

ADDENDUM NO. 1

TO:

Interested Parties

FROM:	Blair Reynolds, Chief Project Manager, Division of Engineering		
DATE:	Thursday, January 7, 2021		
RE:	Pavement Maintenance & Rehabilitation Program – FY-'21 Hot Mix Asphalt (HMA) Applications Contract No. MS-PMP-285-28		
	wledge receipt of this Addendum No. 1 by signing with your Bid.	ng in the space provided below and	
Addendo outlined	to sign and return with your Bid may subject the dum No. 1 forms a part of the Bid Documents, it d herein.	supplements and modifies them as	
This Ad	ddendum No. 1 consists of 68 pages, including	ng this page and attachments.	
I hereby	y acknowledge receipt of Addendum No. 1:		
By:	Dat	te	
S	Signed Name		
Ī	Typed Name		
Ī	Title		
For: _			
F	Firm		
	80 West Paltimore Street Hagerstown MD 21740	0.6002 D. 240 212 2460 TDD: 711	

ADDENDUM NO. 1

Pavement Maintenance & Rehabilitation Program – FY-'21 Hot Mix Asphalt (HMA) Applications Contract No. MS-PMP-285-28

Date Issued: January 7, 2021

Bids Due: January 27, 2021

10:00 a.m.

The following addendum material is hereby made a part of the Bid Documents. Please note the following changes, information, and/or instructions in connection with the proposed work and submit proposals accordingly.

Blair Reynolds

Chief Project Manager Division of Engineering

By Authority of:

Board of County Commissioners

Washington County, Maryland

Scott Hobbs, P.E.

Director

Division of Engineering

To: All prime Contractors and all others to whom specifications have been issued.

Item 1.01 PRE-BID CONFERENCE, held Wednesday, January 6, 2021 at 10:00 a.m.:

Pre-Bid Conference Minutes (consisting of 4 pages).

Item 1.02 Special Provisions, Pages SP-1 thru SP-46

DELETE in its entirety.

REPLACE with Revised SP-1R thru SP-50R, as attached.

Special Provisions revised to include Pay Item 509 Ultra-Thin Bonded

Wearing Course.

Item 1.02 Road List - Summary of Quantities

DELETE in its entirety.

REPLACE with Revised RL-1, as attached.

Item 1.03 Bid Forms, Page BF-12 thru BF-21

DELETE in its entirety

REPLACE with Revised BF-12R thru BF-21R, as attached.

Attachments:

Pre-Bid Conference Minutes with attachments (4 pages)

Revised Special Provisions, Pages SP-1R thru SP-50R (50 pages)

Revised Road List - Summary of Quantities, Page RL-1 (1 page)

Revised Bid Forms, Pages BF12R thru BF-21R (10 Pages)

END ADDENDUM No. 1



Pavement Maintenance & Rehabilitation Program FY'21
Hot Mix Asphalt Applications
Contract No. MS-PMP-285-28
Pre-Bid Conference Minutes
Wednesday, January 6, 2021 at 10:00a.m.
Washington County Administrative Annex via Zoom

Attendance:

Blair Reynolds

Scott Hobbs

Pam Mohn
Darin Jenkins
Pichard Craig

Richard Craig Francisco Martinez Division of Engineering

Division of Engineering

Division of Engineering Craig Paving, Inc.

Craig Paving, Inc. INL Masonry

A Pre-Bid Conference Meeting for the referenced project was held at the Washington County Administrative Annex Building, located at 80 West Baltimore Street, Hagerstown, Maryland via Zoom. Those in attendance for the meeting are named above.

PRE-BID COMMENTS:

- **PB1** After welcoming everyone in attendance, introductions were made for all attendees and everyone was asked to introduce themselves along with the company in which they are affiliated.
- PB2 Those in attendance were given a general overview of the project. The project is a Project Cost Group Letter "E" 2.5 million to 5 million dollars and the work is generally described as asphalt preservation and corrective practices including but not limited to; Preparation work for a separate Chip Seal contract consisting of leveling course, Crack Filling, Milling, Patching, Wedge & Level, Superpave Hot Mix Asphalt (HMA) Overlay (9.5mm and 12.5mm), Paving Fabric applications, Utility Adjustments (Manhole Risers), Pavement Paint Markings, and Thermoplastic Pavement Markings (lines and preformed applications)
- **PB3** Bidders were provided a Road List Summary of Quantities and maps displaying the proposed roadways identified as part of the HMA Applications contract.
- **PB4** Bidders were informed to mark the outside of bid envelope accordingly as pertaining to the Hot Mix Asphalt Applications.

80 West Baltimore Street | Hagerstown, MD 21740-6003 | P: 240.313.2460 | TDD: 711

- PB5 Bidders were made aware that a bid bond in the amount of 5% of the total bid is required and should be made payable to the Board of County Commissioners of Washington County, MD.
- PB6 Bidders were made aware that bids must be submitted on the forms provided. It was noted that these forms are not to be scanned or duplicated. Bids may be considered non-responsive if any other forms are used.
- PB7 Bidders were advised that the deadline for questions is January 13, 2021 at 4:30PM. Bidders may send questions via fax or email. The fax number is 240-313-2401 and email address ecbidquestions@washco-md.net
- PB8 It was noted that this contract is a 185 consecutive calendar day contract. Milestones proposed include:
 - Anticipated NTP April 5, 2021
 - Contract Completion October 8, 2021
 - It was noted that the Contract is broken down into two phases:
 - Preparation work for separate Chip Seal project April 5, 2021 May 9, 2021 (35 days)
 - o Hot Mix Asphalt project May 10, 2021 October 8, 2021 (150 days)
- PB9 With the submission of their bid, Bidders agree to pay as liquidated damages in the amount of \$500.00 for each consecutive calendar day after the deadline for each phase of the contract.
- **PB10** Bidders were made aware of the Sub-Contractor Listing Form within the Bid Forms, Page BF-7, which is required to be completed and submitted with the bid.
- PB11 The successful Contractor must provide contract security in the form of a Performance Bond and Labor & Material Payment Bond, each equal to 100% of the total contract price. Those requirements may be found in the Contract Forms Section of the Bid Document.
- **PB12** Bidders were informed that the successful Contractor shall perform all required testing for quality control.
- **PB13** The County has entered into agreement with Specialized Engineering to perform quality assurance laboratory testing for this contract. The Contractor is responsible for collecting all test samples under the direction of the County's Inspection Staff.
- PB14 Inspection and Inspection Authority will be provided by the County's Consultant Inspection Services Contractor, DFI (Development Facilitators Incorporated) and the County's Inspection Staff.
- **PB15** Contingent Items/Quantities are included in the contract for use when and as directed by the County.
- PB16 The General Notes sections of the Special Provisions were pointed out to all attendees. Note #7

was referenced to inform the bidders of the possibility of an extension to this contract upon mutual agreement of both parties

- Note #7 This Contract may be extended for a period of up to two (2) one (1) year extensions, upon mutual agreement of both parties, the County and the Contractor. Any change in unit price will be subject to approval by the Washington County Board of County Commissioners.
- PB17 The following information was reviewed with the Bidders relative to Category 100 Preliminary MOT:
- The Contractor shall provide all required maintenance of traffic, materials, equipment and certified personnel.
- The Contractor shall assign and designate a certified Traffic Control Manager for each crew/location of work.
- **PB18** The following information was reviewed relative to Category 500 PAVING:
- SHA approved/certified Superpave mix designs are required for this contract.
- Incidental items for each individual pay item are listed in the Measurement and Payment section. Please make yourselves aware of all pertinent information.
- Permanent Pavement Markings Waterbourne Paint and Thermoplastic for Line Striping and Preformed Thermo for Pavement Markings such as RR Crossings, Crosswalks, and Stopbars.
 - 1. Contractor is responsible for documenting all pavement markings on the proposed roads before work begins.
- **PB19** Attendees were advised to make themselves familiar with the road list and take time to review prior to submitting their bid.
- PB20 The STANDARD PLATES Section of the Bid Document includes construction details and MDOT SHA Temporary Traffic Control Typical Applications that will be required on this contract. Bidders were advised that:
- If the successful Contractor chooses to manage the control of traffic by other means and methods, the Contractor will be required to make formal submission of his traffic control plans to the County for approval.
- Road closures are not allowed
- If the Contractor chooses to perform any work by road closure, formal submittal of his detour plans must be issued to the County for approval.
- PB21 Bidders were made aware of the Contract Forms which are in the Bid Document for reference purposes.
- PB22 Bidders were reminded to submit any follow up questions, which must be received submitted in writing no later than 4:30 p.m. Wednesday, January 13, 2021.
- PB23 Bids are due no later than, Wednesday, January 27, 2021 at 10:00 a.m. at which time the bids will be publicly opened and read aloud. Bids received later than 10:00 a.m. on the bid opening date, will be returned to the Bidder unopened.
- **PB24** The Pre-Bid Conference Meeting was adjourned at 10:28 a.m.

Sincerely,

Blair Reynolds Chief Project Manager Division of Engineering

All Attendees Project File cc;

PAVEMENT MAINTENANCE & REHABILITATION PROGRAM FY-'21 HOT MIX ASPHALT (HMA) APPLICATIONS

CONTRACT NO. MS-PMP-285-28 PROJECT NO. 28-285

TABLE OF CONTENTS

	Page Numbers
TABLE OF CONTENTS	SP 1-2R
GENERAL NOTES	SP-3R
CATEGORY 100 - PRELIMINARY	
101 - Maintenance of Traffic	SP 4R
102 - CONTINGENT – Temporary Traffic Signs	
103 - CONTINGENT – Portable Variable Messages Sign (PVMS)	
CATEGORY 200 - GRADING	
201 - CONTINGENT - Removal of Existing Pavement, Sidewalk, Paved Ditch	esSP 9R
202 – CONTINGENT – Removal of Existing Curb or Combination Curb and G	
CATEGORY 500 - PAVING	
501 – CONTINGENT – Stabilization, Type-1	SP 10R
502 – CONTINGENT – Stabilization, Type-2	
503 – CONTINGENT – 4" Graded Aggregate Base	
504 – CONTINGENT – Hot Mix Asphalt Superpave 4.75mm (PG 64S-22)	
505 – Hot Mix Asphalt Superpave 9.5mm (PG 64S-22)	
506 – Hot Mix Asphalt Superpave 12.5mm (PG 70H-22)	
507 – Hot Mix Asphalt Superpave 19.0mm (PG 64S-22)	
508 – CONTINGENT: Hot Mix Asphalt Superpave 25.0mm (PG 64S-22)	
509 – Ultra-Thin Bonded Wearing Course	
510 – CONTINGENT - Hot Mix Asphalt Superpave 9.5mm (PG 64S-22)	
For Driveway Tie-in Handwork and HMA Berms	SP 22R
511 – Hot Mix Asphalt Superpave 9.5mm (PG 64S-22) for Wedge & Leveling .	
512 – 0"-1" Hot Mix Asphalt Superpave 9.5mm (PG 64S-22)	
Level Course	SP 22R

