

SECTION 905 -- PROPOSAL (CONTINUED)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. 1 DATED 4/17/2007 ADDENDUM NO. \_\_\_\_\_ DATED \_\_\_\_\_  
ADDENDUM NO. \_\_\_\_\_ DATED \_\_\_\_\_ ADDENDUM NO. \_\_\_\_\_ DATED \_\_\_\_\_

| Number | Description  |
|--------|--|
| 1      | Replace Table of Contents with same; Replace 907-625-2M with 907-625-3M; Addendum diskette required. |

TOTAL ADDENDA: 1  
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE \_\_\_\_\_

\_\_\_\_\_  
Contractor

BY \_\_\_\_\_  
Signature

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

(To be filled in if a corporation)

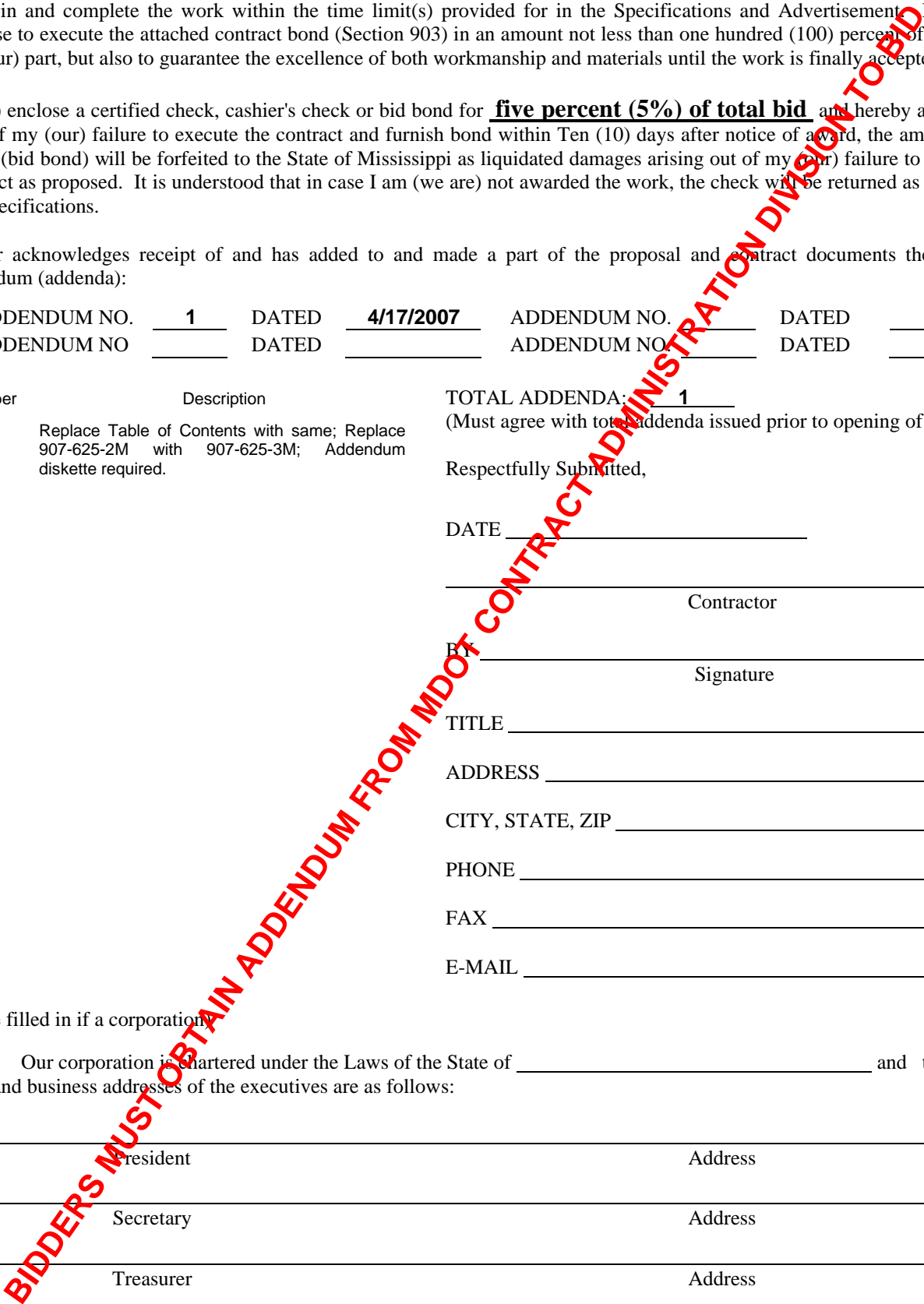
Our corporation is chartered under the Laws of the State of \_\_\_\_\_ and the names, titles and business addresses of the executives are as follows:

