<input type="checkbox"/>	ROADWAY STANDARD DWGS	5001
<input checked="" type="checkbox"/>	BRIDGE STANDARD DWGS	6001
<input type="checkbox"/>	BRIDGE	7001
<input type="checkbox"/>	CROSS SECTIONS	8001
<input type="checkbox"/>	CROSS SECTIONS	9001

STATE OF MISSISSIPPI

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY
FEDERAL AID PROJECT NO. HSIP-9999-01(254)**

INTERSECTION IMPROVEMENTS **FMS CONST# 107530301000**
OKTIBBEHA /PRENTISS /PONTOTOC COUNTY

SCALES	
PLAN	1 IN. = N/A
PROFILE	HOR. 1 IN. = N/A
	VERT. 1 IN. = N/A
LAYOUT	1 IN. = VAR.

BRIDGE STRUCTURES REQ'D.
NONE

BOX BRIDGES REQ'D.
NONE

**US 82 AT SR 389
(WB OFF/ON RAMP)
OKTIBBEHA COUNTY**

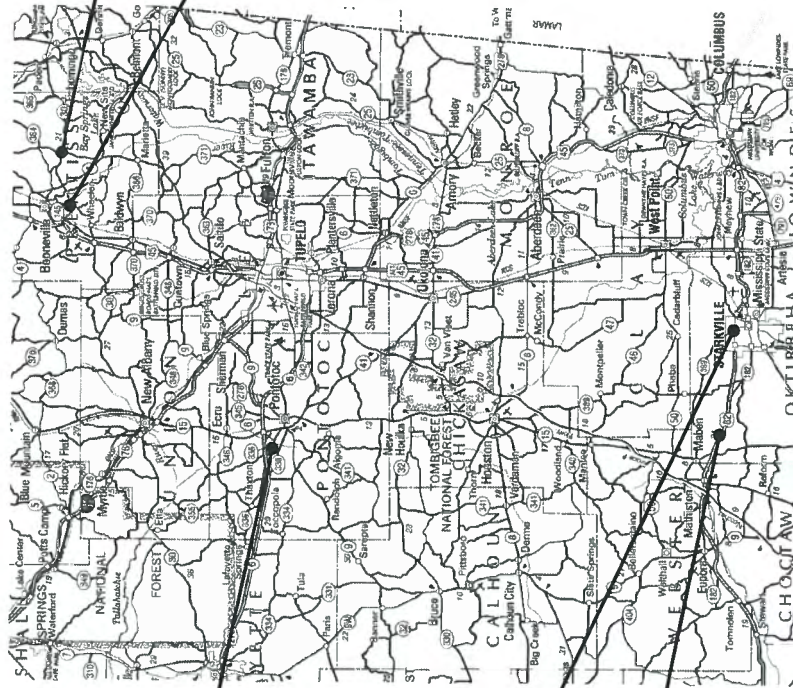
US 82 AT SR 763
OKTIBBEHA COUNTY

PS CONTROL NOTES

HORIZONTAL DATUM: NAD 83(2011) M8 EAST ZONE (US SURVEY FEET)
HORIZONTAL MONUMENT NORTH EAST

VERTICAL DATUM: NAVD 88		(US SURVEY FEET)
VERTICAL MONUMENT		ELEVATION

ALL AZIMUTHS AND DISTANCES ARE GRID VALUES, US SURVEY FEET	
CONVERSION VALUES	PROJECT AVERAGE
GROUND TO GRID (COMBINED) FACTOR	
GRID TO GEODETIC AZIMUTH	



**SITE 1: US 82 AT SR 389
(WB OFF/ON RAMP)
OKTIBBEHA COUNTY**

SITE 2: US 82 AT SR 763
OKTIBBEHA COUNTY

SITE 3:SR 30 AT CR 5031
PRENTISS COUNTY

SITE 4: SR 30 AT CR 2371/3371
PRENTISS COUNTY

SITE 5: SR 336 AT SALLIE HARDIN ROAD
PONTOTOC COUNTY

EXCEPTIONS
NONE

EQUATIONS
NONE

SITES 1-4

SITE 5

3/30/18

James O. Waters - 5115
3/30/85

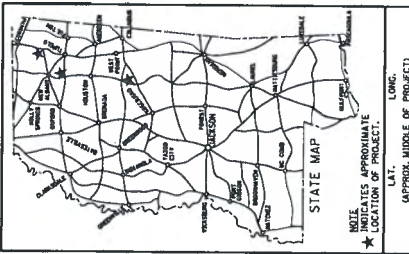
HSIP-9999-01(254)

DISTRICT 1 COUNTY

1

Notice to Bidder No.963 -- Cont

STATE	PROJECT NUMBER	SHEET NO.
MISSISSIPPI	HSIP-0050-01(033)	1

[illegible]

P S & E DATE: 1-3-2018

DEPUTY EXECUTIVE DIRECTOR / CHIEF ENGINEER

EXCISE INFORMATION



DISTRICT 1 COUNTY

FMS CON: 107530 301000

STATE

PROJECT NO.

MISS.

HSP-9995-01(254)

GENERAL NOTES:

1) EQUIPMENT SHOWN ON THESE PLANS ARE IN APPROXIMATE LOCATIONS ALL EQUIPMENT SHALL BE FIELD LOCATED BY THE CONTRACTOR WITH PROPOSED LOCATION APPROVED BY MDOT TO VERIFY PROPER PLACEMENT AND THE BEST SIGHT DISTANCE WHERE NECESSARY, ADEQUATE ROADSIDE PROTECTION, ETC. CONTRACTOR TO STAKE EACH PROPOSED LOCATION TO A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO REVIEW BY MDOT. THE COST OF FIELD STAKING WILL NOT BE MEASURED FOR SEPARATE PAYMENT, BUT WILL BE ABSORBED UNDER OTHER ITEMS. CONTRACTOR TO INSTALL ALL EQUIPMENT, PULL BOXES AND CONDUIT WITHIN PUBLIC RIGHT-OF-WAY.

2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING STRUCTURES SUCH AS BUT NOT LIMITED TO, PIPES, INLETS, APRONS, AND BRIDGES FROM DAMAGE WHICH MIGHT OCCUR DURING CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR, AS DIRECTED BY THE ENGINEER, ANY STRUCTURES DAMAGED DURING THE LIFE OF THE CONTRACT. NO PAYMENT WILL BE MADE FOR REPLACEMENT OR REPAIR OF DAMAGED ITEMS.

3) UNDERGROUND UTILITIES ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIS OWN INDEPENDENT INVESTIGATIONS, INCLUDING SUBSURFACE INVESTIGATIONS AS MAY BE NECESSARY TO LOCATE UTILITIES WITHIN PROJECT WORK LIMITS. IN ADDITION, CONTRACTOR SHALL NOTIFY MDOT MAINTENANCE PERSONNEL AT LEAST TWO WEEKS IN ADVANCE OF WORK AT THE SITE SO THAT MDOT UTILITIES (EX. LIGHTING, CONDUIT) CAN BE FIELD LOCATED.

4) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE THE NECESSARY ARRANGEMENTS WITH THE LOCAL POWER COMPANY TO PROVIDE THE POWER SUPPLY ASSEMBLY 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.

WHEN ELECTRIC POWER SERVICE EXISTS AND IS USED FOR THE OPERATION OF AN EXISTING SYSTEM, THE MONTHLY SERVICE FEES SHALL CONTINUE TO BE PAID BY THE DEPARTMENT OR THE LOCAL AGENCY. IF THE EXISTING POWER SERVICE IS INTENDED FOR USE WITH A NEW SIGNAL SYSTEM, THEN ANY SERVICE CHARGE FEES

5) ALL POST LENGTHS FOR SIGNS SHALL BE DETERMINED IN THE FIELD PRIOR TO FABRICATION.

6) VOIDS CREATED BY THE REMOVAL OF BUT NOT LIMITED TO POSTS, CONCRETE ANCHORS, AND FOOTING SHALL BE BACKFILLED AND TAMPED IN ACCORDANCE WITH SECTION 203 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2017 EDITION.

7) SOME WORK MAY BE REQUIRED OUTSIDE THE PROJECT LIMITS. NO ADDITIONAL COMPENSATION WILL BE MADE FOR SUCH WORK EXCEPT AS PROVIDED BY SPECIFIC PAY ITEMS INCLUDED IN THE PLANS.

8) FLUORESCENT ORANGE SHEETING SHALL BE USED ON ALL CONSTRUCTION AND TRAFFIC CONTROL SIGNS EXCEPT FOR THOSE DESIGNATED ON THE PLANS TO BE BLACK LEGEND AND BORDER ON WHITE BACKGROUND.

9) THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE SURFACE TREATED SHOULDER THAT MIGHT OCCUR DURING CONSTRUCTION. ANY REPAIR TO SHOULDER WILL BE IN ACCORDANCE WITH SECTION 410 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2017 EDITION. NO PAYMENT WILL BE MADE FOR REPAIR OF DAMAGED SHOULDER.

10) THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTOR FROM ADJACENT PROJECT(S) IN IMPLEMENTING THE TRAFFIC CONTROL PLAN AS DIRECTED BY THE ENGINEER. ALL CONFLICTING SIGNS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

11) ROADWAY SIGNS THAT ARE IN CONFLICT WITH CONSTRUCTION OF THIS PROJECT SHALL BE REMOVED AND RELOCATED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER, THE COST OF WHICH SHALL BE ABSORBED IN OTHER BID ITEMS.

12) CLEARING AND GRUBBING, WHERE REQUIRED BY THE PROJECT ENGINEER TO COMPLETE THE EQUIPMENT INSTALLATIONS SHOWN ON THESE PLANS WILL BE PERFORMED IN CONFORMANCE WITH SECTION 201 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2017 EDITION. HOWEVER, THE COST OF CLEARING AND GRUBBING OPERATIONS WILL NOT BE MEASURED FOR SEPARATE PAYMENT, BUT WILL BE ABSORBED UNDER OTHER BID ITEMS.

13) ALL SIGNS, SIGNALS, PAVEMENT MARKINGS AND TEMPORARY TRAFFIC CONTROL DEVICES ARE TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).

14) PAYMENT FOR ELECTRIC CABLE AND CONDUIT SHALL BE BASED ON HORIZONTAL MEASUREMENTS, WITH NO ADDITIONAL PAYMENT FOR ANY VERTICAL RUNS OR SLACK IN PULL BOXES.

15) CONDUIT FOR POWER SUPPLY MAY BE RUN IN THE SAME TRENCH LINES AS FIBER LINES, THOUGH SEPARATE ELECTRICAL PULLBOXES ARE TO BE INSTALLED.

16) ALL CONDUITS TO BE SEALED WITH DUCT PLUG TO PREVENT WATER INTRUSION ONCE CABLE IS INSTALLED. COST TO BE ABSORBED UNDER PAY ITEM NOS. 907-637-C OR 907-637-D.

17) THE CONTRACTOR MAY JACK OR BORE A SINGLE SLEEVE FOR INSTALLATION OF MULTIPLE CONDUITS AT A ROADWAY CROSSING, RATHER THAN JACKING AND BORING INDIVIDUAL CONDUITS. THE INSTALLATION OF THE SLEEVE AND THE FIRST CONDUIT SHALL BE PAID FOR AT THE BID PRICE FOR UNDERGROUND CONDUIT (DRILLED OR JACKED). ADDITIONAL CONDUITS PLACED IN THE SLEEVE SHALL BE PAID FOR AT THE BID PRICE FOR REGULAR UNDERGROUND CONDUIT. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR LARGER SLEEVE. CONTRACTOR SHALL SUBMIT SIZE OF SLEEVE AND MATERIALS DATA TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

18) ANY AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR (TO INCLUDE GRASSING AND SITE GRADING) AS DIRECTED BY THE ENGINEER. ALL REMOVAL AND REPLACEMENT OF SOD, SIDEWALK, ASPHALT AND CONCRETE, AND BACKFILL ARE COST ABSORBED AND CONSIDERED PART OF THE COST OF THE CONDUIT.

19) WHERE THE CONTRACTOR ENCOUNTERS PAVED DITCHES IN ROUTING OF CONDUIT, HE MAY TRENCH AND REPLACE DITCH OR JACK UNDER DITCH, THIS IS NOT A SEPARATE PAY ITEM. DAMAGE TO PAVED DITCHES (AND/OR OTHER STRUCTURE) CAUSED BY CONTRACTOR DURING THIS PROJECT SHALL BE REPAIRED (AS DIRECTED BY THE ENGINEER) AT NO COST TO THE STATE.

20) WORK ON STRUCTURES FOR THIS PROJECT REQUIRES EXCAVATION IN THE IMMEDIATE VICINITY OF TRAFFIC AND ADJACENT PROPERTIES. THEREFORE, THE RISK OF A FAILURE OCCURRING DURING EXCAVATION REQUIRES THAT EXTREME CAUTION BE EXERCISED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING WHAT BRACING, SHORING, OR GROUND SUPPORT SYSTEM THAT IS DEEMED NECESSARY TO PREVENT A FAILURE AND PROTECT THE PERSONS WORKING NEAR THE EXCAVATION, THE PUBLIC THAT MAY BE ABOVE THE EXCAVATION OR ANY STRUCTURES ADJACENT TO THE EXCAVATION. ALL COSTS FOR DESIGNING, DRAWING, AND CONSTRUCTION OF THE FACILITY SHALL BE INCLUDED IN THE PRICE BID FOR CONTRACT ITEMS.

21) THE COST OF DISPOSING OF ALL UNUSED OR REMOVED MATERIALS SHALL BE ABSORBED FOR PAYMENT IN OTHER ITEMS.

22) SIGNAL SUPPLY CABLE SHALL BE IMSA 20-1-1991 SINGLE CABLE, STRANDED. AVG NUMBER AND NUMBER OF CONDUCTORS AS SHOWN ON PLANS.

23) POWER SUPPLY CABLE SHALL BE IMSA 20-1-3 CONDUCTOR CABLE, STRANDED, AVG NUMBER AS SHOWN ON PLANS.

25) THERE SHALL BE A 30 DAY BURN IN PERIOD FROM THE TIME DETECTORS ARE OPERATIONAL AS OUTLINED IN SECTION 634.03.3 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2017 EDITION.

26) IF EXISTING AND PROPOSED SIGNS ARE IN CONFLICT DURING INSTALLATION, THE CONTRACTOR SHALL COMPLETE INSTALLATIONS AND REMOVALS IMMEDIATELY WITHOUT ANY DELAY.

27) REFLECTIVE SIGN POST PANELS SHALL BE MANUFACTURED USING THE SAME GRADE OF RETROREFLECTIVE SHEETING THAT IS USED TO MANUFACTURE THE SIGN ASSEMBLY MOUNTED ABOVE IT.

63

Notice to Bidder No

63

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

BY

REVISION

DATE

PROJ. NO.: HSP-9995-01(254)

COUNTY: VARIOUS

FILENAME: _GN_SH.DGN

DESIGN TEAM BUDHART HORN DECKED - KHA DATE 01/24/18

WORKING NUMBER

GN-1

SHEET NUMBER

3

NOTES

18/02/92/74

STATE	PROJECT NO.
MISS	HSIP-9999-01(254)

SUMMARY OF QUANTITIES (SHEET 1)			
PAY ITEM NO.	PAY ITEM	UNIT	: 107530-301000
			Prelim Final
202-B215	Removal of Sign Including Post & Footing	EA	85
202-B240	Removal of Traffic Stripe	LF	12,384
601-A001	Class "B" Structural Concrete	CY	8
602-A001	Reinforcing Steel	LBS	58
618-A001	Maintenance of Traffic	LS	1
619-A1002	Temporary Traffic Stripe, Continuous White	LF	5,811
619-A2002	Temporary Traffic Stripe, Continuous Yellow	LF	5,681
619-A3002	Temporary Traffic Stripe, Skip White	LF	1,000
619-A4001	Temporary Traffic Stripe, Skip Yellow	LF	1,000
619-A5001	Temporary Traffic Stripe, Detail	LF	215
619-A6001	Temporary Traffic Stripe, Legend	SF	208
619-A6002	Temporary Traffic Stripe, Legend	LF	69
907-619-B001	Temporary Portable Rumble Strips	LF	240
620-A001	Mobilization	LS	50
907-624-B002	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White	LF	889
907-624-D002	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow	LF	1,634
907-624-E001	Inverted Profile Thermoplastic Detail Traffic Stripe, White	LF	50
907-624-E003	Inverted Profile Thermoplastic Detail Traffic Stripe, Yellow	LF	533
	OR		
628-H001	6" High Performance Cold Plastic Traffic Stripe, Continuous White	LF	889
628-J001	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow	LF	1,634
628-K001	High Performance Cold Plastic Detail Stripe, White	LF	50
628-K002	High Performance Cold Plastic Detail Stripe, Yellow	LF	533
625-F003	Legend, High Build	LF	240
626-A003	6" Thermoplastic Traffic Stripe, Skip White	LF	2,480
626-B003	6" Thermoplastic Traffic Stripe, Continuous White	LF	4,886
626-C003	6" Thermoplastic Edge Stripe, Continuous White	LF	10,400
626-D002	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow	LF	860
626-E003	6" Thermoplastic Traffic Stripe, Continuous Yellow	LF	18,702
626-F004	6" Thermoplastic Edge Stripe, Continuous Yellow	LF	2,695
626-G002	Thermoplastic Detail Stripe, White	LF	10,928
626-G003	Thermoplastic Detail Stripe, Yellow	LF	2,609
626-H004	Thermoplastic Legend, White	SF	694
626-H005	Thermoplastic Legend, Yellow	LF	484
627-J001	Two-Way Clear Reflective High Performance Raised Markers	EA	20
627-K001	Red-Clear Reflective High Performance Raised Markers	EA	68
627-L001	Two-Way Yellow Reflective High Performance Raised Markers	EA	471
630-A001	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness	SF	190
630-A003	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness	SF	381
630-C002	Steel U-Section Posts, 2.0 lb/ft	LF	61
630-C003	Steel U-Section Posts, 3.0 lb/ft	LF	702


- ① THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OR REMOVAL OF SIGNS CALLED TO BE REMOVED IN THE PROJECT
- ② FOR SIGN FOUNDATION
- ③ INCLUDES ALL TRAFFIC CONTROL ITEMS THAT MEETS MUTCD AND MDOT REQUIREMENTS
- ④ COST OF REFLECTIVE POST PANEL (RED & YELLOW) ARE TO BE ABSORBED IN THIS PAY ITEM
- ⑤ AS DIRECTED BY ENGINEER
- ⑥ TO BE USED AT US 82 & SR 389 AND SR 336 & SALLIE HARDIN ROAD LOCATIONS. USE IN OTHER LOCATIONS TO BE USED AS DIRECTED BY ENGINEER.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
SUMMARY OF QUANTITIES	
Project No: HSIP-9999-01(254)	Working Number: SQ-1
County:	Sheet Number: 4
FILENAME : SQ.DGN	Date: 04/01/2021
Design Team: BLUCHART-HORN	Checked: GSA

STATE	PROJECT NO.
MISS	HSIP-9999-01(254)

- ① INCLUDES AMBER BEACON AND ANY OTHER HARDWARE AS NEEDED
- ② AS DIRECTED BY ENGINEER
- ③ TO BE USED AT SR 30 & CR 2371/3371 LOCATION
- ④ TO BE USED AT US 82 & SR 389, US 82 & SR 763 AND SR 30 & CR 5031 LOCATIONS
- ⑤ TO BE INSTALLED AND PROGRAMMED PER MANUFACTURER'S RECOMMENDATION. SEE NOTE 24 ON TSD-1
- ⑥ TO BE USED FOR FOUR-PHASE CABINET LOCATED AS PER PLANS
- ⑦ US 82 & SR 763

SUMMARY OF QUANTITIES (SHEET 2)			
PAY ITEM NO.	PAY ITEM	UNIT	: 107530-301000
			Prelim Final
630-D008	Structural Steel Beams, W6 x 9	LF	120
630-E001	Structural Steel Angles & Bars, 3 1/2" x 3 1/2" x 1/4" Angles	LBS	118
630-E004	Structural Steel Angles & Bars, 7/16" x 2 1/2" Flat Bar	LBS	443
630-K001	Welded & Seamless Steel Pipe Posts, 3 1/2"	LF	96
630-K002	Welded & Seamless Steel Pipe Posts, 3"	LF	109
630-K003	Welded & Seamless Steel Pipe Posts, 4"	LF	390
907-630-O001	Remove and Reset Sign Assembly	EA	10
907-632-A001	Solid State Traffic Cabinet Assembly, Type I Cabinet, Type 1 Controller	EA	1
907-632-J001	Power Service Pedestal	EA	4
907-634-F002	Detector Pole with Foundation, 35' Pole	EA	2
907-634-F004	Detector Pole with Foundation, 25' Pole	EA	11
907-636-B014	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor	LF	7,670
907-636-B028	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 8, 3 Conductor	LF	450
907-637-A002	Pullbox Enclosure, Type 2	EA	39
907-637-A003	Pullbox Enclosure, Type 3	EA	4
907-637-C028	Traffic Signal Conduit, Underground, Type 4, 2"	LF	6,460
907-637-D002	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"	LF	1,626
638-A002	Flashing Assembly, Advanced Warning	EA	4
638-A004	Flasher Assembly, ICWS, Watch For Traffic	EA	7
638-A005	Flasher Assembly, ICWS, Watch For Entering Traffic	EA	18
907-641-A002	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	EA	9
907-641-B002	Signal Advanced Radar Vehicle Detection Sensor, Type 2	EA	6
907-641-D001	Radar Vehicle Detection Cable	LF	6,235
660-A003	Equipment Cabinet, Type B	EA	3

MISSISSIPPI DEPARTMENT OF TRANSPORTATION SUMMARY OF QUANTITIES		 Working Number: SQ-2 Sheet Number: 5
Proj No: HSIP-9999-01(254) County:		
FILENAME : SQ.DGN Design Team: BLUCHAR-HORN, Checked: GSA, Date: 04/21/2011		Date:

STANDARD ROADSIDE SIGN ASSEMBLIES REQUIRED

SHEET NO.	CODE LETTER THIS SHEET	STD. ROADSIDE SIGNS TO BE REQD.	QUANTITY	STANDARD PIPE LENGTH (FT.)				U-SECTION POST LENGTH (FT.)		STRUCTURAL BARS	FOOTING CLASS "B" CONCRETE
				3"	3 1/2"	4"	5"	2.0 LB/FT	3.0 LB/FT		
PSP-1	1	WATCH FOR ENT TRAFFIC	4			82.3				7/16" X 21/2"	0.56
PSP-1	2	WATCH FOR APP VEHICLES	1							16 @ 0.833	0.14
PSP-1	3	R1-1	1		16.5	20.5				4 @ 0.833	0.12
PSP-1		R5-1								2 @ 2.29	
PSP-1		R6-1L									
PSP-1		R6-1R									
PSP-1	4	R1-2	1		14.3					2 @ 2.29	0.12
PSP-1		R5-1									
PSP-1	5	R1-2	1								
PSP-1	6	R5-1	1					12.5			
PSP-1	7	R5-1a	2					13.0			
PSP-1	8	W8-13	1					25.0			
PSP-1	9	M3-4	1	15.8			9.0	14.3		2 @ 2.67	0.12
PSP-1		M1-4									
PSP-1		M6-2									
PSP-1		M3-3									
PSP-1		M1-5									
PSP-1		M6-2									
PSP-1	10	M3-4	1	15.8			9.0			2 @ 2.67	0.12
PSP-1		M1-4									
PSP-1		M6-1L									
PSP-1		M3-3									
PSP-1		M1-5									
PSP-1		M6-1L									
PSP-1	11	M2-1	1	14.5			6.8			2 @ 2.67	0.12
PSP-1		M1-4									
PSP-1		M1-5									
PSP-2	2	WATCH FOR APP VEHICLES	2		41.0					8 @ 0.833	0.28
PSP-2		R6-1L									
PSP-2	3	R1-1	2		32.8					4 @ 2.29	0.24
PSP-2		R6-3									
PSP-2		R6-1L									
PSP-2		R6-1R									
PSP-2	4	R1-2	2					26.0			
PSP-2		W4-4P									
PSP-2		R6-1L									
PSP-2	5	WATCH FOR APP VEHICLES	2		41.0					8 @ 0.833	0.28
PSP-2		R6-1R									
PSP-2	6	M3-1	4					57.0			
PSP-2	7	R1-2	2					26.0			
PSP-2		R5-1									
PSP-2	8	R1-2	2					26.0			
PSP-2	9	R5-1	4					52.0			
PSP-2	10	M3-1	1					14.5			
PSP-2		M1-5									
PSP-2		M6-1R									
PSP-2	11	M3-1	1					14.5			
PSP-2		M1-5									
PSP-2		M6-1L									
PSP-2	12	M2-1	2					27.0			
PSP-2		M1-4									
PSP-2	13	M3-1	1	15.8			9.0			2 @ 2.67	0.12
PSP-2		M1-4									
PSP-2		M6-1L									
PSP-2		M3-3									
PSP-2		M1-4									
PSP-2		M6-2									
PSP-2	14	M3-3	1	15.8			9.0			2 @ 2.67	0.12

STANDARD ROADSIDE SIGN ASSEMBLIES REQUIRED

SHEET NO.	CODE LETTER THIS SHEET	STD. ROADSIDE SIGNS TO BE REQD.	QUANTITY	STANDARD PIPE LENGTH (FT.)						U-SECTION POST LENGTH (FT.)		STRUCTURAL BARS	FOOTING CLASS "B" CONCRETE
				3"	3 1/2"	4"	5"	2.0 LB/FT	3.0 LB/FT	7/16" X 2 1/2"			
PSP-3	1	WATCH FOR ENIT TRAFFIC	4			82.3					16 @ 0.8333	0.56	
PSP-3	2	W8-1	4						57.0			0.24	
PSP-3	3	R1-1	2			32.8							
PSP-3		W4-4P											
PSP-3	4	R1-2	4							52.0			
PSP-3		R5-1											
PSP-3	5	W1-8	14							87.5			
PSP-3	6	W1-2L	1							14.3			
PSP-3		W13-1P											
PSP-3	7	W1-2R	1							14.3			
PSP-3		W13-1P											
PSP-3	8	M2-1	2							27.0			
PSP-3		M1-5											
PSP-3	9	M3-1	1	15.8				9.0		2 @ 2.67	0.12		
PSP-3		M1-5											
PSP-3		M6-1L											
PSP-3		M3-3											
PSP-3		M1-5											
PSP-3		M6-2											
PSP-3	10	M3-3	1	15.8				9.0		2 @ 2.67	0.12		
PSP-3		M1-5											
PSP-3		M6-1L											
PSP-3		M3-1											
PSP-3		M6-2											
PSP-4	1	WATCH FOR ENIT TRAFFIC	4			82.3					16 @ 0.8333	0.56	
PSP-4	2	WATCH FOR APP VEHICLES	2			41.0					8 @ 0.833	0.28	
PSP-5	1	R1-1	2						28.0				
PSP-5		W4-4P											
PSP-5	2	W8-1	2						28.0				
PSP-5	3	W2-1	2						30.0				
PSP-5		W16-8P											
PSP-5	4	M1-5	2						28.0				
PSP-5		M6-4											
PSP-5	5	M1-5	2						28.0				
PSP-5		M2-1											
			UNITS	LIN FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT. POUNDS	CU. YDS.		
			TOTAL THIS BLOCK	31.5	32.8	205.5	0.0	18.0	394.0	44.0	1.9		
			TOTAL FIRST BLOCK	77.5	63.5	184.8	0.0	42.8	307.8	164.0	2.3		
			TOTALS	109.0	96.3	390.3	0.0	60.8	701.8	280.0	4.2		

Notice to Bidder No. 953

[illegible]

STATE	PROJECT NO.
MISS.	HSIP-9999-01(254)

STANDARD ROADSIDE SIGN ASSEMBLIES REQUIRED


SHEET NO.	CODE LETTER THIS SHEET	STD. ROADSIDE SIGNS TO BE REQD.	QUANTITY	SIGN SIZE		POST SIZE (STEEL BEAMS)	STRUCTURAL STEEL	REINF. STEEL	FOOTING CLASS "B" CONCRETE
				PRIMARY	SUPPLEMENT				
PSP-2	1	WATCH FOR ENTERING TRAFFIC	4	7'-6"x 4'-6"	-	14'-6" 15'-6"	24.0	57.8	2.8
		RS-1a	4						
				UNITS		LIN. FT.	LIN. FT.	POUNDS	CU. YDS.
				TOTALS		135.0	120.0	57.8	2.80

STANDARD ROADSIDE SIGNS

SHEET ALUMINUM - 0.080" THICKNESS					TOTAL SIGN AREA (SQ. FT.)	REMARKS
SIGN NUMBER	SIZE	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)		
R1-2	36"x 36"	4.50	12.0	54.0		
R6-1L	36"x 12"	3	5.0	15.0		
R6-1R	36"x 12"	3	5.0	15.0		
R6-3	30"x 24"	5	2.0	10.0		
W1-8	24"x 30"	5	14.0	70.0		
W4-4P	24"x 12"	2	6.0	12.0		
W13-1P	24"x 24"	4	2.0	8.0		
W16-8P	24"x 12"	2	2.0	4.0		
M1-4	24"x 24"	4	9.0	36.0		
M1-5	24"x 24"	4	1.0	4.0		
M1-5	30"x 24"	5	6.0	30.0		
M1-5	24"x 24"	4	8.0	32.0		
M2-1	21"x 15"	2	8.0	17.5		
M3-1	24"x 12"	2	6.0	12.0		
M3-3	24"x 12"	2	6.0	12.0		
M3-4	24"x 12"	2	2.0	4.0		
M6-1L	21"x 15"	2	7.0	15.3		
M6-1R	21"x 15"	2	1.0	2.2		
M6-2	21"x 15"	2	6.0	13.1		
M6-4	21"x 15"	2	2.0	4.4		
TOTALS (0.080" THICKNESS)					110.0	370.5

STANDARD ROADSIDE SIGNS

SHEET ALUMINUM - 0.125" THICKNESS					TOTAL SIGN AREA (SQ. FT.)	REMARKS
SIGN NUMBER	SIZE	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)		
WATCH FOR ENT TRAFFIC	90"x 54"	33.75	4.0	135.0		
WATCH FOR ENT TRAFFIC	48"x 48"	16.00	12.0	192.0		
WATCH FOR APP VEHICLES	48"x 48"	16	7.0	112.0		
R1-1	48"x 48"	13	5.0	66.3		
R1-1	36"x 36"	7	2.0	14.9		
R5-1	36"x 36"	9	13.0	117.0		
R5-1a	42"x 30"	9	6.0	52.5		
W1-2L	36"x 36"	9	1.0	9.0		
W1-2R	36"x 36"	9	1.0	9.0		
W3-1	36"x 36"	9	2.0	18.0		
W3-1	36"x 36"	9	10.0	90.0		
W8-13	36"x 36"	9	1.0	9.0		
TOTALS (0.125" THICKNESS)					64.0	824.7

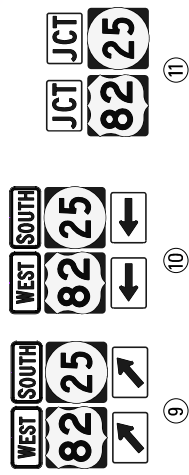
MISSISSIPPI DEPARTMENT OF TRANSPORTATION			
ESTIMATED QUANTITIES		COUNTY: VARIOUS	
ROADSIDE SIGNS		PROJ. NUM.: HSIP-9999-01(254)	
WORKING NUMBER EQ-2		FILENAME: EQ-2.SHDGN	
SHEET NUMBER 7		DATE: 03/08/18	



- NOTES:
1. THIS PLAN ILLUSTRATES ONLY EXISTING SIGN ASSEMBLIES TO BE REMOVED AND NEW SIGN ASSEMBLIES TO BE INSTALLED.
 2. INSTALL AND REMOVE SIGNS AS SHOWN, LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE AND SITE CONDITIONS MAY WARRANT ADJUSTMENT.
 3. UNLESS DIRECTED BY ENGINEER, ALL EXISTING SIGN ASSEMBLIES NOT SHOWN ON THIS PLAN ARE TO REMAIN IN PLACE.
 4. IF DIRECTED BY THE ENGINEER TO REMOVE AND RESET AN EXISTING SIGN ASSEMBLY, PAY ITEM 907-630-0001, REMOVE AND RESET SIGN ASSEMBLY, SHOULD BE USED.
 5. INSTALLATION OF NEW SIGN ASSEMBLIES SHALL NOT BLOCK VISIBILITY OF ANY EXISTING SIGNS THAT ARE TO REMAIN. ALL FIELD ADJUSTMENTS OF NEW SIGN ASSEMBLIES TO BE APPROVED BY ENGINEER.
 6. PAVEMENT MARKINGS AND PAVEMENT MARKERS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE APPLICABLE PAVEMENT MARKING DETAIL SHEET.