513 – Hot Mix Asphalt Superpave 19.0mm (PG 64S-22) for Wedge & Leveling	SP 22R
514 – Paving Fabric for Joint Repair	
515 – Paving Fabric	
516 – CONTINGENT - Paving Mat	
517 – CONTINGENT – Paving Membrane	
518 – Hot Mix Asphalt Patch (Base Mix)	
519 – Hot Mix Asphalt Patch (Surface Mix)	
520 – CONTINGENT – Saw Cut Hot Mix Asphalt Patch (Base Mix)	
521 – CONTINGENT – Saw Cut Hot Mix Asphalt Patch (Surface Mix)	SP 30R
522 – Milling Hot Mix Asphalt Pavement 0"-2" Depth	SP 31R
523 – CONTINGENT - Milling Hot Mix Asphalt Pavement 0"-6" Depth	
524 – Crack Filling	SP 33R
525 – Adjust Existing Manhole	SP 33R
526 – Pavement Marking Paint, 5" Wide Lines	SP 35R
527 – Lead Free Reflective Thermoplastic Pavement Markings, 5" Wide Lines	SP 36R
528 – Lead Free Reflective Thermoplastic Pavement Markings, 10" Wide Lines	SP 36R
529 – Preformed Thermoplastic Pavement Markings, 24" Stop Bars	SP 37R
530 – Preformed Thermoplastic Pavement Markings, 12" Crosswalks	SP 37R
531 – Preformed Thermoplastic Pavement Markings, Arrows	SP 37R
532 – Preformed Thermoplastic Pavement Markings, Letters	SP 37R
533 – Preformed Thermoplastic Pavement Markings, RR Crossing	SP 37R
534 – CONTINGENT -6 Inch Portland Cement Concrete Pavement for Driveway Mix No. 6	SP 38R
535 – CONTINGENT – Removal of Existing Pavement Marking Lines	SP 39R
536 - CONTINGENT - Removal of Existing Pavement Marking Letters, Symbols, Arrows, and Number 1985 - Continued and State 1985 - Co	persSP 39R
CATEGORY 600 - SHOULDERS	
601 – CONTINGENT - Concrete Mountable Curb Replacement	SP 40R
602 – CONTINGENT - Concrete Curb Replacement	SP 41R
603 – CONTINGENT - Concrete Curb Opening	SP 41R
604 - CONTINGENT - Shoulder Edge Drop Off Grading Adjustment	
605 - CONTINGENT – 5 Inch Concrete Sidewalk and Sidewalk Ramps	SP 44R
606 - CONTINGENT – Detectable Warning Surface for Curb Ramps	SP 45R
CATEGORY 700 - LANDSCAPING	
701 - CONTINGENT - Placing Furnished Topsoil, 4" Depth	
702 - CONTINGENT – Seeding Disturbed Areas, Type II	
703 - CONTINGENT – Turfgrass Sod Establishment	
704 – CONTINGENT – Type A Soil Stabilization Matting	SP 49R
CATEGORY 700 - LANDSCAPING	
801 - CONTINGENT – Traffic Signal Loop Detector	SP-50R

GENERAL NOTES:

Note 1: At any time during the period of the Contract, the Engineer may increase, delete, or substitute the scope of work. A change in quantities shall be in accordance with the "Estimated Quantities" provision as stated General Conditions, Section 4.04, Page GC-27. The Engineer may change the limits of the work by adding or deleting roads as listed herein. In the cases where roads are added to the Contract, maintenance of traffic will be paid at 5% of the total cost, based on estimated quantities for each additional road added. The maintenance of traffic expense will be reduced by 5% of the total estimated cost for each road eliminated from the Contract by the County, based on estimated quantities listed herein. This 5% reduction shall also apply to any road the Contractor fails to complete during the Contract.

Reduction Example: = \$100,000 MOT/(\$2,000,000 BID - \$100,000 MOT) = 0.05

= 0.05 X (\$50,000 TOTAL ROAD COST)

= \$2.500

Note 2: The Contractor shall submit an "Order of Work" by road name in lieu of a detailed project schedule as stated General Conditions, Section 8.04, Page GC-76, for review and acceptance by the Engineer prior to the start of work.

Note 3: The Contractor shall not have more than two (2) crews working at any one time, unless otherwise approved by the Engineer. The Engineer may approve up to three (3) crews if inspection staff is available.

Note 4: The Contractor shall assume all responsibility for locating each utility prior to construction. Water valves maintained by the City of Hagerstown water service shall be adjusted by the City of Hagerstown. For adjustment of City of Hagerstown water valves contact Troy Johnson at 301-739-8577 (ext.169), a minimum of three (3) weeks prior to the start of work.

Note 5: The cost of Mobilization for the roads listed herein, as well as any additional roads, is incidental to the unit prices bid.

Note 6: The Contractor is required to complete all *Chip Seal prep work* before beginning work on the Hot Mix Asphalt Road List. The sequence of construction for the Chip Seal prep work will be as follows; Western Section, Central Section, Southern Section, and Eastern Section. Time allowances and liquidated damages for said work can be found in Section ITB-1.10 Time of Completion and Liquidated Damages on page ITB-8.

Note 7: While conducting Contract related work on a roadway the Contractor shall refrain from performing work unassociated with the Contract in order to avoid potential public perception issues. Upon completion of a roadway, work unrelated to the Contract may be completed in the area on the following workday(s). The work shall be completed outside of the agreed upon Contract work hours (unless scheduled on a Saturday).

Note 8: This Contract may be extended for a period of up to two (2) one (1) year extensions, upon mutual agreement of both parties, the County and the Contractor. Any change in unit price will be subject to approval by the Washington County Board of County Commissioners.

CATEGORY 100 - PRELIMINARY

Item No. 101 - MAINTENANCE OF TRAFFIC

- .01 DESCRIPTION: This work shall consist of all labor and material necessary to maintain traffic, both vehicular and pedestrian, on, along, or through the work area. Also included is the installation of temporary removable pavement markings and their removal, installation of non-toxic lead free waterborne paint markings, plus the accommodation of portable toilet(s). This item sets forth the traffic control requirements necessary for the safe and continuous maintenance of traffic throughout the area affected by the work, and is intended to minimize inconveniences to the traveling public, while providing for the safety of motorists, pedestrians, and workers.
- .02 MATERIALS: All materials shall be in accordance with MDOT SHA Standard Specifications Section 104 Maintenance of Traffic and Section 950 Traffic Materials.

Standard Portable Toilet (Porta-John or approved equal)
Nontoxic Lead Free Waterborne MDOT SHA Standard Spec. Section 951.01
Removable Preformed Pavement Marking Material MDOT SHA Standard Specification QPL

- **.03 CONSTRUCTION:** Refer to the General Conditions, Section 7.08, Page GC-58 and the following:
 - A. **DELETE** General Conditions, Section 1.03, Page GC-5, 30. (c).

ADD the following:

Working hours per day on this contract shall be limited to ten (10) hours, from 7:00 a.m. to 5:00 p.m. No equipment or traffic control devices shall be permitted on the roadway before or after the hours specified, or before daylight.

- B. All traffic control devices and methods used shall conform to the Maryland Manual on Uniform Traffic Control Devices (MMUTCD), latest edition.
- C. The Contractor shall assign and designate a certified Traffic Control Manager (TCM) for each crew/location of work. Current certifications of the assigned TCM must be submitted to and approved by the County prior to the start of work.

- D. The Contractor shall provide a sufficient number of flagmen and take all necessary precautions for the protection of the work area and safety of the public. All personnel involved in flagging operations shall have approved flagger certification by the State Highway Administration. When not in visual contact, flaggers shall be equipped with two-way radios, or pilot car, to facilitate the safe flow of traffic through the construction zone. Current certifications of flagger personnel must be submitted to and approved by the County prior to the start of work.
- E. All equipment in use by the contractor must stay within the limits of the work zone at all times.
- F. The Contractor shall provide at least one (1) trailer mounted portable toilet per working crew to be located on site during all hours of operation of any roadway construction that utilizes pay items No. 501 through No. 522 of these Special Provisions.
- G. Temporary Traffic Control Typical Application details are included in the Standard Plates section of this document. Should the said details not be appropriate for the Contractors means and methods of construction, a predetermined Traffic Control Plan (TCP) shall be submitted, for each road, seven (7) calendar days prior to the commencement of the operation. The TCP shall address the type, size, and placement of signs, job location and personnel to be used. The TCP developed by the Contractor may not be employed until the plan is approved by the County.
- H. Traffic Control Devices (TCD) shall be erected by the Contractor and approved by the Engineer prior to the commencement of the operation and shall be maintained at each location until the removal of TCD are approved by the Engineer.
- I. Signs shall be new or in like-new condition. Signs that become faded, illegible, or damaged shall be replaced as directed by the Engineer. Damaged signs shall be repaired or replaced within four (4) hours of notification.

- J. Each newly paved road surface shall have temporary pavement markings in place at the close of each day. Temporary pavement markings shall include five (5) inch wide temporary removable preformed pavement marking white tape, five (5) inch wide temporary removable preformed pavement marking yellow tape, five (5) inch wide non-toxic lead free waterborne pavement marking white paint, five (5) inch wide non-toxic lead free waterborne pavement marking yellow paint. Five (5) inch wide white tape and white paint shall be used for the temporary marking of turning lane lines, arrows, stop bars and crosswalks. Five (5) inch wide yellow tape and yellow paint shall be used for the temporary marking of roadway centerline(s). Both white and yellow five (5) inch wide temporary removable preformed pavement marking tape shall be used on new surfaces utilizing Pay Items No.'s 504, 505, 506, 509, 518 & 520. Both white and yellow five (5) inch wide non-toxic lead free waterborne paint shall be used on new and existing surfaces utilizing Pay Item No.'s 507, 508, 510, 511, 512, 517, 519, 521 & 522. Where turning lane lines exist, they shall be replaced with temporary dashed lines consisting of three (3) foot segments with nine (9) foot gaps. Where pavement arrows exist, at a minimum, they shall be replaced with one temporary arrow for each direction/lane. Temporary twenty (20) inch wide stop bars shall be placed at all intersections where there is an existing stop bar. Temporary ten (10) inch wide crosswalks shall be placed at all existing crosswalk locations. Under the direction of the Engineer, temporary arrows, stop bars and crosswalks shall be constructed using five (5) inch wide white tape or white paint. Arrows shall be similar in size and shape as those existing. Where centerlines exist, they shall be replaced as temporary dashed lines consisting of four (4) foot segments with thirty-six (36) foot gaps.
- K. Final pavement markings shall be applied within 14 consecutive calendar days of removal of the existing pavements markings. One percent (1%) of the total combined bid value of all Pavement Marking Pay Items (No.'s 525, 526, 527, 528, 529, 530, 531, and 532) will be deducted from the final payment per day per roadway that is not marked in accordance with the timeframes stated herein.
- L. No road closures shall be permitted. Traffic shall be maintained through the work area. The Contractor shall maintain at least one (1) lane of traffic, at all times, during work hours and two (2) lanes during non-work hours.
- M. The Contractor shall not detain or impede traffic flow (ingress or egress) at school facilities.
- N. If traffic is required to be detoured around the work area, the Contractor shall submit a TCP for approval.