|                    |                  |
|--------------------|------------------|
| _____<br>resident  | _____<br>Address |
| _____<br>Secretary | _____<br>Address |
| _____<br>Treasurer | _____<br>Address |

The following is my (our) itemized proposal.

HSIP-6098-00(003) / 102252301

Forrest County(ies)



# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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COMBINATION BID PROPOSAL,  
CERTIFICATE OF PERFORMANCE - PRIOR FEDERAL AID CONTRACTS,  
CERTIFICATE REGARDING NON-COLLUSION, DEBARMENT AND SUSPENSION,  
SECTION 902 - CONTRACT FORM, AND SECTION 903 - CONTRACT BOND FORM,  
FORM -- OCR-485,  
FORM W-9,  
PROGRESS SCHEDULE  
HAUL PERMIT FOR BRIDGES WITH POSTED WEIGHT LIMITS.

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

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SPECIAL PROVISION NO. 907-625-3M**

**CODE: (SP)**

**DATE: 04/17/2007**

**SUBJECT: Painted Traffic Markings**

**PROJECT: HSIP-6098-00(003) / 102252301 -- Forrest County**

Section 625, Painted Traffic Markings, of the 1996 Metric Edition of the Mississippi Standard Specifications for Road and Bridge Construction is deleted in toto and replaced as follows:

## **SECTION 907-625 - PAINTED TRAFFIC MARKINGS**

**907-625-01--Description.** This work consists of furnishing and applying reflective white or yellow paint for pavement striping in accordance with plan details, the MUTCD and these specifications.

**907-625.02--Materials.** The traffic paint shall be quick dry water-borne traffic paint to be applied on asphalt or Portland cement concrete pavements. Paint must perform properly when preheated to 43° to 54°C and accept glass beads so that the spheres are imbedded to a depth of 50 percent of their diameter.

All paint materials, including vehicle, pigment, paste, driers, thinners, and mixed paint shall conform to the requirements of these specifications unless otherwise stipulated. Paint shall be furnished ready-mixed or in paste or powder form, as may be specified, and shall be of the type and color shown on the plans or as otherwise indicated. All paints for incorporation in the work shall be manufactured in the United States. Any paint that has caked, hardened or otherwise deteriorated shall not be used.

**907-625.02.1--Sampling and Testing.** Sampling and testing of paint shall be in accordance with the appropriate method in Federal Test Method No. 141, ASTM and/or Mississippi Test Method.

Sampling at the option of the Department will be performed at the point of manufacture or at a designated point of delivery. When the paint is sampled at the point of manufacture, the Department representative shall be given full access to the manufacturing process.

The Central Laboratory may utilize x-ray analysis, gas chromatography, infrared, or ultra violet spectral analysis of the paint or its components to determine whether specified ingredients were used. Paint found not to be in compliance with the approved formula shall not be used.

A sample may be taken by MDOT at random from the initial shipment of each batch received by the Contractor and forwarded to the Central Testing Laboratory and tested for compliance with all requirements of this specification. If the test results fail, another sample will be taken from the same batch number and re-tested. Unacceptable test results shall be cause to reject the entire

batch of traffic paint.

**907-625.02.2--Containers and Marking.** Paint shall be shipped in sturdy leak proof containers. The size of the containers shall be at the option of the Contractor unless specified otherwise in the contract.

Each container or label thereon shall be marked as follows:

- Net weight in kilograms
- Net volume in liters
- Color
- Code number
- Batch number
- Name and percentage of each component
- Name and address of manufacturer
- Date of manufacture

In addition, each container and labeling thereon shall meet the requirements of State and Federal Regulations for transporting the paint.