SIGN LEGEND

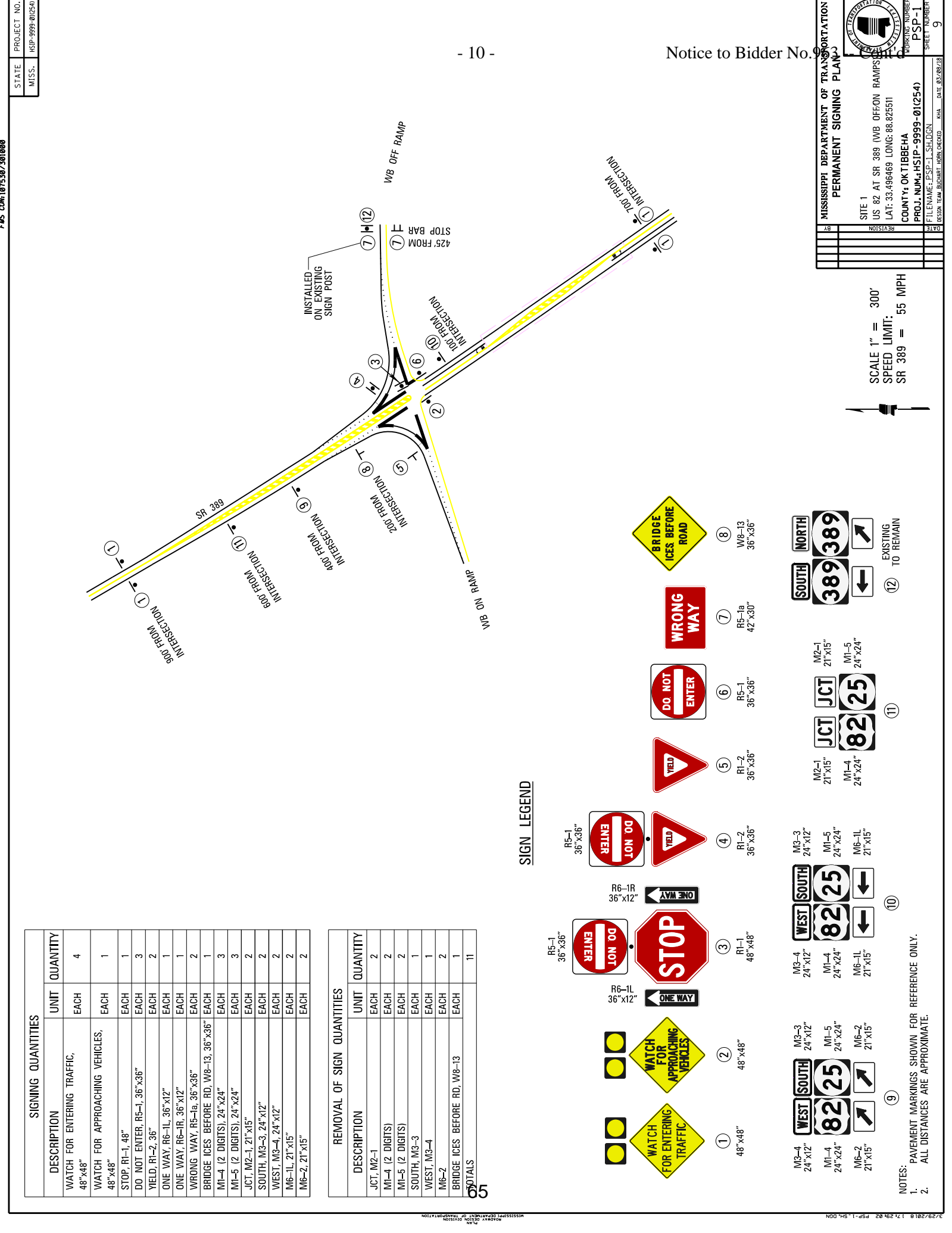


- LEGEND:
- 1. EXISTING SIGN ASSEMBLY TO BE REMOVED, NO NEW SIGN ASSEMBLY TO BE INSTALLED
 - 2. EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
 - 3. EXISTING SIGN ASSEMBLY (ONE PIPE POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
 - 4. EXISTING SIGN ASSEMBLY (ONE PIPE POST, SIGN(S) FACE TWO DIRECTIONS) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
 - 5. NEW SIGN ASSEMBLY, ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION
 - 6. NEW SIGN ASSEMBLY, ONE PIPE POST, SIGN(S) FACE ONE DIRECTION
 - 7. NEW SIGN ASSEMBLY, TWO U-SECTION POST, SIGN(S) FACE ONE DIRECTION
 - 8. NEW SIGN ASSEMBLY, TWO U-SECTION POST, SIGN(S) FACE ONE DIRECTION
 - 9. NEW SIGN ASSEMBLY, TWO U-SECTION POST, SIGN(S) FACE ONE DIRECTION
 - 10. NEW SIGN ASSEMBLY, TWO U-SECTION POST, SIGN(S) FACE ONE DIRECTION
 - 11. NEW SIGN ASSEMBLY, TWO U-SECTION POST, SIGN(S) FACE ONE DIRECTION

Notice to Bidder No. 9

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
INTERSECTION IMPROVEMENT PLAN	
BY	DATE
REVISION	DATE
SITE 1	
US 82 AT SR 389 (WB OFF ON RAMP)	
LAT: 33.496469 LONG: 88.825511	
COUNTY: OKTIBBEHA	
PROJ. NUM.: HSP-9999-01(254)	
WORKING NUMBER	
FILE NAME: JD-1.SHDGN	
DESIGN TEAM: BUDHART, HORN, CHECKED: KHA	
DATE: 03/08/18	
SHEET NUMBER	
10-1	
8	

SCALE 1" = 300'
SPEED LIMIT:
SR 389 = 55 MPH



SIGNING QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
WATCH FOR ENTERING TRAFFIC, 48"x48"	EACH	4
WATCH FOR APPROACHING VEHICLES, 48"x48"	EACH	1
STOP, R1-1, 48"	EACH	1
DO NOT ENTER, R5-1, 36"x36"	EACH	3
YIELD, R1-2, 36"	EACH	2
ONE WAY, R6-1L, 36"x12"	EACH	1
ONE WAY, R6-1R, 36"x12"	EACH	1
WRONG WAY, R5-1a, 36"x36"	EACH	2
BRIDGE ICES BEFORE RD, W8-13, 36"x36"	EACH	1
M1-4 (2 DIGITS), 24"x24"	EACH	3
M1-5 (2 DIGITS), 24"x24"	EACH	3
JCT, M2-1, 21"x15"	EACH	2
SOUTH, M3-3, 24"x12"	EACH	2
WEST, M3-4, 24"x12"	EACH	2
M6-1L, 21"x15"	EACH	2
M6-2, 21"x15"	EACH	2

REMOVAL OF SIGN QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
JCT, M2-1	EACH	2
M1-4 (2 DIGITS)	EACH	2
M1-5 (2 DIGITS)	EACH	2
SOUTH, M3-3	EACH	1
WEST, M3-4	EACH	1
M6-2	EACH	2
BRIDGE ICES BEFORE RD, W8-13	EACH	1
TOTALS		11

SIGN LEGEND

NOTES:
1. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY.
2. ALL DISTANCES ARE APPROXIMATE.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
PERMANENT SIGNING PLAN

PROJECT: SR 389 WB OFF-RAMP

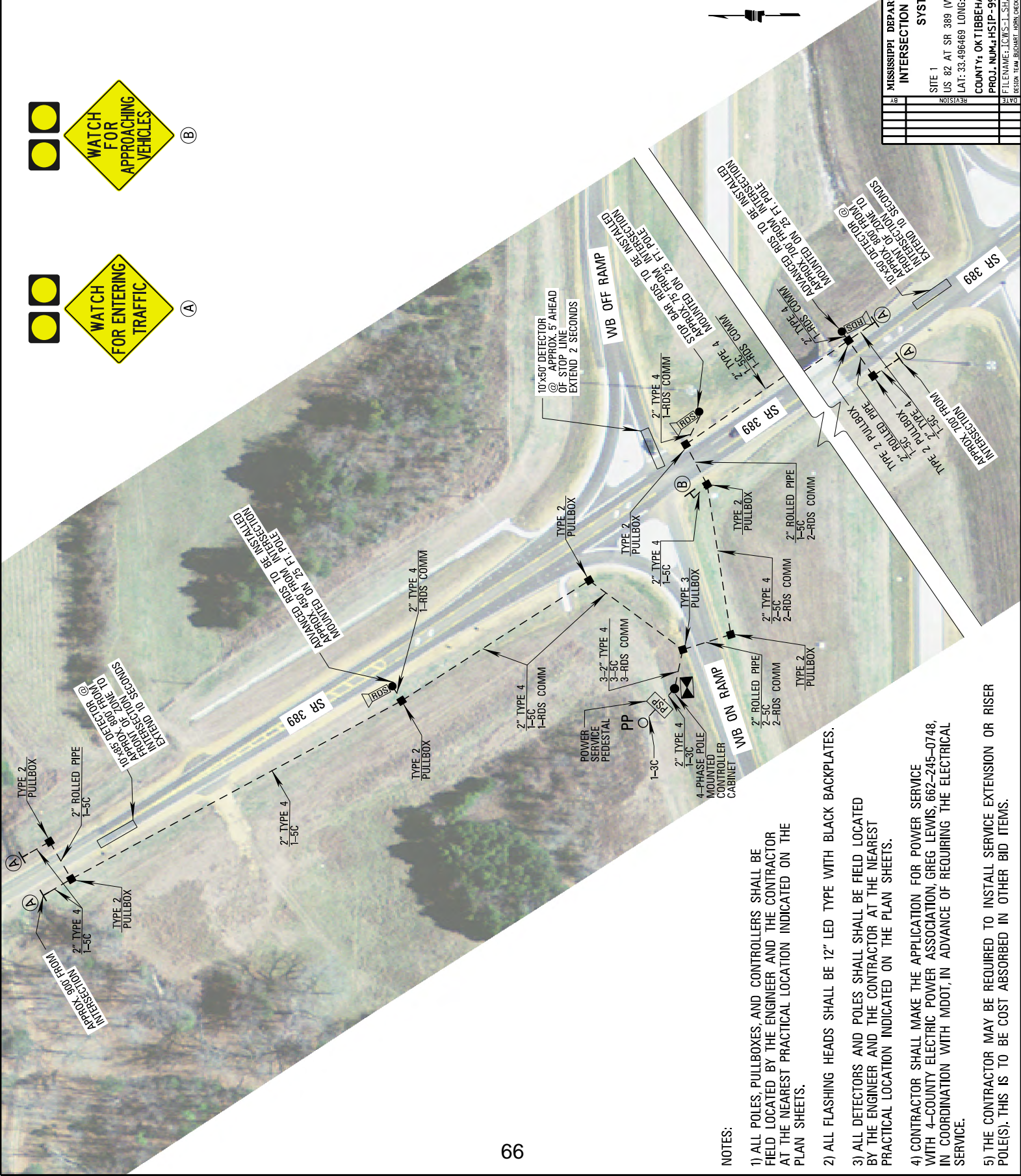
COUNTY: OKTIBBEHA

PROJ. NUM.: HSP-9999-01(254)

FILENAME: PSP-1_SIGN

SHEET NUMBER: 9

DATE: 03/08/18



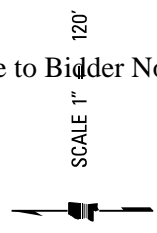
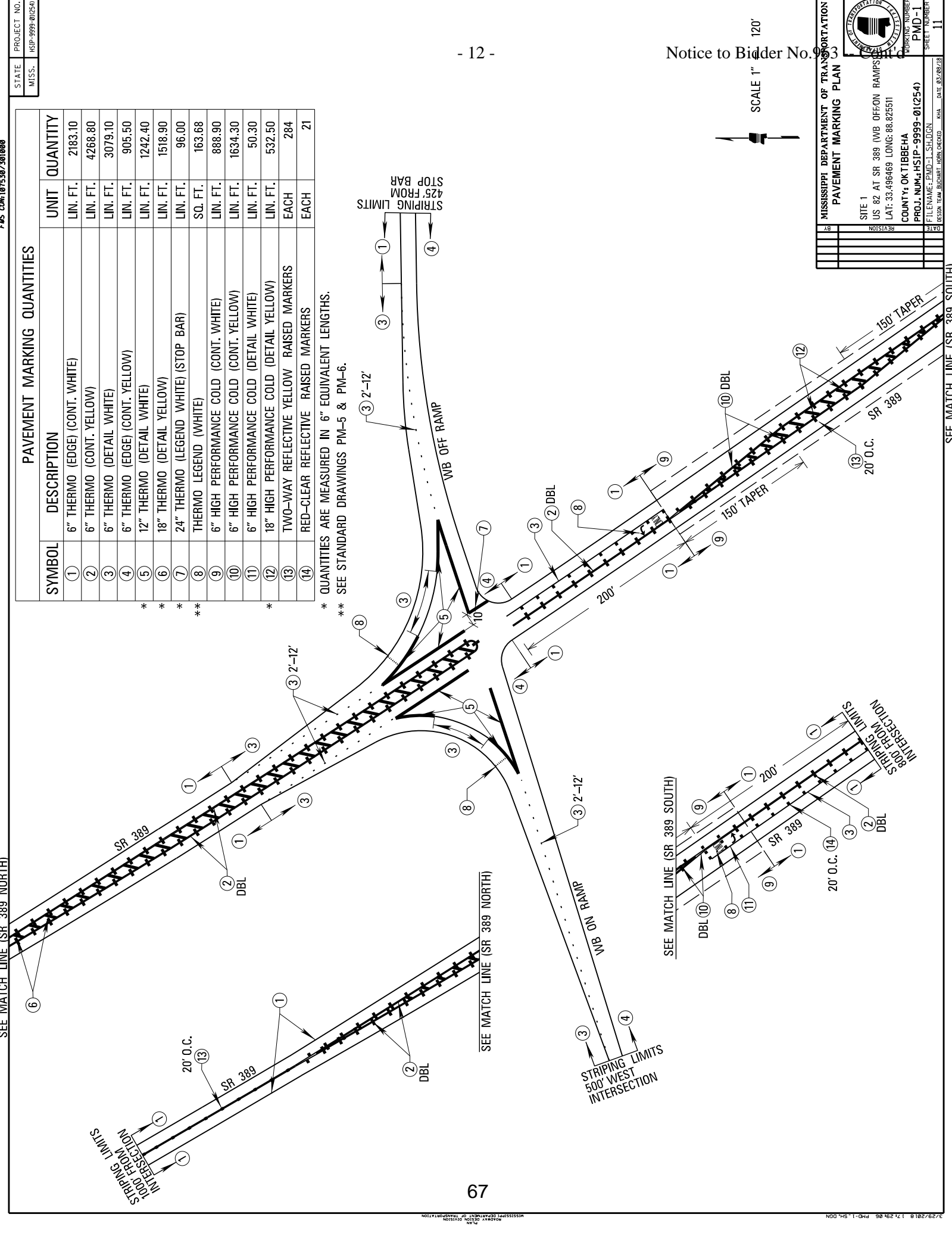
NOTES:

- 1) ALL POLES, PULLBOXES, AND CONTROLLERS SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 2) ALL FLASHING HEADS SHALL BE 12" LED TYPE WITH BLACK BACKPLATES.
- 3) ALL DETECTORS AND POLES SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 4) CONTRACTOR SHALL MAKE THE APPLICATION FOR POWER SERVICE WITH 4-COUNTY ELECTRIC POWER ASSOCIATION, GREG LEWIS, 662-245-0748, IN COORDINATION WITH MDOT, IN ADVANCE OF REQUIRING THE ELECTRICAL SERVICE.
- 5) THE CONTRACTOR MAY BE REQUIRED TO INSTALL SERVICE EXTENSION OR RISER POLE(S). THIS IS TO BE COST ABSORBED IN OTHER BID ITEMS.

PAVEMENT MARKING QUANTITIES

SYMBOL	DESCRIPTION	UNIT	QUANTITY
①	6" THERMO (EDGE) (CONT. WHITE)	LIN. FT.	2183.10
②	6" THERMO (CONT. YELLOW)	LIN. FT.	4268.80
③	6" THERMO (DETAIL WHITE)	LIN. FT.	3079.10
④	6" THERMO (EDGE) (CONT. YELLOW)	LIN. FT.	905.50
⑤	12" THERMO (DETAIL WHITE)	LIN. FT.	1242.40
⑥	18" THERMO (DETAIL YELLOW)	LIN. FT.	1518.90
⑦	24" THERMO (LEGEND WHITE) (STOP BAR)	LIN. FT.	96.00
⑧	THERMO LEGEND (WHITE)	SQ. FT.	163.68
⑨	6" HIGH PERFORMANCE COLD (CONT. WHITE)	LIN. FT.	888.90
⑩	6" HIGH PERFORMANCE COLD (CONT. YELLOW)	LIN. FT.	1634.30
⑪	6" HIGH PERFORMANCE COLD (DETAIL WHITE)	LIN. FT.	50.30
⑫	18" HIGH PERFORMANCE COLD (DETAIL YELLOW)	LIN. FT.	532.50
⑬	TWO-WAY REFLECTIVE YELLOW RAISED MARKERS	EACH	284
⑭	RED-CLEAR REFLECTIVE RAISED MARKERS	EACH	21

* QUANTITIES ARE MEASURED IN 6" EQUIVALENT LENGTHS.
** SEE STANDARD DRAWINGS PM-5 & PM-6.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKING PLAN

STATE OF MISSISSIPPI

TRANSPORTATION

SITE 1

US 82 AT SR 389 (WB OFF-RAMP) RAMPSPR

LAT: 33.496469 LONG: 88.825511

COUNTY: OKTIBBEHA

PROJ. NUM.: HSIP-9999-01(254)

FILENAME: PMD-1_SHDGN

DESIGN TEAM: BUDIMART, INC. CHECKED: KHA DATE: 03/08/18

WORKING NUMBER

PMD-1

SHEET NUMBER

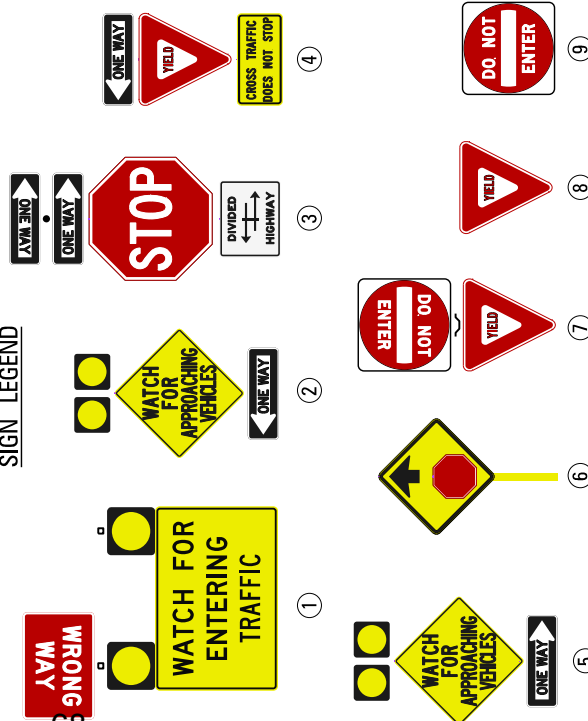
11

SEE MATCH LINE (SR 389 SOUTH)

NOTES:

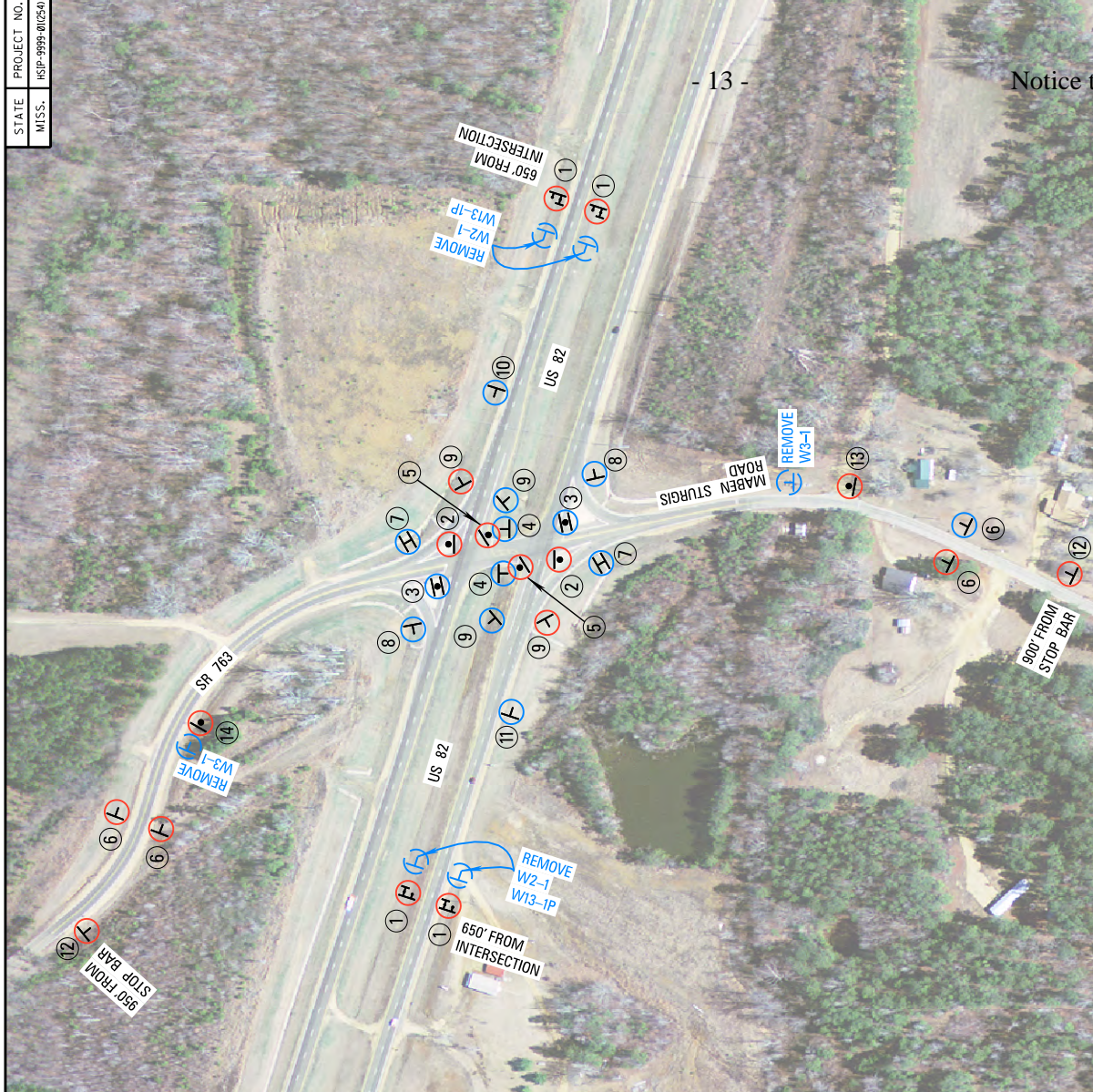
1. THIS PLAN ILLUSTRATES ONLY EXISTING SIGN ASSEMBLIES TO BE REMOVED AND NEW SIGN ASSEMBLIES TO BE INSTALLED.
2. INSTALL AND REMOVE SIGNS AS SHOWN, LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE AND SITE CONDITIONS MAY WARRANT ADJUSTMENT.
3. UNLESS DIRECTED BY ENGINEER, ALL EXISTING SIGN ASSEMBLIES NOT SHOWN ON THIS PLAN ARE TO REMAIN IN PLACE.
4. IF DIRECTED BY THE ENGINEER TO REMOVE AND RESET AN EXISTING SIGN ASSEMBLY, PAY ITEM 907-630-0001 REMOVE AND RESET SIGN ASSEMBLY, SHOULD BE USED.
5. INSTALLATION OF NEW SIGN ASSEMBLIES SHALL NOT BLOCK VISIBILITY OF ANY EXISTING SIGNS THAT ARE TO REMAIN. ALL FIELD ADJUSTMENTS OF NEW SIGN ASSEMBLIES TO BE APPROVED BY ENGINEER.
6. REFLECTIVE SIGN POST PANELS SHALL BE AT LEAST 3 INCHES IN WIDTH BY 72 INCHES IN HEIGHT. REFLECTIVE POST PANEL SHALL BE USED ONLY WHERE SHOWN ON PLANS AND SHALL BE PAID FOR UNDER PAY ITEM 630-C003.
7. PAVEMENT MARKINGS AND PAVEMENT MARKERS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE APPLICABLE PAVEMENT MARKING DETAIL SHEET.
8. THE EXISTING OVERHEAD FLASHING ASSEMBLY INCLUDING SIGNAL HEADS, POLES, POLE FOUNDATIONS, WIRING AND ANY OTHER PERTINENT ITEMS ARE TO BE REMOVED BY THE CONTRACTOR AND SHALL BECOME THE PROPERTY OF THE DISTRICT 1. THE EQUIPMENTS SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE DISTRICT 1 ENGINEER. THE COST TO BE ABSORBED IN OTHER BID ITEMS.

SIGN LEGEND




LEGEND:

10. **EXISTING SIGN ASSEMBLY (ONE POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED, NO NEW SIGN ASSEMBLY TO BE INSTALLED**
EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
EXISTING SIGN ASSEMBLY (ONE PIPE POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE TWO DIRECTIONS) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
EXISTING SIGN ASSEMBLY (ONE PIPE POST, SIGN(S) FACE TWO DIRECTIONS) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
NEW SIGN ASSEMBLY, ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION
NEW SIGN ASSEMBLY, ONE PIPE POST, SIGN(S) FACE ONE DIRECTION
NEW SIGN ASSEMBLY, TWO PIPE POST, SIGN(S) FACE ONE OR TWO DIRECTION



- 13 -

Notice to Bidder No.9 Cont'd

MISSISSIPPI DEPARTMENT OF TRANSPORTATION INTERSECTION IMPROVEMENT PLAN			WORKING NUMBER 10-2-2 SHEET NUMBER 12
BY	DATE	SITE 2 US 82 AT SR 763 LAT: 33.526825 LONG: 89.066478 COUNTY: OK TIBBEHA PROJ: NUKA HSP- 9999-01(254) FILENAME: 10-2-2_SHO.DGN DESIGN TEAM BUDHART WORK GROUP KHA DATE 03/08/18	
REVISION	DATE		

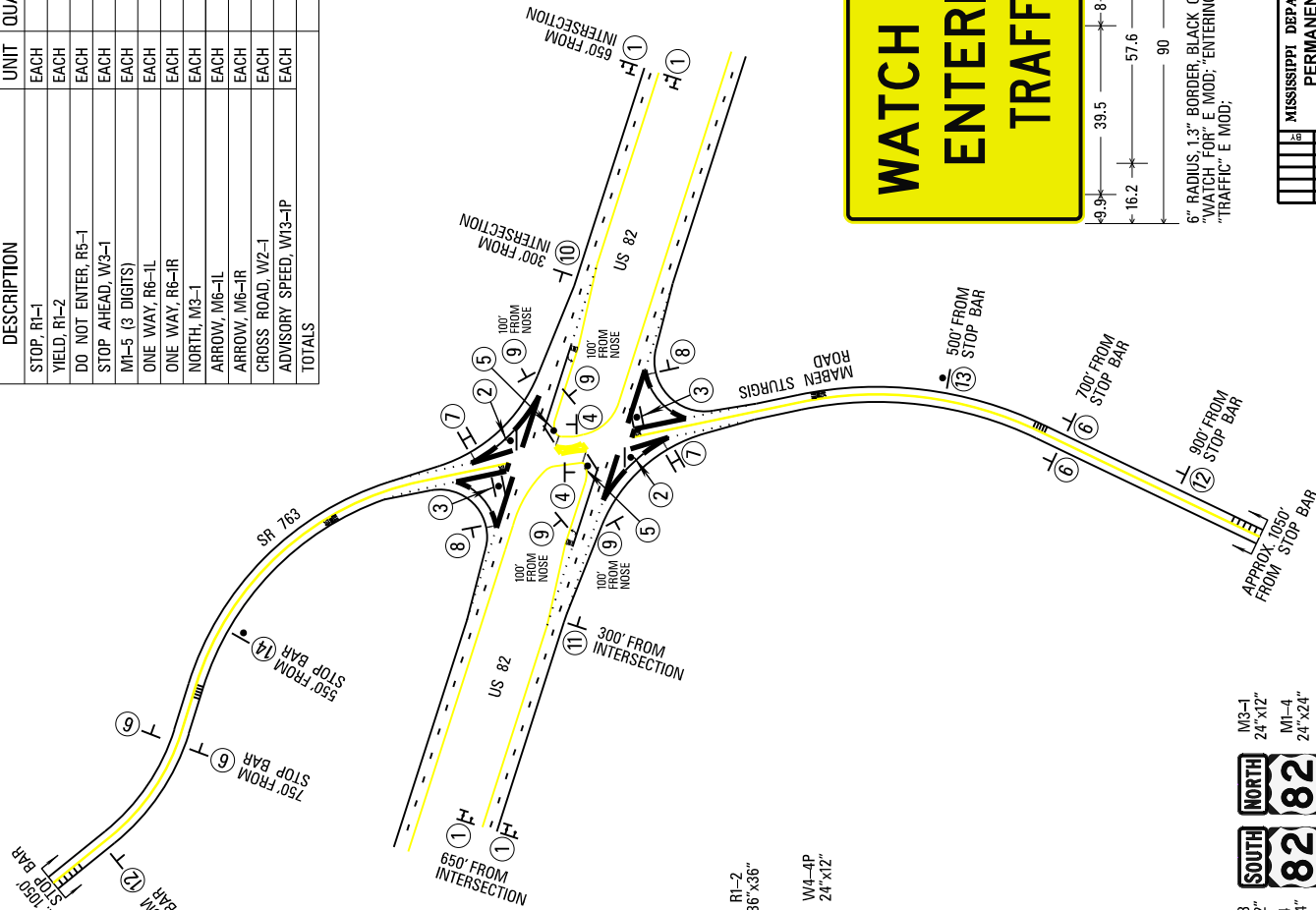
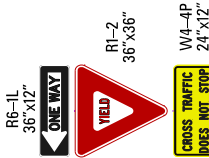
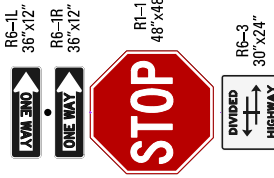
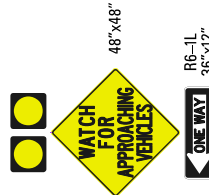
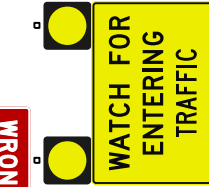
SCALE 1" = 300'
SPEED LIMIT:
JS 82 = 65 MPH



REMOVAL OF SIGN QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
STOP, R1-1	EACH	4
YIELD, R1-2	EACH	4
DO NOT ENTER, R8-1	EACH	4
STOP AHEAD, W3-1	EACH	3
M1-5 (3 DIGITS)	EACH	2
ONE WAY, R6-1L	EACH	4
ONE WAY, R6-1R	EACH	2
NORTH, M3-1	EACH	2
ARROW, M6-1L	EACH	1
ARROW, M6-1R	EACH	1
CROSS. ROAD, W2-1	EACH	4
ADVISORY SPEED, W13-1P	EACH	4
TOTALS		35

SIGNING QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
WATCH FOR ENTERING TRAFFIC, 90"x34"	EACH	4
WATCH FOR APPROACHING VEHICLES, 48"x48"	EACH	4
STOP, R1-1, 48"	EACH	2
DO NOT ENTER, R5-1, 36"x36"	EACH	6
YIELD, R1-2, 36"	EACH	6
ONE WAY, R6-1L, 36"x12"	EACH	4
ONE WAY, R6-1R, 36"x12"	EACH	4
WRONG WAY, R5-1A, 42"x30"	EACH	4
DIVIDED HIGHWAY, R6-3, 30"x24"	EACH	2
STOP AHEAD, W3-1, 36"x36"	EACH	4
CROSS TRAFFIC DOES NOT STOP, W4-WP, 24"x12"	EACH	2
M1-4 (2 DIGITS), 24"x24"	EACH	6
M1-5 (2 DIGITS), 24"x24"	EACH	2
JCT, M2-1, 21"x15"	EACH	2
NORTH, M3-1, 24"x12"	EACH	4
SOUTH, M3-3, 24"x12"	EACH	2
M6-1L, 21"x15"	EACH	3
M6-1R, 21"x15"	EACH	1
M6-2, 21"x15"	EACH	2
REFLECTIVE SIGN POST PANEL YELLOW	EACH	4

SIGN LEGEND




WATCH FOR ENTERING TRAFFIC

← Notice to Bidder No. 9

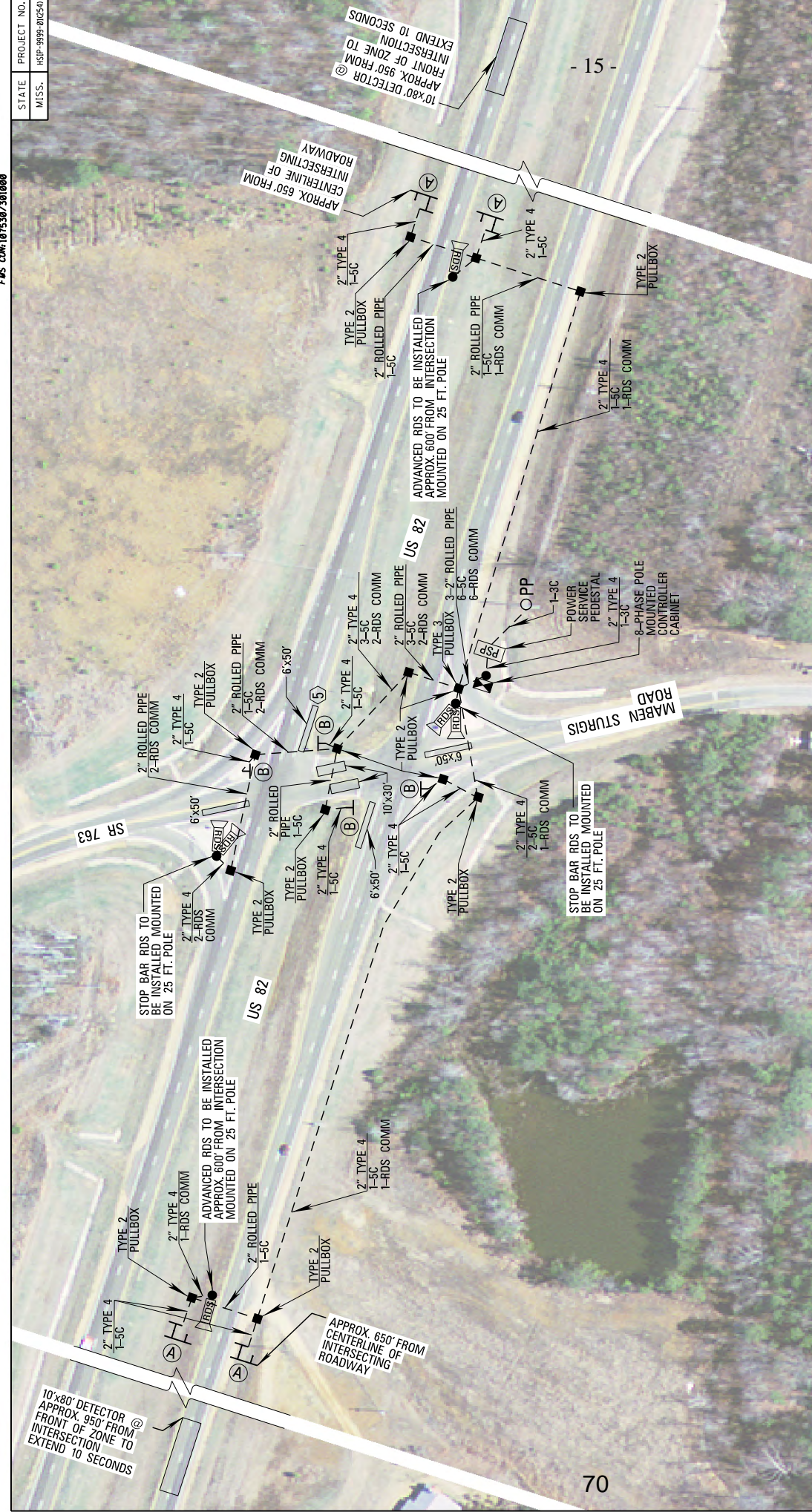
6" RADIUS, 1.3" BORDER, BLACK ON YELLOW;
"WATCH FOR" E MOD; "ENTERING" E MOD;
"TRAFFIC" E MOD;

SCALE 1" = 300'
SPEED LIMIT:
US 82 = 65 MPH

MISSISSIPPI DEPARTMENT OF TRANSPORTATION PERMANENT SIGNING PLANS	9		WORKING NUMBER PSP-2 SHEET NUMBER 13
SITE 2 US 82 AT SR 763 LAT: 33.526825 LONG: 89.066478 COUNTY: OKTIBBEHA PROJ. NUM: HSIP-9999-01(254)	DATE FILENAME: PSP-2_S4.DGN PERSON: BUSHART, WILSON, OFFERED KWA DATE: 03/08/18	9	Could

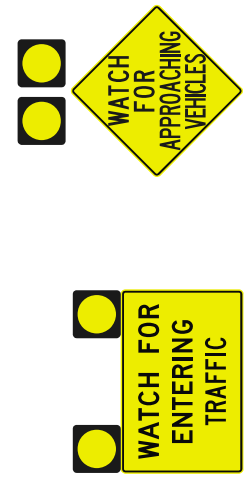
NOTES:

1. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY.
2. ALL DISTANCES ARE APPROXIMATE.