- O. All personnel on the project site shall comply with MOSH and Federal OSHA regulations. At a minimum, all personnel shall wear reflective safety vests within the work zone.
- P. All salvaged material and devices, i.e. TCP signs, etc., shall become the property of the Contractor.
- Q. Weeds, shrubbery, construction equipment or material, spoil, etc., shall not be allowed to obscure any traffic control device.
- R. Upon removal of signs, Contractor is to restore all disturbed areas, sod or pavement, to its original condition.
- will be paid for at the Contract lump sum price. Monthly payment will be made upon satisfactory completion of the previous month's work. Any discrepancies from the Contract Documents, the MMUTCD, or the MDOT SHA Standard Specifications will be documented and provided to the Contractor for resolution. Any discrepancies not addressed by the Contractor may constitute a corresponding reduction of payment.

Payment will be full compensation for all work necessary to maintain traffic including all work, sequence of operations, labor and material necessary to maintain traffic, including but not limited to flagmen, signs, temporary traffic control signs, temporary pavement markings, barricades, and furnishing, placing, replacing, repairing, restoring and moving traffic control devices necessary for the fulfillment of the Contract requirements and implementation of the approved Traffic Control Plans included in the Standard Plates section of this Contract Document.

The maintenance of traffic expense will be reduced by 5% of the total estimated cost for each road eliminated from the Contract by the County, based on estimated quantities listed herein. This 5% reduction shall also apply to any road the Contractor fails to complete during the Contract.

Portable Toilets will not be measured for payment, but shall be considered incidental to the lump sum cost of Maintenance of Traffic.

Temporary removable preformed pavement markings and the removal of temporary removable preformed pavement markings will not be measured for payment, but shall be considered incidental to the lump sum cost of Maintenance of Traffic.

Temporary non-toxic waterborne pavement marking paint will not be measured for payment, but shall be considered incidental to the lump sum cost of Maintenance of Traffic.

Item No. 102 – <u>CONTINGENT - TEMPORARY TRAFFIC SIGNS</u>

- **DESCRIPTION:** This item of work shall consist of furnishing, installing, and maintaining High Performance Wide Angle Retroreflective Sheeting Temporary Traffic Signs as directed by the Engineer and will only be utilized for the preparation work for the separate Chip Seal contract.
- **MATERIALS:** All materials shall be in accordance with MDOT SHA Standard Specifications Section 104 Maintenance of Traffic, Section 950 Traffic Materials.

.03 CONSTRUCTION:

- A. Temporary Traffic Signs (TTS) shall be as specified in the Contract Documents and/or as directed by the Engineer.
- B. Signing shall conform to the MMUTCD and/or the MDOT Standard Highway Sign Book (SHSB).
- C. All salvaged material and devices, i.e. TCP signs, etc., shall become the property of the Contractor at the end of the project.
- D. These signs shall be placed in accordance with the Book of Standards "Sign Spacing Chart", Standard No. MD-104.01-02. The locations for placement of these signs shall include all roads in which a pre-existing double yellow centerline is covered by the applied leveling course and/or line of sight issues exist as determined by the Engineer. This signage shall include, but not necessarily limited to "Unmarked Pavement" signs and may be a minimum of 36" by 36". These signs shall remain erected until the Chip Seal contractor begins work on said road. Upon removal of signs, the Contractor shall restore all disturbed areas, sod or pavement, to its original condition.
- E. Temporary traffic signs for unmarked pavement shall be placed on square steel or uchannel posts. These signs will be required to stay in place until the chip seal contractor begins work at that location.
- .04 MEASUREMENT AND PAYMENT: CONTINGENT Temporary Traffic Signs will be measured and paid for at the Contract unit price bid per square foot. The payment will be full compensation for furnishing, erection, relocation, maintenance, cleaning, replacement due to damage or normal wear, removal and for all materials, labor, equipment, tools and incidentals necessary to complete the work. CONTINGENT Temporary Traffic Signs will only be utilized when performing the preparation work for the separate Chip Seal contract.

Item No. 103– CONTINGENT - PORTABLE VARIABLE MESSAGE SIGN (PVMS)

- **DESCRIPTION:** This work shall consist of furnishing, installing and operation of portable, self-contained, trailer-mounted, variable message signs for the maintenance of traffic during construction activities. This is a contingent item to be used as directed by the Engineer. Refer to MDOT SHA Standard Specifications Section 104.19 Portable Variable Message Signs.
- **.02 MATERIALS:** All materials shall be in accordance with MDOT SHA Standard Specifications Section 104.19.02 provided herein and the following:

PVMS

MDOT SHA STANDARD QPL

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 104.19.03 provided herein and the following:
 - A. The PVMS shall be placed and removed at the direction of the Engineer.
- **MEASUREMENT AND PAYMENT:** Refer to MDOT SHA Standard Specifications Section 104.19.04 provided herein.

CATEGORY 200 - GRADING

- Item No. 201 <u>CONTINGENT REMOVAL OF EXISTING PAVEMENT, SIDEWALK,</u> PAVED DITCHES
- Item No. 202 <u>CONTINGENT REMOVAL OF EXISTING CURB OR COMBINATION</u>
 <u>CURB AND GUTTER</u>
- **.01 DESCRIPTION:** Refer to MDOT SHA Standard Specifications Section 206.01.
- **.02 MATERIALS:** Refer to MDOT SHA Standard Specifications Section 206.02.
- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 206.03.
- **.04 MEASUREMENT AND PAYMENT:** Refer to MDOT SHA Standard Specifications Section 206.04.

CATEGORY 500 - PAVING

Item No. 501 - CONTINGENT - STABILIZATION, TYPE-1 Item No. 502 - CONTINGENT - STABILIZATION, TYPE-2

DESCRIPTION: This work shall consist of excavating soft subgrade soils, furnishing and .01 installing stabilization material and geotextile at spot locations directed by the Engineer.

.02 **MATERIALS:**

MDOT SHA Standard Spec. Section 901 Crusher Run Aggregate, CR-6 AASHTO No. 2 Stone MDOT SHA Standard Spec. Section 901 HMA Base Mix 19.0mm SP Item No. 506 MDOT SHA Standard Spec. Section 921.09 Geotextile

See .03 Construction, I.. below Geogrid

MDOT SHA Standard Spec. Section 921.01 Water Moisture & Dust Control Agents MDOT SHA Standard Spec. Section 921.02

- .03 **CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 501.03 and the following:
 - A. Existing pavement to be removed to accommodate the repair shall be saw cut.
 - В. Upon removal of the existing pavement and the undercut subgrade, the Engineer will evaluate the subgrade to determine its suitability for repair.
 - C. Install Stabilization Repair Type-1 as directed by the Engineer in accordance with Standard Plate No. 501.
 - D. Wrinkles and folds in the geotextile shall be avoided and any damaged geotextile shall be replaced or repaired as directed by the Engineer at the Contractor's expense.
 - E. Crusher Run Aggregate, CR-6 shall be compacted to 97% of the maximum dry density as determined by ASTM 1557. During compaction operations, the moisture content shall be maintained within 2 percent of the optimum. Prior to placement, the Contractor shall provide copies of material test results demonstrating maximum density, optimum moisture content. Test results must be current within six (6) months of use.
 - F. Asphalt pavement shall be placed to match the existing surface as described in Item No. 517 - HMA Patches (Base Mix), FDP.

- G. Install Stabilization Repair Type-2 as directed by the Engineer in accordance with Standard Plate No. 502.
- H. Upon completion of AASHTO No. 2 Stone backfill, the Contractor shall place geogrid reinforcement in accordance with Standard Plate No. 502 prior to completing the stabilization with Crusher Run Aggregate, CR-6.
- I. Geogrid shall be BX1100 as manufactured by Tensar Earth Technologies Inc., or MS 220 as manufactured by Tenax Corporation, or approved equal.
- .04 MEASUREMENT AND PAYMENT: Contingent Stabilization Type-1 and Type-2 will be measured and paid for at the Contract unit price bid per cubic yard. The payment will be full compensation for all saw cutting, excavating, hauling, milling, placing, grading, stabilization aggregates, geogrid, geotextile, compaction, disposal, labor, equipment, tools and incidentals necessary to complete the work. The placement of the base asphalt material shall be paid for under Pay Item No. 507 Hot Mix Asphalt Superpave 19.0mm.

Item No. 503 – <u>CONTINGENT – 4" GRADED AGGREGATE BASE</u>

.01 DESCRIPTION: Place graded aggregate base material without a stabilizing agent at locations as directed by the Engineer. This item is intended for use after milling existing asphalt pavement where conditions may require additional graded aggregate base to level the surface before placing new hot mix asphalt.