**907-625.02.3--Water Borne Traffic Paint.** This material shall be a rapid setting waterborne compound suitable for use with hot application equipment and applied at the rate of 88 liters per kilometer to produce a 150-mm solid line thickness of 0.55 wet millimeters. The material shall meet the requirements Specification Adherence of Table 1. The paint shall contain Rohm & Haas Rhoplex Fastrack HD-21A emulsion with 48.5 - 49.5 percent solids content or Dow DT 400NA acrylic emulsion with 49.5 - 51.5 percent solids content or approved equal. White paint shall contain a minimum of 0.12 kilogram per liter of titanium dioxide conforming to ASTM D 476 and the yellow paint shall be Hansa Yellow (11-2400). The paint shall be tested by analytical infrared (IR) spectroscopy.

**Table 1  
Water Borne Traffic Paint Physical Properties**

| Property                          | Requirements |     | Test Method |
|-----------------------------------|--------------|-----|-------------|
|                                   | Min          | Max |             |
| PH                                | 9.9          |     | ASTM E 70   |
| Viscosity, at 25°C Krebs Unit     | 78           | 95  | ASTM D 562  |
| Drying Time Minutes               | --           | 10  | ASTM D 711  |
| Total Solids,%                    | 73           | 79  | ASTM D 2369 |
| Percent Pigment *                 | 55           | 62  | ASTM D 3723 |
| Nonvolatile in Vehicle, % by mass | 43           | --  | ASTM D 215  |
| Mass Per Liter, kg / L            |              |     | ASTM D 1475 |
| White                             | 114.3        |     |             |
| Yellow                            | 109.3        |     |             |
| Daylight Reflectance, %           |              |     | ASTM E 1349 |
| White                             | 80           | --  |             |
| Yellow                            | 50           | --  |             |
| Color                             | Pass         |     | 1           |
| Pigment Composition               | Pass         |     | 3           |
| IR                                | Pass         |     | 4           |

\* No theoretical empirical factor shall be applied in determining the pigment percent of the paint. Percent pigment will not be calculated by adding back the burned off organic constituents of the pigment.

Color -- Yellow shall conform to requirements of the Table 2 listed below when tested in accordance with ASTM E 1349.

**Table 2  
Water Borne Traffic Paint Color Specification Limits (Daytime)**

| Color  | 1     |       | 2     |       | 3     |       | 4     |       |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|
|        | x     | y     | x     | y     | x     | y     | x     | y     |
| Yellow | 0.493 | 0.473 | 0.518 | 0.464 | 0.486 | 0.428 | 0.469 | 0.452 |

The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with Standard Illuminant D65.

**907-625.02.3--Glass Beads.** Glass beads shall meet the requirements of Subsection 720.01 for Class 'B' High Visibility beads and applied at a rate of 127 kilograms per kilometer of 150-mm wide solid stripe.

**907-625.03--Construction Requirements.**

**907-625.03.1--Equipment.** Selection of proper equipment to produce satisfactory results within the following requirements shall be the responsibility of the Contractor.

- a) Equipment shall permit traffic to pass safely within the limits of the roadway surface and shoulder while operating.
- b) Equipment shall be designed for placement of both solid and skip line stripes of the spacing shown on the plans with square, neat stripe ends.
- c) Equipment shall provide a method for cleaning the surface of dust immediately prior to placement of striping materials.
- d) Equipment shall provide a gravity bead dispenser for drop-on application of glass beads.
- e) The equipment shall provide accurate regulation of the application rate and shall have a tachometer or other approved device to ensure uniform paint application at the designated rate. The equipment shall be adjustable for applying one, two or three adjacent lines simultaneously at the specified spacing and be equipped with a device capable of following a control line. Operation of the unit shall be such that paint will not be spattered or blown on another stripe. The unit shall be designed to properly agitate the paint while in operation.
- f) The equipment may be equipped with a heat exchanger to heat the paint to reduce drying time.
- g) The operation shall include a trailing vehicle equipped with a flashing arrow board.

**907-625.03.2--Surface Preparation.** All areas to be painted shall be thoroughly cleaned. Cleaning may be done by hand brooms, rotary brooms, air blast, scrapers, or whatever combination of equipment is necessary to clean the pavement thoroughly without damage to the surface. Before edge striping, particular care shall be taken to remove all vegetation, loose soil, and the like from the area to be painted. Should other methods fail, the surface shall be wetted with a water jet and scrubbed as necessary to dislodge all foreign material. After washing, the surface shall be allowed to dry thoroughly, and all films of dried mud apparent after surface drying shall be removed before application of paint. Painting shall follow as closely as practicable after the surface has been cleaned and dried, but no paint shall be applied until the surface has been inspected and permission given to proceed. The cost for preparing the surface shall be included in the unit prices for the marking items.