NOTES:

- 1) ALL POLES, PULLBOXES, AND CONTROLLERS SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 2) ALL FLASHING HEADS SHALL BE 12" LED TYPE WITH BLACK BACKPLATES
- 3) ALL DETECTORS AND POLES SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 4) CONTRACTOR SHALL MAKE THE APPLICATION FOR POWER SERVICE WITH 4-COUNTY ELECTRIC POWER ASSOCIATION, GREG LEWIS, 662-245-0748, IN COORDINATION WITH MDOT, IN ADVANCE OF REQUIRING THE ELECTRICAL SERVICE.
- 5) THE CONTRACTOR MAY BE REQUIRED TO INSTALL SERVICE EXTENSION OR RISER POLE(S). THIS IS TO BE COST ABSORBED IN OTHER BID ITEMS.

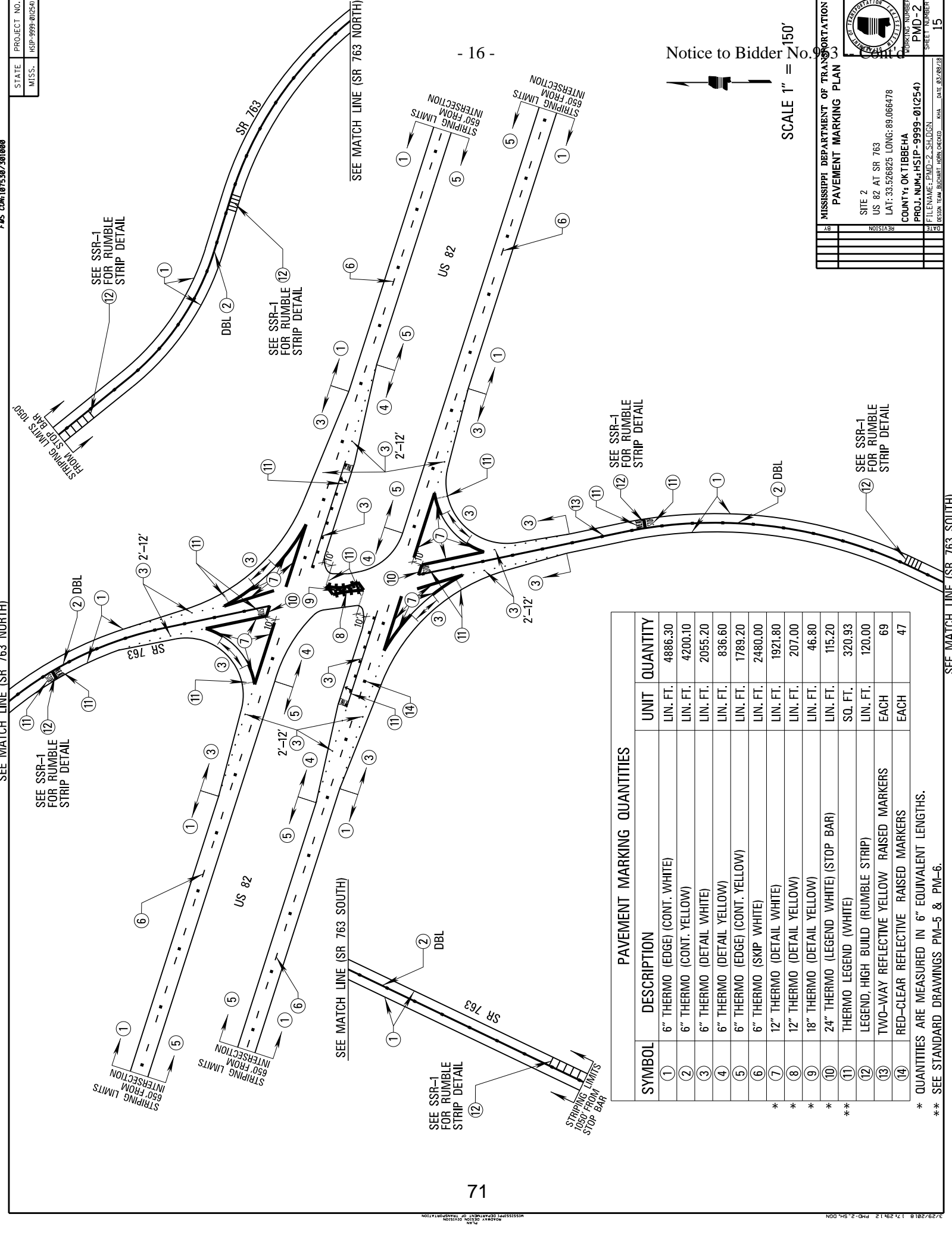


SCALE 1" = 150'
SPEED LIMIT:
US 82 = 65 MPH

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
INTERSECTION CONFLICT WARNING	
SYSTEM	
SITE 2	
US 82 AT SR 763	
LAT: 33.526825 LONG: 89.066478	
COUNTY: OKTIBBEHA	
PROJ. NUM.: HSIP-9999-01(254)	
WORKING NUMBER	
FILE NAME: JCWS-2_SHE.DGN	
DESIGN TEAM	BUDHART, HORN, CHECKED
RHA	DATE: 03/08/18
SHEET NUMBER	14



ICWS-2



- 16 -

Notice to Bidder No. 9999-01(254)

SCALE 1" = 150'

STATE

PROJECT NO.

MISS.

HSIP-9999-01(254)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

SITE 2

US 82 AT SR 763

COUNTY: OKTIBBEHA

PROJ. NUM.: HSIP-9999-01(254)

FILENAME: PMD-2_SHL.DGN

DATE: 03/08/18

WORKING NUMBER

PMD-2

SHEET NUMBER

15

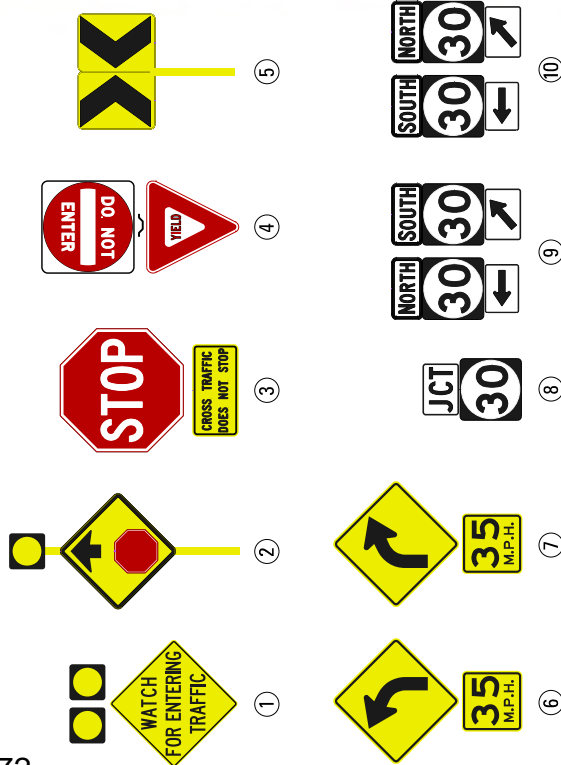
PAVEMENT MARKING QUANTITIES		
SYMBOL	DESCRIPTION	UNIT
1	6" THERMO (EDGE) (CONT. WHITE)	LIN. FT.
2	6" THERMO (CONT. YELLOW)	LIN. FT.
3	6" THERMO (DETAIL WHITE)	LIN. FT.
4	6" THERMO (DETAIL YELLOW)	LIN. FT.
5	6" THERMO (EDGE) (CONT. YELLOW)	LIN. FT.
6	6" THERMO (SKIP WHITE)	LIN. FT.
7	12" THERMO (DETAIL WHITE)	LIN. FT.
8	12" THERMO (DETAIL YELLOW)	LIN. FT.
9	18" THERMO (DETAIL YELLOW)	LIN. FT.
10	24" THERMO (LEGEND WHITE) (STOP BAR)	LIN. FT.
11	THERMO LEGEND (WHITE)	SQ. FT.
12	LEGEND, HIGH BUILD (RUMBLE STRIP)	LIN. FT.
13	TWO-WAY REFLECTIVE YELLOW RAISED MARKERS	EACH
14	RED-CLEAR REFLECTIVE RAISED MARKERS	EACH

* QUANTITIES ARE MEASURED IN 6" EQUIVALENT LENGTHS.
** SEE STANDARD DRAWINGS PM-5 & PM-6.

NOTES:

1. THIS PLAN ILLUSTRATES ONLY EXISTING SIGN ASSEMBLIES TO BE REMOVED AND NEW SIGN ASSEMBLIES TO BE INSTALLED.
2. INSTALL AND REMOVE SIGNS AS SHOWN, LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE AND SITE CONDITIONS MAY WARRANT ADJUSTMENT.
3. UNLESS DIRECTED BY ENGINEER, ALL EXISTING SIGN ASSEMBLIES NOT SHOWN ON THIS PLAN ARE TO REMAIN IN PLACE.
4. IF DIRECTED BY THE ENGINEER TO REMOVE AND RESET AN EXISTING SIGN ASSEMBLY, PAY ITEM 907-630-0001 REMOVE AND RESET SIGN ASSEMBLY, SHOULD BE USED.
5. INSTALLATION OF NEW SIGN ASSEMBLIES SHALL NOT BLOCK VISIBILITY OF ANY EXISTING SIGNS THAT ARE TO REMAIN. ALL FIELD ADJUSTMENTS OF NEW SIGN ASSEMBLIES TO BE APPROVED BY ENGINEER.
6. REFLECTIVE SIGN POST PANELS SHALL BE AT LEAST 3 INCHES IN WIDTH BY 72 INCHES IN HEIGHT. REFLECTIVE POST PANEL SHALL BE USED ONLY WHERE SHOWN ON PLANS AND SHALL BE PAID FOR UNDER PAY ITEM 630-C003.
7. PAVEMENT MARKINGS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE APPLICABLE PAVEMENT MARKING DETAIL SHEET.
8. THE EXISTING STOP SIGN WITH SOLAR FLASHING ASSEMBLY (QTY. 2) ARE TO BE REMOVED BY THE CONTRACTOR AND SHALL BECOME THE PROPERTY OF THE DISTRICT 1. THE EQUIPMENT SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE DISTRICT 1 ENGINEER.


SIGN LEGEND

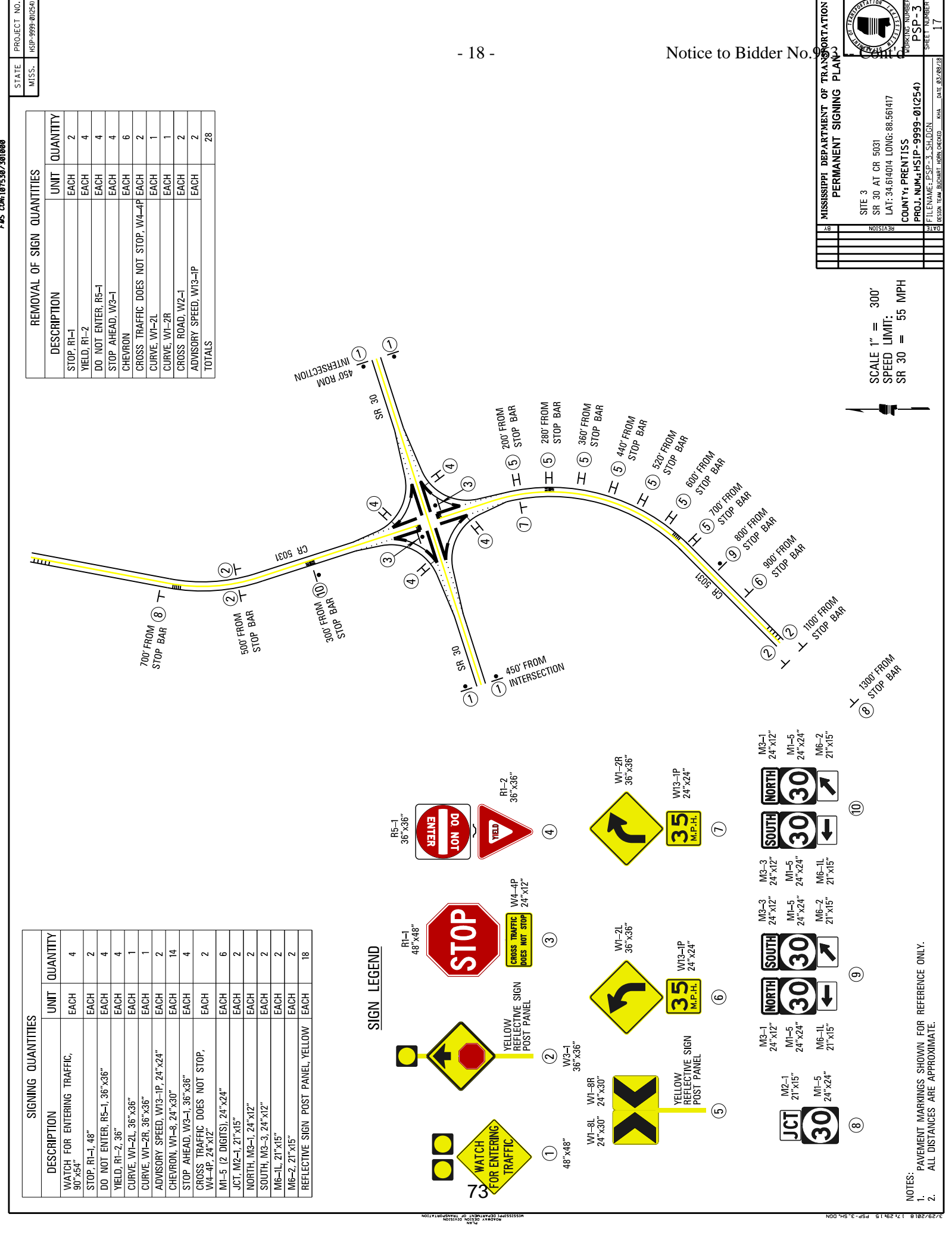


LEGEND:

- ⊖ EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED, NO NEW SIGN ASSEMBLY TO BE INSTALLED
- ⊖ EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
- ⊕ EXISTING SIGN ASSEMBLY (ONE PIPE POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
- ⊕ EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE TWO DIRECTIONS) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
- ⊕ NEW SIGN ASSEMBLY, ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION
- ⊕ NEW SIGN ASSEMBLY, ONE PIPE POST, SIGN(S) FACE ONE DIRECTION

SCALE 1" = 300'
SPEED LIMIT:
SR 30 = 55 MPH

DATE	FILENAME: ID-3_CH.DGN	DESIGN TEAM BUDHART NARRI CORP.	KHA	DATE: 03/08/18	SHEET NUMBER	16
PROJECT	PROJ. NUM: HSIP-9999-01(254)	COUNTY: PRENTISS	PORTING NUMBER			
LOCATION	LAT: 34.814014 LONG: 88.561417		ID-3			
SECTION	SR 30 AT CR 5031		SECTION			
AB	SITE 3		SECTION			
<div> <div>MISSISSIPPI DEPARTMENT OF TRANSPORTATION</div> <div>INTERSECTION IMPROVEMENT PLAN</div> </div> <div>  </div>						



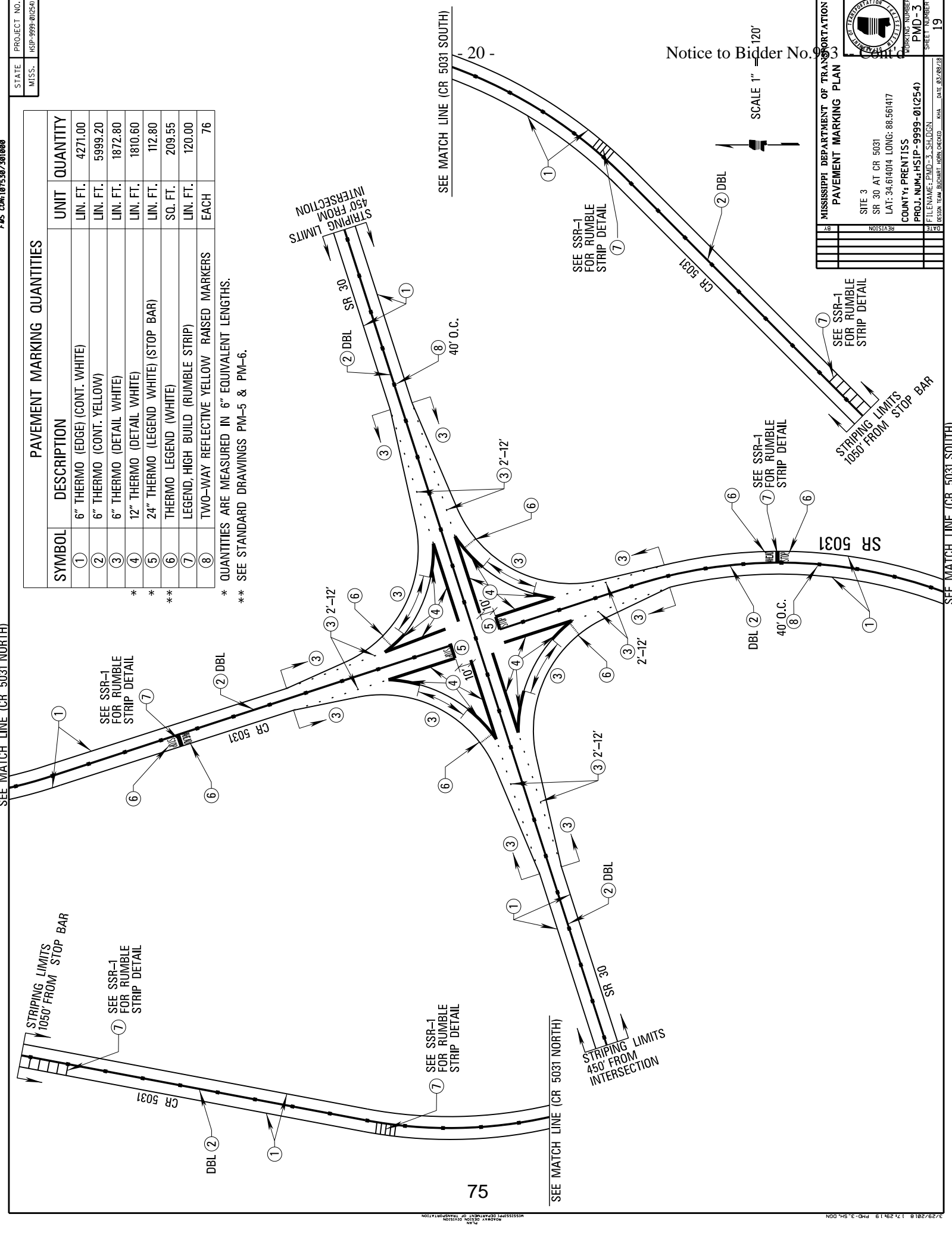


- 1) ALL POLES, PULLBOXES, AND CONTROLLERS SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 2) ALL FLASHING HEADS SHALL BE 12" LED TYPE WITH BLACK BACKPLATES
- 3) ALL DETECTORS AND POLES SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 4) CONTRACTOR SHALL MAKE THE APPLICATION FOR POWER SERVICE WITH PRENTISS COUNTY ELECTRIC POWER ASSOCIATION, ROBERT DODSON, 662-728-4433, IN COORDINATION WITH MDOT, IN ADVANCE OF REQUIRING THE ELECTRICAL SERVICE.
- 5) THE CONTRACTOR MAY BE REQUIRED TO INSTALL SERVICE EXTENSION OR RISER POLE(S). THIS IS TO BE COST ABSORBED IN OTHER BID ITEMS.

4) CONTRACTOR SHALL MAKE THE APPLICATION FOR POWER SERVICE WITH PRENTISS COUNTY ELECTRIC POWER ASSOCIATION, ROBERT DODSON, 662-728-4433, IN COORDINATION WITH MDOT, IN ADVANCE OF REQUIRING THE ELECTRICAL SERVICE.

5) THE CONTRACTOR MAY BE REQUIRED TO INSTALL SERVICE EXTENSION OR RISER POLE(S). THIS IS TO BE COST ABSORBED IN OTHER BID ITEMS.

SCALE 1" = 150'
SPEED LIMIT:
SR 30 = 55 MPH



PAVEMENT MARKING QUANTITIES

SYMBOL	DESCRIPTION	QUANTITY	
		UNIT	QUANTITY
①	6" THERMO (EDGE) (CONT. WHITE)	LIN. FT.	4271.00
②	6" THERMO (CONT. YELLOW)	LIN. FT.	5999.20
③	6" THERMO (DETAIL WHITE)	LIN. FT.	1872.80
④	12" THERMO (DETAIL WHITE)	LIN. FT.	1810.60
⑤	24" THERMO (LEGEND WHITE) (STOP BAR)	LIN. FT.	112.80
⑥	THERMO LEGEND (WHITE)	SQ. FT.	209.55
⑦	LEGEND, HIGH BUILD (RUMBLE STRIP)	LIN. FT.	120.00
⑧	TWO-WAY REFLECTIVE YELLOW RAISED MARKERS	EACH	76

* QUANTITIES ARE MEASURED IN 6" EQUIVALENT LENGTHS.

** SEE STANDARD DRAWINGS PM-5 & PM-6.

Notice to Bidder No. 9933

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

STATE PROJECT NO. MISS. HSP-9999-01(254)

DATE

BY

REVISION

DATE

FILE NAME: PMD-3_SHLDGN

DESIGN TEAM: BUDHART, HORN, CHECKED: KHA

DATE: 03/08/18

19

SHEET NUMBER

PMO-3

WORKING NUMBER

COUNTY: PRENTISS

PROJ. NUM.: HSP-9999-01(254)

SITE 3

SR 30 AT CR 5031

LAT: 34.614014 LONG: 88.561417

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

STATE PROJECT NO. MISS. HSP-9999-01(254)

DATE

BY

REVISION

DATE

FILE NAME: PMD-3_SHLDGN

DESIGN TEAM: BUDHART, HORN, CHECKED: KHA

DATE: 03/08/18

19

SHEET NUMBER

PMO-3

WORKING NUMBER

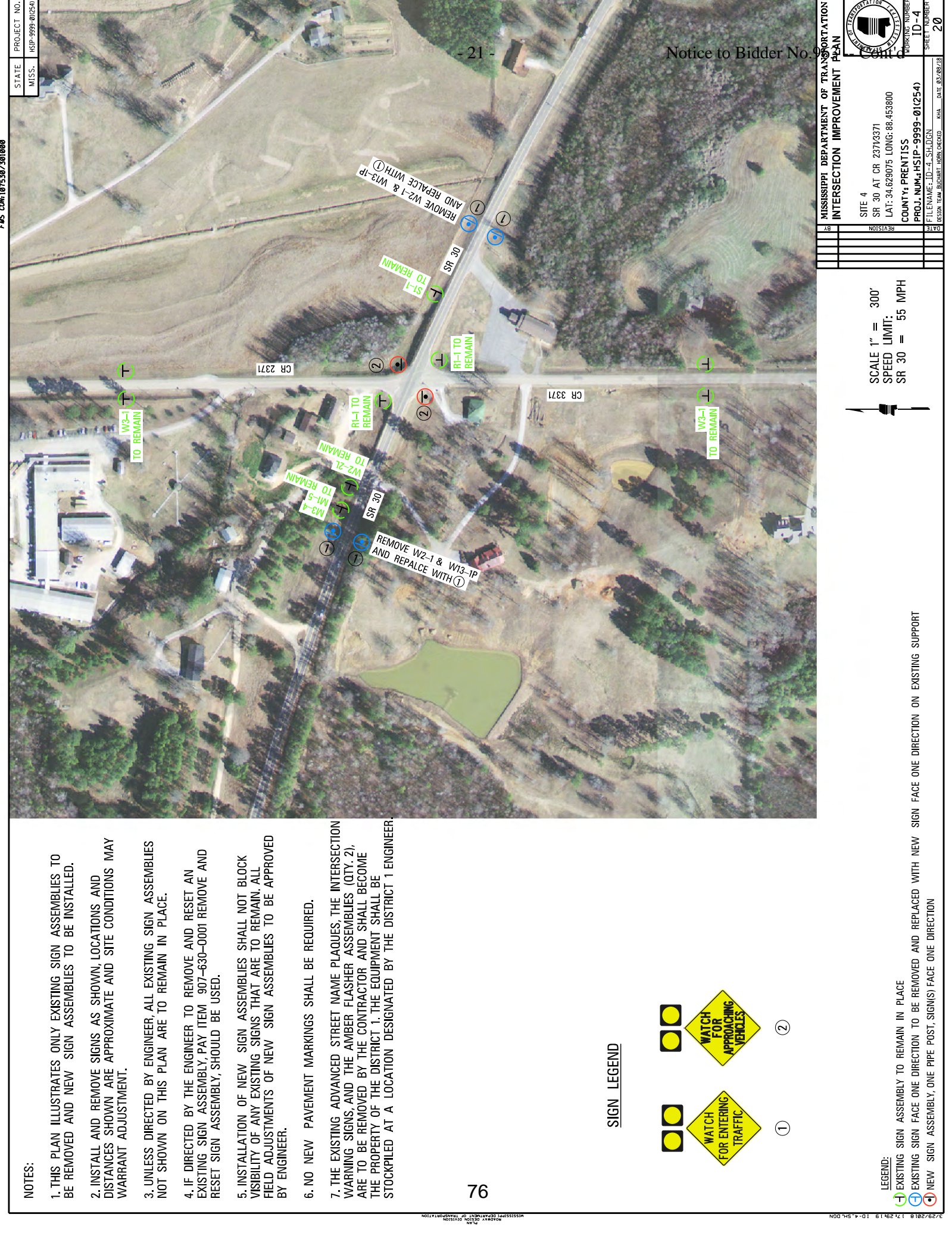
COUNTY: PRENTISS

PROJ. NUM.: HSP-9999-01(254)

SITE 3

SR 30 AT CR 5031

LAT: 34.614014 LONG: 88.561417



NOTES:

1. THIS PLAN ILLUSTRATES ONLY EXISTING SIGN ASSEMBLIES TO BE REMOVED AND NEW SIGN ASSEMBLIES TO BE INSTALLED.
2. INSTALL AND REMOVE SIGNS AS SHOWN, LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE AND SITE CONDITIONS MAY WARRANT ADJUSTMENT.
3. UNLESS DIRECTED BY ENGINEER, ALL EXISTING SIGN ASSEMBLIES NOT SHOWN ON THIS PLAN ARE TO REMAIN IN PLACE.
4. IF DIRECTED BY THE ENGINEER TO REMOVE AND RESET AN EXISTING SIGN ASSEMBLY, PAY ITEM 907-630-0001 REMOVE AND RESET SIGN ASSEMBLY, SHOULD BE USED.
5. INSTALLATION OF NEW SIGN ASSEMBLIES SHALL NOT BLOCK VISIBILITY OF ANY EXISTING SIGNS THAT ARE TO REMAIN. ALL FIELD ADJUSTMENTS OF NEW SIGN ASSEMBLIES TO BE APPROVED BY ENGINEER.
6. NO NEW PAVEMENT MARKINGS SHALL BE REQUIRED.
7. THE EXISTING ADVANCED STREET NAME PLAQUES, THE INTERSECTION WARNING SIGNS, AND THE AMBER FLASHER ASSEMBLIES (QTY. 2), ARE TO BE REMOVED BY THE CONTRACTOR AND SHALL BECOME THE PROPERTY OF THE DISTRICT 1. THE EQUIPMENT SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE DISTRICT 1 ENGINEER.

SIGN LEGEND



LEGEND:

- EXISTING SIGN ASSEMBLY TO REMAIN IN PLACE
- EXISTING SIGN FACE ONE DIRECTION TO BE REMOVED AND REPLACED WITH NEW SIGN FACE ONE DIRECTION ON EXISTING SUPPORT
- NEW SIGN ASSEMBLY, ONE PIPE POST, SIGN(S) FACE ONE DIRECTION

PROJECT NO.		STATE		MISS.	
HSIP-9999-01(254)					
MISSISSIPPI DEPARTMENT OF TRANSPORTATION					
INTERSECTION IMPROVEMENT PLAN					
SITE 4					
SR 30 AT CR 2371/3371					
LAT: 34.629075 LONG: 88.453800					
COUNTY: PRENTISS					
PROJ. NUM.: HSIP-9999-01(254)					
WORKING NUMBER					
ID-4					
SHEET NUMBER					
20					
DATE					
8/2/2018					
DESIGN TEAM					
BUDHART, HORN, CROOK, KHA					

SCALE 1" = 300'

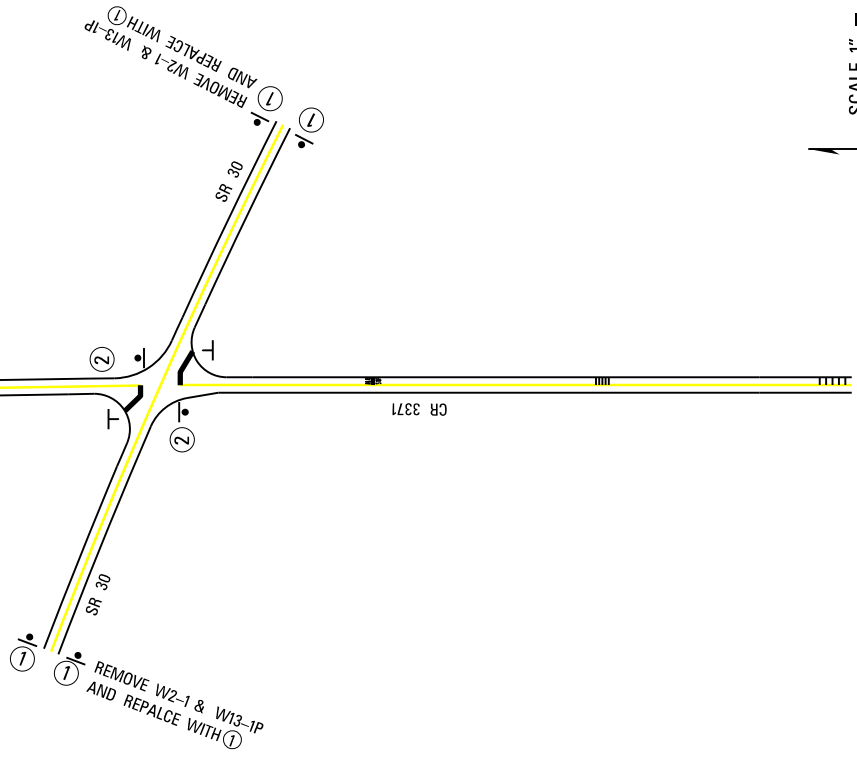
SPEED LIMIT:

SR 30 = 55 MPH

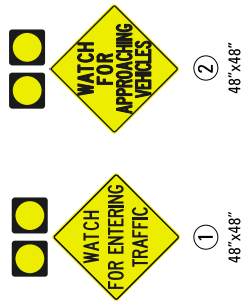
SIGNING QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
WATCH FOR ENTERING TRAFFIC, 48"x48"	EACH	4
WATCH FOR APPROACHING VEHICLES, 48"x48"	EACH	2

REMOVAL OF SIGN QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
CROSS ROAD, W2-1	EACH	4
ADVISORY SPEED, W13-IP	EACH	4
TOTALS		8

* REMOVAL OF SIGN FACE ONLY.



SIGN LEGEND



NOTES:
1. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY.
2. ALL DISTANCES ARE APPROXIMATE.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
PERMANENT SIGNING PLAN

STATE OF MISSISSIPPI
DEPARTMENT OF TRANSPORTATION

SITE 4
SR 30 AT CR 2371/3371
LAT: 34.629075 LONG: 88.453800
COUNTY: PRENTISS
PROJ. NUM.: HSP-9999-01(254)
WORKING NUMBER
PSP-4
SHEET NUMBER
21

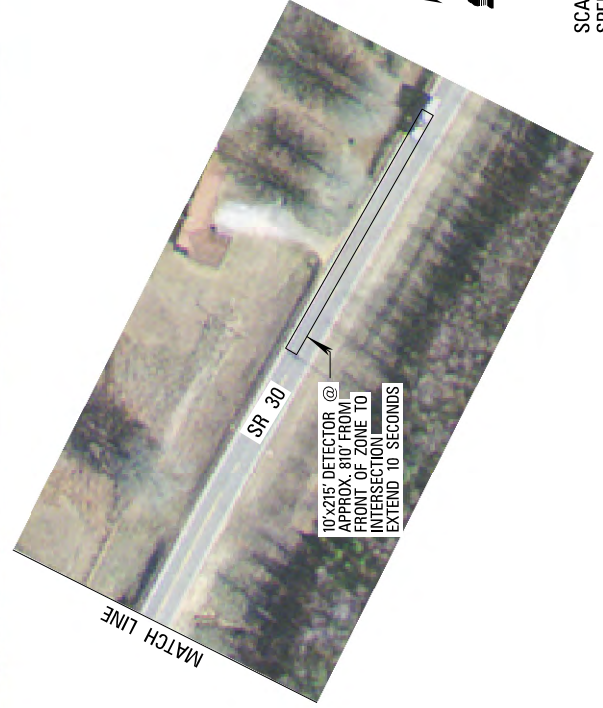
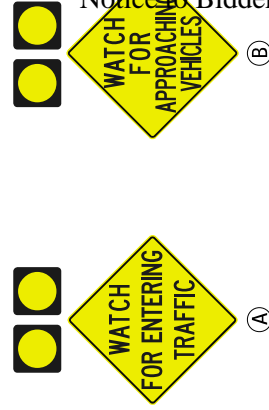
DATE
DESIGN TEAM
BUDHART, HORN, CHECKED
KHA
DATE 03/08/18

SCALE 1" = 300'
SPEED LIMIT:
SR 30 = 55 MPH



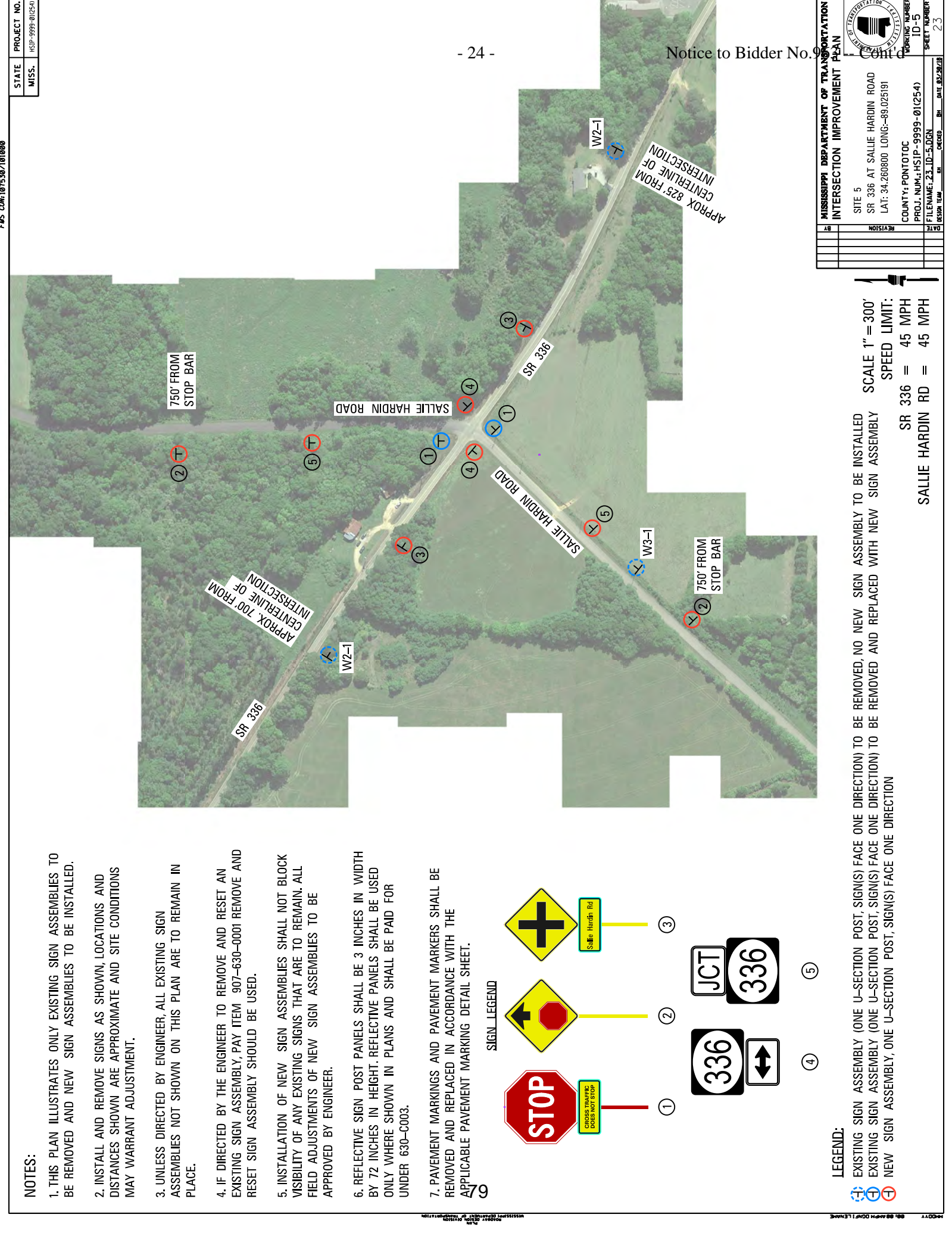
NOTES:

- 1) ALL POLES, PULLBOXES, AND CONTROLLERS SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 2) ALL FLASHING HEADS SHALL BE 12" LED TYPE WITH BLACK BACKPLATES
- 3) ALL DETECTORS AND POLES SHALL BE FIELD LOCATED BY THE ENGINEER AND THE CONTRACTOR AT THE NEAREST PRACTICAL LOCATION INDICATED ON THE PLAN SHEETS.
- 4) CONTRACTOR SHALL MAKE THE APPLICATION FOR POWER SERVICE WITH PRENTISS COUNTY ELECTRIC POWER ASSOCIATION, ROBERT DODSON, 662-728-4433, IN COORDINATION WITH MDOT, IN ADVANCE OF REQUIRING THE ELECTRICAL SERVICE.
- 5) THE CONTRACTOR MAY BE REQUIRED TO INSTALL SERVICE EXTENSION OR RISER POLE(S), THIS IS TO BE COST ABSORBED IN OTHER BID ITEMS.