.02 MATERIALS:

Graded Aggregate for Base Course

MDOT SHA Standard Spec. Section 901.01

- A. A representative sample of the material type shall be submitted to the County for approval prior to its use.
- B. The material gradation shall conform to the following guideline;

Sieve Size	Percent Passing by Weight
2 Inch	100
1 ½ Inch	95-100
³ / ₄ Inch	70-92
3/8 Inch	50-70
No. 4	35-55
No. 30	12-25
No. 200	0-8

C. Gradation results, from a pre-approved laboratory, shall be submitted to the County for approval prior to its use.

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 501.03, provided herein and the following:
 - A. Materials relative to this Contingent Item shall be placed at locations and depths as directed by the Engineer. The Contractor shall confirm all locations with the Engineer prior to placement.
- MEASUREMENT AND PAYMENT: Item No 503 CONTINGENT Graded Aggregate Base Course will be measured and paid for at the Contract unit price bid per ton. The payment will be full compensation for all material, hauling, placing, compacting, labor, equipment, tools and incidentals necessary to complete the work.
- Item No. 504 <u>CONTINGENT: SUPERPAVE ASPHALT MIX 4.75mm (PG 64S-22)</u>
- Item No. 505 <u>SUPERPAVE ASPHALT MIX 9.5mm (PG 64S-22)</u>
- Item No. 506 SUPERPAVE ASPHALT MIX 12.5mm (PG 64H-22)
- Item No. 507 SUPERPAVE ASPHALT MIX 19.0mm (PG 64S-22)
- Item No. 508 CONTINGENT: SUPERPAVE ASPHALT MIX 25.00mm (PG 64S-22)
- Asphalt Mix courses as shown herein and/or as directed by the Engineer. HMA courses shall consist of crushed stone, crushed slag, or crushed gravel and fine aggregate, slag or stone screening or a combination thereof combined with asphalt cement. The Engineer will permit the use of HMA courses containing RAP material in the specified mixes. All mix designs used on this contract shall be MDOT SHA Standard Specification approved and certified.
- **.02 MATERIALS:** In accordance with MDOT SHA Standard Specifications as follows:

Performance Graded Asphalt Binders MDOT SHA Standard Spec. Section 904.02

Tack Coat	MDOT SHA Standard Section 904.03
Hot Mix Asphalt Mixes	MDOT SHA Standard Section 904.04
Hot Applied Crack Filler	MDOT SHA Standard Section 911.01
Hot Applied Joint Sealer	MDOT SHA Standard Section 911.01
Production Plant	MDOT SHA Standard Section 915

- A. Superpave Asphalt Mixes shall meet the requirements of <u>Standard Specification for SUPERPAVE Volumetric Mix Design, AASHTO Designations MP2-99</u>, and be subject to approval by the Engineer.
- B. The Contractor shall submit a certificate of analysis showing conformance with Performance Graded Asphalt Binder Specification, MP1 for the following mixes:

<u>Mix</u>	<u>Binder</u>
Superpave Asphalt Mix 4.75 mm	PG 64S-22
Superpave Asphalt Mix Asphalt Mix 9.5 mm	PG 64S-22
Superpave Asphalt Mix 12.5 mm	PG 64H-22
Superpave Asphalt Mix 19.0 mm	PG 64S-22
Superpave Asphalt Mix 25.0 mm	PG 64S-22

(Job mix formulas shall be submitted for approval by the County for the above mixes prior to placement)

- C. Mixes shall be designed for an Equivalent Single Axle Load (ESAL) range of 0.3 million to < 3.0 million ESAL's (compaction level 2) and a seven (7) Day Average Design Air Temperature < 39°C.
- D. The allowable percentage of recycled asphalt pavement (RAP) and its suitability for use shall be in conformance with MSMT 412 and M 323. The allowable amount of RAP in the specified mixes shall not exceed 20% for surface mixes or 25% for base mixes. When using 20% or less of RAP, binder viscosity adjustments are not required. Documentation of RAP stockpile quality and traceability shall be submitted to the Engineer for an approval prior to use.
- E. Crushed glass and roofing shingles shall not be used in the Superpave mixes.
- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 504.03 and the following:
 - A. Prior to any asphalt placement, the Contractor, Engineer, Inspector, and Paving Foreman, the Foreman, and the Quality Control Technicians shall hold a meeting for the Contractor to outline the schedule of paving and to review the quality control plans for the production plant and field operations. Subsequent meetings may be held on a weekly basis, at the direction of the Engineer.
 - B. The Contractor shall provide daily production reports to the County no later than 1:00 p.m. on the day prior to scheduled production.
 - C. The Contractor shall provide a copy of the plant quality control testing results within 24 hours of placement of applicable HMA.

- D. At any time during the period of the Contract, the Engineer may increase, delete, or substitute asphalt or sealant tonnage, milling area or patching quantities as listed herein for Washington County, at his/her discretion. The Engineer may also change the limits of the work by adding or deleting roads as listed herein. A change in quantities shall be in accordance with the "Estimated Quantities" provision as stated in General Conditions, Section 4.04, page GC-27.
- E. Contractor shall record the size, location, and orientation of all pavement markings with sketches and photographs of each roadway in a neat and legible manner. Documentation of each roadway shall be submitted and approved by the Engineer prior to the performance of any work on said roadway.
- F. Driveway tie-ins shall be constructed so that the minimum pavement depth is maintained. Prior to placing new pavement, the entire affected surface area of the existing pavement shall be 100% covered with tack coat. After new pavement has been placed, all joints shall be filled with approved joint sealer.
- G. All driveway tie-ins constructed within two (2) feet of the edge of roadway shall be incidental to the associated overlay pay item. All driveway tie-ins more than two (2) feet off the edge of roadway shall be paid for under Pay Item 509.
- H. Roadway tie-ins shall be constructed in accordance with Standard Plate No. 503 and MDOT SHA Standard Specifications Section 504.03.09. All tie-ins shall be milled as directed by the Engineer.
- I. All driveway and roadway tie-ins shall be milled or sawcut to ensure a clean transition from new to existing pavement surfaces.
- J. For each roadway, all necessary tie-ins shall be prepared and approved by the Engineer before the Contractor may begin the final surface overlay operation.
- K. At the direction of the Engineer, the Contractor shall perform proof rolling in each lane on roadways scheduled for HMA base patch. Proof roll shall be performed a minimum of twenty-four (24) hours prior to work on the subject road. Proof roll shall be performed using a fully loaded dump truck that meets maximum legal load.
- L. The Engineer, via random sampling method, shall determine all mixture sample and pavement core locations.
- M. All Raised Pavement Markers shall be removed prior to the paving operation.
- N. All construction joints and cores shall be sealed within two (2) working days after the surface course has been completed.

- O. All compaction of HMA shall take place while the in place temperature is above 185 degrees. HMA shall be compacted to an in place density of 92.0 to 97.0 percent of the maximum density.
- P. The Paver speed shall not be in excess of 35 feet per minute. The Engineer may require a lesser speed if it is deemed that the rollers are not able to achieve the required compaction at that speed.
- Q. At the direction of the Engineer, the Contractor shall perform density testing and obtain three verification cores. Results of these tests shall be delivered to the Engineer within 24 hours. Calibration cores shall not be taken without receiving prior approval from the Engineer.
- R. Testing frequency will be one box sample taken per 1000 cumulative tons, per mix throughout the project. Additional random testing may be performed at the direction of the Engineer.
- S. Where an overlay section is adjacent to curb or combination curb and gutter, the existing pavement shall be milled to ensure the pavement is flush with the gutter or the curb reveal is not decreased. Payment for milling curb reveal is paid under Item No. 521 Milling Hot Mix Asphalt Pavement 0"-2".
- T. At the direction of the Engineer, the Contractor shall mill any existing utility patches before the final overlay to ensure the elevation is that of the surrounding asphalt. Payment for milling curb reveal is paid under Item No. 521 Milling Hot Mix Asphalt Payement 0"-2".
- U. Roadway surface must be completely dry before placement of any tack coat or HMA.
- V. When applying the tack coat to a vertical surface, a wand may be used. While applying tack coat to a horizontal surface (mainline or shoulder), the tack coat shall be applied using a controlled application method. Application to horizontal surfaces with a wand is considered unacceptable.
- W. Prior to applying the tack coat, remove all loose and foreign materials from the surface. Apply using full circulation spray bars that are laterally and vertically adjustable and that provide triple fanning and overlapping action. The tack coat distributing equipment shall have a computerized rate control for adjusting and controlling the application from the cab, this application rate shall be a minimum of 0.04 gal/sq yd. The tack truck shall be inspected and certified by the Maryland State Highway Administration prior the start of work.

- X. A clean out area shall be designated for all trucks during a paving operation to ensure no loose material is emptied in front of the paver.
- Y. The construction of cul de sacs shall be limited to one half at a time to ensure access for property owners during construction.
- Z. A minimum of two experienced roller operators shall be dedicated to the rolling operation during an overlay to ensure proper compaction and the elimination of roller all marks from the mat.
- **.04 MEASUREMENT AND PAYMENT:** Refer to MDOT SHA Standard Specifications Section 504.04 and the following:
 - A. HMA pavements will be measured and paid for at the Contract unit price bid per ton for the respective types of Superpave. The payment will be full compensation for furnishing, hauling, placing, field and plant quality control, field and laboratory testing, tack coat, labor, equipment, tools and incidentals necessary to complete the work.
 - B. All costs for constructing and removal of tie-ins, final or temporary shall be considered incidental and included in the price bid per ton for HMA courses.
 - C. An adjustment will be made to the final Contract unit price of HMA. If the price of liquid asphalt binder fluctuates significantly from the prevailing price to the price at the month of placement; adjustments will be in accordance with section 504.04.01 of the MDOT SHA Standard Specifications Section provided herein and shall be determined and paid for on a monthly basis. The Contractor shall submit his invoice for payment of bituminous pavement placed along with any corresponding price adjustment request for liquid asphalt binder for the affected material as well as calculations in order for a price adjustment to be recognized by the County.
 - D. Removal of all Raised Pavement Markers and preparation of the surface for pavement activities shall be considered as incidental to the cost of the pertinent asphalt pay item.
 - E. Joint Seal shall be considered incidental to the cost of the pertinent asphalt pay items. Joint Seal shall be used for any location that new pavement is adjacent to existing pavement surfaces and shall include, but not limited to, storm drain inlets, roadway tie-ins, driveway tie-ins, patches, and any Longitudinal and/or Transverse joints that are identified by the Engineer. Joint Seal shall be applied no later than two (2) working days after the final surface course or patch course has been completed.

- F. All proof rolling shall be considered incidental and included in the price bid per ton for HMA courses.
- G. The County reserves the right to reduce or refuse payment for any HMA which fails to meet quality assurance tests for in place density, mixture gradation and asphalt content for all quantities placed for the test period. When all testing results meet within the tolerances as submitted in the job mix formula and the in place density meets on or within 92.0 to 97.0 percent, payment will be made at 100% of the Contract unit price bid per ton of the mix placed. When testing results do not meet the specified in place density or allowable tolerance for mixture gradation and asphalt content, reductions in payment will be made per the following:

 When the in-place density is on or within 90.0 to 91.9 percent, payment will be made at 93% of the Contract unit price bid per ton of the mix placed. When the in-place density is equal to or less than 89.9 percent or equal to or greater than 97.1 percent, the materials placed shall removed and reinstalled at no additional cost to the County.