Upon request, the Engineer will establish control points for markings, by type and color, at necessary intervals not to exceed 182 meters. The Contractor shall preserve and apply markings in conformity with control points established.

**907-625.03.3--Weather Limitations.** No paint striping shall be done when the pavement surface is not thoroughly dried, when the air is foggy or misty, when the air or surface temperature is below 10°C, or when wind or other condition causes a film of dust to be deposited on the surface after cleaning and before striping can be done or causes displacement of striping material.



**907-625.03.4--Application.** The longitudinal joint or existing centerline stripe shall be used in determining the location of the centerline of new striping. In the absence of a longitudinal joint or existing stripe, the location of the centerline of new striping shall be located by the Contractor with the approval of the Engineer. Skip line individual intervals will not be marked. No striping material shall be applied over a guide string line.

**Paint Preparation.** Immediately before application, paints shall be agitated and mixed thoroughly to a uniform consistency, free from lumps or agglomerates. Paints shall be kept covered to retain volatiles. Paints shall not be thinned without approval.

**Application Rate.** Paint shall be applied at the rate of 88 liters per kilometer to produce a 150-mm solid line at a thickness of 0.55 millimeters. Glass beads shall be applied according to Subsection 907-625.02.3.

Paint may be heated in heat exchangers to accelerate drying to a temperature between 43° and 54°C for water borne paint.

**907-625.03.5--Tolerances.** The length and width of lines shall be within a tolerance of plus or minus 75 millimeters and plus or minus three millimeters (3 mm), respectively. For skip markings, the tolerance for intervals shall not exceed the line length tolerance.

Markings applied at less than minimum material rates, deviating from true alignment by more than 25 millimeters in 15 meters, exceeding stipulated length and width tolerances, and showing light spots, faulty distribution of beads, smears, or other deficiencies or irregularities shall be removed and replaced. Removal methods shall be in accordance with Subsection 907-619.03.2.

**907-625.03.6--Protection.** The newly painted markings shall be protected so that, insofar as possible, paint will not be picked up by the tires of passing vehicles. Warning signs shall be placed at the beginning of a wet line and at points well in advance of the marking equipment. For the benefit of the Contractor, small flags or other similarly effective small objects may be placed near freshly applied lines at frequent intervals to reduce crossings by traffic. Damaged portions of stripes shall be effaced and replaced by the Contractor at no additional cost to the State.

Operations shall be conducted so that traffic can move without undue hindrance. When public traffic is being maintained, warning signs at the starting end shall be moved forward as sections of stripe dry sufficiently to prevent pick-up under traffic.

**907-625.04--Method of Measurement.** Painted traffic markings completed in accordance with the plans and specifications will be measured by the kilometer or by the meter, 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, lane lines and edge stripes will be the horizontal length computed along the stationed control line.

Detail traffic stripe will be measured by the meter from end-to-end of individual stripes. Measurement will be made along the surface of each stripe and will exclude nominal skip

intervals where specified. Stripes more than 150 millimeters in width will be converted to equivalent lengths of 150-mm stripe.

Legend will be measured as provided for legend in Subsection 907-626.04.

**907-625.05--Basis of Payment**. Painted traffic markings will be paid for at the contract unit price per kilometer, meter, or square meter as applicable, which shall be full compensation for preparation of the surface, furnishing and applying all materials, protection of wet paint; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

The prices thus paid shall be full compensation for completing the work.

Payment will be made under:

|  |                             |
|--|-----------------------------|
| 907-625-A: Traffic Stripe, Skip White        | - per meter or kilometer    |
| 907-625-B: Traffic Stripe, Skip Yellow       | - per meter or kilometer    |
| 907-625-C: Traffic Stripe, Continuous White  | - per meter or kilometer    |
| 907-625-D: Traffic Stripe, Continuous Yellow | - per meter or kilometer    |
| 907-625-E: Detail Traffic Stripe             | - per meter                 |
| 907-625-F: Legend                            | - per square meter or meter |