SCALE 1" = 150'
SPEED LIMIT:
SR 30 = 55 MPH




[illegible]








NOTES:

1. THIS PLAN ILLUSTRATES ONLY EXISTING SIGN ASSEMBLIES TO BE REMOVED AND NEW SIGN ASSEMBLIES TO BE INSTALLED.
2. INSTALL AND REMOVE SIGNS AS SHOWN, LOCATIONS AND DISTANCES SHOWN ARE APPROXIMATE AND SITE CONDITIONS MAY WARRANT ADJUSTMENT.
3. UNLESS DIRECTED BY ENGINEER, ALL EXISTING SIGN ASSEMBLIES NOT SHOWN ON THIS PLAN ARE TO REMAIN IN PLACE.
4. IF DIRECTED BY THE ENGINEER TO REMOVE AND RESET AN EXISTING SIGN ASSEMBLY, PAY ITEM 907-630-0001 REMOVE AND RESET SIGN ASSEMBLY SHOULD BE USED.
5. INSTALLATION OF NEW SIGN ASSEMBLIES SHALL NOT BLOCK VISIBILITY OF ANY EXISTING SIGNS THAT ARE TO REMAIN. ALL FIELD ADJUSTMENTS OF NEW SIGN ASSEMBLIES TO BE APPROVED BY ENGINEER.
6. REFLECTIVE SIGN POST PANELS SHALL BE 3 INCHES IN WIDTH BY 72 INCHES IN HEIGHT. REFLECTIVE PANELS SHALL BE USED ONLY WHERE SHOWN IN PLANS AND SHALL BE PAID FOR UNDER 630-C003.
7. PAVEMENT MARKINGS AND PAVEMENT MARKERS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE APPLICABLE PAVEMENT MARKING DETAIL SHEET.

SIGN LEGEND







LEGEND:

1. EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED, NO NEW SIGN ASSEMBLY TO BE INSTALLED
2. EXISTING SIGN ASSEMBLY (ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION) TO BE REMOVED AND REPLACED WITH NEW SIGN ASSEMBLY
3. NEW SIGN ASSEMBLY, ONE U-SECTION POST, SIGN(S) FACE ONE DIRECTION

SCALE 1" = 300'

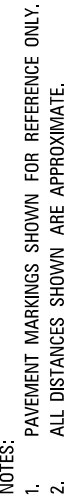
SPEED LIMIT:

SR 336 = 45 MPH
SALLIE HARDIN RD = 45 MPH

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
INTERSECTION IMPROVEMENT PLAN	
BY	REVISION
SITE 5	
SR 336 AT SALLIE HARDIN ROAD	
LAT: 34.260800 LONG: -89.025191	
COUNTY: PONTOTOC	
PROJECT NUMBER: HSIP-9999-01(254)	
FILENAME: 23-ID-5.DGN	
DATE	DESIGN TEAM
DATE	DATE 03/26/18
SHEET NUMBER 23	

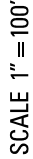
Notice to Bidder No. 9

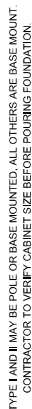
REMOVAL OF SIGN QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
CROSS ROAD, W2-1, 36"x36"	EACH	2
STOP AHEAD, W3-1, 36"x36"	EACH	1
TOTALS	EACH	3



SCALE 1" = 300'
SPEED LIMIT:
SR 336 = 45 MPH
SALLIE HARDIN RD = 45 MPH

* QUANTITIES ARE MEASURED IN 6" EQUIVALENT LENGTHS.





NOT TO SCALE



GENERAL NOTES:

- THE PEDestal SHALL BE OF NEW TYPE 3R RAINPROOF CONSTRUCTION AND SHALL BE LISTED AS ENCLOSED INDUSTRIAL CONTROL EQUIPMENT (UL 508A). THE PEDestal SHALL BE UNPAINTED ALUMINUM. THE PEDestal SHALL COMPLY WITH UL50 REQUIREMENTS AND SHALL EXCEED ALL OTHER APPLICABLE REQUIREMENTS.
- NOMINAL SIZE OF THE PEDestal SHALL BE 48" X 16" X 16", DIMENSION SHOWN ARE TYPICAL. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
- THE PEDestal SHALL HAVE A TOP PLATE RATING OR 120V/240V SINGLE PHASE WITH AN AVERAGE RATING OF 800A.
- HINGES SHALL BE STAINLESS STEEL AND OF THE CONTINUOUS PIANO HINGE TYPE.
- THE PEDestal MOUNTING BOLTS SHALL NOT BE EXTERNALLY ACCESSIBLE. THE PEDestal SHALL BE ABLE TO BE EMBEDDED IN CONCRETE OR USE ANCHOR BOLTS FOR MOUNTING ON CONCRETE BASE. EITHER PEDestal MOUNTING BASE OR ANCHOR BOLT KIT SHALL BE REQUIRED FOR INSTALLATION.
- THE SERVICE PEDestal SHALL HAVE THREE SEPARATE ISOLATED SECTIONS FOR METERING EQUIPMENT, UTILITY TERMINATION AND CUSTOMER EQUIPMENT.
- THE METERING SECTION SHALL BE PAD-LOCKABLE AND SEALABLE AND HAVE A HINGED SWING DOOR WITH AN INTEGRAL HINGED PAD-LOCK CARTRIDGE SEALABLE TO THE REQUIREMENTS OF THE SERVING UTILITY.
- THE UTILITY SECTION SHALL BE PAD-LOCKABLE AND SEALABLE AND HAVE A HINGED SWING DOOR WITH AN INTEGRAL HINGED PAD-LOCK CARTRIDGE SEALABLE TO THE REQUIREMENTS OF THE SERVING UTILITY.

3. THE UTILITY TERMINATION SECTION SHALL BE PAD-LOCKABLE AND SEALABLE AND SHALL HAVE A STAINLESS STEEL HANDLE PROVIDED ON A LIFT-OFF COVER. SUFFICIENT CLEARANCE SHALL BE PROVIDED FOR A 4-INCH DIAMETER CONDUIT OR UTILITY CABLES ENTRANCE. UTILITY LANDING LUGS SHALL BE UL LISTED AND SHALL ACCOMMODATE #6 350 KCMIL CONDUCTORS.

THE CUSTOMER COMPARTMENT DOOR SHALL BE HINGED ON THE LEFT HAND SIDE. A STAINLESS PADDLE-LOCKABLE HASP SHALL BE PROVIDED TO SECURE THE CUSTOMER COMPARTMENT. AN OUTDOOR TRACKED HEAVY DUTY COMBINATION LOCK SHALL BE PROVIDED TO LOCK THE CUSTOMER COMPARTMENT DOOR. A DOOR KEYPAD SHALL BE PROVIDED TO KEEP THE DOOR IN AN OPEN POSITION. A WEATHER PROOF SEEVIE REQUIRED FOR LABELING SHALL BE LOCATED ON THE INSIDE OF THE CUSTOMER DOOR DISTRIBUTION AND CONTROL EQUIPMENT SHALL BE BEHIND AN INTERNAL DEAD-FRONT DOOR WITH A QUARTER-TURN SECURING LATCH AND SHALL BE HINGED TO OPEN MORE THAN 90 DEGREES. THE SECTION DOOR SHALL BE HINGED ON THE SAME SIDE AS THE CUSTOMER

10.0. ALL DISTRIBUTION AND CONTROL EQUIPMENT SHALL BE FACTORY WIRED USING 600 VOLT WIRE SIZED TO NEC AND UL REQUIREMENTS.

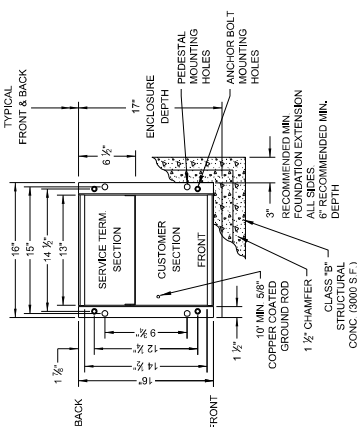
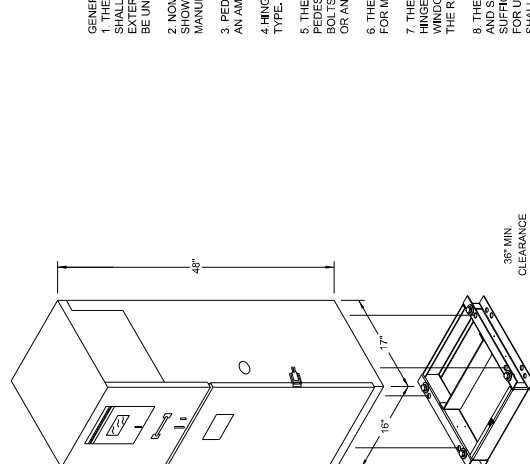
11. THE SERVICE PEDESTAL SHALL BE RATED FOR OPERATION AT 10K MINIMUM (AIC) AMPS INTERRUPTING CAPACITY. THE PROVIDED DOCUMENTATION SHALL LIST CIRCUIT BREAKER COMBINATIONS AND THOSE TO BE USED FOR DE-RATED OPERATION FOR SERIES RATINGS. CIRCUIT BREAKERS SHALL BE PERMANENTLY LABELED WITH ENGRAVED NAME PLATES.

2. THE PANEL SHALL CONTAIN AS A MINIMUM A 50 AMP BREAKER PER EACH SERVICE (TRAFFIC SIGNAL, LUMINAIRE, AND ITS IF ITS EQUIPMENT IS INSTALLED ON PROJECT.)

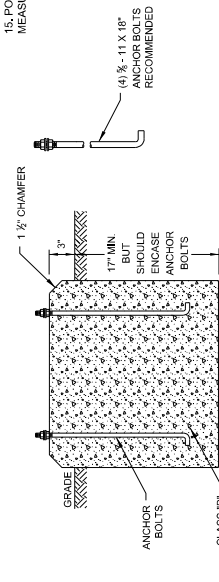
3. PHOTO CELL SHALL BE REQUIRED IF THE PROJECT WILL INSTALL LUMINAIRES AND/OR ILLUMINATED STREET NAME SIGNS.

4. THE SERVING UTILITY SHALL BE CONSULTED FOR REQUIREMENTS BEFORE ORDERING OR INSTALLING EQUIPMENT

No 5. POWER SERVICE PEDESTAL, AS SPECIFIED IN THE PROJECT PLANS WILL BE MEASURED AS A UNIT PER EACH.

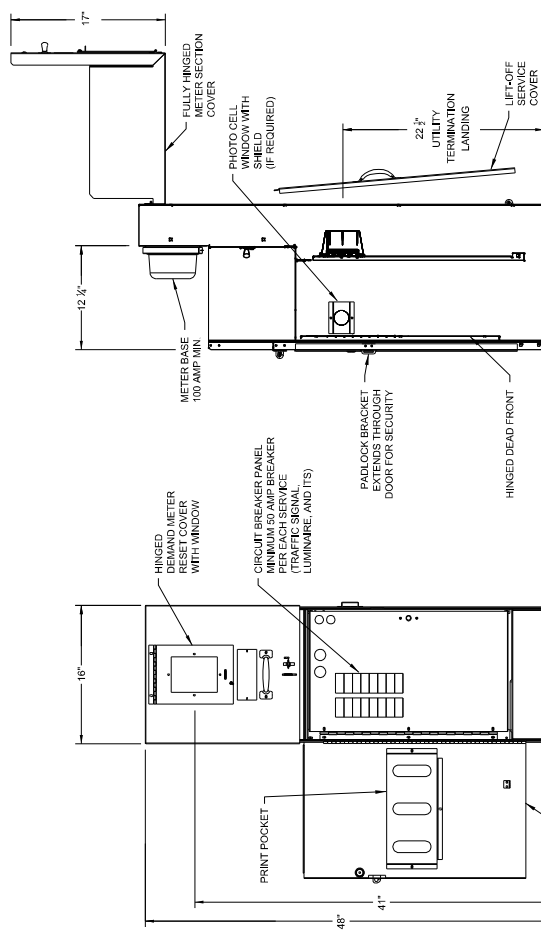


MOUNTING BASE DETAIL

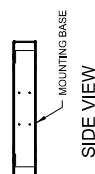


OPTIONAL MOUNTING

OF TIONAL MOUNTING



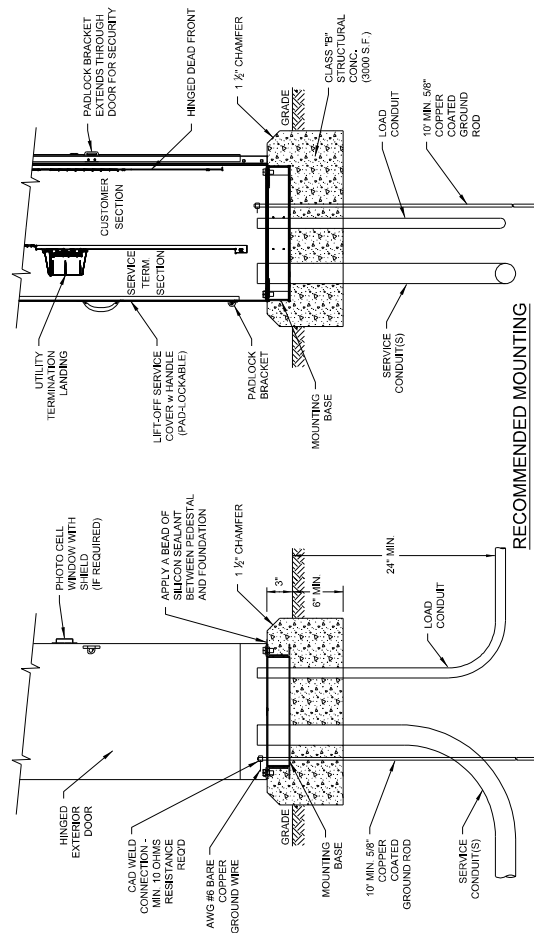
FRONT VIEW



SIDE VIEW

16" COMMERCIAL PEDESTAL

DO NOT SCALE

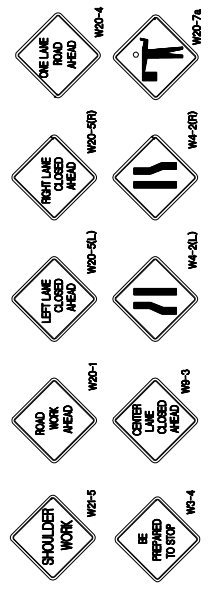


RECOMMENDED MOUNTING

BASE ENCLOSED IN CONCRETE NOT TO SCALE

[illegible]

SIGN LEGEND



GENERAL NOTES:

1. ADDITIONAL ADVANCE WARNING SIGNS MAY BE NECESSARY. ANY ADDITIONAL SIGNS SHOULD BE INCLUDED UNDER PAY ITEM 618-A, MAINTENANCE OF TRAFFIC.
2. POST MOUNTED SIGNS SHALL HAVE A 7' MINIMUM MOUNTING HEIGHT.
3. PAYMENT FOR ALL SIGNS, CONES, DRUMS, CONCRETE BARRIERS, STEEL PLATES AND OTHER MATERIALS, BARRICADES, LABOR AND INCIDENTALS REQUIRED TO IMPLEMENT THE TRAFFIC CONTROL PLAN SHALL BE INCLUDED UNDER PAY ITEM 618-A, MAINTENANCE OF TRAFFIC.
4. APPROACH SIDE TRAFFIC CONTROL TO BE USED WHEN WORK OCCURS ON EITHER THE APPROACH SIDE OR THE FAR SIDE OF THE INTERSECTION. FAR SIDE TRAFFIC CONTROL IS NOT NEEDED WHEN WORK IS CONFINED TO THE APPROACH SIDE ONLY.
5. FOR A DIVIDED HIGHWAY SITUATION, A SECOND SET OF ADVANCE WARNING SIGNS SHALL BE ERECTED IN MEDIAN AREA (8' MIN. MEDIAN WIDTH REQUIRED).

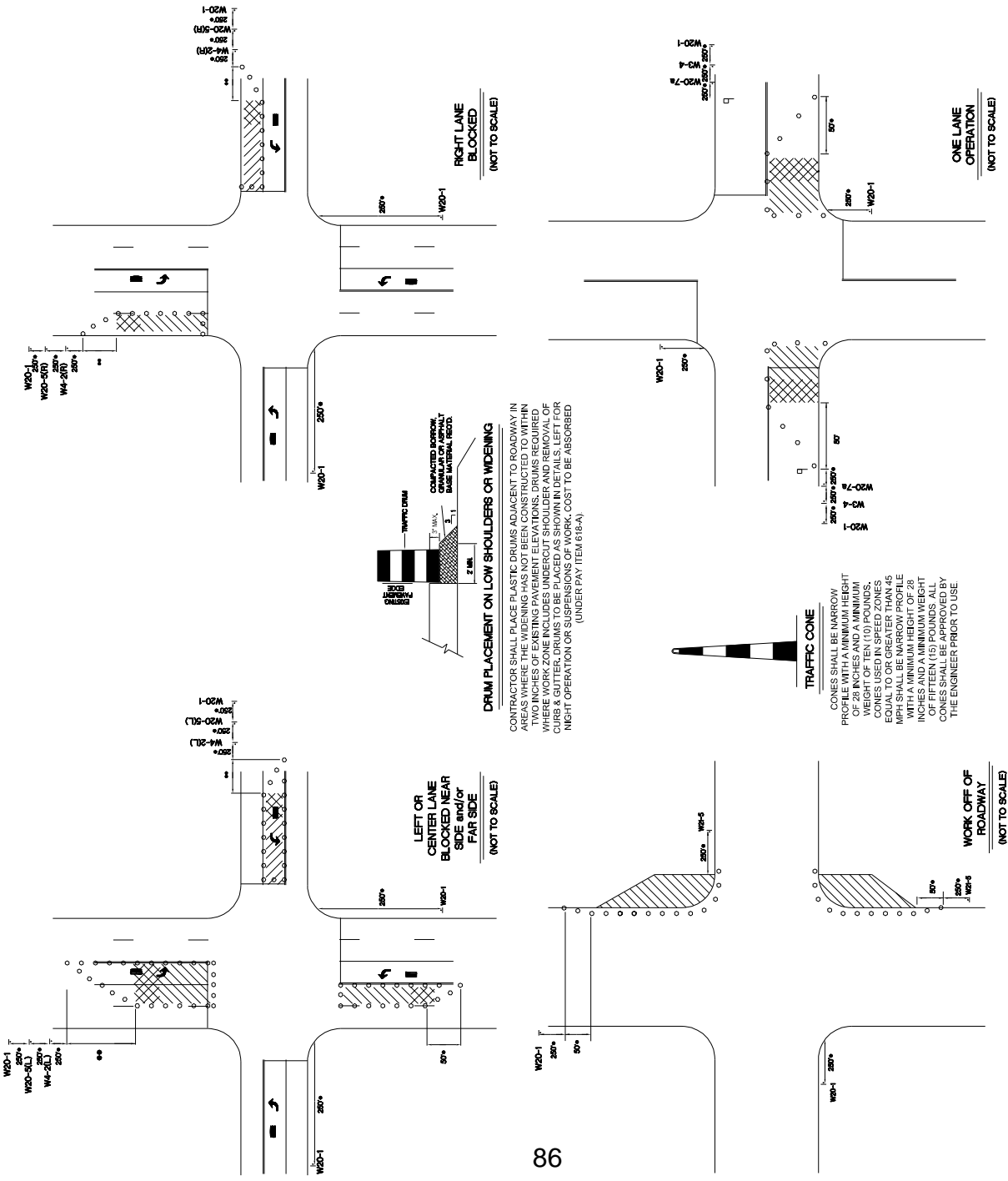
LEGEND

- DRUMS (30" MAXIMUM SPACING) - CONES SHALL BE NARROW PROFILE WITH A MINIMUM HEIGHT OF 28 INCHES AND A MINIMUM WEIGHT OF TEN (10) POUNDS. CONES SHALL BE USED IN ALL SITUATIONS WHERE THE MINIMUM HEIGHT OF NARROW PROFILE WITH A MINIMUM HEIGHT OF 28 INCHES AND A MINIMUM WEIGHT OF FIFTEEN (15) POUNDS. ALL CONES SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.
- SIGNS - SEE SIGN LEGEND MIN. SIZE 48" x 48". BLACK ON ORANGE BACKGROUND FLAGGER WITH PADDED - 18" STOP/SLOW PADDLES ACCEPTED AS PROPER TRAFFIC CONTROL DEVICES SHALL BE USED. HAND HELD FLAGS SHALL NOT BE FOR FLAGGING OPERATION.

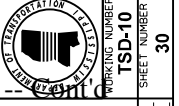


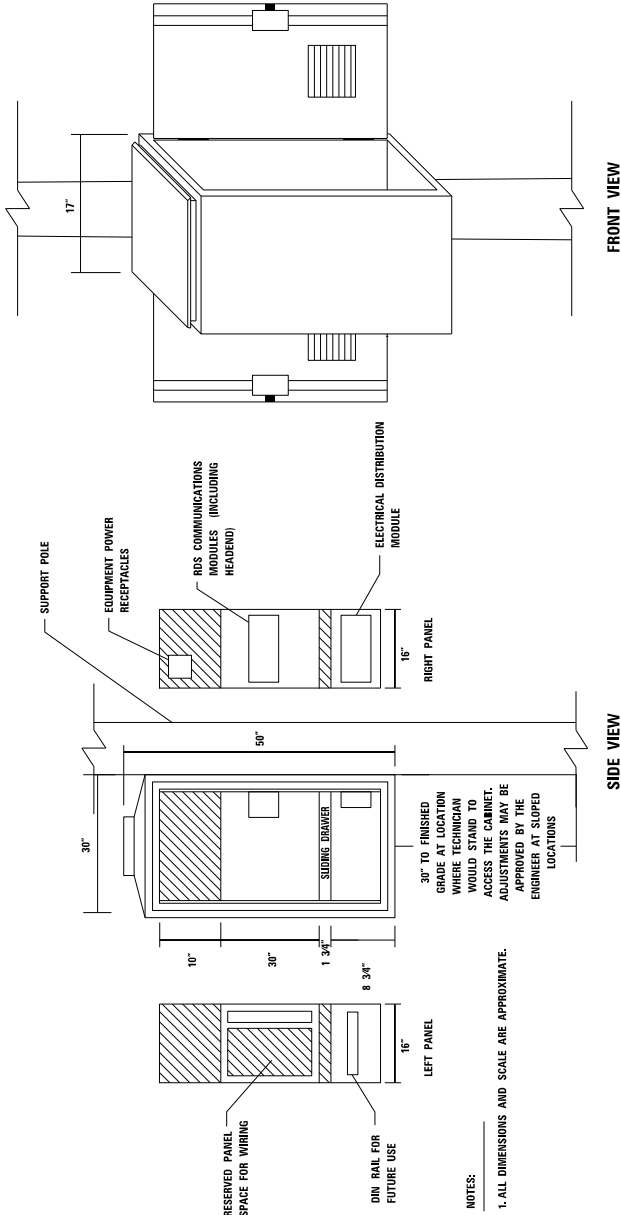
- CONSIDERED MINIMUM DISTANCE - ENGINEER TO DETERMINE APPROPRIATE SPACING IN THE FIELD
- SPEED LIMIT BUFFER TAPER LENGTH (Feet)

M.P.H.	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
FEET	115	125	150	180	200	220	240	260	280	300	320	340	360	380	400	420	440

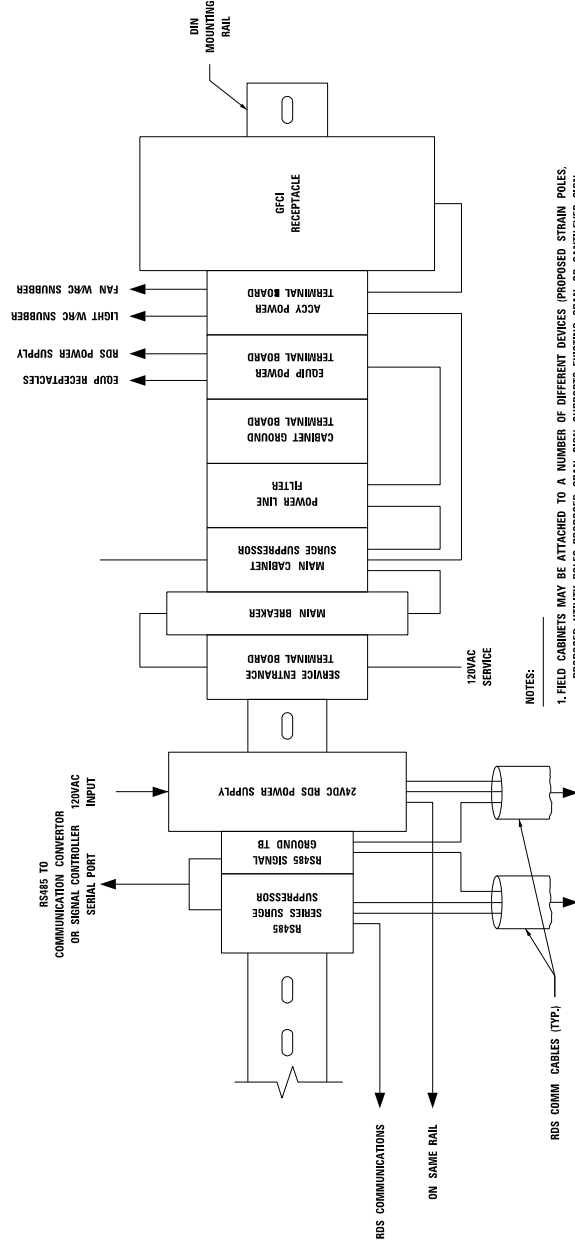
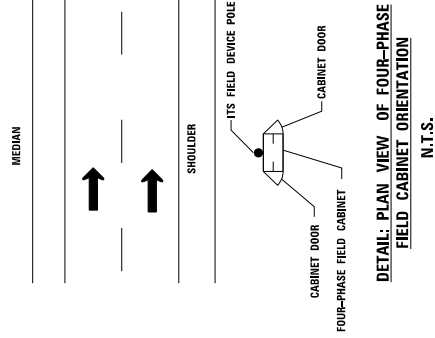


MISSISSIPPI DEPARTMENT OF TRANSPORTATION		TRAFFIC CONTROL PLAN (TRAFFIC SIGNAL INSTALLATION)		PROJECT NO.: HSP-9995-01(254)		COUNTY: VARIOUS		WORKING NUMBER TSD-10		SHEET NUMBER 30	
BY		REVISION		DATE		FILE NAME: TSD-10.DGN		DESIGN TEAM		DATE 10/20/17	





FOUR-PHASE
 FIELD CABINET LAYOUT
 N.T.S.



ELECTRICAL DISTRIBUTION & RDS
 COMMUNICATIONS WIRING MODULE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

POLE MOUNTED
RDS DETAIL

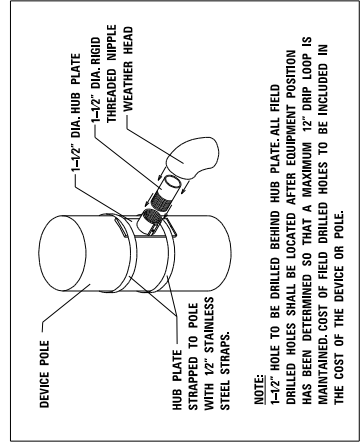
PROJ. NO.: HSP-9995-01(254)
COUNTY: VARIOUS

WORKS NUMBER
RDS-1

FILE NAME: RDS-1.DGN
DESIGN TEAM

SHEET NUMBER
33

DATE
CHECKED

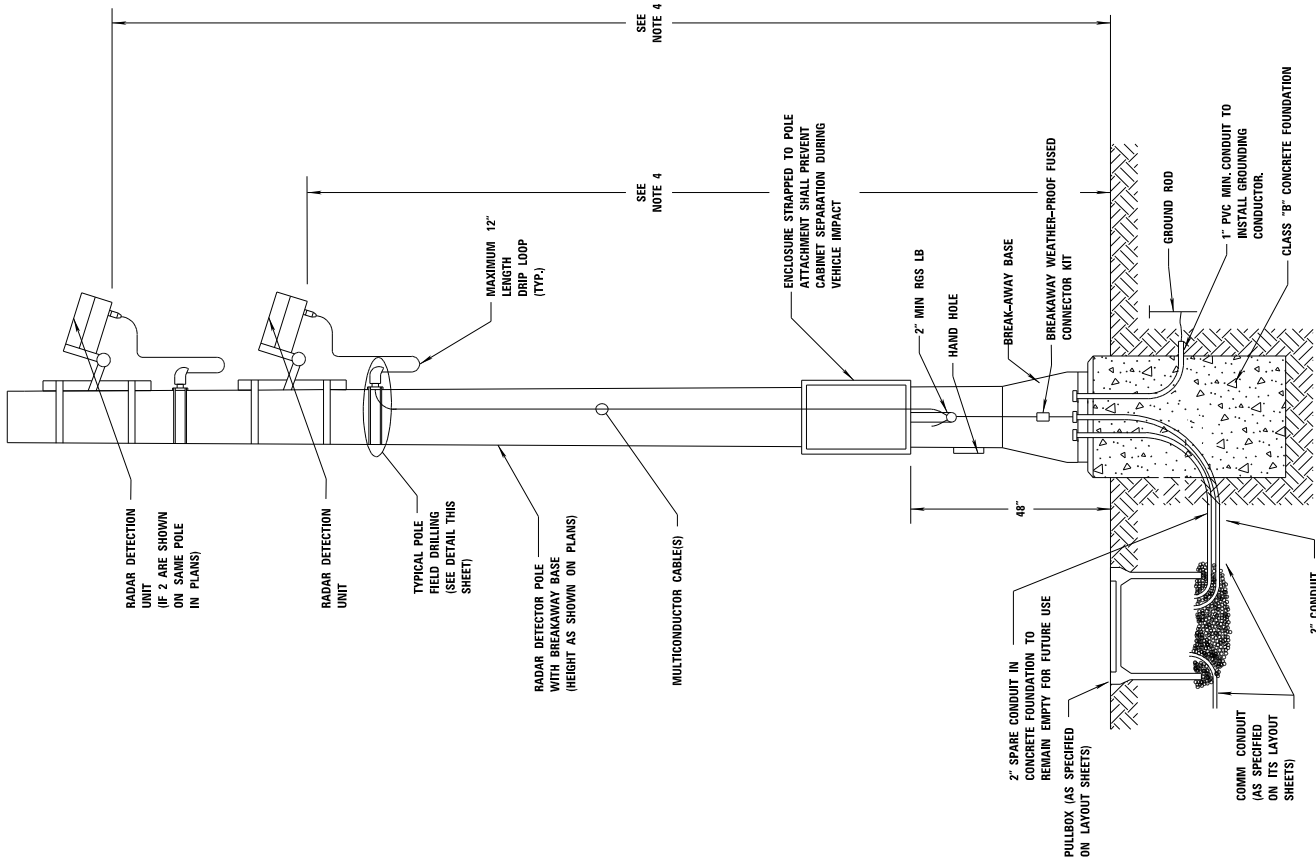


TYPICAL POLE FIELD DRILLING

N.T.S.

NOTES:

1. THE CONTRACTOR SHALL SUBMIT FOUR (4) SETS OF LAYOUTSHOP DRAWINGS OF ALL COMPONENTS (INCLUDING THE PLAN OF ATTACHMENT) TO THE ENGINEER FOR REVIEW AND APPROVAL. ALL DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSISSIPPI.
2. ALL EQUIPMENT CONNECTIONS SHALL BE MADE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
3. SUPPORTS AND FOUNDATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOUNDATION DESIGN AND SHALL SUBMIT FOUR (4) COPIES OF THE DESIGN CALCULATIONS TO THE ENGINEER FOR HIS APPROVAL. THE TOP OF THE FOUNDATION SHALL NOT PROJECT OVER 4" MAX. ABOVE THE GROUND LINE. ALL FOUNDATION DESIGNS SHALL BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER FROM THE STATE OF MISSISSIPPI.
4. RADAR DETECTION MOUNTING HEIGHTS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS BASED ON SITE CONDITIONS, OFFSET, AND NUMBER OF LANES MONITORED.



TYPICAL RADAR DETECTION SYSTEM ON NEW POLE

N.T.S.