For every 1.0 percent outside the gradation tolerance, one (1) dollar will be deducted from the Contract unit price bid per ton, for each sieve opening size. In those instances where the test results are outside the tolerance at a value that is more than the range of the tolerance (the difference between the maximum and minimum design value), payment will be refused.

For every 0.10 percent outside the asphalt content tolerance, one (1) dollar will be deducted from the Contract unit price bid per ton. In those instances where the test results are outside the tolerance at a value that is more than the range of the tolerance (the difference between the maximum and minimum design value), payment will be refused.

Dismissal of the payment reduction or refusal will require the Contractor to submit acceptable test results by an approved independent laboratory or submission of a certified mix design that meets test criteria for consideration. The expense of any additional testing shall be the responsibility of the Contractor.

.01 **DESCRIPTION**—This work is the construction of a polymer-modified emulsified asphalt membrane (UTWCEM) immediately overlaid with an ultra-thin bonded wearing course of hot-mix asphalt concrete (UTWC) in one pass of a single paving machine.

.02 MATERIALS

(a) Bituminous Material.

- 1. Asphalt Binder. Provide material as specified meeting the requirements of the Standard Specification for Performance-Graded Asphalt Binder, AASHTO M 320, except as revised in Bulletin 25. Obtain material from an approved producer and source listed in Bulletin 15 for the specified grade and provide quality control testing and certification as specified in Sections 106.03(b) and 702.1(b)1.
- 2. Emulsified Asphalt. Class UTWCEM as specified in Bulletin 25. Obtain material from an approved producer and source listed in Bulletin 15 and provide quality control testing and certification as specified in Sections 106.03(b) and 702.1(b)1.

(b) Aggregate.

1. Fine Aggregate. Manufactured sand from an approved source, listed in Bulletin 14 and meeting the requirements in Table A.

TABLE A

FINE AGGREGATE PROPERTIES					
TEST	TEST METHOD	MINIMUM	MAXIMUM		
Sand Equivalent	AASHTO T 176	45	-		
Methylene Blue	AASHTO T 330	-	10		
Uncompacted Void Content	AASHTO T 304	40	-		

2. Coarse Aggregate. Coarse aggregate from an approved source, listed in Bulletin 14 and meeting the requirements in Table B.

TABLE B

COARSE AGGREGATE PROPERTIES					
TEST	TEST	TEST AVERAGE DAILY TRAFFIC (AI			
IESI	METHOD	< 5,000	5,000 < 20,000	> 20,000	
Abrasion Max. %	AASHTO T 96	35	30	30	
Micro-Deval (MD)* Max. %	AASHTO T 327	18	18	18	
Skid Resistance Level (SRL) Min. %	Bulletin 14	G or higher	H or higher	E	
Absorption Max. %	AASHTO T 85	2	2	2	
Thin And Elongated Pieces Max. %	ASTM D 4791	10	10	10	
Soundness Max. %	PTM No. 510	10	10	10	
% Crushed, 1 Face	ASTM D 5821	95	95	100	
% Crushed, 2 Face	ASTM D 5821	85	85	85	
*MD > 18, requires approval of DME/DMM.					

(c) Filler. Do not use flyash if the design traffic is greater than or equal to 3 million Equivalent Single Axle Loads (ESALs).

(d) Mixture Composition. Provide a wearing course of plant mixed hot bituminous concrete consisting of fine aggregate, coarse aggregate, filler, and asphalt cement. Size, uniformly grade, and combine aggregate fractions in such proportions that the total aggregate and the bitumen in the JMF conform to the composition specified in Table C, and meet the mixture characteristics of Table D.

TABLE C

COMPOSITION, TOTAL PERCENT BY MASS (WEIGHT) PASSING				
SIEVE SIZE	TYPE A	TYPE B	TYPE C	
19.0 mm (3/4 inch)	100	100	100	
12.5 mm (1/2 inch)	100	100	85 - 100	
9.5 mm (3/8 inch)	100	75 - 100	65 - 85	
6.3 mm (1/4 inch)	75 - 100	28 - 45	28 - 45	
4.75 mm (No. 4)	40 - 60	23 - 37	23 - 37	
2.36 mm (No. 8)	15 - 30	21 - 31	21 - 31	
1.18 mm (No. 16)	12 - 20	15 - 23	15 - 23	
600 μm (No. 30)	8 - 15	10 - 18	10 - 18	
300 μm (No. 50)	6 - 12	8 - 14	8 - 14	
150 μm (No. 100)	5 - 10	5 - 10	6 - 10	
75 μm (No. 200)	4.0 – 6.5	4.0 – 6.5	4.0 – 6.5	
Asphalt % by mass (weight)	4.5 - 5.8	4.5 - 5.7	4.5 - 5.7	
Note: Material finer than the 75 μm (No. 200) sieve will be determined as per PTM No. 100.				

TABLE D

MIXTURE CHARACTERISTICS					
MIXTURE CHARACTERISTIC TEST METHOD MINIMUM MAXIMUM					
Moisture sensitivity, % TSR	AASHTO T 283*	80	-		
Draindown, % mass	AASHTO T 305	_	0.1		
Apparent Asphalt Film Thickness, microns	Bul. 27, Sec 12.4.1	10.0	-		

^{*}Prepare specimens in accordance with the Department's modified procedures for Superpave Mix Design, detailed in Bulletin 27, Chapter 2A referencing AASHTO R 35 Section 11, with the following exceptions:

- 1. Condition the mixture in accordance with Bulletin 27.
- 2. Compact to 100 gyrations.
- 3. Extrude as soon as possible without damage to the sample.
- 4. Use AASHTO T 269 to determine void content.
- 5. Record the void content of the specimens.
- 6. Condition specimens, compute the Tensile Strength Ratio, and evaluate the specimens in accordance with Bulletin 27.
- 7. Visual stripping will require modification and/or readjustments as directed by the Representative.
- 1. Producer QC Plan and JMF. Prepare a QC Plan, as specified in Section 106, and submit it for review at the start of the project and at least annually thereafter. Do not start work until the QC Plan has been reviewed and the JMF has been submitted.

When unsatisfactory results or other conditions make it necessary, a new JMF may be required. If a change in sources of materials is made, submit a revised JMF to the DME/DMM before using any new material.

2. Uniformity. Produce the bituminous mixture to meet the requirements as specified in Table C. Produce the mixture within the JMF tolerances specified in Table E.

TABLE E

JMF TOLERANCE REQUIREMENTS OF COMPLETED MIX (n≥1)			
Passing 9.5 mm (3/8 inch) and larger sieves	±5%		

Passing 6.3 mm (1/4 inch) to 2.36 (No. 8) sieves ±4%			%	
Passing 1.18 mm (No. 16) to	0.3 mm (No. 50) sieves	±3%		
Passing 0.15 mm (No. 100) sieve ±2%				
Passing 75 μ (No. 200) sieve $\pm 1.5\%$				
Asphalt % by mass		±0.5%		
TEMPERATURE OF MIXTURE (F)				
CLASS OF MATERIAL	TYPE OF MATERIAL	MINIMUM	MAXIMUM	
PG 64-22	Asphalt Cement	285	330	
PG 76-22	Asphalt Cement	295	340	

(e) Mixture Acceptance. Obtain material certification from the material producer. Send certification to the Inspector-In-Charge within 1 working day following any QC tests for bitumen determination and sieve analysis of the mixture.

The mixture will be accepted by certification at the plant when quality control tests conform to the JMF within the tolerances specified in Table E. Acceptance by certification may be suspended if QC tests or QA samples obtained by QA Teams from the BOPD deviate from the tolerances in Table E for acceptance values. The acceptance values are:

- Asphalt percent passing by mass (weight),
- Percent passing the 75μ (No. 200) sieve,
- Percent passing the 2.36 mm (No. 8) sieve, and
- Percent passing the 6.3 mm (1/4 inch) sieve.

If at any time during the course of the work any acceptance values deviate from the tolerances in Table E in consecutive tests, immediately make necessary changes to comply with the JMF. If the material cannot be brought into compliance within 150 tons of production, suspend operations and notify the Inspector-In-Charge. Do not resume production for the project until the Representative has reviewed any corrective action.

If the asphalt content or the percent passing the 75μ (No. 200) sieve deviates from the tolerances specified in Table E, the material represented will be considered defective and acceptance will be determined as specified in Section 409.3(o).

(f) Certification. Section 106.03(b)3.

Certify each day's shipment of material delivered to the job site.

.03 CONSTRUCTION—Section 409.3 with additions and modifications as follows:

(b) Weather Limitations. Replace with the following:

Do not place bituminous paving mixtures from November 1 to March 31, unless allowed in writing by the District Executive. Do not place bituminous paving mixtures when the surfaces are wet or when the air or surface temperature is below 50F. If work is halted because of weather conditions, the Representative may allow the Contractor to place limited quantities of mixture that are en route to the project.

(e) Paving Equipment.

1. Bituminous Pavers. Add the following:

Use pavers that include a built-in spray bar placed in front of the variable-width heated screed unit, so that the operations of spreading UTWCEM and the UTWC are performed in succession, within a period of less than 5 seconds.

(g) Preparation of Existing Surface.

1. Conditioning of Existing Surface. Replace with the following:

At least 24 hours before paving operations, seal longitudinal and transverse joints and cracks 1/4-inch and wider as specified in Section 469. Use rubberized sealant as specified in Section 469 and minimize the sealant over-band

thickness and width. Do not exceed Section 469 over-band tolerances. Remove thermoplastic and pavement traffic markings prior to placement of material. Thoroughly clean pavements impregnated with grease, oil, or fuel. Immediately prior to applying the UTWCEM and the UTWC, clean the surface by sweeping or other means necessary to remove all loose particles and unsuitable material.

(h) Spreading and Finishing.

1.b Spreading and Finishing. Replace with the following:

Apply UTWCEM with a metered mechanical pressure sprayer, at a temperature of 120F to 180F. Continuously monitor the rate of spray, ensuring a uniform application rate over the entire width to be overlaid. Determine the spray rate given the existing pavement porosity, and apply between 0.15 and 0.25 gallons per square yard. Do not allow wheels or other parts of the paving machine to come in contact with the UTWCEM before the UTWC is applied. Within 5 seconds of applying the UTWCEM, lay the UTWC within the temperature range specified in Table E for the class and type of material used, and at the placement rate specified in Table F.

Continuously adjust operations to obtain a quality surface free from drags marks, open areas or suspect quality. If adjustments do not obtain a quality surface the Representative may direct work to stop. Do not begin spreading and finishing until the Representative is satisfied with proposed corrective actions to provide a satisfactory surface.

