

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SPECIAL PROVISION

FOR

THE

INTERSTATE /APPALACHIAN PAVEMENT MARKING CONTRACT

STATE PROJECT NUMBER: _____

FEDERAL PROJECT NUMBER: _____

SECTION 711

PAINTS, COATINGS, OILS AND INKS

ADD THE FOLLOWING TO THE SECTION:

711.43 – WHITE OR YELLOW FAST-DRY TRAFFIC PAINT (TYPE X):

711.43.1 – General: The pavement marking material shall be formulated as a medium life pavement marking system capable of providing a minimum of two years of continuous performance as specified by the retroreflective parameters established within this contract. The pavement marking shall be a Wet Continuous and Recovery Reflective product. The binder, as provided by the pavement marking manufacturer shall be lead free and be suitable for bituminous and concrete pavements. The Contractor shall employ a binder which is placed at no less than 20 mils. The material shall be capable of retaining reflective glass beads or ceramic elements of the drop-on or spray-on type as specified by the bead / ceramics manufacturer.

711.43.1.1 – Definitions:

- **Acceptance Date Of Warranted Work** – the date when the warranted work is completed and is continuously open to traffic. This is the date of initial acceptance and constitutes the start date for the warranty period.
- **Initial Acceptance** – The Division and the Contractor shall jointly review all completed warranted work. If the Division determines that the warranted work is in compliance with the Contract Specifications and is continuously open to traffic then the Date of Initial Acceptance occurs. If the work does not meet contract requirements, the Contractor shall make all necessary corrections at it's expense according to the specifications here-in. The date on which initial acceptance occurs is termed the "*Acceptance Date of Warranted Work*"

- **Warranty Bond** – a bond issued in the amount of \$ _____ by a surety which guarantees that the warranty requirements of this contract will be met.
- **Warranty Period** – the time frame within the contract that the warranty criteria as specified in the provision and specifications for sections 711.43 and 715.40 are to remain in effect.
- **Warranted Work** – work that is guaranteed to meet the warranty requirements throughout the warranty period as stipulated in sections 711.43 and 715.40.
- **Warranty Work** – corrective action taken by the Contractor to bring the warranted work into compliance with the specifications and provisions of the contract.

711.43.2 – Color and Retroreflectivity Requirements: The Contractor shall provide a pavement marking system to meet the following performance requirements:

COLOR: Each color installed shall match those chromaticity limits within this section. Color determination and testing will be made at any point within the contract period. The color shall show no appreciable discoloration due to aging during the life of this contract. Pavement markings may be visually checked by the Engineer or designee at any time during the life of this contract. Additionally, the Engineer or designee, may at any time during the life of this contract use a portable colorometer to determine if the markings have faded or darkened beyond the CIE Chromaticity Coordinate Limits listed in the following table:

COLOR	CIE CHROMATICITY COORDINATE LIMITS							
	1		2		3		4	
	X	Y	X	Y	X	Y	X	Y
White	0.480	0.410	0.430	0.380	0.405	0.405	0.455	0.435
Yellow	0.575	0.425	0.508	0.415	0.473	0.453	0.510	0.490

The color shall show no appreciable discoloration due to aging during the life of this contract. Pavement markings shall be visually checked by the Engineer or designee upon the completion of the Project or after thirty days following application of the binder.

RETROREFLECTIVITY: Dry, Wet Recovery and Wet Continuous

- **Dry reflectivity values** of applied pavement marking system shall maintain values of 300 MCD/M²/LX for white pavement markings and 225 MCD/M²/LX for yellow pavement markings.
- **Wet Recovery reflectivity values** of applied pavement marking system shall maintain values of 200 MCD/M²/LX for white pavement markings and 150 MCD/M²/LX for yellow pavement markings.
- **Wet Continuous reflectivity values** of applied pavement marking system shall maintain values of 100 MCD/M²/LX for white pavement markings and 75 MCD/M²/LX for yellow pavement markings.

All values aforementioned shall be maintained for a minimum of 75 days after August 30th, 2011 completion date as measured with a LTL-X retroreflectometer or equal 30 meter device approved by the Traffic Engineering Division (TED). Mobile Reflectivity instruments shall be considered a 30 meter device. The Mobile Retroreflectivity reading shall be the primary source of measurement of retroreflectivity. Once it has been established that all the aforementioned values have been maintained for the 75 day period, the Contractor shall submit the *Initial Acceptance For Pavement Marking Warranty Form*, and this shall be considered Initial Acceptance of the Contract work to be warranted.

The Contractor will also be required to take and record a minimum of five (5) readings per color per day utilizing an LTLX-2000 retroreflectometer. These readings shall be recorded on the daily report and should be taken throughout the day. All readings shall be submitted to the District Construction Office.

711.43.3 - Sampling and Testing Procedures for Performance Samples: During the pavement marking contract, the pavement marking materials furnished and installed under this project shall show no signs of failure greater than five (5) percent loss due to blistering, excessive cracking, bleeding, staining, discoloration, smearing or spreading under heat, deterioration due to contact with oil or gasoline, chipping, spalling, poor adhesion to the pavement, damage from traffic and normal wear. Snowplow damage shall be considered as normal wear within this contract.