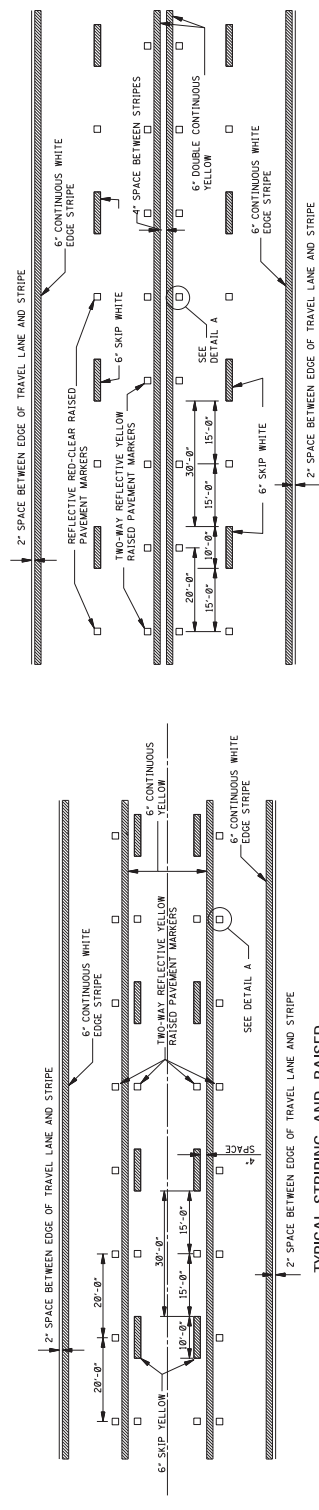


NOTES:
Install rumble strips as shown :

1. 1 set of rumble strips approx. 250' from STOP AHEAD
2. 1 set of rumble strips approx. 300' from STOP
3. 1 set of rumble strips approx. Halfway between first and last set
4. Rumble strips to be 6" thermoplastic (120 mill/each ply, 360 mil total)
5. 5 rumble strips per set minimum
6. Installation may vary due to terrain
7. Signs should be 48" for channelized intersection, 36" for non-channelized intersection

**THIS DRAWING IS
NOT TO SCALE**

3/7/2018 20:37:51 STOP RUMBLE.DON

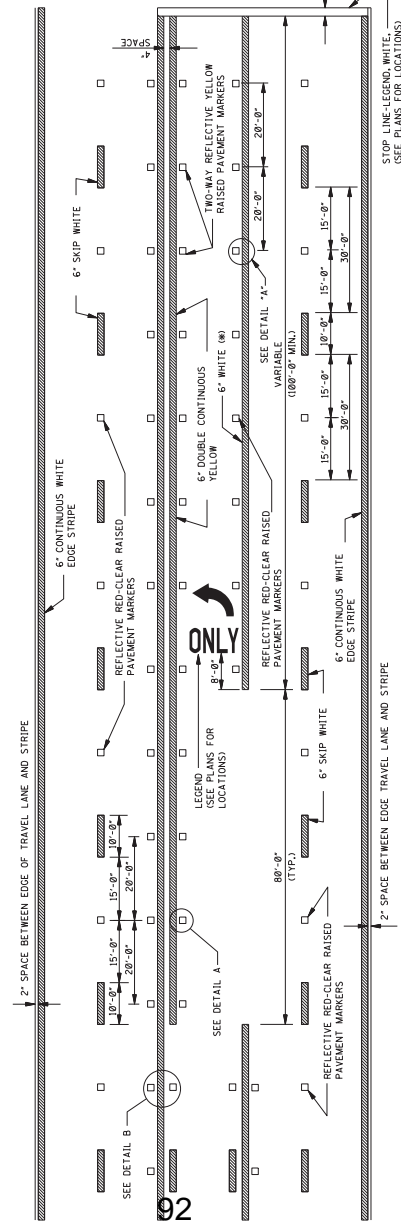


TYPICAL STRIPING AND RAISED PAVEMENT MARKERS FOR 3-LANE SECTION

TYPICAL STRIPING AND RAISED PAVEMENT MARKERS FOR 4-LANE SECTION

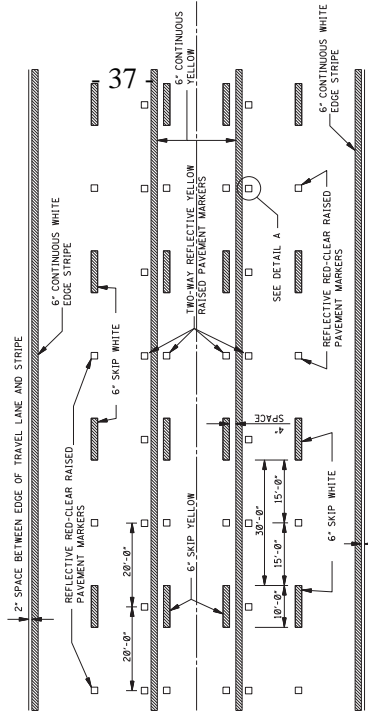
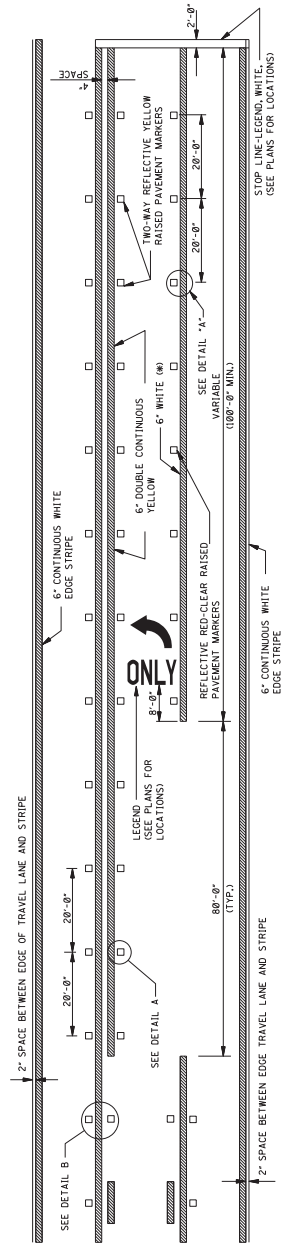
TYPICAL TWO-WAY ARROW INSTALLATION

NOTES: 1. CONSIDER EACH SEGMENT OF CONTINUOUS TWO-WAY LEFT TURN LANE SEPARATELY. 2. IF SEGMENT IS GREATER THAN 350', PLACE FIRST SET OF ARROWS 50' TO 100' FROM BEGINNING AND/OR END OF SEGMENT AND SPACE ADDITIONAL SETS OF ARROWS (250' O.C.).



TYPICAL STRIPING AND RAISED PAVEMENT MARKERS AT LEFT TURN LANES

* NOTE: USE DETAIL STRIPING IF LENGTH < 150' AT THIS LOCATION, OTHERWISE USE CONTINUOUS STRIPING.



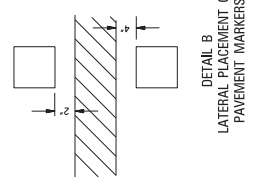
TYPICAL STRIPING AND RAISED PAVEMENT MARKERS FOR 5-LANE SECTION

GENERAL NOTE:
1. PAVEMENT MARKERS SHALL BE HIGH PERFORMANCE RAISED PAVEMENT MARKERS AS LISTED IN THE MOST APPROVED SOURCES OF MATERIALS.

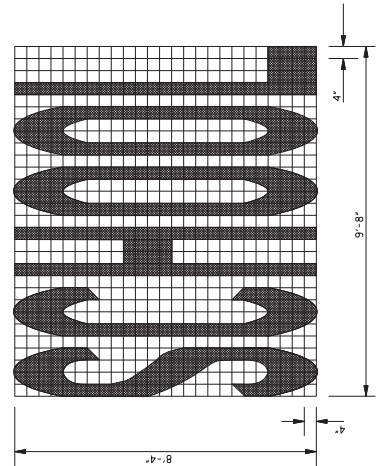
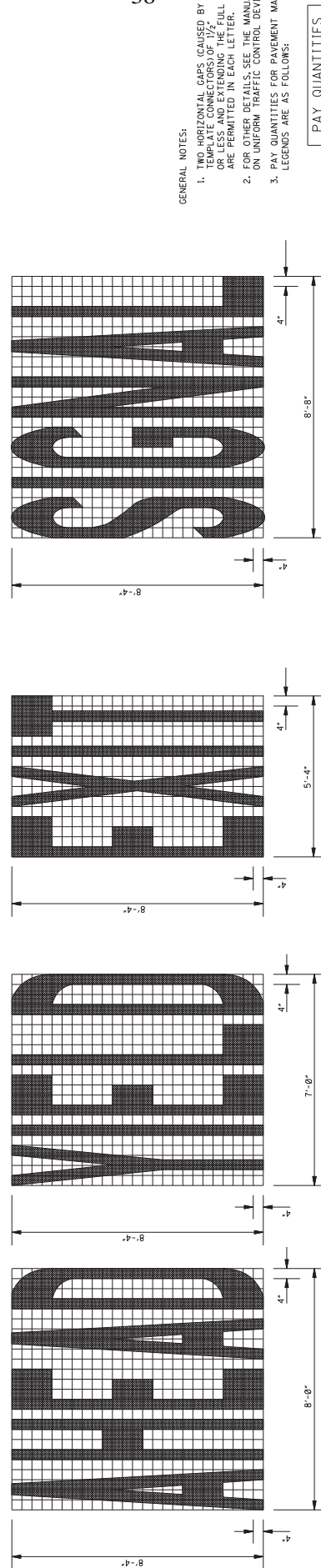
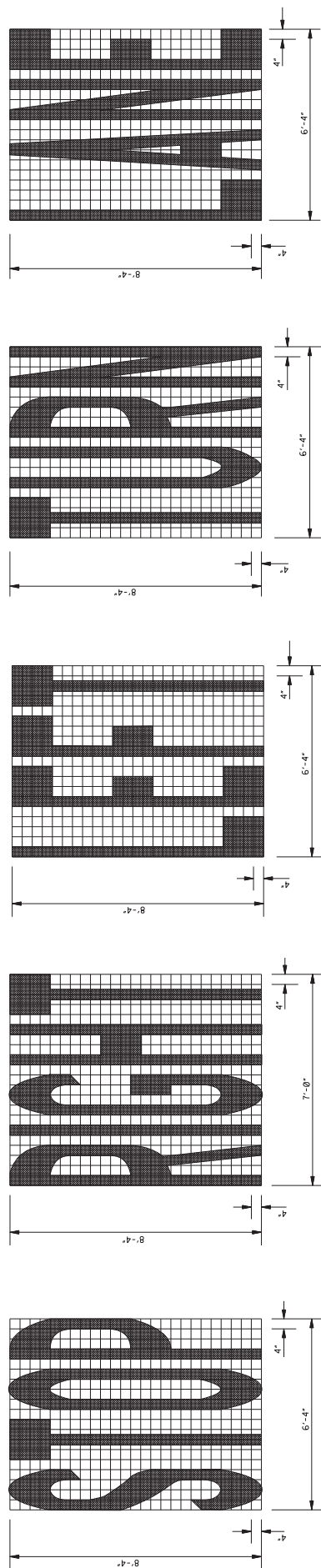
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
PAVEMENT MARKING
DETAILS FOR 3-LANE
4-LANE AND 5-LANE
UNDIVIDED ROADWAYS

BY	REVISION	DATE

ISSUE DATE: AUGUST 01, 2017
SHEET NUMBER 6052
WORKING NUMBER PM-2



DETAIL A
LATERAL PLACEMENT OF PAVEMENT MARKERS



- 38 -

GENERAL NOTES:

1. TWO HORIZONTAL GAPS, CAUSED BY THE SIGN MOUNTING, SHALL BE PERMITTED OR LESS AND EXTENDING THE FULL WIDTH ARE PERMITTED IN EACH LETTER.
2. FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. PAY QUANTITIES FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

LEGEND	AREA (sq ft)
STOP	24.6
RIGHT	28.6
LEFT	28.6
TURN	27.3
LANE	22.7
AHEAD	32.3
YIELD	26.8
EXIT	18.5
SIGNAL	32.5
SCHOOL	35.5

Notice to Bidder No. 963

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

**PAVEMENT MARKING
LEGEND DETAILS**

ISSUE DATE: AUGUST 01, 2017

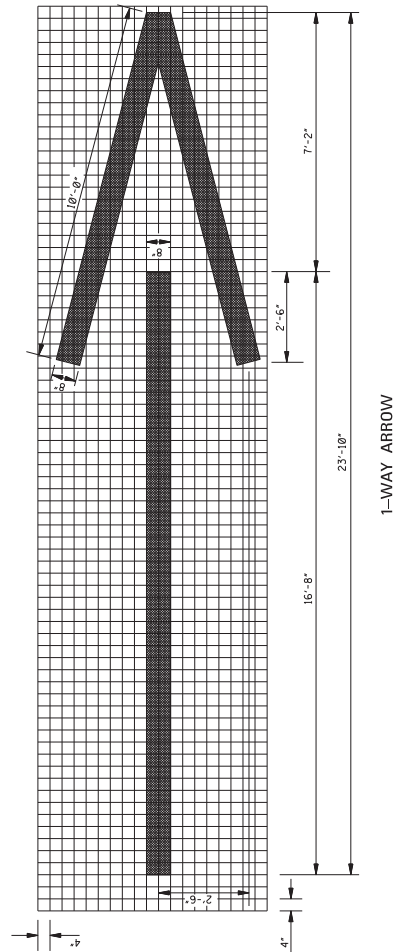
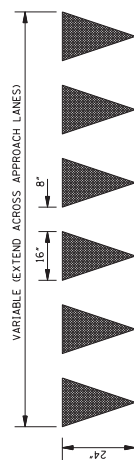
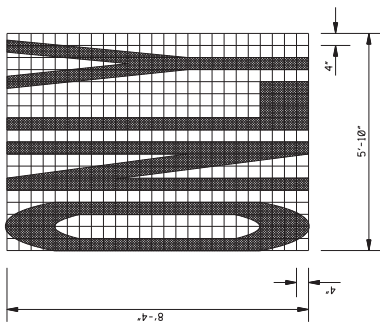
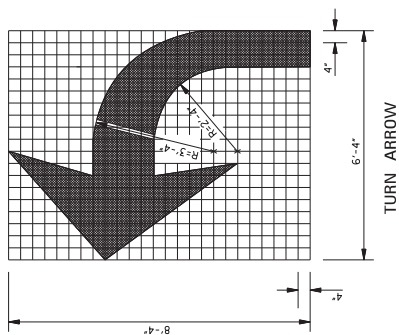
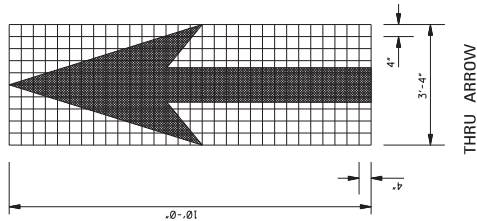
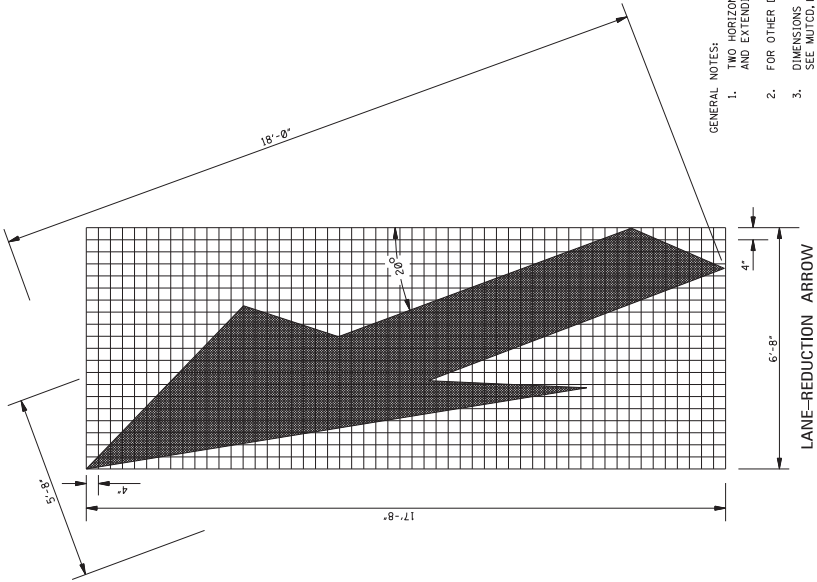
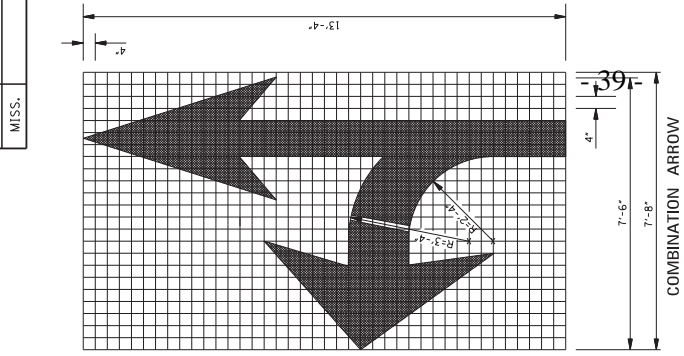
PROJECT NUMBER: 6055

DATE: _____

BY: _____

REVISION: _____

Cont'd



1. TWO HORIZONTAL GAPS, CAUSED BY TEMPLATE CONNECTORS OF 1/4" OR LESS AND EXTENDING THE FULL WIDTH ARE PERMITTED IN EACH LETTER.
2. FOR OTHER DETAILS, SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. DIMENSIONS OF THE YIELD LINE MAY VARY WITH APPROVAL OF THE ENGINEER. SEE QUOTED, LATEST EDITION, FOR ALLOWABLE DIMENSIONS.
4. PAY METHODS FOR PAVEMENT MARKING LEGENDS ARE AS FOLLOWS:

PAY QUANTITIES	
LEGEND/SYMBOL	AREA (ft ²)
ONLY	22.0
TURN ARROW	16.4
THRU ARROW	12.3
COMB. ARROW	27.5
1-WAY ARROW	24.3
LANE REDUCTION ARROW	40.0

Notice to Bidder No.963 -- Cont'd

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

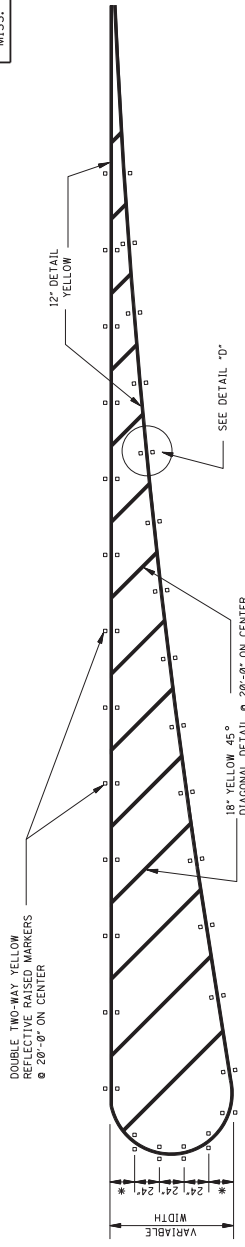
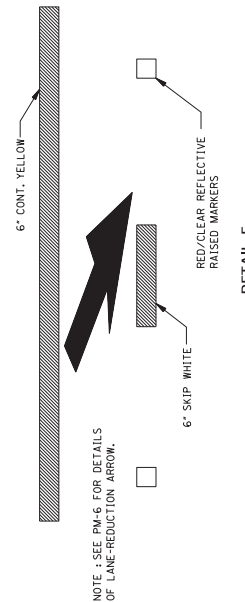
PAVEMENT MARKING LEGEND DETAILS



 WORKING NUMBER
 PM-6
 SHEET NUMBER
 6056

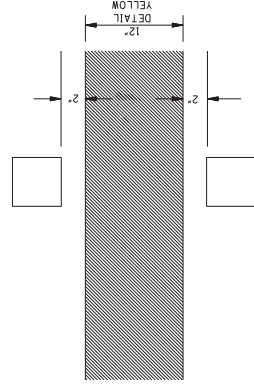
AUGUST 01, 2017

1-WAY ARROW



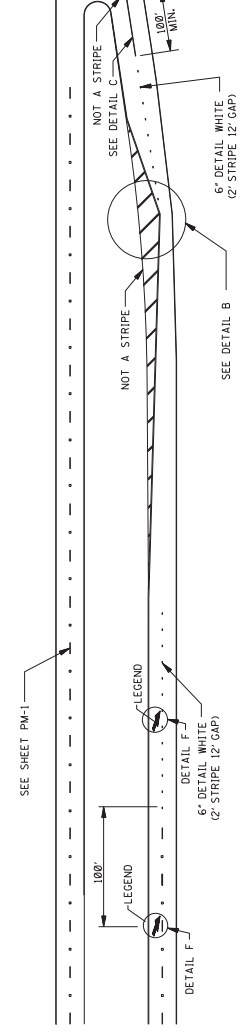
DETAIL F

DETAIL A
* NOTE: VARIABLE (24" MAXIMUM)

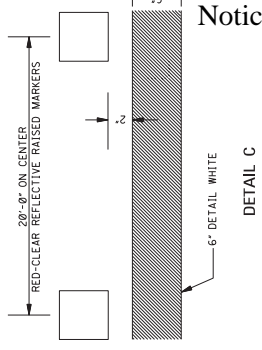


DETAIL D

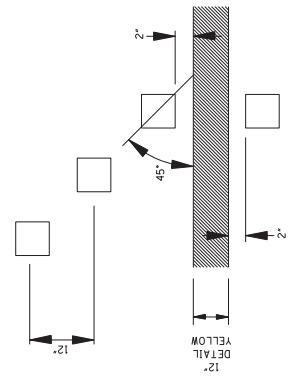
- 40 -



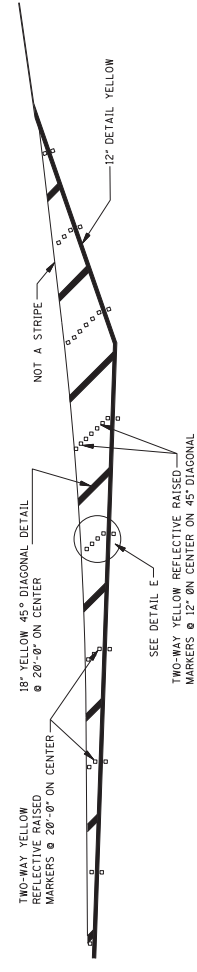
PLAN



DETAIL C



DETAIL E



DETAIL B


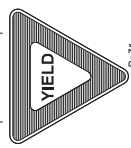






















































Notice to Bidder No. 963 Cont'd

DATE	REVISION	BY

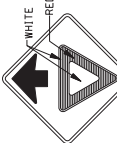
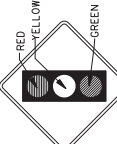































MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
**4-LANE TO 2-LANE
TRANSITION AT
INTERCHANGE**
ISSUE DATE: AUGUST 01, 2017
SHEET NUMBER 6058
PROJECT NUMBER PM-8

[illegible]

Notice to Bidder No.963 - Cont'd

PROJECT NO.									
STATE		PROJECT NO.		MISS.		R4-3		R4-3	
SIGN NUMBER		R1-1		R1-2		R2-1		R2-4a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.100"	0.125"	0.080"	0.100"	0.100"	0.125"	0.080"	0.100"
LEGEND									
LETTER & NUMERAL SERIES		R-2"		R-3"		R-2 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		12" SERIES "C"		5" RED		4" SERIES "E"		8" SERIES "E"	
SIZE (WIDTH X HEIGHT)		3" SERIES "C"		3" SERIES "C"		10" SERIES "E"		14" SERIES "E"	
COLORS		ALL		ALL		ALL		ALL	
REFLECTORIZATION		ALL		ALL		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		4		4		10	
PUNCHING DISTANCE FROM TOP EDGE		18" (VERT. CENTER)		12" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 33'		3" 15'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE		WHITE	
REFLECTORIZATION		BACKGROUND		BACKGROUND		ALL		ALL	
NUMBER OF POSTS		1		1		1		1	
NUMBER OF HOLES TO BE PUNCHED (% DIA.)		2		2		2		4	
PUNCHING DISTANCE FROM TOP EDGE		12" (VERT. CENTER)		15" (FROM CENTER)		3"		9"	
PUNCHING DISTANCE FROM TOP EDGE		3" 27'		3" 21'		3" 27'		3" 21'	
SIGN NUMBER		R4-7		R6-3		R5-1		R5-1a	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS		0.080"	0.125"	0.080"	0.125"	0.100"	0.125"	0.100"	0.125"
LEGEND									
LETTER & NUMERAL SERIES		R-2 1/4"		R-3"		R-1 1/4"		R-2 1/4"	
WIDTH OF BORDER OUTSIDE		1/4" BLACK		1/4" BLACK		1/4" BLACK		1" WHITE	
SIZE (WIDTH X HEIGHT)		36" x 48"		48" x 60"		36" x 36"		42" x 30"	
COLORS		BLACK		BLACK		WHITE			

Notice to Bidder No.963 - Cont'd

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN											STANDARD ROADSIDE SIGNS		MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN			
SIGN NUMBER											STATE PROJECT NO.		MISS.			
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											W3-20		W3-3		W4-10L W4-10R	
0.125"											0.125"		0.125"		0.125"	
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-2 1/4"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
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LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
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PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
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LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
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SIGN NUMBER											W4-2		W13-3		W10-1	
ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
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LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
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SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION											YELLOW		YELLOW		YELLOW	
NUMBER OF POSTS											1		1		1	
FOR MOUNTING											1		1		1	
NUMBER OF HOLES TO BE PUNCHED (3/4" DIA.)											2		2		2	
PUNCHING DISTANCE FROM EACH VERT. EDGE											15" FROM		15" FROM		15" FROM	
PUNCHING DISTANCE FROM EACH HORIZ. CENTER											18" FROM		18" FROM		18" FROM	
PUNCHING DISTANCE FROM TOP EDGE											15" FROM		15" FROM		15" FROM	
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ALUMINUM (6061-T6) SIGN BLANK THICKNESS											0.125"		0.125"		0.100"	
NOTE: SEE PLAN SHEETS FOR IDEOGRAM REQUIRED ON INDIVIDUAL SIGNS.																
99																
LEGEND																
LETTER & NUMERICAL SERIES											R-2 1/4"		R-2 1/4"		R-3"	
INSIDE											1/4" BLACK		1/4" BLACK		1/4" BLACK	
WIDTH OF BORDER											3/4" YELLOW		3/4" YELLOW		3/4" YELLOW	
SIZE (WIDTH X HEIGHT)											48" X 48"		36" X 36"		36" X 48"	
COLORS											BLACK		BLACK		BLACK	
REFLECTORIZATION																

STATE

PROJECT NO.

MISS.

ROADSIDE SIGN IN RURAL AREA

ROADSIDE SIGN IN BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA

ROADSIDE SIGN WITH ADVISORY SPEED PLAQUE IN RURAL AREA

ROADSIDE ASSEMBLY IN RURAL AREA

ROADSIDE SIGN IN RURAL AREA

ROADSIDE SIGN IN BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA

ROADSIDE SIGN WITH ADVISORY SPEED PLAQUE IN RURAL AREA

ROADSIDE ASSEMBLY IN RURAL AREA

INTERSTATE OR FREEWAY SIGN WITH SECONDARY SIGN

OVERHEAD SIGN

SIGN ON NOSE OF MEDIAN

SIGNS IN ISLANDS OR BEHIND CURB USING U-POSTS OR PIPE POSTS

PLAN

ELEVATION

GENERAL NOTES:

- SEE SECTION 24-19 OF THE MUTCD FOR REDUCED LATERAL OFFSET DISTANCES THAT MAY BE USED FOR SIGNS LOCATED IN THE CLEAR ZONE OF A RAMP OR WHERE EXISTING POLES ARE CLOSE TO THE CURB. SIGNS SHALL BE LOCATED OUTSIDE THE CLEAR ZONE UNLESS PLACED ON A BREAKAWAY OR YIELDING SUPPORT.
- THE 2 FT. MINIMUM OFFSET APPLIES ONLY TO STANDARD SIGNS MOUNTED ON U-POSTS. ALL STANDARD SIGNS MOUNTED ON PIPE POSTS SHALL BE OFFSET A MINIMUM OF 4 FT. FROM THE SHOULDERS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN DIVISION

STANDARD PLAN

STANDARD

ROADSIDE SIGN

ASSEMBLY AND

INSTALLATION

DATE

REVISION

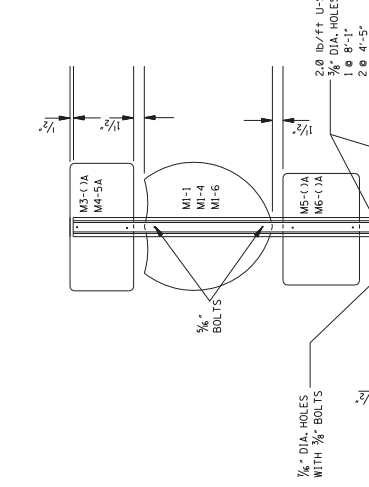
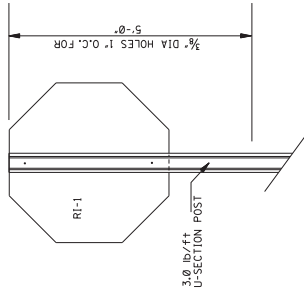
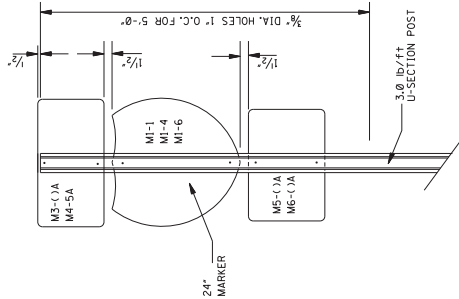
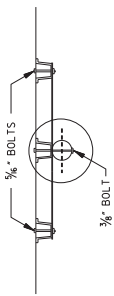
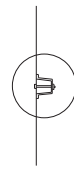
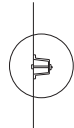
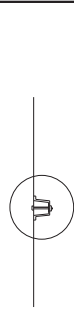
BY

ISSUE DATE:

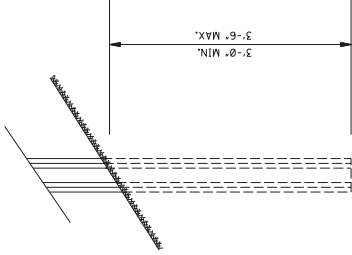
AUGUST 01, 2017

SHEET NUMBER

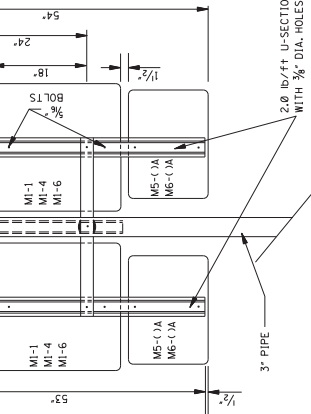
6306



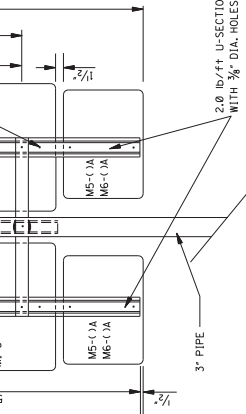
TYPICAL ASSEMBLY OF
"FLAT TOPPED" REGULATORY
OR WARNING SIGN MOUNTED ON
A SINGLE U-SECTION POST



FOOTING DETAIL FOR
U-SECTION POSTS



TYPICAL ROUTE ASSEMBLY



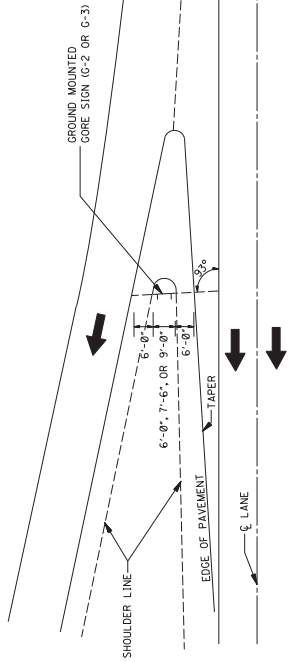
TYPICAL STACKED ROUTE ASSEMBLY

- GENERAL NOTES:
1. UNLESS OTHERWISE SPECIFIED, HORIZONTAL BRACES ARE $\frac{1}{2}$ " X $\frac{1}{2}$ " X VARIABLE LENGTH FLAT STEEL BARS. BARS ARE WELDED TO PIPE AS SHOWN. WHEN FABRICATION IS COMPLETED, BRACES SHALL BE WELDED AS PER SECTION 630 OF THE STANDARD SPECIFICATION.
 2. HOLES IN FLAT BARS ARE $\frac{3}{8}$ " DIAMETER.
 3. SIGNS ARE FASTENED TO FLAT BARS AND U-SECTION POST WITH $\frac{1}{4}$ " BOLTS, WITH FLAT WASHER AND LOCK-NUTS.
 4. GROUND PLATE NOT REQUIRED ON U-SECTION POST.
 5. SEE M.K. NO. SN-4B FOR DETAIL OF PIPE FOOTING DETAIL.

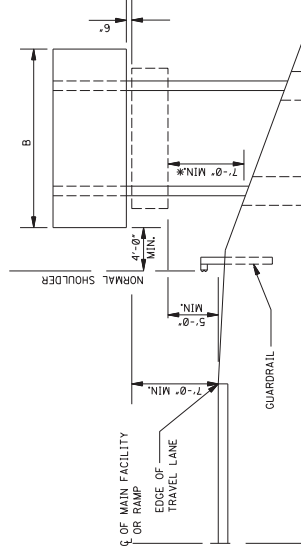
Notice to Bidder No. 963 Cont'd

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
**STANDARD SIGN
ROADSIDE SIGN
ASSEMBLY AND
INSTALLATION**
REPORTING NUMBER
SN-4A
SHEET NUMBER
6307
ISSUE DATE: AUGUST 01, 2017



TYPICAL INSTALLATION OF GROUND MOUNTED GORE SIGN (G-2 OR G-3)



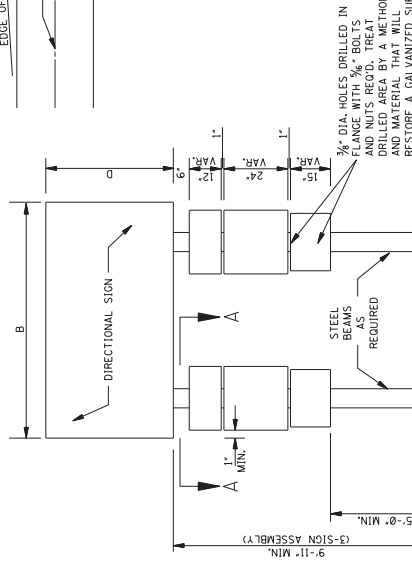
TYPICAL INSTALLATION IN A FILL SECTION PROTECTED BY GUARDRAIL

GENERAL NOTES:
1. 7'-0" MINIMUM FROM GROUND TO BOTTOM EDGE OF LOWEST SIGN (SHORTEST POST).