TABLE F

GRADATION		
TYPE	NMAS	PLACEMENT RATES FOR UTWC
A	6.33 mm (1/4 inch)	45 to 65 pounds per square yard
В	9.5 mm (3/8 inch)	55 to 80 pounds per square yard
С	12.5 mm (1/2 inch)	60 to 85 pounds per square yard

Note: Placement rates are intended as a guide and additional material may be required to obtain a quality surface. In no case should material yield be below the lower limits of the placement rate range.

(i) Compaction. Replace with the following:

Roll the UTWC immediately after placement and before the material temperature has fallen below 185F. Roll using a minimum of two passes with a steel double-drum asphalt roller having a mass of not less than 8 tons. Do not allow roller(s) to remain stationary on the freshly placed UTWC. Maintain roller(s) in reliable operating condition and equipped with functioning water system and scrapers to prevent adhesion of the fresh mix onto the roller drums. A release agent (added to the water system) may be required. Compact in the static mode, with the exception of joints where vibration may be necessary. A pneumatic-tire roller may be used to prevent the "bridging" effect of the steel drum roller.

- (j) Mat Density Acceptance. Density testing is not required.
- (k) Joints. Replace with the following:
 - 1. Longitudinal Joints. Form butt joints only and compact with rollers.
- **2. Transverse Joints.** Minimize the number of transverse joints. Maintain continuous forward paving wherever possible. Construct joints perpendicular to the direction of traffic and compact.
- (m) Tests for Depth. Loose depth or compacted depth tests are not required. However, control the depth of courses by the weight per square yard.

.04 MEASUREMENT AND PAYMENT—

(a) Item No. 506 – Ultra-Thin Bonded Wearing Course will be measured and paid for at the contract unit price bid per square yard. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Item No. 510 - <u>CONTINGENT - SUPERPAVE ASPHALT MIX 9.5mm (PG 64S-22)</u> FOR DRIVEWAY TIE-IN HANDWORK AND HMA BERMS

- **.01 DESCRIPTION:** This item may be used at various locations where extra handwork is required for existing driveway tie-ins when the area to be overlaid cannot be reached by gating out the paver and to replace any existing asphalt berm as directed by the Engineer.
- .02 MATERIALS: All asphalt pavement materials used for Hot Mix Asphalt Driveway Tiein Handwork and HMA Berms shall meet the specifications for Superpave Mixes provided in Item No. 505 – HMA Superpave 9.5mm of these Special Provisions.
- **.03 CONSTRUCTION:** Refer to Item No. 505 HMA Superpave 9.5mm, .03 Construction of these Special Provisions and the following:
 - A. Existing asphalt berms shall be replaced in kind. New asphalt berms may be installed as directed by the Engineer.
 - B. The Contractor shall confirm all locations with the Engineer prior to placement of asphalt for asphalt driveway tie-in handwork and placement of asphalt berms.
 - C. All driveway tie-ins more than two (2) feet off the edge of roadway shall be paid for as handwork. All driveway tie-ins constructed within two (2) feet of the edge of roadway shall be incidental to the associated overlay pay item.
- **.04 MEASUREMENT AND PAYMENT:** Refer to Item No. 505 HMA Superpave 9.5mm, .04 Measurement and Payment of these Special Provisions.
- Item No. 511 <u>SUPERPAVE ASPHALT MIX 9.5mm (PG 64S-22)</u> FOR WEDGE AND LEVELING
- Item No. 512 <u>0"-1" SUPERPAVE ASPHALT MIX 9.5mm (PG 64S-22)</u> LEVEL COURSE
- Item No. 513 <u>SUPERPAVE ASPHALT MIX 19.0mm (PG 64S-22)</u> <u>FOR WEDGE AND LEVELING</u>
- **DESCRIPTION:** Hot Mix Asphalt Level Course may be used as a leveling (drag) course at various locations to fill ruts, and or depressions, etc. over the existing pavement, as directed by the Engineer. Hot Mix Asphalt Wedge and Leveling may be used at various locations where roadway cross-slope is less than or equal to zero percent, to fill ruts, and or depressions, etc. over the existing pavement, as directed by the Engineer.
- .02 MATERIALS: All asphalt pavement materials used for shall meet the specifications for Superpave Mixes provided in Item No. 505 Superpave Asphalt Mix 9.5mm and Item No. 507 Superpave Asphalt Mix 19.0mm of these Special Provisions.

- .03 CONSTRUCTION: Refer to Item No. 505 Superpave Asphalt Mix 9.5mm, .03 Construction, of these Special Provisions, and the following:
 - A. The Contractor shall confirm all locations with the Engineer prior to placement of either the wedge and level or level (drag) course.
 - B. Testing frequency will be one box sample taken per 1000 cumulative tons, per mix throughout the project. Additional random testing may be performed at the discretion of the Engineer.
 - C. The wedge and leveling and the level (drag) course shall be placed when the ambient and surface temperatures are 40° F and rising.
- .04 MEASUREMENT AND PAYMENT: Refer to Item No. 505 Superpave Asphalt Mix 9.5mm and Item No. 507 Superpave Asphalt Mix 19.0mm, .04 Measurement and Payment of these Special Provisions.

Item No. 514 – PAVING FABRIC FOR JOINT REPAIR

Item No. 515 - PAVING FABRIC

Item No. 516 - CONTINGENT - PAVING MAT

.01 **DESCRIPTION:** This work shall consist of furnishing and installing a nonwoven geotextile paving interlayer (paving fabric, paving mat) beneath a hot mix asphalt overlay to the roadways listed herein or as directed by the Engineer. Item No. 513 – Paving Fabric for Joint Repair is intended to be installed on portions of a roadway where one continuous joint occurs such as along the centerline or shoulder of the existing road. Item No. 514 – Paving Fabric and Item No. 515 – Paving Mat is intended to be installed on the full surface area of the designed roadway including the full radii of intersections and cul-de-sacs.

.02 MATERIALS:

Tack Coat MDOT SHA STANDARD Section 904.03
Geotextile See .03 Construction, S. below

.03 CONSTRUCTION:

- A. Patch and repair those roadways scheduled for paving interlayer as directed by the Engineer prior to placement of the paving interlayer.
- B. All hot mix asphalt overlay tie-ins shall be prepared before placement of the paving interlayer.

- C. All utilities including, but not limited to manholes and water valves shall be adjusted to the appropriate height of the hot mix asphalt overlay and shall be prepared before placement of the paving interlayer. No utility shall be left covered by the paving interlayer.
- D. The tack coat and paving interlayer shall be placed when the ambient and surface temperature is 40° F and rising. Existing pavement shall be dry and free of any standing water.
- E. Prior to applying the tack coat, remove all loose and foreign materials from the surface. Apply using full circulation spray bars that are laterally and vertically adjustable and that provide triple fanning and overlapping action. The tack coat distributing equipment shall have a computerized rate control for adjusting and controlling the application from the cab. Hand spraying may be necessary at overlaps, but shall be kept to a minimum.
- F. The tack coat application rate shall be sufficient to saturate the fabric and to bond the fabric to the existing pavement surface. The application rate shall be a minimum of 0.20 gal/sq yd and a maximum of 0.30 gal/sq yd or as recommended by the paving interlayer manufacturer and approved by the Engineer.
- G. The temperature shall be a minimum of 290° F and a maximum of 325° F or as recommended by the paving interlayer manufacturer and approved by the Engineer.
- H. The tack coat shall be applied at a uniform width that is equal to the width of the roll of paving interlayer plus six inches. The tack coat shall not be applied too far in advance of the application of paving interlayer where sufficient amount of time occurs resulting in loss of tack.
- I. The paving interlayer shall be placed smoothly onto the tack coat using mechanical or manual equipment capable of handling full rolls of fabric. The paving fabric shall be placed so that the non heat treated (or fuzzy) side is placed downward into the tack coat.
- J. Wrinkles and folds in the paving fabric and paving mat shall be avoided. At the direction of the Engineer, wrinkles severe enough to cause folds greater than one inch shall be slit and laid flat in the direction of the paving operation.
- K. Stiff bristle brooms and /or a pneumatic-tired roller may be used to smooth the paving interlayer and to maximize contact with the existing pavement surface.

- L. Overlapping of paving interlayer shall be held to a minimum. Overlap shall be limited to one to three inches to insure full closure of the overlapping layers. Any transverse joints shall be overlapped in the direction of the paving operation to prevent edge pick-up by the paver.
- M. Excessive paving interlayer which extends beyond the edge of the existing pavement or areas of tack coat application shall be trimmed and removed at the direction of the Engineer.
- N. In the event that the tack coat should bleed through the paving fabric before the hot mix asphalt overlay, it may be necessary to absorb any visible sealant by spreading hot mix asphalt over those areas at the direction of the Engineer.
- O. All areas where paving interlayer is placed shall be paved with hot mix asphalt the same day that the paving interlayer is applied.
- P. No traffic shall be permitted on the applied paving interlayer except for necessary construction equipment. Turning of necessary construction equipment shall be held to a minimum to avoid movement or damage to the paving interlayer. Damaged paving interlayer shall be removed and replaced with the same type of paving interlayer and tack coat at the direction of the Engineer.
- Q. In the event that rainfall should occur prior to placement of the hot mix asphalt overlay, the paving interlayer must be allowed to completely dry before the asphalt may be placed.
- R. The hot mix asphalt temperature shall not exceed 325° F at the time of placement onto the paving fabric.
- S. Paving fabric shall be Marifi MPV 500 as manufactured by Tencate-Mirafi Construction Products, or approved equal. Paving mat shall be TruPave as manufactured by Tencate-Mirafi Construction Products, or approved equal.
- T. Paving interlayer installation shall be performed by those with three (3) or more years of experience with installing the subject material. The Contractor shall submit qualifications to the Engineer for review and approval a minimum of two (2) weeks prior to installation.
- U. Paving Fabric for Joint Repair shall be a minimum width of twenty-nine (29) inches and shall be centered on the existing joint for the full length of the application.

- **MEASUREMENT AND PAYMENT:** Item No. 513 Paving Fabric for Joint Repair will be measured and paid for at the contract unit price bid per linear foot. Item No. 514 Paving Fabric and Item No. 515 Paving Mat will be measured and paid for at the contract unit price bid per square yard. The payment will be full compensation for application of tack coat, placing geotextile, cutting of geotextile, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
 - A. An adjustment will be made to the final Contract unit price of the paving interlayer. If the price of liquid asphalt binder fluctuates significantly from the prevailing price as quoted in the Contract Documents to the date of placement; adjustments will be in accordance with section 504.04.01 of the MDOT SHA Standard Specifications Section provided herein and shall be determined and paid for on a monthly basis. The Contractor shall submit his invoice for payment of bituminous pavement used for placement of the paving interlayer along with any corresponding price adjustment request for liquid asphalt binder (per gallon) for the affected material as well as calculations in order for a price adjustment to be recognized by the County.