The following values shall be maintained after the date of Initial Acceptance and its respective retroreflectivity until August 20th, 2012.

- **Dry retroreflectivity values** of 190 MCD/M²/LX for white, and 160 MCD/M²/LX for yellow pavement markings.
- **Wet Recovery retroreflectivity values** of 145 MCD/M²/LX for white, and 110 MCD/M²/LX for yellow pavement markings.

Loss due to pavement failure, unless caused by the marking material, will not be considered as a material failure and will not be included in the loss calculations and/or retroreflectivity readings.

Periodic pavement marking reviews shall be performed throughout the project locations and warranty period. These reviews will occur at any time after the markings have been placed. These reviews will evaluate the pavement marking material within the project limits for either day and night acceptability considering all requirements listed above.

During the life of this contract if any markings are found deficient, the Contractor will be given notification stating the locations and the type of deficiency. These notifications will be given at any time during the life of the contract, but no later than October 15, 2012.

Upon notification, if the Contractor does not complete the replacement of all of the deficient pavement markings by the end of twenty (20) calendar days, the Contractor shall be subject to liquidated damages as described within Section 108.7 of the West Virginia Division of Highway's Standard Specifications until replacement is completed. No direct payment shall be

made for the replacement of any deficient pavement marking during the warranty period as such work shall be considered as incidental to the work as paid for by the various pavement marking items in the contract.

During the life of this contract if more than twenty (20) percent of the pavement markings are found deficient, the Contractor shall be subject to lane rental charges of \$3,000/per lane/per mile. Lane rental costs shall be in the form of liquidated damages.

711.43.4 – INITIAL ACCEPTANCE:

A copy of the Initial Acceptance for Pavement Marking Warranty form will be sent to the Contractor's warranty bond surety agent by the Division. Neither the Initial Acceptance nor any prior inspection acceptance or approval by the Division diminishes the Contractor's responsibility under this warranty. (note: a copy of the form is located at the end of this provision)

711.43.5 – WARRANTY BOND:

The Contractor shall furnish a single term warranty bond, in the amount stipulated in Section 711.43.1.1 above prior to Contract Award. The effective starting date of the warranty bond shall be the Acceptance Date of Warranted Work. The warranty bond will be released at the end of the Warranty Period or after all warranty work has been satisfactorily completed whichever is later.

**WEST VIRGINIA DIVISION OF TRANSPORTATION
INITIAL ACCEPTANCE FOR PAVEMENT MARKING WARRANTY FORM**

CONTRACT ID:

STATE PROJECT NUMBER:

SURETY NAME:

SURETY ADDRESS:

CONTRACTOR NAME:

CONTRACTOR ADDRESS:

WORK TYPE:

**DATE
ACCEPTED**

**PROJECT
ENGINEER:**

INITIAL ACCEPTANCE OF WARRANTY WORK APPROVAL

CONTRACTOR'S SIGNATURE:

ENGINEER'S SIGNATURE:

ACCEPTANCE DATE:

cc: Surety Company, Financial Services - Payments

**WEST VIRGINIA
DIVISION OF TRANSPORTATION
PAVEMENT WARRANTY BOND**

Bond Number _____

KNOWN ALL MEN BY THESE PRESENTS:

That we, (hereinafter called the "Principal"), and

_____, a corporation duly organized under the laws of the State of _____ and duly licensed to transact business in the State of West Virginia (hereinafter called "Surety"), are held and firmly bound unto the West Virginia Division of Transportation (hereinafter called the "Obligee"), in the sum of Dollars (\$), for the payment of which sum well and truly to be made, we, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has heretofore entered into a contract with the West Virginia Division of Transportation dated _____ under Contract ID _____ and;

WHEREAS, the said Principal is required to guarantee the installed Contract Surface Course under said contract, against specific pavement defects which may develop during the period(s) of years beginning the date(s) of the Acceptance Date of Construction by the Obligee.

In no event shall losses paid under this bond aggregate more than the amount of the bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Principal shall faithfully carry out and perform the said guarantee, and shall, on due notice, repair and make good at its own expense any and all specific pavement defects in the said work which may develop during the period specified above or shall pay over, make good and reimburse to the said Obligee all loss and damage which said Obligee may sustain by reason of failure or default of said Principal so to do, then this obligation shall be null and void; otherwise shall remain in full force and effect.

PROVIDED HOWEVER, that in the event of any default on the part of said Principal, a written statement of the particular facts showing such default and the date thereof shall be delivered to the Surety by registered mail, within thirty (30) days after the Obligee or his representative shall learn of such default and that no claim, suit or action by reason of any default of the Principal shall be brought hereunder after the expiration of thirty (30) days from the end of the warranty period as herein set forth.

Signed this day of , .

Contractor

By

Surety _____

By

Attorney-In-Fact