Notice to Bidder No. 963 Cont'd

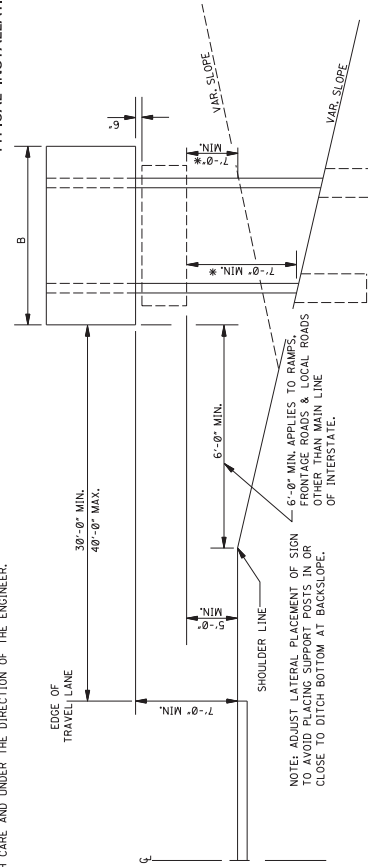
BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
TYPICAL INSTALLATION OF GROUND MOUNTED DIRECTIONAL SIGNS	
WORKING NUMBER SN-5	SHEET NUMBER 6309
ISSUE DATE: AUGUST 01, 2017	



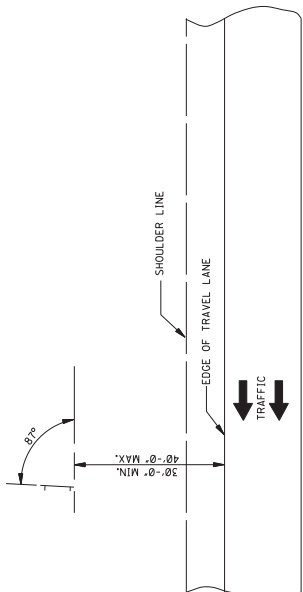
SPECIAL INSTALLATION OF A GROUND MOUNTED DIRECTIONAL SIGN WITH STANDARD ROADSIDE SIGNS MOUNTED BELOW

NOTE: BEFORE FINAL PLACEMENT OF SIGNS IN SHARP CURVE SECTIONS (AS IN THE CASE OF INTERCHANGE LOOPS AND RAMP) THE SIGN SHALL BE INSPECTED BY THE ENGINEER AT NIGHT TO INSURE PROPER REFLECTORIZATION OF THE SIGN. IT MAY THEN BE NECESSARY TO ADJUST THE ALIGNMENT OF THE SIGN (I.E., ORIENT THE SIGN FACE) TO AVOID OR MINIMIZE SPECULAR REFLECTION. THIS ADJUSTMENT SHOULD BE MADE WITH CARE AND UNDER THE DIRECTION OF THE ENGINEER.

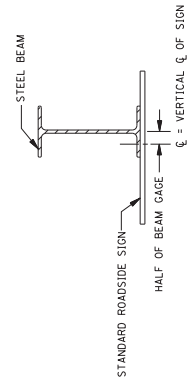


TYPICAL INSTALLATION IN A CUT OR FILL SECTION

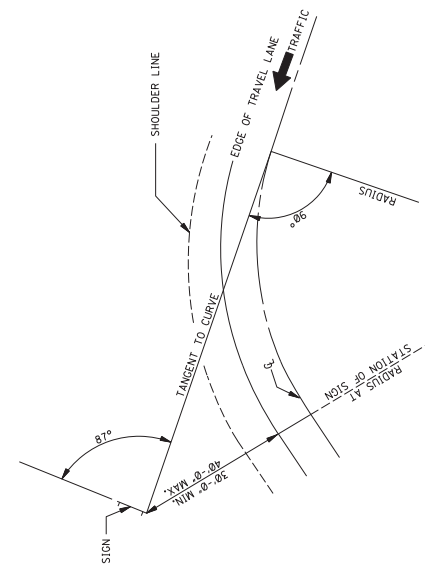
NOTE: ADJUST LATERAL PLACEMENT OF SIGN TO AVOID PLACING SUPPORT POSTS IN OR CLOSE TO DITCH BOTTOM AT BACKSLOPE. OF INTERSTATE.



ALIGNMENT OF SIGNS FOR TANGENT SECTIONS



SECTION A-A



ALIGNMENT OF SIGN FOR CURVED SECTION

1. FOOTING:
ALL FOOTINGS SHALL BE CLASS "B" CONCRETE. POST STUDS SHALL BE SET IN CONCRETE FOOTING AT REQUIRED GRADE AND ALIGNMENT WITH CARE SO THAT MINIMUM SHIMMING WILL BE REQUIRED.
2. BASE CONNECTION PROCEDURE:
ASSEMBLE POST TO STUD WITH BOLTS AND WITH A FLAT WASHER ON EACH BOLT BETWEEN PLATES, SHIM AS REQUIRED TO PLUMB POST. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" TO 15" WRENCH TO BED WASHERS AND SHIMS AND TO CLEAN BOLT THREADS. THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE AS SHOWN BY TABLE. BURN THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH. HIGH STRENGTH BOLTS IN BASE CONNECTIONS SHALL BE TIGHTENED TO TORQUE AS SHOWN BY TABLE ON SN-6A. DO NOT OVER TIGHTEN.

3. POST LENGTH:
ALL POST LENGTHS SHALL BE VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION. WHERE FIELD CONDITIONS REQUIRE THE POST LENGTH TO VARY MORE THAN 12", IT MAY BE NECESSARY TO CHANGE THE SIZE OR NUMBER OF POSTS. SUCH DETERMINATION WILL BE MADE BY THE STATE TRAFFIC ENGINEER. ANY CHANGE OF SIZE OR NUMBER OF POSTS SHALL NOT BE JUSTIFICATION FOR ANY CONTRACT PRICE ADJUSTMENTS.

4. FABRICATOR NOTE:
IMPORTANT- ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN SHOP BY A METHOD APPROVED BY THE BRIDGE DESIGN ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO PROVIDE THE MINIMUM TENSION IN EACH BOLT WHEN ALL BOLTS ARE TIGHT, AS SHOWN BY TABLE SN-6A.

5. ALL HOLES IN FUSE PLATES AND HINGE PLATES SHALL BE DRILLED.
6. ALL PLATE CUTS SHOULD BE SAW CUTS. FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GRIND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE ACCEPTABLE.

7. WELDING FOR STEEL SIGN SUPPORTS:
WELDING SHALL BE PERFORMED IN SHOP BY ELECTRIC ARC PROCESS.

8. MATERIAL SPECIFICATIONS:
THE MATERIALS USED IN THE CONSTRUCTION OF THE GROUND MOUNTED SIGN SUPPORT STRUCTURES, AS LISTED BELOW, SHALL CONFORM WITH THE REQUIREMENTS OF THE DESIGNATED ASTM SPECIFICATION. ALL OTHER MATERIALS, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS, EXCEPT AS OTHERWISE NOTED ON THE PLANS.

9.

DESCRIPTION	MATERIALS PER ASTM DESIGNATION	GALVANIZE PER ASTM DESIGNATION
POSTS OF STEEL PIPE	A 53 (GRADE "B")	A 53
BASE CONNECTION PLATES FOR PIPES	A 36	A 123
POSTS OF STEEL W, B, AND T BEAMS INCLUDING BASE CONNECTION, FUSE AND HINGE PLATES	A 588 OR A 572 GRADE 50	A 123
POST BRACING ANGLES AND FLAT BARS USED IN FABRICATION AND ERECTION OF SIGN SUPPORTS	A 36	A 123
HIGH STRENGTH BOLTS, NUTS AND WASHERS	A 325	A 153
BOLTS OTHER THAN HIGH STRENGTH	A 307 (GRADE "A")	A 153

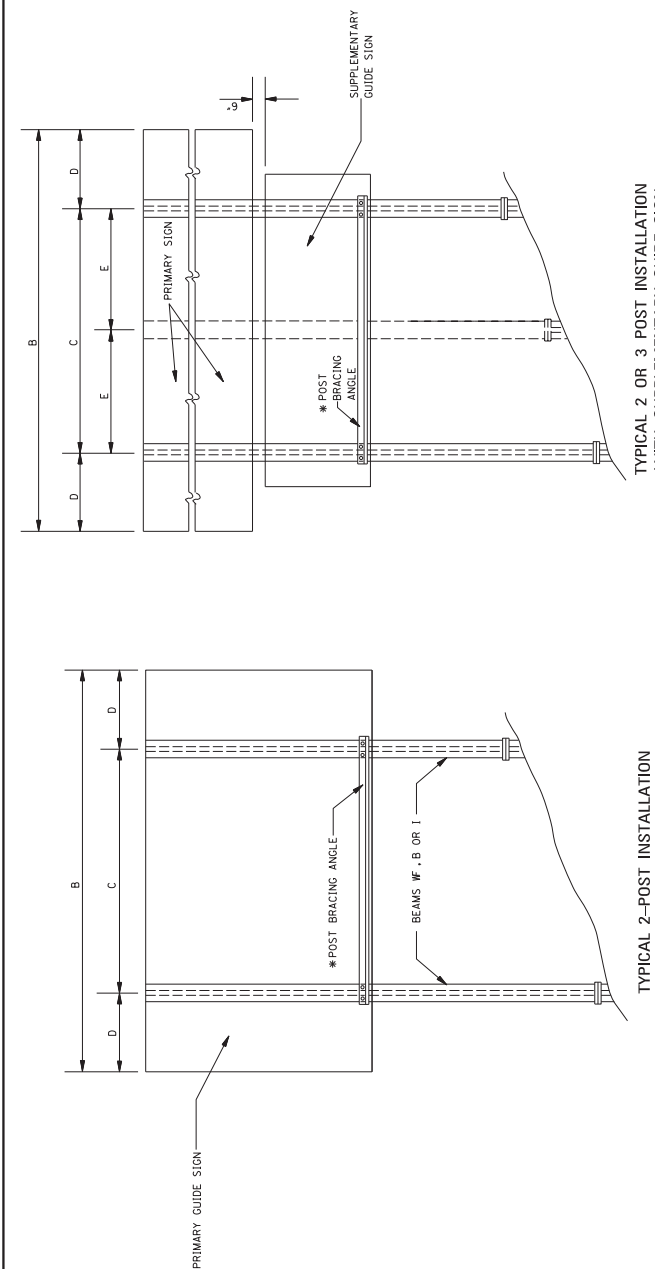
- ① ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION EXCEPT AS NOTED ON THE PLANS.
- ② PIPES MAY BE WELDED OR SEAMLESS.
- ③ BOLTS, WASHERS, AND NUTS USED FOR FASTENING ALUMINUM SIGN SHEETS AND PANELS SHALL BE ALUMINUM AS PER FOLLOWING TABLE.

DESCRIPTION	ASTM DESIGNATION	ALLOY
BOLTS AND WASHERS	A 307	2024-T4
FLAT BAR NUTS	B 211	6061-T6
STOP NUTS	B 211	2017-T4

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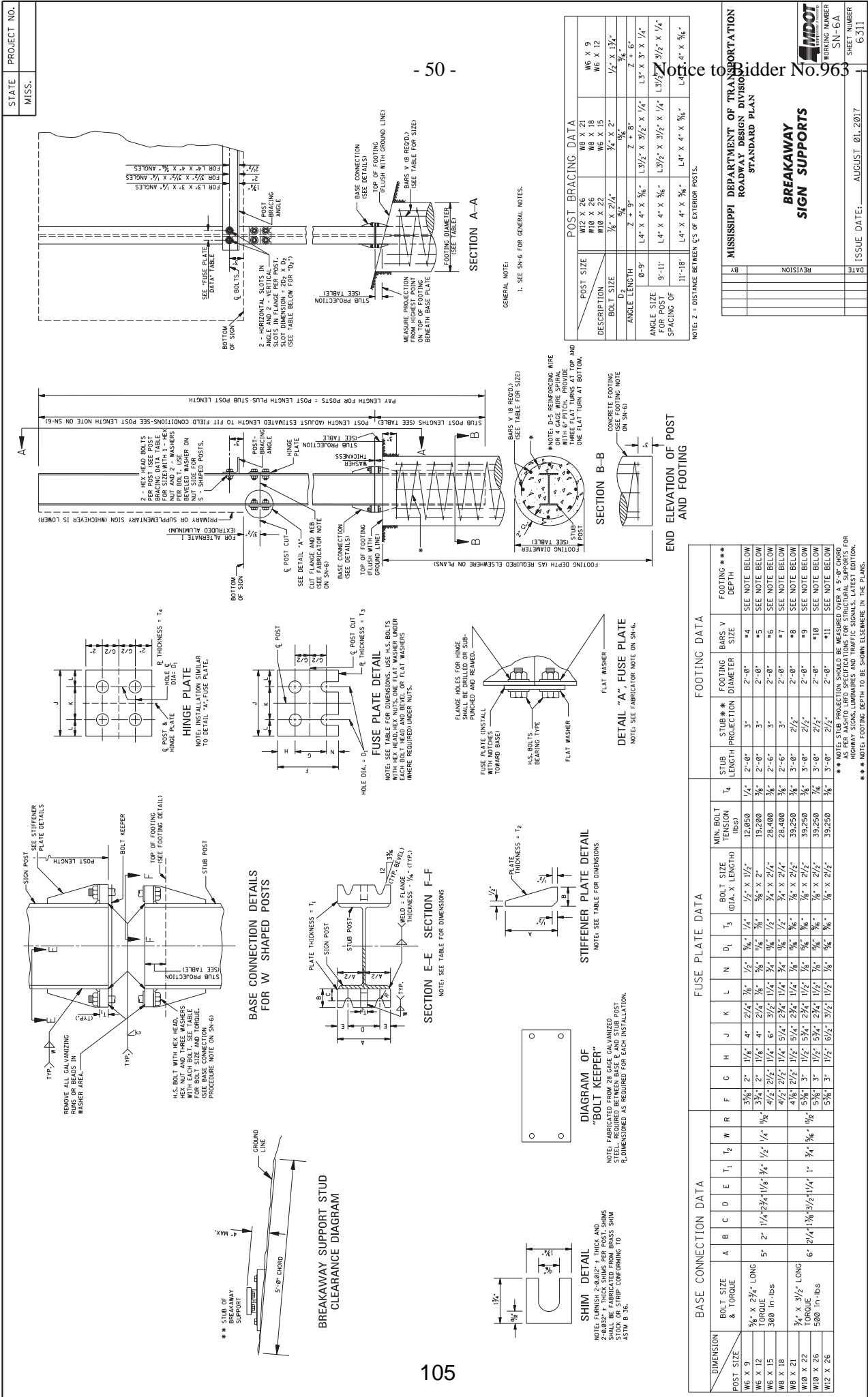


TYPICAL 2-POST INSTALLATION WITHOUT EXIT SIGN

TYPICAL 2 OR 3 POST INSTALLATION WITH SUPPLEMENTARY GUIDE SIGN AND POST BRACING ANGLE LOCATION

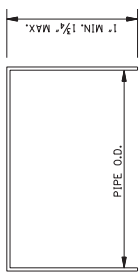
* NOTE: PLACE POST BRACING ANGLE AT BOTTOM OF PRIMARY OR SUPPLEMENTARY SIGN WHICHEVER IS LOWER.
(SEE "END ELEVATION OF POST AND FOOTING" ON SN-6A.)

SIGN POST SPACING TABLE											
2 POST				2 POST (CONT'D)				3 POST			
"B"	"C"	"D"	"E"	"B"	"C"	"D"	"E"	"B"	"C"	"D"	"E"
4'-0"	2'-0"	1'-0"	1'-0"	14'-6"	8'-9"	2'-10 1/2"	3'-0"	20'-0"	14'-0"	3'-0"	7'-0"
4'-6"	2'-6"	1'-0"	1'-0"	15'-0"	9'-0"	3'-0"	3'-1 1/2"	20'-6"	14'-3"	3'-1 1/2"	7'-1 1/2"
5'-0"	3'-0"	1'-0"	1'-0"	15'-6"	9'-3"	3'-1 1/2"	3'-1 1/2"	21'-0"	14'-9"	3'-1 1/2"	7'-4 1/2"
5'-6"	3'-6"	1'-0"	1'-0"	16'-0"	9'-6"	3'-3"	3'-3"	21'-6"	15'-0"	3'-3"	7'-6"
6'-0"	4'-0"	1'-0"	1'-0"	16'-6"	10'-0"	3'-3"	3'-3"	22'-0"	15'-6"	3'-3"	7'-9"
6'-6"	4'-6"	1'-0"	1'-0"	17'-0"	10'-3"	3'-4 1/2"	3'-4 1/2"	22'-6"	15'-9"	3'-4 1/2"	7'-10 1/2"
7'-0"	5'-0"	1'-0"	1'-0"	17'-6"	10'-6"	3'-4 1/2"	3'-4 1/2"	23'-0"	16'-0"	3'-4 1/2"	7'-11 1/2"
7'-6"	5'-6"	1'-0"	1'-0"	18'-0"	10'-9"	3'-7 1/2"	3'-7 1/2"	23'-6"	16'-3"	3'-7 1/2"	8'-0"
8'-0"	6'-0"	1'-0"	1'-0"	18'-6"	11'-0"	3'-9"	3'-9"	24'-0"	16'-6"	3'-9"	8'-3"
8'-6"	6'-6"	1'-0"	1'-0"	19'-0"	11'-3"	3'-9"	3'-9"	24'-6"	17'-0"	3'-9"	8'-6"
9'-0"	7'-0"	1'-0"	1'-0"	19'-6"	11'-6"	3'-10 1/2"	3'-10 1/2"	25'-0"	17'-3"	3'-10 1/2"	8'-9"
9'-6"	7'-6"	1'-0"	1'-0"	20'-0"	12'-0"	4'-0"	4'-0"	25'-6"	17'-6"	4'-0"	9'-0"
10'-0"	8'-0"	1'-0"	1'-0"	20'-6"	12'-3"	4'-1 1/2"	4'-1 1/2"	26'-0"	18'-0"	4'-1 1/2"	9'-1 1/2"
10'-6"	8'-6"	1'-0"	1'-0"	21'-0"	12'-6"	4'-3"	4'-3"	26'-6"	18'-3"	4'-3"	9'-3"
11'-0"	9'-0"	1'-0"	1'-0"	21'-6"	13'-0"	4'-3"	4'-3"	27'-0"	19'-0"	4'-3"	9'-6"
11'-6"	9'-6"	1'-0"	1'-0"	22'-0"	13'-3"	4'-4 1/2"	4'-4 1/2"	27'-6"	19'-3"	4'-4 1/2"	9'-9"
12'-0"	10'-0"	1'-0"	1'-0"	22'-6"	13'-6"	4'-6"	4'-6"	28'-0"	20'-0"	4'-6"	10'-0"
12'-6"	10'-6"	1'-0"	1'-0"	23'-0"	13'-9"	4'-7 1/2"	4'-7 1/2"	28'-6"	20'-3"	4'-7 1/2"	10'-3"
13'-0"	11'-0"	1'-0"	1'-0"	23'-6"	14'-0"	4'-9"	4'-9"	29'-0"	20'-6"	4'-9"	10'-6"
13'-6"	11'-6"	1'-0"	1'-0"	24'-0"	14'-3"	4'-9"	4'-9"	29'-6"	21'-0"	4'-9"	10'-9"
14'-0"	12'-0"	1'-0"	1'-0"	24'-6"	14'-6"	4'-9"	4'-9"	30'-0"	21'-3"	4'-9"	11'-0"

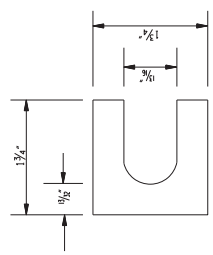


GENERAL NOTES: (SEE WK. NO. SN-6 FOR ADDITIONAL GENERAL NOTES)

1. THE TOP PLATE OF THE TRIANGULAR SLIP BASE SHALL HAVE THE DIMENSIONS SHOWN IN THE DETAIL. THE LIFTING CONE SHALL BE WELDED TO THE BOTTOM PLATE ONLY. A HOLE EQUAL TO THE INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS DETAILLED. TOP & BOTTOM PLATES SHALL BE SYMMETRICAL FOR THE PURPOSE OF ASSEMBLY IN ANY POSITION.
2. BASE CONNECTION ASSEMBLY AS FOLLOWS:
 - A. ASSEMBLE POST TO STUB WITH 3 BOLTS AND WITH 3 FLAT WASHERS PER BOLT.
 - B. SHIM AS REQUIRED TO PLUMB POST.
 - C. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" TO 15" WRENCH TO BED WASHERS, KEEPER PLATE, SHIMS AND TO CLEAN THE SURFACES OF THE SIGN POST.
 - D. LOOSEN EACH BOLT IN TURN & RETIGHTEN IN A SYSTEMATIC ORDER TO PRESCRIBED TORQUE. (SEE BASE CONNECTION DATA TABLE).
 - E. BURR THREADS AT JUNCTION WITH NUT WITH A CENTER PUNCH TO PREVENT NUT FROM LOOSENING.
3. FRICTION CAPS TO BE MANUFACTURED FROM HOT ROLLED OR COLD ROLLED STEEL. THE MINIMUM THICKNESS SHALL BE 20 GAGE SHEET METAL. RIM EDGES SHOULD BE REASONABLY STRAIGHT AND SMOOTH. CAPS SHALL BE SIZED AND FORMED IN SUCH A MANNER AS TO PROVIDE A DRIVE-ON FRICTION FIT AND HAVE NO TENDENCY TO ROCK WHEN SEATED ON PIPE. THE DEPTH SHALL BE SUFFICIENT TO PREVENT THE CAP FROM SLIDING OFF THE SIGN POST. THEY SHALL BE FREE OF SHARP CREASES OR INDENTATIONS, AND SHOW NO SIGNS OF METAL FRACTURE. ALL CAPS SHALL BE THE SAME IN SHAPE AND GENERAL APPEARANCE AS APPROVED BY THE ENGINEER.
4. STUB PROJECTION SHOULD BE MEASURED OVER A 1/2" CHORD AS PER AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, LATEST EDITION. SEE WK. NO. SN-6A FOR DIAGRAM.
5. AS AN ALTERNATIVE THE POST LENGTH OF THE SIGN POST CAN BE MADE-UP USING A NOMINAL LENGTH OF GALVANIZED PIPE. A GALVANIZED SLIP BASE CASTING GALVANIZED FLAT PLATES OR APPROVED EQUIP WITH ALL NECESSARY HARDWARE REQUIRED TO SECURE THEM TO THE SIGN POST. A GALVANIZED KEEPER PLATE SHALL BE USED TO PREVENT THE SIGN POST FROM SLIDING OFF THE SIGN POST. THE SIGN POST SHALL HAVE 3-SCREWS TO SECURE THE POST TO THE CASTING AND ONE SET SCREWS TO PREVENT ROTATION. THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS OF THE COMPLETE ASSEMBLY FOR MDOT APPROVAL.

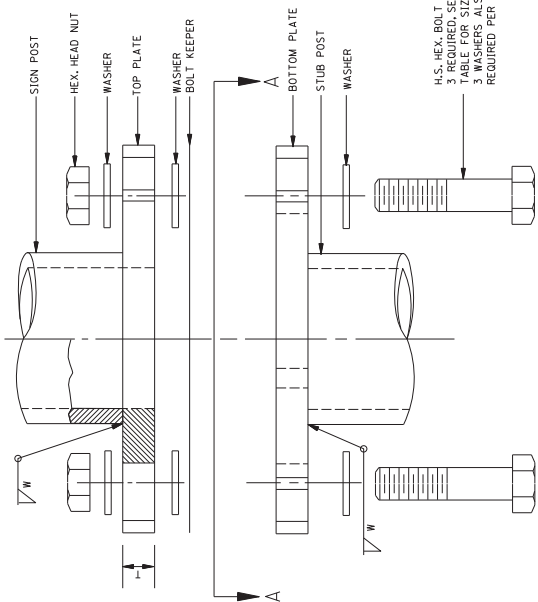


FRICTION CAP DETAIL
NOTE: SEE NOTE 3

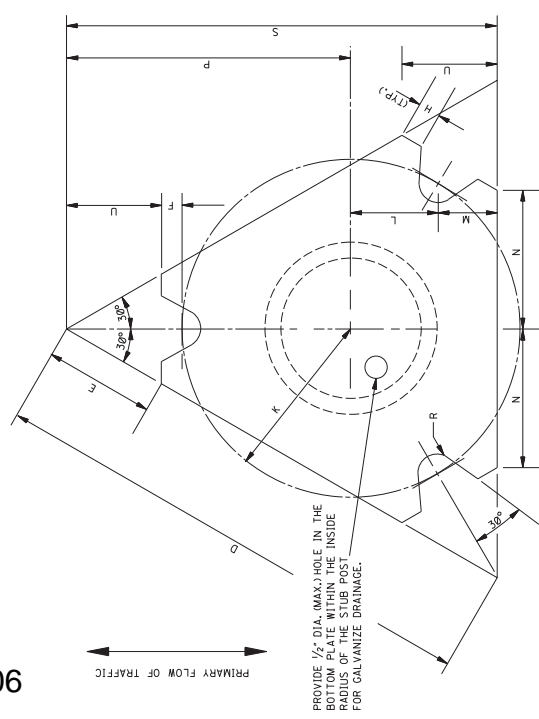


SHIM DETAIL

NOTE: FURNISH 2-0.012" ± THICK AND 2-0.032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B 36.

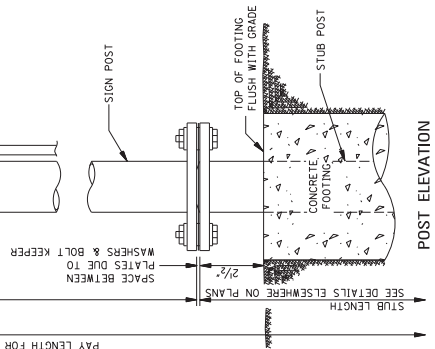


MULTI-DIRECTIONAL SIGN POST & STUB POST

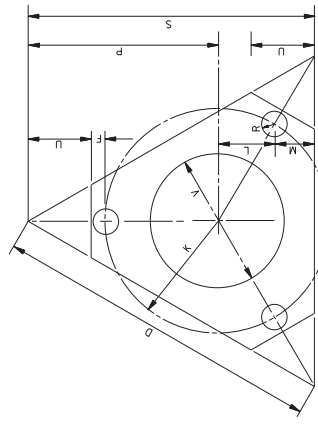


SECTION A-A

NOTE: SEE DATA TABLE FOR DIMENSIONS



POST ELEVATION



BOLT KEEPER PLATE DETAIL

NOTE: TO BE FABRICATED FROM 28 GAGE THICK GALVANIZED STEEL. TO BE INSTALLED AS SHOWN IN DETAIL AT UPPER LEFT.

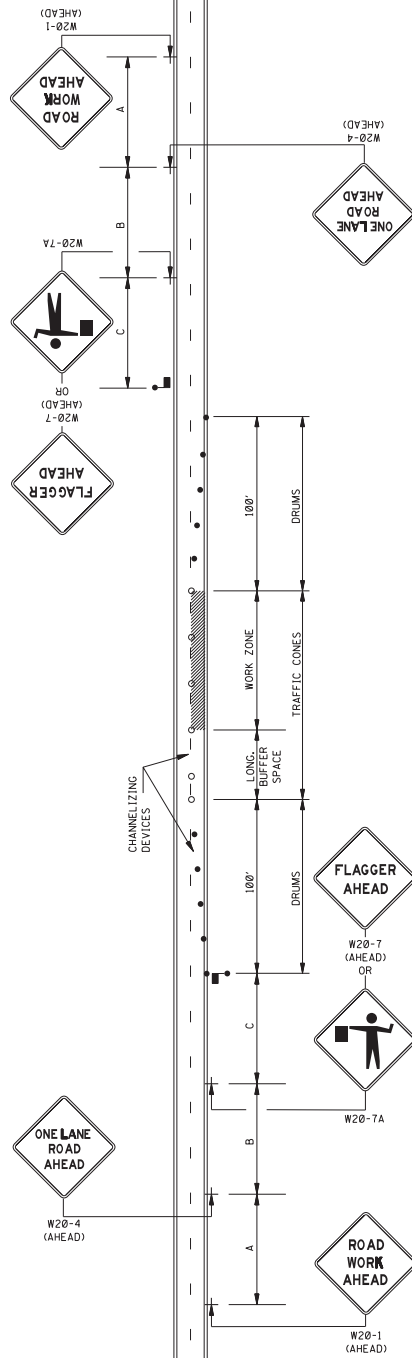
BASE CONNECTION DATA TABLE																
DIMENSIONS	BOLT SIZE & TORQUE	T	W	C	D	E	F	G	H	J	K	L	M	N	P	R
PIPE SIZES	3/4" 27/2"	3/4"	3/4"	1"	10/16"	2 1/2"	1/2"	3/4"	1/2"	1 3/4"	3/2"	1 3/4"	1 1/4"	2 1/8"	6"	9"
5"	500 lb. x 3"	7/8"	7/8"	1 1/8"	13"	2 7/8"	1/2"	3/4"	3/4"	2 1/2"	4 1/2"	2 1/4"	1 1/2"	3 3/4"	7 1/2"	11 1/4"
																15 3/4"

* NOTE: APPROXIMATE DIMENSIONS

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
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STANDARD PLAN

**BREAKAWAY
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LEGEND



- FLAGGER
- RETROREFLECTIVE FREE-STANDING PLASTIC DRUMS
- TRAFFIC CONES (28" HEIGHT MINIMUM)

DISTANCE BETWEEN SIGNS			
ROAD TYPE	A	B	C
URBAN (35 MPH OR LESS)	100 FT.	100 FT.	100 FT.
URBAN (40 - 70 MPH)	350 FT.	350 FT.	350 FT.
RURAL	500 FT.	500 FT.	500 FT.
EXPRESSWAY / FREEWAY	1000 FT.	1500 FT.	2640 FT.

- ALL CHANNELIZING DEVICES SHALL BE A MINIMUM OF 28" IN HEIGHT.
- DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 36" X 36" AND BLACK COPY ON FLUORESCENT ORANGE SHEETING.
- WHEN WORK ZONE IS NO LONGER NEEDED, ALL SIGNS SHALL BE COVERED OR REMOVED AND ALL CHANNELIZING DEVICES SHALL BE MOVED TO THE SHOULDER EDGE.
- ADDITIONAL FLAGGERS MAY BE NEEDED AS DIRECTED BY THE ENGINEER.
- WHEN WORK IS REQUIRED AT NIGHT, FLAGGER STATIONS SHALL BE ILLUMINATED.
- CHANNELIZING DEVICE TYPES FOR:
 - APPROACH AND EXIT TAPERS
 - ALONG LANE LINE AND WORK ZONE- TRAFFIC CONES (28" HEIGHT)
- ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

GENERAL NOTES:

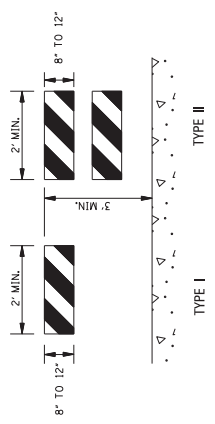
- THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE. FLAGGER STATIONS SHALL BE LOCATED SUCH THAT THE STOPPING DISTANCE OF TRAFFIC APPROACHING THE WORK ZONE TO STOP VALUES IN STOPPING SIGHT DISTANCE COLUMN MAY BE USED AS A MINIMUM FOR THIS DISTANCE.

POSTED SPEED AND/OR DESIGN SPEED mph	MAXIMUM CHANNELIZING DEVICES (ft)		LONGITUDINAL BUFFER SPACE (ft)	STOPPING SIGHT DISTANCE
	TAPER	ALONG LANE LINE & WORK ZONE		
25	20	50	55	155
30	20	60	85	200
35	20	70	120	250
40	20	80	170	305
45	20	90	220	360
50	20	100	280	425
55	20	110	335	495
60	20	120	415	570
65	20	130	485	645

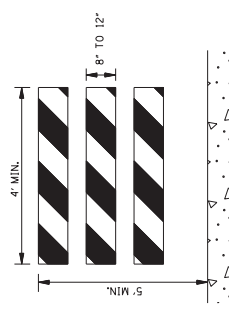
* NOTE: BUFFER SPACE MAY BE ADJUSTED AS NEEDED ACCORDING TO ROADWAY GEOMETRY TO MEET SIGHT DISTANCE REQUIREMENTS, AS DIRECTED BY THE ENGINEER.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	REVISION	DATE
ROADWAY DESIGN DIVISION		
STANDARD PLAN		
TRAFFIC CONTROL PLAN		
WITH FLAGGER		
(ONE-LANE CLOSURE OF TWO-WAY TRAFFIC)		
ISSUE DATE: AUGUST 01, 2017		
SHEET NUMBER 6351		





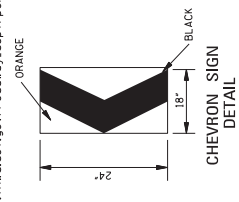
TYPE I
TYPE II



TYPE III

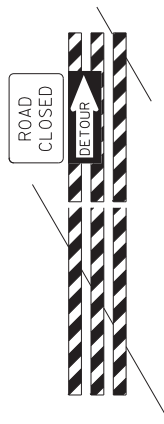
STANDARD BARRICADES

1. THE MARKING FOR BARRICADE RAILS SHALL BE ORANGE AND WHITE (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
2. RAIL STRIPE SHOULD BE 6 INCHES EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.
3. DO NOT PLACE SANDBAGS OR OTHER DEVICES TO PROVIDE MASS ON THE BOTTOM RAIL THAT WILL BLOCK VIEW OR RAIL FACE.
4. FOR ADDITIONAL INFORMATION OR DETAILS, SEE MUTCD, LATEST EDITION.
5. BARRICADES ARE CLASSIFIED BY FHWA AS CATEGORY II WORK ZONE DEVICES WHICH REQUIRE CRASHWORTHINESS ACCEPTANCE LETTERS. TO DATE, 2-IN. THICK TIMBER RAILS HAVE NOT BEEN 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/policy/guide/road_hardware/cat2.cfm



CHEVRON SIGN
DETAIL

1. A CHEVRON SIGN CONSISTS OF A BLACK CHEVRON TYPE MARKING ON AN ORANGE BACKGROUND AND SHALL POINT IN THE DIRECTION OF TRAFFIC FLOW.
2. THE CHEVRON SIGN SHALL BE MOUNTED ON CRASHWORTHY SUPPORT.
3. 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'-0" BEHIND THE LANE TRANSITION STRIPE.

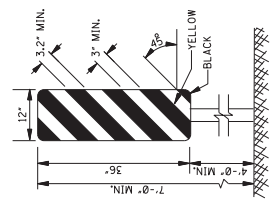


BARRICADE CLOSING A ROAD

BARRICADE CHARACTERISTICS

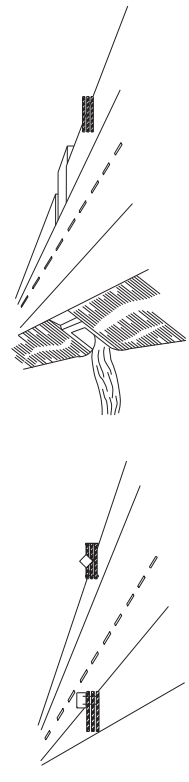
	I	II	III
WIDTH OF RAIL **	8" MIN. - 12" MAX.	8" MIN. - 12" MAX.	8" MIN. - 12" MAX.
LENGTH OF RAIL **	24" MIN.	24" MIN.	48" MIN.
WIDTH OF STRIPE *	6"	6"	6"
HEIGHT	36" MIN.	36" MIN.	60" MIN.
NUMBER OF EXPOSED RAIL FACES	2 (ONE EACH DIRECTION)	4 (TWO EACH DIRECTION)	3 IF FACING TRAFFIC IN ONE DIRECTION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



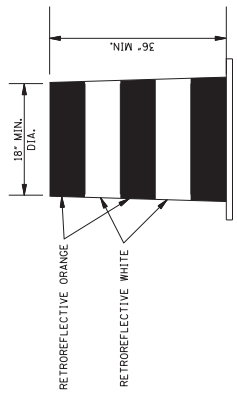
TYPE 3 OBJECT MARKER
(OM-3R)

1. TYPE 3 OBJECT MARKERS SHALL BE USED AT ALL EXPOSED BRIDGE ABUTMENTS AND AT OTHER LOCATIONS AS DEEMED NECESSARY BY THE ENGINEER.
2. THE OM-3R IS SHOWN. THE OM-3L 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.
3. THE INSIDE EDGE OF THE MARKER SHALL BE IN LINE WITH THE INNER EDGE OF THE OBSTRUCTION.