Item No. 517 – <u>CONTINGENT: PAVING MEMBRANE</u>

.01 **DESCRIPTION:** This work shall consist of furnishing and installing a nonwoven geotextile paving interlayer (paving membrane) beneath a hot mix asphalt overlay to the roadways listed herein or as directed by the Engineer. Item No. 516 – Paving Membrane is intended to be installed on portions of a roadway where one continuous joint or crack occurs such as along the centerline or shoulder of the existing road.

.02 MATERIALS:

Geotextile See .03 Construction, O. below Primer MDOT SHA Standard Spec. Section 913.04

.03 CONSTRUCTION:

- A. Patch and repair those roadways scheduled for paving interlayer as directed by the Engineer prior to placement of the paving interlayer. The Contractor shall confirm all locations with the Engineer prior to placement of paving membrane.
- B. The paving membrane shall be placed when the ambient and surface temperature is 45° F and rising. Existing pavement shall be dry and free of any standing water. Remove all loose and foreign materials from the surface prior to placement.
- C. When the surface temperature is below 65° F, a primer shall be used while placing the paving membrane unless other wise directed by the Engineer. Primer may be applied with hand rollers or brushes, or sprayed for larger application areas.

- D. The paving membrane shall be placed so that the self-adhering side is placed downward on the existing pavement surface and the width shall be centered on the joint or crack. Where possible, allow two to three inches of the paving membrane to extend beyond the beginning and end of the joint or crack.
- E. Wrinkles and folds in the paving interlayer shall be avoided. At the direction of the Engineer, wrinkles severe enough to cause folds greater than one inch shall be slit and laid flat in the direction of the paving operation.
- F. Stiff bristle brooms and /or a pneumatic-tired roller may be used to smooth the paving interlayer and to maximize contact with the existing pavement surface.
- G. Overlapping of paving interlayer shall be held to a minimum. Overlap shall be limited to one to three inches to insure full closure of the overlapping layers. Any transverse joints shall be overlapped in the direction of the paving operation to prevent edge pick-up by the paver. In the event where a longitudinal joint should overlap a transverse joint, the paving interlayer should be applied first to the joint in the transverse direction.
- H. The paving membrane shall not be installed on grades where the slope exceeds 10% or on steep grades where there are areas of stopping or sharp turning, unless otherwise directed by the Engineer.
- I. Excessive paving interlayer which extends beyond the edge of the existing pavement shall be trimmed and removed at the direction of the Engineer.
- J. All areas where paving interlayer is placed shall be paved with hot mix asphalt the same day that the paving interlayer is applied.
- K. No traffic shall be permitted on the applied paving interlayer except for necessary construction equipment. Turning of necessary construction equipment shall be held to a minimum to avoid movement or damage to the paving interlayer. Damaged paving interlayer shall be removed and replaced with the same type at the direction of the Engineer.
- L. In the event that rainfall should occur prior to placement of the hot mix asphalt overlay, the paving interlayer must be allowed to completely dry before the asphalt may be placed.
- M. Tack coat for the hot mix asphalt shall be applied to the surface of the paving membrane at the same rate it is to be applied on the existing asphalt surface. No extra tack is required unless otherwise directed by the Engineer.

- N. The hot mix asphalt temperature shall not exceed 325° F at the time of placement onto the paving membrane.
- O. Paving membrane shall be Marifi MTK as manufactured by Tencate-Mirafi Construction Products, or approved equal. Paving Membrane shall be a minimum width of eighteen (18) inches.
- **MEASUREMENT AND PAYMENT:** Item No. 516 Paving Membrane will be measured and paid for at the contract unit price bid per linear foot. The payment will be full compensation for application of primer, placing geotextile, cutting of geotextile, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Item No. 518 - <u>HOT MIX ASPHALT PATCH (Base Mix)</u> Item No. 519 - HOT MIX ASPHALT PATCH (Surface Mix)

- **DESCRIPTION:** This work shall consist of all labor, supervision, material, equipment and services necessary and incidental for repairing hot mix asphalt pavements by removing all (or part) of the existing asphalt pavement and replacing the removed material with hot mix asphalt. This item shall be used at locations and to the limits as marked-out in the field, listed herein and/or as directed by the Engineer. There are five (5) HMA Patch scenarios under this contract:
 - A. Full Depth Patch (FDP) replaced w/ base mix. This shall consist of the removal of specified areas of the full thickness of the existing asphalt pavement section, to the top of the underlying aggregate base material, and replacement with hot mix asphalt base mix to match the existing HMA surface in accordance with Standard Plate 504. A HMA overlay for the entire roadway follows this FDP.
 - B. FDP replaced w/ base mix and surface mix. This shall consist of the removal of specified areas of the full thickness of the existing asphalt pavement section, to the top of the underlying aggregate base material, and replacement with hot mix asphalt base mix up to 1.5 inches of the final surface, followed by surface mix to match existing HMA surface in accordance with Standard Plate 504. This patch will serve as the final roadway surface.
 - C. Partial Depth Patch (PDP) replaced w/ base mix. This shall consist of removing a portion of the unsound pavement in specified areas and replacement with hot mix asphalt base mix to match existing HMA surface to remain in accordance with Standard Plate 505. A HMA Overlay for the entire roadway follows this PDP.

- D. PDP replaced w/ surface mix. This shall consist of removing a portion of the unsound pavement in specified areas and replacement with hot mix asphalt surface mix to match existing HMA surface to remain in accordance with Standard Plate 505. This patch will serve as the final roadway surface.
- E. PDP replaced w/ base and surface mix. This shall consist of removing a portion of the unsound pavement in specified areas and replaced with hot mix asphalt base mix up to 1.5 inches of the final surface, followed by surface mix to match existing HMA surface in accordance with Standard Plate 505. This patch will serve as the final roadway surface.
- F. If the milling procedure exposes existing subbase stone or subgrade soil, the material shall be compacted prior to asphalt placement with a smooth drum roller or other necessary equipment as directed by the Engineer.
- .02 MATERIALS: All asphalt pavement materials used for Hot Mix Asphalt Patches shall meet the specifications for Superpave Mixes provided in Item No. 505 Superpave Asphalt Mix 9.5mm and Item No. 507 Superpave Asphalt Mix 19.0mm of these Special Provisions.
- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 505.03 and the following:
 - A. The pre-marked areas shall be identified in the field and milled to the depth required. Patch depth will vary.
 - B. Inspection of the PDP may reveal that additional pavement removal is required, up to full depth. If the milling procedure exposes existing subbase stone or subgrade soil that material shall be compacted with a smooth drum roller or necessary equipment as directed by the Engineer.
 - C. For patches that will serve as the final wearing surface, the base course HMA shall be placed up to 1.5 inches from the final surface. Placement of the final surface course shall be such that it blends in with the existing asphalt pavement, to provide a smooth and acceptable ride as determined by the Engineer. The final surface course shall not be placed until the base course has cooled to a maximum of 175° F.
 - D. All compaction of HMA shall take place while the in place temperature is above 185 degrees. HMA shall be compacted to an in place density of 92.0 to 97.0 percent of the maximum density.

- E. A minimum of one (1) density test shall be performed on each patch. Additional tests shall be performed for each 100 linear feet of continuous patch, thereafter. All density testing and core locations shall be designated by the Engineer. Three (3) verification cores shall be obtained weekly, at locations approved by the Engineer.
- F. Testing frequency will be one (1) box sample taken per 1,000 cumulative tons, per mix throughout the project. Additional random testing may be performed at the discretion of the Engineer.
- G. Prior to applying the tack coat, remove all loose and foreign materials from the surface. Apply using full circulation spray bars that are laterally and vertically adjustable and that provide triple fanning and overlapping action. The tack coat distributing equipment shall have a computerized rate control for adjusting and controlling the application from the cab, this application rate shall be a minimum of .04 gal/sq yd.
- H. No patches shall be left open or unfinished overnight.
- I. Patches that will serve as the final wearing surface must receive Joint Sealer along all joints no later than two (2) days after the patch has been completed.
- .04 **MEASUREMENT AND PAYMENT:** Refer to Item No. 505 Superpave Asphalt Mix 9.5mm and Item No. 507 Superpave Asphalt Mix 19.0mm, .04 Measurement and Payment of these Special Provisions and the following:
 - A. Payment will not be made until required patch joints have been sealed.
 - B. When the Engineer determines that the aggregate base or sub-grade material is unsuitable, removal and replacement will be measured and paid for in accordance with Item No. 501 Contingent Stabilization Type-1 or Item No. 502 Contingent Stabilization Type-2 of these Special Provisions.

Item No. 520 - CONTINGENT - SAW CUT HOT MIX ASPHALT PATCH (Base Mix) Item No. 521 - CONTINGENT - SAW CUT HOT MIX ASPHALT PATCH (Surface Mix)

.01 DESCRIPTION: This work shall consist of all labor, supervision, material, equipment and services necessary and incidental for repairing hot mix asphalt pavements by saw cutting and removing all (or part) of the existing asphalt pavement and replacing the removed material with hot mix asphalt. This item shall be used as directed by the Engineer. Refer to Item No. 517 – Hot Mix Asphalt Patch (Base Mix) & Item No. 518 Hot Mix Asphalt Patch (Surface Mix) for Full Depth for HMA Patch scenarios.

- .02 MATERIALS: All asphalt pavement materials used for Hot Mix Asphalt Patches shall meet the specifications for Superpave Mixes provided in Item No. 503 Superpave Asphalt Mix 9.5mm and Item No. 505 Superpave Asphalt Mix 19.0 of these Special Provisions.
- .03 CONSTRUCTION: Refer to Item No. 517 Hot Mix Asphalt Patch (Base Mix) & Item No. 518 Hot Mix Asphalt Patch (Surface Mix), .03 Construction, of these Special Provisions, and the following:
 - A. The pre-marked areas identified in the field by the Engineer shall be saw cut to the depth required. Patch depth will vary.
 - B. Contingent Saw Cut Hot Mix Asphalt Patches shall be various rectangular sizes ranging from a minimum of one (1) foot in length by one (1) foot in width up to a maximum of ten (10) foot in length by ten (10) foot in width.
- .04 MEASUREMENT AND PAYMENT: Refer to Item No. 517 Hot Mix Asphalt Patch (Base Mix) & Item No. 518 Hot Mix Asphalt Patch (Surface Mix), .04 Measurement and Payment, of these Special Provisions, and the following:
 - A. Payment will not be made until required patch joints have been sealed. Saw cutting shall not be measured for payment, but shall be considered incidental and included in the unit price bid per ton.