WING BARRICADES

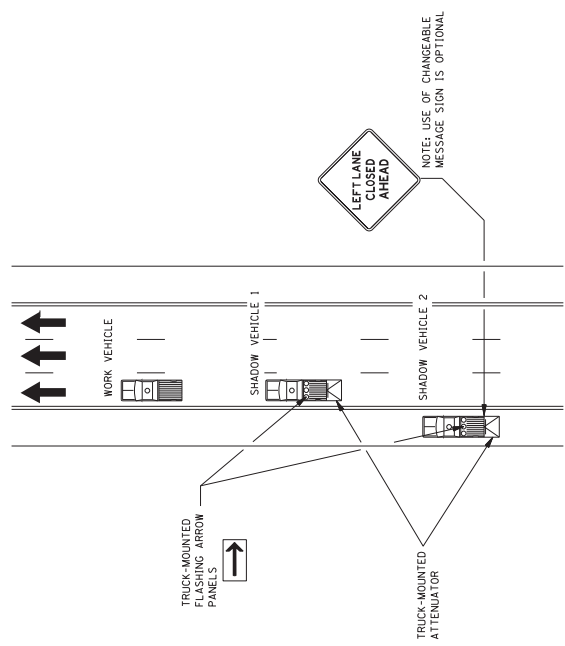
1. WING BARRICADES ARE TYPE III BARRICADES ERECTED ON THE SHOULDER ON ONE OR BOTH SIDES OF THE PAVEMENT TO GIVE THE SENSATION OF A NARROWING OR RESTRICTED ROADWAY. WING BARRICADES MAY BE USED AS A MOUNTING FOR THE ADVANCE WARNING SIGNS OR FLASHERS.
2. WING BARRICADES SHOULD BE USED:
 - A. IN ADVANCE OF A CONSTRUCTION PROJECT EVEN WHEN NO PART OF THE ROADWAY IS ACTUALLY CLOSED.
 - B. IN ADVANCE OF ALL BRIDGE OR CULVERT WIDENING OPERATIONS.



PLASTIC DRUM STRIPING DETAIL

1. PLASTIC DRUMS SHALL BE ON END AND USED AS AN EXPEDIENT METHOD FOR TEMPORARY CONSTRUCTION OF ROADWAY MARKINGS. DRUMS SHALL BE USED WITH MARKING STANDARDS FOR BARRICADE. THE PREDOMINANT COLOR ON DRUMS SHALL BE ORANGE WITH FOUR (4) RETROREFLECTIVE, HORIZONTAL, CIRCUMFERENTIAL STRIPES (2 ORANGE & 2 WHITE) 6" WIDE.
2. DRUMS SHOULD NEVER BE PLACED IN THE ROADWAY WITHOUT WARNING SIGNS.
3. WHERE PRACTICAL PLASTIC DRUMS SHOULD BE PLACED NO CLOSER THAN 3'-0" FROM THE EDGE OF TRAVELED LANE.

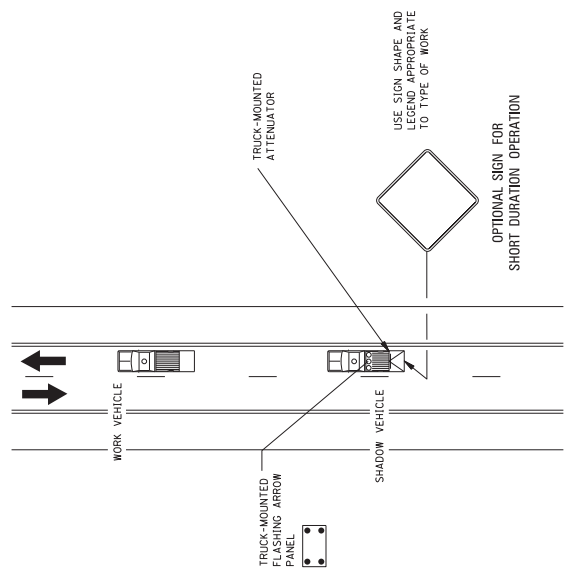
MOBILE OPERATIONS ON MULTILANE ROAD



MOBILE OPERATIONS ON MULTILANE ROAD

- NOTES FOR MULTILANE LANE OPERATION:
- VEHICLES USED FOR THESE OPERATIONS SHOULD BE MADE HIGHLY VISIBLE WITH APPROPRIATE EQUIPMENT, SUCH AS FLASHING LIGHTS, ROTATING BEACONS, FLAGS, SIGNS, OR ARROW PANELS.
 - SHADOW VEHICLE 2 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK MOUNTED ATTENUATOR (TMA). AN APPROPRIATE LANE CLOSURE SIGN SHOULD BE PLACED ON SHADOW VEHICLE 2 SO AS NOT TO OBSCURE THE ARROW PANEL.
 - SHADOW VEHICLE 1 SHOULD BE EQUIPPED WITH AN ARROW PANEL AND TRUCK-MOUNTED ATTENUATOR (TMA).
 - SHADOW VEHICLE 2 SHOULD TRAVEL AT A VARYING DISTANCE FROM THE WORK OPERATION SO AS TO PROVIDE ADEQUATE SIGHT DISTANCE FOR TRAFFIC APPROACHING FROM THE REAR.
 - WHEN ADEQUATE SHOULDER WIDTH IS NOT AVAILABLE, SHADOW VEHICLE 2 SHOULD BE ELIMINATED.
 - ON HIGH-SPEED ROADWAYS, A THIRD SHADOW VEHICLE SHOULD BE USED (i.e., VEHICLE 3 ON THE SHOULDER IF PRACTICAL), VEHICLE 2 IN THE CLOSED LANE, AND VEHICLE 1 IN THE CLOSED LANE.
 - ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60" X 30" IN ACCORDANCE WITH THE CRITERIA PRESENTED IN THE MUTCD.
 - WORK SHOULD NORMALLY BE DONE DURING OFF-PEAK HOURS.
 - VEHICLE-MOUNTED SIGNS SHOULD BE MOUNTED WITH THE BOTTOM OF THE SIGN LOCATED AT A MINIMUM HEIGHT OF 48" ABOVE THE PAVEMENT AND SHALL NOT BE OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
 - ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

MOBILE OPERATIONS ON TWO-LANE ROAD



MOBILE OPERATIONS ON TWO-LANE ROAD

- NOTES FOR TWO-LANE OPERATION:
- WHERE PRACTICAL AND WHEN NEEDED, THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS. IF THIS CAN NOT BE DONE FREQUENTLY AS AN ALTERNATIVE, A "DO NOT PASS" SIGN MAY BE PLACED ON THE REAR OF THE VEHICLE BLOCKING THE LANE.
 - THE DISTANCE BETWEEN THE WORK AND SHADOW VEHICLES MAY VARY ACCORDING TO THE TYPE OF ROADWAY. WHEN SHADOW VEHICLES ARE USED, WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLE SHOULD MAINTAIN THE MINIMUM DISTANCE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. THE SHADOW VEHICLE SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
 - ADDITIONAL SHADOW VEHICLES TO WARN AND REDUCE THE SPEED OF ONCOMING OR OPPOSING TRAFFIC MAY BE USED. POLICE PATROL CARS MAY BE USED FOR THIS PURPOSE.
 - A TRUCK-MOUNTED ATTENUATOR (TMA) SHOULD BE USED ON THE SHADOW VEHICLE AND MAY BE USED ON THE WORK VEHICLE.
 - THE WORK VEHICLE SHALL BE EQUIPPED WITH BEACONS, AND THE SHADOW VEHICLES SHALL BE EQUIPPED WITH TWO HIGH-INTENSITY FLASHING LIGHTS MOUNTED ON THE REAR, ADJACENT TO THE SIGN. SHADOW AND WORK VEHICLES SHALL DISPLAY FLASHING OR ROTATING BEACONS BOTH FORWARD AND TO THE REAR.
 - VEHICLE-MOUNTED SIGNS SHOULD BE MOUNTED WITH THE BOTTOM OF THE SIGN LOCATED AT A MINIMUM HEIGHT OF 48" ABOVE THE PAVEMENT AND SHALL NOT BE OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
 - ARROW BOARD TO BE USED IN CAUTION MODE.
 - ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TRAFFIC CONTROL PLAN
MOBILE OPERATIONS
MULTILANE ROADS
AND
TWO-LANE ROADS

ISSUE DATE: AUGUST 01, 2017

WORKING NUMBER
TCP-9

SHEET NUMBER
6359

General Decision Number: MS180211 01/05/2018 MS211

Superseded General Decision Number: MS20170211

State: Mississippi

Construction Type: Highway

County: Oktibbeha County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 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 \$10.35 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 2018. 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	01/05/2018

SUMS2010-030 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 14.13	0.00
CARPENTER, Excludes Form Work....	\$ 13.49	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.70	0.00
ELECTRICIAN.....	\$ 21.80	7.93
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 16.79	0.00
INSTALLER - GUARDRAIL.....	\$ 11.51	0.00
IRONWORKER, REINFORCING.....	\$ 14.82	0.00
LABORER: Asphalt, Includes		
Raker, Shoveler, Spreader and		
Distributor.....	\$ 10.39	0.00

LABORER: Common or General.....\$	9.25	0.00
LABORER: Concrete Worker.....\$	10.69	0.00
LABORER: Flagger.....\$	9.76	0.00
LABORER: Grade Checker.....\$	12.77	0.00
LABORER: Landscape.....\$	9.56	0.00
LABORER: Mason Tender - Cement/Concrete.....\$	11.08	0.00
LABORER: Pipelayer.....\$	10.76	0.00
LABORER: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....\$	10.38	0.00
OPERATOR: Asphalt Spreader.....\$	16.03	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....\$	14.40	0.00
OPERATOR: Boring Machine.....\$	15.14	0.00
OPERATOR: Broom/Sweeper.....\$	10.94	0.00
OPERATOR: Bulldozer.....\$	14.73	0.00
OPERATOR: Concrete Saw.....\$	15.68	0.00
OPERATOR: Crane.....\$	18.32	0.00
OPERATOR: Distributor.....\$	12.59	0.00
OPERATOR: Drill.....\$	19.22	0.00
OPERATOR: Grader/Blade.....\$	14.57	0.00
OPERATOR: Loader.....\$	11.54	0.00
OPERATOR: Mechanic.....\$	15.13	0.00
OPERATOR: Milling Machine.....\$	15.12	0.00
OPERATOR: Oiler.....\$	12.33	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....\$	14.47	0.00
OPERATOR: Piledriver.....\$	15.13	0.00
OPERATOR: Roller (All Types)....\$	11.54	0.00
OPERATOR: Scraper.....\$	13.15	0.00
OPERATOR: Tractor.....\$	11.25	0.00
OPERATOR: Trencher.....\$	15.00	0.00

TRUCK DRIVER: Flatbed Truck.....	\$ 13.79	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 13.30	0.00
TRUCK DRIVER: Mechanic.....	\$ 14.23	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.29	0.00
TRUCK DRIVER: Water Truck.....	\$ 10.58	0.00
TRUCK DRIVER: Dump Truck (All Types).....	\$ 11.71	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 15.81	0.00

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

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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 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

General Decision Number: MS180216 01/05/2018 MS216

Superseded General Decision Number: MS20170216

State: Mississippi

Construction Type: Highway

County: Prentiss County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 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 \$10.35 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 2018. 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	01/05/2018

SUMS2010-035 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 13.70	0.00
CARPENTER, Excludes Form Work....	\$ 13.49	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.07	0.00
ELECTRICIAN.....	\$ 21.80	7.93
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 16.79	0.00
INSTALLER - GUARDRAIL.....	\$ 11.51	0.00
IRONWORKER, REINFORCING.....	\$ 13.16	0.00
LABORER: Asphalt, Includes		
Raker, Shoveler, Spreader and		
Distributor.....	\$ 10.31	0.00

LABORER: Common or General.....\$	9.59	0.00
LABORER: Concrete Worker.....\$	10.69	0.00
LABORER: Flagger.....\$	9.76	0.00
LABORER: Grade Checker.....\$	12.77	0.00
LABORER: Landscape.....\$	9.56	0.00
LABORER: Mason Tender - Cement/Concrete.....\$	11.08	0.00
LABORER: Pipelayer.....\$	10.94	0.00
LABORER: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....\$	10.38	0.00
OPERATOR: Asphalt Spreader.....\$	16.03	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....\$	14.25	0.00
OPERATOR: Boring Machine.....\$	15.14	0.00
OPERATOR: Broom/Sweeper.....\$	10.94	0.00
OPERATOR: Bulldozer.....\$	15.14	0.00
OPERATOR: Concrete Saw.....\$	15.68	0.00
OPERATOR: Crane.....\$	18.32	0.00
OPERATOR: Distributor.....\$	12.59	0.00
OPERATOR: Drill.....\$	19.22	0.00
OPERATOR: Grader/Blade.....\$	14.29	0.00
OPERATOR: Loader.....\$	11.54	0.00
OPERATOR: Mechanic.....\$	14.75	0.00
OPERATOR: Milling Machine.....\$	15.12	0.00
OPERATOR: Oiler.....\$	12.33	0.48
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....\$	14.47	0.00
OPERATOR: Piledriver.....\$	15.13	0.00
OPERATOR: Roller (All Types)....\$	11.54	0.00
OPERATOR: Scraper.....\$	13.75	0.00
OPERATOR: Tractor.....\$	10.60	0.00
OPERATOR: Trencher.....\$	15.00	0.00

TRUCK DRIVER: Flatbed Truck.....	\$ 13.79	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 12.81	0.00
TRUCK DRIVER: Mechanic.....	\$ 14.23	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.88	0.00
TRUCK DRIVER: Water Truck.....	\$ 9.88	0.00
TRUCK DRIVER: Dump Truck (All Types).....	\$ 10.63	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 15.81	0.00

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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)).

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Union Average Rate Identifiers

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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

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Wage and Hour Division
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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

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END OF GENERAL DECISION

General Decision Number: MS180215 01/05/2018 MS215

Superseded General Decision Number: MS20170215

State: Mississippi

Construction Type: Highway

County: Pontotoc County in Mississippi.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 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 \$10.35 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 2018. 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	01/05/2018

SUMS2010-034 08/04/2014

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 14.13	0.00
CARPENTER, Excludes Form Work....	\$ 13.49	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.70	0.00
ELECTRICIAN.....	\$ 21.80	7.93
HIGHWAY/PARKING LOT STRIPING:		
Truck Driver (Line Striping		
Truck).....	\$ 13.77	0.00
INSTALLER - GUARDRAIL.....	\$ 11.51	0.00
IRONWORKER, REINFORCING.....	\$ 14.82	0.00
LABORER: Common or General,		
Including Asphalt Raking,		
Shoveling, Spreading and		
Concrete Work.....	\$ 10.22	0.00

LABORER: Flagger.....	\$ 9.76	0.00
LABORER: Grade Checker.....	\$ 12.77	0.00
LABORER: Landscape.....	\$ 9.56	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 11.08	0.00
LABORER: Pipelayer.....	\$ 10.76	0.00
LABORER: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 10.38	0.00
OPERATOR: Asphalt Spreader.....	\$ 16.03	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 13.15	0.00
OPERATOR: Boring Machine.....	\$ 15.14	0.00
OPERATOR: Broom/Sweeper.....	\$ 11.50	0.00
OPERATOR: Bulldozer.....	\$ 14.73	0.00
OPERATOR: Concrete Saw.....	\$ 15.68	0.00
OPERATOR: Crane.....	\$ 18.32	0.00
OPERATOR: Distributor.....	\$ 12.59	0.00
OPERATOR: Drill.....	\$ 19.22	0.00
OPERATOR: Grader/Blade.....	\$ 13.00	0.00
OPERATOR: Loader.....	\$ 12.00	0.00
OPERATOR: Mechanic.....	\$ 15.13	0.00
OPERATOR: Milling Machine.....	\$ 15.12	0.00
OPERATOR: Oiler.....	\$ 12.33	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 11.50	0.00
OPERATOR: Piledriver.....	\$ 15.13	0.00
OPERATOR: Roller (All Types)....	\$ 11.43	0.00
OPERATOR: Scraper.....	\$ 13.15	0.00
OPERATOR: Tractor.....	\$ 11.25	0.00
OPERATOR: Trencher.....	\$ 15.00	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 13.79	0.00

TRUCK DRIVER: Lowboy Truck.....	\$ 13.30	0.00
TRUCK DRIVER: Mechanic.....	\$ 14.23	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.29	0.00
TRUCK DRIVER: Water Truck.....	\$ 10.58	0.00
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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

SUPPLEMENT TO FORM FHWA-1273

DATE: 01/06/2016

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

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

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

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

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

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

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

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4.2(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

(06/28/2012)

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. 907-103-2

CODE: (SP)

DATE: 06/22/2017

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-103.01--Consideration of Proposal. Delete the second and third paragraphs of Subsection 103.01 on page 19, and substitute the following.

907-103.01.1--For Projects Constructed Without Federal Funds. Resident Contractors actually domiciled in Mississippi are to be granted preference over nonresidents in awarding of Contracts financed 100% with State funds.

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

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-619-6

CODE: (SP)

DATE: 03/21/2018

SUBJECT: Temporary Portable Rumble Strips

Section 619, Traffic Control for Construction Zones, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-619.02--Materials. After Subsection 619.02.15 on page 472, add the following.

907-619.02.16--Temporary Portable Rumble Strips. Temporary portable rumble strips shall be RoadQuake manufactured by PSS and meet the following requirements:

- capable of being installed without adhesives or bolts,
- have a minimum weight of 100 pounds,
- have a minimum overall length of 11 feet,
- have a minimum width of 12 inches, and
- have a maximum height of 3/4 inch.

Temporary portable rumble strips shall be installed in accordance with the attached details, or as directed by the Engineer.

907-619.03--Construction Requirements. After Subsection 619.03.11 on page 476, add the following.

907-619.03.16--Temporary Portable Rumble Strips. Temporary portable rumble strips shall be placed at locations shown on the traffic control plans, attached drawing, or as directed by the Engineer. The rumble strips shall be removed when lane closures are removed, relocated when lane closures are relocated, or as directed by the Engineer.

Prior to placement of the rumble strips, the roadway shall be cleaned to be free of dust, sand, and other materials that may cause slippage. The minimum roadway temperature at the time of installation shall be in accordance with manufacturer recommendations.

A minimum of three (3) temporary portable rumble strips shall be arranged in an array. The spacing of temporary portable rumble strips in each array shall be on 15-foot centers. One array of three (3) strips shall be used in each lane. The rumble strips shall be regularly monitored and maintained to ensure they stay in place under traffic.

907-619.04--Method of Measurement. At the end of Subsection 619.04 on page 478, add the following.

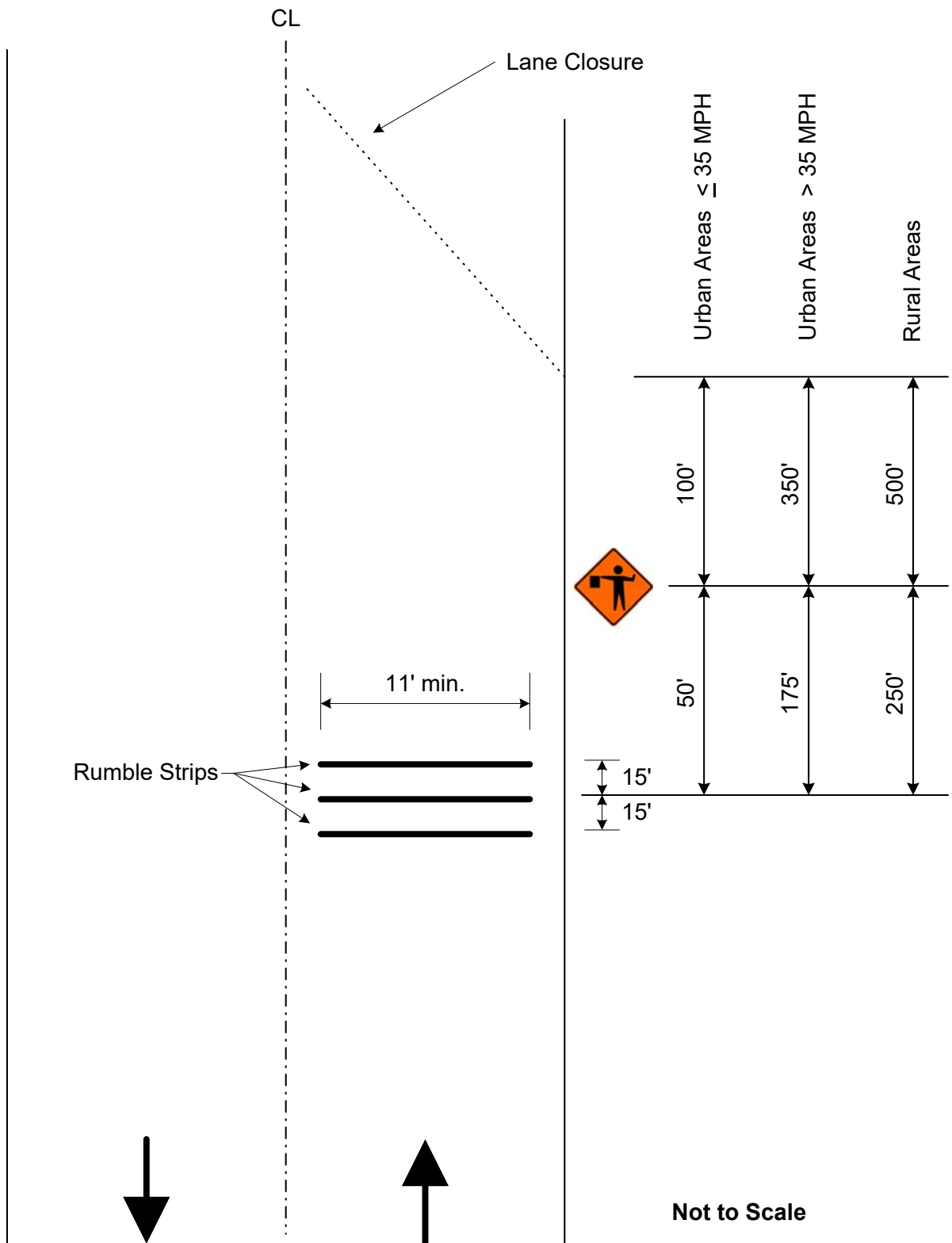
Temporary Portable Rumble Strips will be measured for payment by the linear foot only when a pay item for temporary portable rumble strips is included in the contract. Otherwise, temporary portable rumble strips will be included in the cost of pay item 618-A, Maintenance of Traffic. The quantity of temporary portable rumble strips will be the length of rumble strips approved by the Engineer to be in-place on the project at any one time.

907-619.05--Basis of Payment. After the fifth paragraph of Subsection 619.05 on page 478, add the following.

Temporary Portable Rumble Strips measured as prescribed above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for cleaning the roadway surface, installing the rumble strips, maintenance and repair of the strips, cleaning and resetting of the strips, removal and replacement, and for all labor, equipment, tools, and incidentals necessary to complete the work.

After the last pay item listed on page 480, add the following.

907-619-B: Temporary Portable Rumble Strips - per linear foot



Detail of Temporary Portable Rumble Strips

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-624-1

CODE: (SP)

DATE: 01/17/2017

SUBJECT: Inverted Profile Thermoplastic Traffic Stripe

Section 907-624, Inverted Profile Thermoplastic Traffic Stripe, is hereby added to and made part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

907-624.01--Description. Inverted profile thermoplastic pavement markings consists of furnishing materials and placing inverted profile thermoplastic pavement markings in reasonably close conformity with these specifications and the details shown on the plans or established.

Inverted profile thermoplastic pavement markings, high contract, shall consist of furnishing materials and placing inverted profile thermoplastic pavement markings over a black thermoplastic pavement marking in order to enhance the marking's visibility.

907-624.02--Materials.

907-624.02.1--General. The inverted profile thermoplastic marking material shall consist of an alkyd/maleic or hydrocarbon based formulation. The material shall be so manufactured as to be applied to the pavement in a molten form, with internal and surface application of glass spheres, and upon cooling to normal pavement temperature, shall produce an adherent, reflectorized pavement marking of specified thickness and width, capable of resisting deformation.

Materials shall be obtained from approved sources as listed on the Department's "List of Approved Sources" for Inverted Profile Thermoplastic Pavement Marking Materials. The material shall not scorch, break down, discolor, or deteriorate when held at the application temperature for four hours or when reheated four times to the application temperature. Temperature-vs-viscosity characteristics of the plastic material shall remain constant when reheated four times, and shall be the same from batch to batch.

The thermoplastic material shall be a product especially compounded for pavement markings. The pavement markings shall maintain their original dimension and shall not smear or spread under normal traffic at temperatures below 140°F. The markings shall have a uniform cross section. Pigment shall be evenly dispersed throughout its thickness. The exposed surface shall be free from tack and shall not be slippery when wet. The material shall not lift from pavement in freezing weather. Cold ductility of the material shall be such as to permit normal movement with the pavement surface without chipping or cracking.

Black thermoplastic compound for the placement of inverted profile thermoplastic pavement markings, high contract, shall consist of a hydrocarbon or alkyd/maleic based formulation.

The manufacturers of the thermoplastic compound, glass beads and epoxy primer sealer shall furnish to the Engineer three copies of certified test reports showing results of all tests specified herein and shall further certify that the materials meet all requirements. The Contractor shall provide the warranty as specified herein to the Engineer.

907-624.02.2--Inverted Profile Thermoplastic Material. The thermoplastic material shall consist of homogeneously mixed pigments, fillers, resins and glass beads, and shall be available in both white and yellow. The material shall be free from all skins, dirt, and foreign objects. Materials shall conform to AASHTO M 249 with the following modifications:

907-624.02.2.1--Intermixed Glass Beads. The thermoplastic material shall contain a minimum of 40 percent Class H glass beads by weight. Class H glass beads shall meet the requirements of ASTM D 1155, and shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO M 247, Section 4.4.2. Class H beads shall have a minimum of 70 percent true spheres and the +20 sieve shall be tested visually.

The gradation of the Class H beads shall meet the following:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
12	100
14	95 - 100
16	80 - 100
18	30 - 100
20	15 - 100
30	10 - 100
50	0 - 50
100	0 - 5

907-624.02.2.2--Binder Content. The binder content of the thermoplastic material shall be 19 percent minimum.

907-624.02.2.3--Titanium Dioxide. The titanium dioxide shall meet ASTM D 476, Type II, Rutile grade - 10 percent minimum titanium content.

907-624.02.2.4--Yellow Pigment. The yellow pigment for the yellow thermoplastic material shall be five (5) percent minimum.

907-624.02.2.5--Specific Gravity. The specific gravity of the thermoplastic pavement marking material shall not exceed 2.35.

907-624.02.2.6--Flow Characteristics.

907-624.02.2.6.1--Flowability. After heating the thermoplastic material for four (4) hours ± 5 minutes at $425 \pm 3^\circ\text{F}$ and testing flowability, the white thermoplastic shall have a maximum percent residue of 22 percent and the yellow thermoplastic shall have a maximum residue of 24 percent.

907-624.02.2.6.2--Flow Resistance. The material shall exhibit a maximum flow of 10%. The material's ability to form ribs on the markings shall be evaluated by casting a disc of material approximately 3.5 inches wide by 1.0 inch long by and 0.60 inch deep. After the material is cooled to ambient temperature, measure the exact height. The material shall then be stored at 190°F for four (4) hours. After the material is cooled to ambient temperature, re-measure the exact height and express the flow resistance as a flow percentage.

907-624.02.2.7--Reflectivity. The initial reflectance for the in-place marking shall have a minimum reflectance value of 450 mcd/fc/sq. ft. for white and 350 mcd/fc/sq. ft. for yellow, when measured with a MiroLux Ultra 30 retroreflectometer, or approved equal.

907-624.02.2.8--Wet Reflectivity. The initial reflectance for the in-place marking when wet shall have a minimum reflectance value of 200 mcd/fc/sq. ft. for white and 175 mcd/fc/sq. ft. for yellow, when measured with an approved retroreflectometer. The stripe shall be wetted utilizing a pump type sprayer for five (5) seconds. After 30 seconds, place the retroreflectometer on the stripe and measure the reflectance.

907-624.02.2.9--Inverted Profile. The thermoplastic pavement marking material shall be applied to have individual profiles having a minimum height of 0.140 inches with the recessed inverted profiles having a thickness of 0.025 to 0.050 inches. The profiles shall be well defined, spaced approximately one (1) inch apart, and not excessively run back together.

907-624.02.3--Black Pavement Marking Material for High Contrast Inverted Profile Pavement Markings.

907-624.02.3.1--General. In the molten state, the material shall not give off fumes that are toxic or otherwise injurious to persons or property. The manufacturer shall provide material safety data sheets for the product.

The temperature versus viscosity characteristic of the plastic material shall remain constant and the material shall not deteriorate in any manner during three reheating processes. There shall be no obvious change in color of the material as a result of up to three reheatings, or in maintaining the material at application temperature up to an aggregate time of four (4) hours, or from batch to batch. The maximum elapsed time after application at which normal traffic will leave no impression or imprint on the new stripe shall be 30 seconds when the air and road surface temperature is approximately 68 ±5°F. The applied stripe shall remain free from tack and shall not lift from the pavement under normal traffic conditions within a road temperature range of -20°F to 150°F. The stripe shall maintain its original dimensions and placement. Cold ductility of the material shall be such as to permit normal dimensional distortion as a result of tire impact within the temperature range specified.

The material shall provide a stripe that has a uniform thickness throughout its cross section.

907-624.02.3.2--Binder. The binder shall be hydrocarbon or alkyd/maleic based. The binder shall consist of a homogeneous mixture of pigment, fillers, resins, waxes and plasticizers. The total

binder content shall be well distributed throughout the compound. The binder shall be free from all foreign objects or ingredients that would cause bleeding, staining or discoloration. The binder shall be 19 percent minimum by weight of the thermoplastic compound.

907-624.02.3.3--Pigment. The pigment used for black pavement marking compound shall be as required and shall be uniformly distributed throughout the marking compound.

907-624.02.3.4--Filler. The filler to be incorporated with the resins shall be a white calcium carbonate, silica or any approved substitute.

907-624.02.3.5--Specific Gravity. The specific gravity of the marking compound shall not exceed 2.0.

907-624.02.3.6--Softening Point. After heating the marking compound for 4 hours ± 5 minutes at $375 \pm 3^\circ\text{F}$ and testing in accordance with ASTM E 28, the material shall have a minimum softening point of 180°F as measured by the ring and ball method.

907-624.02.3.7--Tensile Bond Strength. After heating the marking compound for 4 hours ± 5 minutes at $375 \pm 3^\circ\text{F}$, the tensile bond strength shall exceed 180 psi when tested in accordance with ASTM D 4806. The material shall be applied to unprimed, sandblasted Portland cement concrete block at a thickness of 0.0625-inch and at a temperature of $375 \pm 3^\circ\text{F}$. The test shall be conducted at room temperature.

907-624.02.3.8--Impact Resistance. After heating the marking compound for 4 hours ± 5 minutes at $375 \pm 3^\circ\text{F}$, the impact resistance shall be a minimum of 50 inch-pounds minimum when tested in accordance with ASTM D 2794. No cracks or bond loss shall occur when a 0.0625-inch thick film drawdown is made at $375 \pm 3^\circ\text{F}$ on an unprimed sandblasted Portland cement concrete block. The sample is tested with a male indenter 5/8-inch and no female Die at room temperature.

907-624.02.3.9--Identification. Each package of material shall be stenciled with the manufacturer's name, the type of material and specification number, the month and year the material was packaged and lot number. The letters and numbers used in the stencils shall be a minimum of 1/2 inch in height.

907-624.02.3.10--Packaging. The material shall be packaged in suitable containers that will not adhere to the product during shipment and storage. The container of pavement marking material shall weigh approximately 50 lbs. Each container shall designate the color, type of resin, type of application and user information. The label shall warn the user that the material shall be heated in the range of 350° to 425°F .

907-624.02.3.11--Storage Life. The material shall meet the requirements of this specification for a period of one year. The material must also meet uniformly with no evidence of skins or unmelted particles for this one-year period. The manufacturer shall replace any material not meeting the above requirements.

907-624.02.3.12--Certifications. The material manufacturer shall furnish a certified copy of material test reports to the Engineer.

907-624.02.4--Drop-On Glass Beads. Drop-on glass beads shall be separated into two (2) classes, as follows:

907-624.02.4.1--Class G Glass Beads. Class G glass beads shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO M 247, Section 4.4.2 and shall exhibit the following characteristics:

- **Color and Clarity:** The glass beads shall be colorless and clear, and shall be free of carbon residues.
- **Index of Refraction:** minimum 1.50
- **Roundness:** The glass beads shall have a minimum of 80% true spheres per screen for the two highest sieve quantities, determined visually, and a maximum of 3% angular particles per sieve, determined visually. The remaining sieves shall have a minimum of 75% true spheres, determined visually per aspect ratio using microfiche reader.
- **Air Inclusions:** 10% maximum
- **Specific Gravity:** The specific gravity of the glass beads shall be a minimum of 2.50.
- **Gradation:** The gradation of Class G glass beads shall be as follows:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
12	100
14	100 - 95
16	100 - 80
18	100 - 20
20	90 - 20
30	100 - 50
Pan	100 - 90

All Class G glass beads shall be coated with an adhesion promoting coating.

907-624.02.4.2--Class H Glass Beads. Class H glass beads shall meet the requirements of ASTM D 1155, and shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO M 247, Section 4.4.2. Class H beads shall have a minimum of 70 percent true spheres and the +20 sieve shall be tested visually.

The gradation of the Class H beads shall meet the following:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
16	99 - 100
20	75 - 100
30	55 - 95
50	10 - 35
100	0 - 5

907-624.03--Construction Requirements.

907-624.03.1--Equipment. The application equipment shall be specifically designed for placing thermoplastic material in a hot molten state on the pavement surface utilizing a pressure type application method. The thermoplastic stripe shall be formed by a die that is allowed to drag along in proximity with the pavement surface. The die is pulled forward by a special linkage that will allow it to automatically level itself as to float and remain parallel with the pavement surface. The traffic stripe shall be formed by reason that the hot thermoplastic material is forced under pressure through four sides to the die onto the pavement surface. The top of the die shall be enclosed and provide entry means for the hot molten thermoplastic material to enter the die cavity. The bottom of the die shall contain a movable door that is remote controlled so as to start or stop the flow of thermoplastic material onto the pavement surface. When the movable door is open, thermoplastic material can flow through the die and will apply a thermoplastic stripe that will be formed rearward of the advancing die. The pavement surface shall be at the bottom of the die enclosure. Thermoplastic material shall be fed to the die under pressure through flexible oil-jacketed stainless steel hoses. The thermoplastic material must be either pumped or fed from a pressure vessel to the die under pressure in order to obtain the proper adhesion with the pavement surface.

The system shall consist of a low pressure drop-on type glass bead gun, (bead coat #1). The thermoplastic die shall be oil-jacketed on four (4) sides and is formed from a single solid block of steel. The glass bead gun shall dispense glass beads onto the hot thermoplastic stripe from a height of approximately one (1) inch above the pavement surface. The point at which the glass beads strike the surface of the stripe shall be approximately three inches (3") behind the strike point of the thermoplastic material itself. This reflective bead coat #1 shall utilize Class G glass beads as specified herein, and shall provide a surface coating of 50 percent of the thermoplastic stripe surface. Of this 50 percent stripe coverage, at least 50 percent of the beads shall be embedded to a depth of 60 percent of their diameter.

A second curtain coater, low pressure drop-on type glass bead gun capable of applying a continuous sheet or ribbon of glass beads, shall follow at an interval of approximately 10 inches behind the first bead gun. This second glass bead gun shall apply bead coat #2 which will form a continuous drop-on coat of Class H glass beads immediately in front of the profiling device. This second curtain of glass beads shall have a low impact speed so that they are not forced into the stripe under pressure.

A special rotatable wheel profiling device shall be located approximately eight (8) inches behind bead gun #2. This rotatable wheel device shall be approximately seven (7) inches in diameter and shall have a plurality of spaced projections located around its circumference. The profiling device shall be wider than the stripe being applied in order that the stripe shall be adequately covered. The projections on the rotatable profiling device shall have an angular profiling surface set at an angle to the pavement surface. The rotatable profile device shall be mounted with an automatic leveling device to the same carriage assembly as the thermoplastic gun. This is required so that a traffic stripe of accurate and uniform definition can be obtained. The inverted profile grooves shall be pressed into the hot molten thermoplastic stripe within one (1) second of the thermoplastic material application in order to insure proper bead adhesion to the stripe. Using rollers to place grooves in the traffic stripe utilizing a separate vehicle or grooves that are not pressed within one

(1) second of the thermoplastic material application will not be allowed. To insure that no thermoplastic material adheres to the wheel as it rotates and profiles the stripe, a small air atomizer water jet shall apply a thin mist coat of water to the rotatable profile wheel. It is the intent of this specification that a minimum amount of water be used and that no water puddles greater than ¼ inch in diameter be allowed to accumulate on the pavement surface in proximity to the freshly placed stripe. Excess water on the pavement surface can cause bond failure of the thermoplastic material.

All parts of the thermoplastic holding tank including manifolds, hoses, pipes, dies, etc., shall be oil-jacketed to insure accurate temperature control. The thermoplastic material shall be preheated in kettles designed specifically for that purpose. Each kettle of preheated thermoplastic material shall be properly mixed and heated to the correct application temperature. The preheated material shall then be fed to the thermoplastic gun for application.

The striping machine shall contain enough glass beads and water to apply one full kettle of thermoplastic material.

907-624.03.2--Cleaning of Pavement Surface. Immediately before application, the areas to receive markings shall be cleaned thoroughly using equipment capable of cleaning without damaging the pavement surface. This will include, but not be limited to, all vegetation, loose soil, oils, and other debris. On areas of pavement cured with compound, the membrane shall be removed completely by "shot" blasting, sand blasting or other approved method. Striping shall follow as closely as practical after the pavement surface has been cleaned.

907-624.03.3--Application Over Existing Striping. Where shown on the plans or directed by the Engineer, the existing traffic stripe shall be removed by grinding or sandblasting. When placing inverted profile thermoplastic pavement markings on existing pavement that has more than one light coat (pavement not showing through stripe) of striping material, the existing stripe shall be removed to the point that 80 percent of the pavement surface is visible.

Removal of existing stripe will be paid for as a separate item of work.

Where unsatisfactory striping performed by the Contractor must be removed and replaced in accordance with these specifications, the Contractor shall use the removal method described above. No payment will be made for removal or replacement of the Contractor's unsatisfactory striping.

907-624.03.4--Surface Conditions. When placing inverted profile thermoplastic pavement markings, no striping shall be permitted when the pavement surface temperature is less than 60°F. A non-contact infrared pyrometer shall be furnished by the Contractor for use by the Engineer for verification of the temperature. Striping shall not be performed when there is moisture on the pavement surface or when winds exceed 12 mph. When unseen moisture is suspected to be present, a moisture test shall be performed. The test shall be as follows:

- 1) Place a piece of roofing felt on the pavement surface.
- 2) Pour 0.5 gallon of thermoplastic material at application temperature onto the paper.

- 3) After two (2) minutes, lift the paper and inspect to see if moisture has been drawn from the pavement.
- 4) If moisture is present, striping is not to begin until the surface is moist free.

Documentation of weather and pavement conditions shall be recorded as part of completing the MDOT Inverted Profile Thermoplastic Pavement Marking Inspectors Report.

907-624.03.5--Application. Prior to the placement of pavement markings, the Contractor shall furnish the Engineer three copies of the manufacturer's warranty stating that the manufacturer will guarantee the pavement marking to meet the requirements of this specification.

The thermoplastic material shall be preheated and thoroughly mixed. The application temperature of the thermoplastic material shall be between 400°F and 430°F. A digital thermometer complete with a 24-inch probe shall be furnished by the Contractor for use by the Engineer for verification of the temperature.

When measured at the highest point of the profile, the cold thickness of the in-place thermoplastic stripe shall be a minimum of 0.140 inch for Inverted Profile Thermoplastic Pavement Markings. The thickness of the thermoplastic material in the bottom of the profiles shall range from 0.025 to 0.050 inch. The individual profiles shall be located transversely across the stripe at intervals of approximately one (1) inch. The bottoms of these intervals shall be between 3/32 inch and 5/16 inch wide. In order to drain water and to reflect light, it is normal for the top surface of the inverted profiles to be irregular. The application rate of thermoplastic material for Inverted Profile Thermoplastic Pavement Markings shall be a minimum of 2700± pounds per mile for a continuous 6-inch stripe.

The application rate for Class G glass beads (bead coat #1) shall be 300± pounds per mile for 6-inch continuous stripe.

The application rate for Class H glass beads (bead coat #2) shall be 300± pounds per mile for 6-inch continuous stripe.

The thickness of the striping materials shall be verified periodically (at least every 1320 feet) and any thickness more than five (5) percent under the designated thickness shall be reworked. A consistent, uncorrected under-run will not be allowed and the Contractor will be required to install the specified minimum thickness of 0.140 inch. A wet thickness gauge and cold thickness gauge shall be furnished by the Contractor for use by the Engineer for the verification of film thickness.

When striping over existing painted stripe (one light coat), on old oxidized asphalt, on all concrete surfaces or on asphalt surfaces when ambient temperatures are below 70°F, a two component epoxy primer sealer shall be used and installed as recommended in writing by the thermoplastic material manufacturer. The epoxy primer sealer shall be EX255/EX256 as manufactured by Crown Paint Company of Oklahoma City, Oklahoma, or approved equal. The Contractor shall furnish certification of compatibility of the epoxy primer sealer to be used with the thermoplastic material supplied. If an alternate epoxy primer sealer to the EX255/EX256 is used, the Contractor

shall furnish a mill analysis and proof of adequate performance of the alternate epoxy primer sealer when used with thermoplastic pavement markings.

907-624.03.6--Inverted Profile Thermoplastic Traffic Stripe, High Contrast. Before applying the black pavement marking material, the Contractor shall remove any dirt, glaze, grease or any other material that would reduce the adhesion of the thermoplastic to the pavement.

The pavement marking material shall be installed in a molten state by the spray method at a minimum temperature of 350°F and a maximum temperature of 425°F. Scorching or discoloration of material shall be cause for rejection by the Engineer. The machinery shall be constructed so that all mixing and conveying parts, up to and including the thermoplastic gun, maintain the material in the molten state.

The pavement marking materials shall not be applied when air and pavement surface temperatures are below 60°F or when the surface of the pavement contains any evidence of moisture.

The pavement marking material shall be applied at a thickness of not less than 0.040-inch.

The equipment used to install hot applied pavement marking material shall provide continuous mixing and agitation of the material while maintaining a minimum temperature exceeding 400°F. A strainer shall be in place between the main material reservoir and the gun to prevent accumulation and clogging. The equipment shall be constructed for easy accessibility to parts requiring cleaning and maintenance.

After the black thermoplastic pavement markings are applied, inverted profile thermoplastic markings shall be placed over the black thermoplastic pavement markings in accordance with the specifications and to the dimensions and details shown on the plans or established.

907-624.03.7--Warranty. The manufacturer shall warrant that the inverted profile thermoplastic markings will meet the minimum performance level of 150 mcd/fc/sq. ft. dry and 75 mcd/fc/sq. ft. wet for a period of 48 months from the date of final inspection when exposed to normal roadway conditions regardless of the average daily traffic. Failure to meet this requirement will result in the total replacement of the portion of the stripe shown to be below these minimums. All costs of labor, material and other incidentals necessary for the replacement of unacceptable pavement markings shall be at no additional costs to the State.

Compliance will be determined by an average brightness reading over a minimum zone marking length of 300 linear feet, using an approved reflectometer. The zone of measurement referred to includes centerline stripe, edge lines and skip lines.

Performance Requirements:	White		Yellow	
	<u>Dry</u>	<u>Wet</u>	<u>Dry</u>	<u>Wet</u>
Initial Reflectivity, mcd/fc/sq. ft.	450	200	350	175
48-Month Retained Reflectivity	150	75	150	75

The measurement procedure for this warranty will entail a visual night inspection by a manufacturer representative and a MDOT representative to identify areas of the installation, which appear to be below the specified minimum, warranted reflectance value. All reflectance measurements for dry conditions shall be made on a clean dry surface at a minimum temperature of 40°F. All reflectance measurements for wet conditions shall be made using the setting conditions of Subsection 907-624.02.2.8 at a minimum temperature of 40°F.

Measurement intervals for installations with areas less than, or equal to, three (3) miles shall be at a minimum of three (3) check points for each zone. These check points should include the start point, approximate mid-point and the end point.

Measurement intervals for installations with areas greater than three (3) miles shall be at a minimum of three (3) check points, one at the start point, one at the end point and additional measurements spaced at 3-mile intervals between the start and end points of the area in question.

The number of measurements at each check point for each zone will be as follows:

- (A) Skip Lines: Eighteen (18) measurements, distributed over six (6) skip lines, shall be made at each check point.
- (B) Center Lines and/or Edge Lines: Eighteen (18) measurements shall be made over 300 linear feet of continuous stripe.

When taking reflectivity measurements, the value of the measurement shall be determined by averaging three measurements; one at the left edge of the stripe, one at the center of the stripe and one at the right edge of the stripe.

In addition, the reflectance values measured at each check point shall be averaged by zone to determine conformance to the minimum warranted reflective values.

907-624.04--Method of Measurement. Inverted profile thermoplastic traffic stripe of the type specified will be measured by the mile or by the linear foot, as indicated, from end-to-end of individual stripes. In the case of skip lines the measurement will include skips. The length used to measure centerline and edge stripes will be the horizontal length computed along the stationed control line. Inverted profile thermoplastic detail traffic stripe will be measured by the linear foot from end-to-end of individual stripes. Measurements will be made along the surface of each stripe and will exclude skip intervals where skips are specified. Stripes more than six (6) inches in width will be converted to equivalent lengths of six-inch widths.

907-624.05--Basis of Payment. Inverted profile thermoplastic traffic stripe, measured as prescribed above, will be paid for at the contract unit price per mile or linear foot, as applicable, which shall be full compensation for completing the work.

Payment will be made under:

907-624-A:	6" Inverted Profile Thermoplastic Traffic Stripe, Skip White *	- per linear foot or mile
907-624-B:	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White *	- per linear foot or mile
907-624-C:	6" Inverted Profile Thermoplastic Traffic Stripe, Skip Yellow *	- per linear foot or mile
907-624-D:	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow *	- per linear foot or mile
907-624-E:	Inverted Profile Thermoplastic Detail Traffic Stripe, <u>Color</u> *	- per linear foot

* High Contrast may be specified

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-630-1

CODE: (SP)

DATE: 01/17/2017

SUBJECT: Remove and Reset Signs

Section 630, Traffic Signs and Delineators of the Mississippi Standard Specifications for Road and Bridge Construction, 2017 Edition, is hereby amended as follows.

907-630.01--Description. After the last paragraph of Subsection 630.01 on page 503, add the following.

Selected existing, temporarily installed, and/or permanently installed signs other than construction traffic control signs shall be removed and reset as shown on the plans, in the contract documents, or as directed by the Engineer. Removing and resetting of signs may include provisions of continuous sign visibility by the traveling public before, during, and after the operation. The Contractor shall provide all materials necessary to remove and reset the sign, including any footings, supports, brackets, hardware, breakaway features and other incidentals. All installations within 30 feet of the pavement edge of temporary or permanent thru lanes shall include breakaway support features certified to meet NCHRP Report 350 prior to the removal and resetting of the sign.

Selected existing overhead sign shall be removed and reset as shown on the plans, in the contract documents, or as directed by the Engineer. The Contractor shall provide all materials necessary to remove and reset the sign, including any supports, brackets, hardware, and other incidentals. The Contractor shall take all precautions necessary when removing, transporting, storing, and re-installing to protect the sign from any damage to the sign panel or reflective sign surface.

907-630.04--Method of Measurement. After the last paragraph of Subsection 630.04 on page 510, add the following.

Remove and reset signs will be measured per each or square foot.

If a sign assembly is removed and temporarily placed in storage, then later reset as directed by the Engineer, measurement for payment will be made one time only, after the stored sign is reset.

No separate measurement will be made for removal only of a sign assembly, as said removal shall be included in the appropriate pay item for removal of signs.

907-630.05--Basis of Payment. After the first paragraph of Subsection 630.05 on page 510, add the following.

Remove and reset sign, measured as prescribed above, will be paid for at the contract unit price per each or square foot, which price shall be full compensation for furnishing and placing all

materials necessary to effect the removal and resetting, including footings, supports, brackets, hardware, breakaway features, transporting, storage, and for all labor, equipment, tools and incidentals necessary to complete the work.

Add the following to the list of pay items on pages 510 & 511.

907-630-O: Remove and Reset Sign, Description - per each or square foot

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, 1/4-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 ¼-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 pushbutton 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/hardwire/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. 907-634-1

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Traffic Signal and ITS Equipment Poles

Section 634, Traffic Signal and ITS Equipment Poles, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-634.02--Materials.

907-634.02.1.1--Traffic Signal Poles. Delete the third, fourth, and fifth bullets in Subsection 634.02.1.1 on pages 542 and 543, and substitute the following.

- Self-supporting straight or upswept mast arm(s), in accordance with Plan details. Where possible, the mast arms shall match the adjacent signal poles in the area unless otherwise stated;
- Tag installed on shaft side opposite the mainline highway and located approximately 48 inches above the top of the Baseplate;
- Minimum nominal size of four (4) inches wide by 26 inches tall reinforced hand-hole with included terminal block(s);
- A ½-inch coarse thread grounding stud shall be located on the interior side of the pole hand-hole opening;

907-634.02.1.2--Galvanized Steel Poles for Cameras. Delete the first sentence of the second paragraph of Subsection 634.02.1.2 on page 543, and substitute the following.

Unless specified otherwise in the plans, poles shall be designed in accordance with the AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals*, as specified in the plans, including all interims and updates.

Delete the third sentence of the second paragraph of Subsection 634.02.1.2 on page 543.

907-634.02.1.3--Galvanized Steel Poles for Detectors. Delete the first sentence of the second paragraph of Subsection 634.02.1.3 on page 546, and substitute the following.

Unless specified otherwise in the plans, poles shall be designed in accordance with the AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals*, as specified in the plans, including all interims and updates.

Delete the third sentence of the second paragraph of Subsection 634.02.1.3 on page 546.

907-634.02.1.4--Aluminum Poles for Detectors. Delete the first sentence of the second paragraph of Subsection 634.02.1.4 on page 547, and substitute the following.

Unless specified otherwise in the plans, poles shall be designed in accordance with the AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals*, as specified in the plans, including all interims and updates.

Delete the third sentence of the second paragraph of Subsection 634.02.1.4 on page 547.

907-634.02.1.5--Structure-Mounted ITS Equipment Poles. Delete the first sentence of the second paragraph of Subsection 634.02.1.5 on page 548, and substitute the following.

Unless specified otherwise in the plans, poles shall be designed in accordance with the AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals*, as specified in the plans, including all interims and updates.

Delete the third sentence of the second paragraph of Subsection 634.02.1.5 on page 548.

907-634.03--Construction Requirements.

907-634.03.1--Foundations. Delete the last sentence of the fourth paragraph of Subsection 632.03.1 on page 550, and substitute the following.

Where foundations are constructed in areas where the pavement edge elevation and shoulder edge elevation differ more than twelve (12) inches, taller foundations may be used but must be approved by the Engineer.

907-634.04--Method of Measurement. After the last sentence of the fourth paragraph of Subsection 634.04 on page 552, add the following.

Field conditions may require taller foundations than specified in the plans. In which case, the addition concrete will be paid for at the contract bid price per cubic yard for pole foundations.

907-634.05--Basis of Payment. Delete the pay items listed on page 554, and substitute the following.

907-634-A: Traffic Signal Equipment Pole, Type __, __' Shaft, __' Arm *	- per each
907-634-B: Traffic Signal Equipment Pole Shaft Extension, __' **	- per each
907-634-C: Pole Foundations, Class __ Concrete	- per cubic yard
907-634-D: Slip Casing, __" Diameter	- per linear foot
907-634-E: Camera Pole with Foundation, __' Pole	- per each
907-634-F: Detector Pole with Foundation, __' Pole	- per each

907-634-G: Traffic Signal Equipment Pole Mast Arm Extension, ____' ** - per each

907-634-H: ITS Equipment Pole, Structure Mounted, ____' Pole - per each

907-634-I: Wood Pole, Class ____ Height ____' -per each

* Multiple Arms may be indicated

** Additional information may be indicated

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-636-2

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Electrical Cable

Section 636, Electrical Cable, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-636.01--Description. Delete the last sentence of the last paragraph in Subsection 636.01 on page 555 and substitute the following.

It shall include excavating, laying, placing tracer cable or tape, backfilling, replacing sod, aerial supports and/or pull-through conduits, as applicable; and transformer enclosures and/or terminal boxes when not placed under other items of the contract.

907-636.02--Materials. After the paragraph of Subsection 636.02 on page 555, add the following.

907-636.02.1--ITS Ground Mounted Meter Enclosure.

907-636.02.1.1--Meter Base. Meter bases shall be NEMA Type 3R with a minimum rating of 100 amps and shall meet the requirements of the local utility. The meter base shall be provided with ampere rating of meter sockets based on sockets being wired with insulated wire rated at least 167°F. The meter base shall be designed for underground service.

Meter bases shall be 4-terminal, 600 volt, single phase, 3-wire furnished with the following:

- (a) Line, load and neutral terminals accepting #8 to 2/0 AWG copper/aluminum wire,
- (b) Ringed or ringless type, with or without bypass,
- (c) Made of galvanized steel,
- (d) Listed as meeting UL Standard UL-414, and
- (e) Underground service entrance as specified.

The meter bases shall have electrostatically applied dry powder paint finish, light gray in color, with a minimum thickness of 2.4 mils.

A 1-inch watertight hub for threaded rigid conduit shall be furnished with meter base.

907-636.02.1.2--Disconnect. External electrical service disconnects shall be furnished with a single pole 50-amp inverse time circuit breaker with at least 10,000 RMS symmetrical amperes short circuit current rating in a lockable in open or closed position in accordance with National Electric Code (NEC) and be a NEMA 3R Type enclosure. The disconnect shall be listed as meeting UL Standard UL-489 and marked as being suitable for use as service equipment.

The disconnect enclosure shall be fabricated from galvanized steel and electrostatically apply dry powder paint finish, light gray in color, to yield a minimum thickness of 2.4 mils. Ground bus and neutral bus shall be provided with at least four terminals with minimum wire capacity range of number 14 through number 4.

For 480V service, a local utility approved, lockable, non-fused disconnect switch on the supply side of the meter base shall be furnished, installed, and labeled as "Utility Disconnect". A separate load side disconnect with overcurrent protection shall be provided within two feet (2') of the meter.

907-636.02.1.3--Ground Mounted – Pedestal – Service Panel. 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 of G90 galvanized steel with light green #14672 Federal Specification 595 polyurethane industrial grade powder paint.

Hinges shall be stainless steel and of the continuous piano hinge type.

The pedestal mounting bolts shall not be externally accessible. The pedestal shall be able to be embedded in concrete or use anchor bolts for mounting on concrete base. Either pedestal mounting base or anchor bolt kit shall be used for installation.

The service pedestal should have three separate isolated sections for metering equipment, utility termination and customer equipment.

The metering section shall be pad-lockable and sealable and have a hinged swing hood with an integral hinged polycarbonate sealable window for access to demand meters. Meter socket type shall meet the requirements of the serving utility.

The utility termination section shall be pad-lockable and sealable and shall have a stainless steel handle provided on a lift-off cover. Sufficient clearance shall be provided for a 4-inch diameter conduit for utility cables entrance. Utility landing lugs shall be UL listed and shall accommodate conductor sizes between AWG #6 – 350 kcmil.

The customer compartment door shall be hinged on the left hand side. A stainless pad-lockable hasp shall be provided to secure customer compartment. A door keeper shall be provided to keep the door in an open position. A print pocket shall be provided on the inside of the door in a weatherproof sleeve. Required UL labeling shall be located on the inside of the customer door. Distribution and control equipment shall be behind an internal dead-front door with a quarter-turn securing latch and be hinged to open more than 90 degrees. The dead-front door shall be hinged on the same side as the customer section door. All distribution and control equipment shall be factory wired using 600-volt wire sized to NEC and UL requirements.

The service pedestal shall be rated for operation at 10K minimum amps interrupting capacity (AIC). The provided documentation shall list circuit breaker combinations and those to be used for de-rated operation for series ratings. Circuit breakers shall be permanently labeled with engraved name plates.

The serving utility shall be contacted for necessary requirements before ordering or installing equipment.

907-636.02.2--ITS Ground Mounted Transformer Enclosure.

907-636.02.2.1--Disconnect. The disconnect shall meet the requirements of Subsection 907-636.01.2.

907-636.02.2.2--Ground Mounted - Pedestal – Service Panel. The ground mounted - pedestal – service panel shall meet the requirements of Subsection 907-636.01.3. In addition, the transformer shall be rated to match the requirement of the primary service and the types of load served as specified in the plans. The transformer unit shall be installed inside the enclosure and meet all applicable codes. Each transformer shall be furnished as one complete unit and wiring of multiple transformers to meet the required ratings at each enclosure location is not allowed. Step-up and Step-down transformers shall be designed specifically for each application. Reverse feeding of step-up and step-down transformers is not allowed. All transformers shall be designed for outdoor installation and rated 600 VAC and below.

907-636.04--Method of Measurement. Delete the first paragraph of Subsection 636.04 on page 557, and substitute the following.

Electric cable of the type specified, constructed as specified on the plans, will be measured by the linear foot. Measurement will be computed horizontally along the conduit, messenger cable or mast arm and vertically along the pole. Measurement in underground conduit is only in the horizontal plane and no additional quantity shall be added for conduit depth or change in elevation of the conduit. No extra length will be allowed for cable inside signal heads, drip loops, or sag in aerial supported cable. Tracer tape, when required in the plans, used with tracer cable will not be measured for separate payment but shall be included in the contract price for Tracer Cable. The terminals for the measurements of lengths will be considered specifically as the center of the pull boxes, poles, signal heads or controller cabinets.

After the first paragraph of Subsection 636.04 on page 557, add the following.

ITS Ground Mounted Enclosures, complete in place and accepted, will be measured as a unit quantity per each for a complete and operable unit in accordance with the contract provisions.

907-636.05--Basis of Payment. After the first paragraph of Subsection 636.05 on page 557, add the following.

ITS Ground mounted enclosures, measured as prescribed above, will be required wherever ground mounted meter enclosures or step-up or step-down transformers are noted as required in the plans. The enclosures shall be paid for at the contract unit price bid per each; which price shall be full compensation for any transformers (as described in the plans), foundation construction, cabinets, pedestals, meter bases, disconnects, relays, terminals, circuit breakers, sockets, hubs, buses, connectors, mounting material, all other materials for constructing, installing, connecting, testing

and final cleanup; and for all equipment, labor, tools and incidentals necessary to complete the work in accordance with the contract documents.

In the first sentence of the second paragraph of Subsection 636.05 on page 557, change “relaid” to “re-laid”.

Delete the list of pay items on pages 557 and 558, and substitute the following.

907-636-A: Electric Cable, Direct Burial, <u>Type</u> , AWG ___, ___ Conductor	- per linear foot
907-636-B: Electric Cable, Underground in Conduit, <u>Type</u> , AWG ___, ___ Conductor	- per linear foot
907-636-C: Electric Cable, Aerial Supported, <u>Type</u> , AWG ___, ___ Conductor	- per linear foot
907-636-D: Electric Cable, Aerial Supported in Conduit, <u>Type</u> , AWG ___, ___ Conductor	- per linear foot
907-636-E: Electric Cable, Underground in Conduit, Tracer Cable	- per linear foot
907-636-F: Electric Cable, Repair	- per linear foot
907-636-G: Underground Cable and Conduit, Removed	- per linear foot
907-636-H: Underground Cable and Conduit, Removed and Re-laid	- per linear foot
907-636-I: ITS Ground Mounted * Enclosure	- per each

* Indicates Meter or Transformer Enclosure Type

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-637-2

CODE: (IS)

DATE: 11/15/2017

SUBJECT: Traffic Signal Conduit and Pull Boxes

Section 637, Traffic Signal Conduit and Pull Boxes, of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-637.02--Materials.

907-637.02.1--Pull Box / Enclosures. Delete the first sentence of the second paragraph of Subsection 637.02.1 on page 558, and substitute the following.

For grade level pull boxes and enclosures only, Tier 22 (22,500-pound design load, 33,750-pound test load) enclosures with minimum size dimensions as shown in the detail drawings on the plans shall be installed for use in traffic signal construction. Enclosure boxes shall be open bottom.

Delete the fourth sentence of the second paragraph of Subsection 637.02.1 on page 558.

907-637.03--Construction Requirements.

907-637.03.1--Pull box/Enclosures. Delete the sixth sentence of the first paragraph of Subsection 637.03.1 on page 559, and substitute the following.

Enclosures located in soil or sodded areas shall be installed with a supporting poured concrete collar or approved composite collar assembly, as shown by details on the plans.

907-637.03.2.1--Conduit Duct Bank. Delete the first sentence of subparagraph a) under Bored or drilled conduit in Subsection 637.03.2.1 on page 560, and substitute the following.

All conduits under railroad tracks shall be horizontal directional bored or drilled at a minimum of ten (10) feet below the railroad bed, or as required by the Railroad Company.

Delete Subsections 637.03.2.4 and 637.03.2.5 on pages 561 & 562, and substitute the following.

907-637.03.2.4--Blank.

907-637.03.2.5--Blank.

907-637.04--Method of Measurement. Delete subparagraphs a) and b) in Subsection 637.04 on page 563, and substitute the following.

- a) From center to center of pull box and/or foundation.

- b) Any above ground vertical conduit runs, as indicated in the plans. Measurement in underground conduit is only in the horizontal plane and no additional quantity shall be added for conduit depth or change in elevation of the conduit.

907-637.05--Basis of Payment. Delete the fourth and fifth paragraphs of Subsection 637.05 on page 564, and substitute the following.

Duct Plugs and Sealant will be included in the cost of the conduit and will not be measured separately.

Delete the pay items listed on page 564 and substitute the following.

907-637-A:	Pull Box Enclosure, <u>Type</u>	- per each
907-637-B:	Pull Box Enclosure, Structure Mounted, <u>Type</u>	- per each
907-637-C:	Traffic Signal Conduit, Underground, <u>Type, Size</u>	- per linear foot
907-637-D:	Traffic Signal Conduit, Underground Drilled or Jacked, <u>Type, Size</u>	- per linear foot
907-637-E:	Traffic Signal Conduit, Structural Conduit, <u>Type, Size</u>	- per linear foot
907-637-F:	Traffic Signal Conduit, Aerial Supported, <u>Type, No., Size</u>	- per linear foot
907-637-G:	Traffic Signal Conduit, Underground Encased in Concrete, <u>Type, Size</u>	- per linear foot
907-637-H:	Traffic Signal Conduit Bank, Underground, <u>Type, No., Size</u>	- per linear foot
907-637-I:	Traffic Signal Conduit Bank, Underground Drilled or Jacked, <u>Type, No., Size</u>	- per linear foot
907-637-J:	Traffic Signal Conduit Bank, Structural Conduit, <u>Type, No., Size</u>	- per linear foot
907-637-K:	Traffic Signal Conduit Bank, Aerial Supported, <u>Type, Size and Number</u>	- per linear foot

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 WindowsTM 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

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.

Installation of Intersection Conflict Warning Systems at numerous intersections across the District, known as Federal Aid Project No. HSIP-9999-01(254) / 107530301 in District 1.

Line no.	Item Code	Adj Code	Quantity	Units	Description[Fixed Unit Price]
Roadway Items					
0010	202-B215		85	Each	Removal of Sign Including Post & Footing
0020	202-B240		12,384	Linear Feet	Removal of Traffic Stripe
0030	601-A001	(S)	8	Cubic Yard	Class "B" Structural Concrete
0040	602-A001	(S)	58	Pounds	Reinforcing Steel
0050	618-A001		1	Lump Sum	Maintenance of Traffic
0060	618-B001		1	Square Feet	Additional Construction Signs (\$10.00)
0070	619-A1002		5,811	Linear Feet	Temporary Traffic Stripe, Continuous White
0080	619-A2002		5,681	Linear Feet	Temporary Traffic Stripe, Continuous Yellow
0090	619-A3002		1,000	Linear Feet	Temporary Traffic Stripe, Skip White
0100	619-A4001		1,000	Linear Feet	Temporary Traffic Stripe, Skip Yellow
0110	619-A5001		215	Linear Feet	Temporary Traffic Stripe, Detail
0120	619-A6001		208	Square Feet	Temporary Traffic Stripe, Legend
0130	619-A6002		69	Linear Feet	Temporary Traffic Stripe, Legend
0140	620-A001		1	Lump Sum	Mobilization
0150	626-A003		2,480	Linear Feet	6" Thermoplastic Traffic Stripe, Skip White
0160	626-B003		4,886	Linear Feet	6" Thermoplastic Traffic Stripe, Continuous White
0170	626-C003		10,400	Linear Feet	6" Thermoplastic Edge Stripe, Continuous White
0180	626-D004		860	Linear Feet	6" Thermoplastic Traffic Stripe, Skip Yellow
0190	626-E003		18,702	Linear Feet	6" Thermoplastic Traffic Stripe, Continuous Yellow
0200	626-F004		2,695	Linear Feet	6" Thermoplastic Edge Stripe, Continuous Yellow
0210	626-G002		10,928	Linear Feet	Thermoplastic Detail Stripe, White
0220	626-G003		2,609	Linear Feet	Thermoplastic Detail Stripe, Yellow
0230	626-H004		694	Square Feet	Thermoplastic Legend, White
0240	626-H005		1,144	Linear Feet	Thermoplastic Legend, White
0250	627-J001		20	Each	Two-Way Clear Reflective High Performance Raised Markers
0260	627-K001		68	Each	Red-Clear Reflective High Performance Raised Markers
0270	627-L001		471	Each	Two-Way Yellow Reflective High Performance Raised Markers
0280	630-A001		190	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness
0290	630-A003		381	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness
0300	630-C002		61	Linear Feet	Steel U-Section Posts, 2.0 lb/ft
0310	630-C003		702	Linear Feet	Steel U-Section Posts, 3.0 lb/ft
0320	630-D008		120	Linear Feet	Structural Steel Beams, W6 x 9
0330	630-E001		118	Pounds	Structural Steel Angles & Bars, 3 1/2" x 3 1/2" x 1/4" Angles
0340	630-E004		443	Pounds	Structural Steel Angles & Bars, 7/16" x 2 1/2" Flat Bar

Line no.	Item Code	Adj Code	Quantity	Units	Description[Fixed Unit Price]
0350	630-K001		96	Linear Feet	Welded & Seamless Steel Pipe Posts, 3 1/2"
0360	630-K002		109	Linear Feet	Welded & Seamless Steel Pipe Posts, 3"
0370	630-K003		390	Linear Feet	Welded & Seamless Steel Pipe Posts, 4"
0380	638-A002		4	Each	Flashing Assembly, Advanced Warning
0390	638-A004		7	Each	Flasher Assembly, ICWS, Watch For Traffic
0400	638-A005		18	Each	Flasher Assembly, ICWS, Watch For Entering Traffic
0410	660-A003		3	Each	Equipment Cabinet, Type B
0420	907-619-B001		330	Linear Feet	Temporary Portable Rumble Strips
0430	907-630-O001		10	Each	Remove and Reset Sign Assembly
0440	907-632-A001		1	Each	Solid State Traffic Cabinet Assembly, Type I Cabinet, Type 1 Controller
0450	907-632-J001		4	Each	Power Service Pedestal
0460	907-634-F002		2	Each	Detector Pole with Foundation, 35' Pole
0470	907-634-F004		11	Each	Detector Pole with Foundation, 25' Pole
0480	907-636-B014		7,670	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor
0490	907-636-B028		450	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 8, 3 Conductor
0500	907-637-A002		39	Each	Pullbox Enclosure, Type 2
0510	907-637-A003		4	Each	Pullbox Enclosure, Type 3
0520	907-637-C028		6,460	Linear Feet	Traffic Signal Conduit, Underground, Type 4, 2"
0530	907-637-D002		1,626	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"
0540	907-641-A002		9	Each	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2
0550	907-641-B002		6	Each	Signal Advanced Radar Vehicle Detection Sensor, Type 2
0560	907-641-D001		6,235	Linear Feet	Radar Vehicle Detection Cable
ALTERNATE GROUP AA NUMBER 1					
0570	907-624-B002		889	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White
0580	907-624-D002		1,634	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow
0590	907-624-E001		50	Linear Feet	Inverted Profile Thermoplastic Detail Traffic Stripe, White
0600	907-624-E003		533	Linear Feet	Inverted Profile Thermoplastic Detail Traffic Stripe, Yellow
ALTERNATE GROUP AA NUMBER 2					
0610	628-H001		889	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous White
0620	628-J001		1,634	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow
0630	628-K001		50	Linear Feet	High Performance Cold Plastic Detail Stripe, White
0640	628-K002		533	Linear Feet	High Performance Cold Plastic Detail Stripe, Yellow

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. _____	_____ _____ _____	_____ _____ _____	_____ _____ _____	_____ _____ _____	_____

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. **HSIP-9999-01(254)/ 107530301000**

in **District 1** _____ 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)

SECTION 902

CONTRACT FOR HSIP-9999-01(254)/ 107530301000

LOCATED IN THE COUNTY(IES) OF District 1

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 _____

Title _____

Signed and sealed in the presence of:
(names and addresses of witnesses)

MISSISSIPPI TRANSPORTATION COMMISSION

By _____

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: HSIP-9999-01(254)/ 107530301000

LOCATED IN THE COUNTY(IES) OF: District 1

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 **Installation of Intersection Conflict Warning Systems at numerous intersections across the District, known as Federal Aid Project No. HSIP-9999-01(254) / 107530301 in District 1.**

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__

(Witness)

(Witness)

(Principal) (Seal)

By: _____
(Name) (Title)

(Surety) (Seal)

By: _____
(Attorney-in-Fact)

(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: **July 24, 2018**Project No: **HSIP-9999-01(254)/ 107530301000**County: **District 1**

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