Item No. 522 - MILLING HOT MIX ASPHALT PAVEMENT 0" to 2" DEPTH Item No. 523 - MILLING HOT MIX ASPHALT PAVEMENT 0" to 6" DEPTH

DESCRIPTION: This work shall consist of all labor, supervision, material, equipment and services necessary and incidental for milling hot mix asphalt pavement to the depth, and locations, provided herein and/or as directed by the Engineer. The intent of this item is to provide proper curb reveal as well as removal of deteriorated thin and/or delaminating asphalt. This item is not for tie-ins with intersecting roads, driveways, or bridge approaches.

.02 MATERIALS:

Hot Mix Asphalt (HMA)

MDOT SHA Standard Section 904

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 508.03 and the following:
 - A. Milling shall be required at all closed sections to provide proper tie-in and crown correction on the roadways listed herein. It is estimated that approximately 2 inchdeep milling will be required for curb reveal along gutter pans.

- B. While milling along any concrete curb, the contractor shall take significant care to ensure no damage is incurred to the curb. Any damaged curb will be assessed and a determination will be made by the Engineer whether repairs are needed. Any repairs required by the Engineer will be performed at no cost to the County.
- C. As directed by the Engineer, full width milling may be required on roadways designated herein to remove the delaminating surface, correct roadway crowns, and remove deteriorated pavement.
- D. The Contractor may mill up to one (1) week in advance of surfacing activities. However at the close of each day, if the roadway remains milled with no asphalt, the Contractor shall place TPM as required, at the Contractor's expense.
- E. Milled surfaces shall be swept and/or vacuumed at the Engineer's discretion prior to returning the area to traffic.
- F. Asphalt pavement millings shall become the property of the Contractor and shall be disposed of properly. At the direction of the Engineer, the County reserves the right to retain up to 10% of the asphalt pavement millings.
- G. After the milling operation is complete, all depressions, potholes, and other irregularities shall be filled and any existing water valves, meters, manhole covers, etc. shall be wedged using hot mix asphalt, or as directed by the Engineer. The cost of this asphalt shall be incidental to this pay item.
- H. Milling or grinding for driveways, roadway tie-ins, and/or bridge approaches shall not be included as part of this item but is incidental to the appropriate Hot Mix Asphalt Item as described in Item No. 504 Superpave Asphalt Mix 4.75mm, Item No. 505 Superpave Asphalt Mix 9.5mm, Item No. 506 Superpave Asphalt Mix 12.5mm, Item No. 507 Superpave Asphalt Mix, and Item No 508 Superpave Asphalt Mix 25.0mm of these Special Provisions.
- I. Milling for patches shall not be included as part of this item but is incidental to the appropriate Hot Mix Asphalt Item as described in Item No. 517 Hot Mix Asphalt Patches (Base Mix) and Item No. 518 Hot Mix Asphalt Patches (Surface Mix) of these Special Provisions.
- J. If the milling procedure exposes existing subbase stone or subgrade soil, the material shall be compacted prior to asphalt placement with a smooth drum roller or other necessary equipment as directed by the Engineer.

MEASUREMENT AND PAYMENT: Milling Hot Mix Asphalt will be measured and paid for at the contract unit price bid per square yard as accepted by the Engineer. The square yard measurement will be computed from the actual width and length measurements of the milled area. The payment will be full compensation for milling, hauling, and disposal of milled material, cleanup and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Item No. 524 - CRACK FILLING

- **DESCRIPTION:** This work shall consist of all labor, supervision, material, equipment and services necessary and incidental for furnishing and installing in place crack fill. This item shall be used for cracks ranging from 1/8" to 1" wide at locations and to the limits as marked-out in the field, provided herein and/or as directed by the Engineer.
- **.02 MATERIALS:** All materials shall be in accordance with MDOT SHA Standard Specifications Section 510.02 and the following:

Performance Graded Asphalt Binders & HMA
Hot Applied Crack Filler
Aggregate
MDOT SHA Standard Section 904.04
MDOT SHA Standard Section 911.01
MDOT SHA Standard Section M 43, No. 10
MDOT SHA Standard Section M 140

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 510.03 and the following:
 - A. Crack Filling shall be performed on the list of designated roadways as provided herein and/or as directed by the Engineer in accordance with Standard Plate 506.
 - B. All cracks shall be completely dry and cleared of all debris by means of pneumatic methods prior to Crack Filling.
 - C. Crack Filling shall be performed when the ambient and surface temperatures are 45° F and rising.
- .04 MEASUREMENT AND PAYMENT: Crack Filling will be measured and paid for at the contract unit price bid per pound, as accepted by the Engineer. The payment will be full compensation for furnishing, hauling, and placing of all materials, crack shaping, crack filling, the removal and disposal of old filler and debris, and for all material, labor, equipment, tools, and incidentals necessary to complete the work, regardless of the width or depth of the crack. Payment will not be made for wasted material.

Item No. 525 - ADJUST EXISTING MANHOLE

DESCRIPTION: This work shall consist of adjusting the elevations of existing manholes, to accommodate construction as necessary or as directed by the Engineer. The Road Listing provided herein provides the estimated number of manholes to be adjusted on each road. The Contractor shall assume all responsibility for locating each utility prior to construction.

.02 MATERIALS:

Asphalt Grade Rings (variable depths) as manufactured by East Jordan Iron Works Concrete Rings Class 2 Concrete

- **.03 CONSTRUCTION:** The final elevation of all manhole cover covers shall be flush with the final pavement surface.
 - A. All manhole adjustments will be performed by the Contractor and shall be in accordance with the Washington County Department of Water Quality Standard Specifications for Construction of Sanitary Sewers, latest edition, and Standard Plate No. 507. For adjustment of Washington County manholes contact Ken Showe at 240-313-2625 a minimum of one (1) week prior to the start of work.
 - B. All adjustments shall be performed prior to placement of asphalt overlay.
 - C. Any milling required to accommodate the overlay or patch shall be extended to the edge of the utility rim. Depth at the rim edge shall equal the depth of milling required unless otherwise directed by the Engineer.
 - D. Immediately following hot mix asphalt overlay placement, all utility covers shall be cleaned and cleared of **any** excess asphalt and deleterious matter. Payment for the adjustments will not be made until the cleaning is accepted and approved by the Engineer.
- **MEASUREMENT AND PAYMENT:** The adjustment of existing manholes will be measured and paid for at the Contract unit price bid per each. The payment will be full compensation for all adjustment, material, labor, equipment, tools, cleaning of excess asphalt and deleterious matter, and incidentals necessary to complete the work.
 - A. Any hot mix asphalt that is required for adjusted utilities shall not be measured for payment but will be considered incidental to the cost of Item No. 101 Maintenance of Traffic.

B. The Contract unit price bid per each refers to each individual manhole requiring adjustment. If more than one asphalt grade ring is required to bring the manhole cover up flush with the final pavement surface, it shall not be measured, but will be considered incidental to the price bid per each.

Item No. 526 – <u>PAVEMENT MARKING PAINT, 5" WIDE LINES</u>

DESCRIPTION: Furnish and apply nontoxic lead free waterborne pavement marking paint. These markings shall include 5" wide pavement lines (striping). This item shall be used at locations and to the limits as identified and marked in the field, listed herein and/or as directed by the Engineer.

.02 MATERIALS:

Nontoxic Lead Free Waterborne Pavement Marking Material MDOT SHA Standard Spec. Section 951.01

- **CONSTRUCTION:** Refer to MDOT SHA Standard Specification Section 549 and MDOT SHA Standard Supplemental Specifications Section 550.03, provided herein, and the following:
 - A. The location, color, and orientation of markings shall not change from the existing condition, but shall be replaced in kind, unless otherwise directed by the Engineer.
 - B. Pavement Marking Paint shall be placed when the ambient and surface temperatures are 50° F and rising.
 - C. Final pavement markings shall be applied within 14 consecutive calendar days of removal of the existing pavements markings. One percent (1%) of the total combined bid value of all Pavement Marking Pay Item No's. 525, 526, 527, 528, 529, 530, 531, and 532 will be deducted from the final payment per day per roadway that is not marked in accordance with the timeframes stated above.
- **MEASUREMENT AND PAYMENT:** The payment will be full compensation for all pavement preparation, furnishing and placing of markings, testing, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. Refer to MDOT SHA Standard Specification Section 549.04 and the following:
 - A. Pavement Marking Paint, 5" Wide Lines will be measured and paid for at the Contract unit price per linear foot for the color and width specified.

- Item No. 527 <u>LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS</u>, 5" WIDE LINES
- Item No. 528 <u>LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS</u>, 10" WIDE LINES
- **.01 DESCRIPTION:** This work shall consist of the preparation and application of lead free reflective thermoplastic pavement markings to roadway surfaces as specified herein, or as directed by the Engineer.
- **.02 MATERIALS:** Refer to MDOT SHA Standard Specifications Section 951.02 Lead Free Reflective Thermoplastic Pavement Markings.
- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 549 and MDOT SHA STANDARD Specifications Section 553.03, provided herein, and the following:
 - A. The location, color, and orientation of markings shall not change from the existing condition, but shall be replaced in kind, unless otherwise directed by the Engineer.
 - B. Thermoplastic Pavement Markings shall be placed when the ambient and surface temperatures are 50° F and rising.
 - C. Final pavement markings shall be applied within 14 consecutive calendar days of removal of the existing pavements markings. One percent (1%) of the total combined bid value of all Pavement Marking Pay Item No's. 525, 526, 527, 528, 529, 530, 531, and 532 will be deducted from the final payment per day per roadway that is not marked in accordance with the timeframes stated above.
- **.04 MEASUREMENT AND PAYMENT:** Refer to MDOT SHA Standard Supplemental Specifications Section 553.04, MDOT SHA Standard Specifications Section 549.04 and the following:
 - A. The payment for furnishing and applying pavement line markings will be at the contract bid price per linear foot.
 - B. Quality Control will not be measured but the cost will be incidental to the other pertinent items specified.
 - C. Payment will be made upon submission of the Quality Control Reports to the County.

NO PREHEAT HEAT APPLIED PERMANENT PREFORM THERMOPLASTIC PAVEMENT MARKINGS:

Item No. 529 - LINES, 24" WIDE STOP BAR

Item No. 530 - LINES, 12" WIDE CROSSWALK

Item No. 531 – SYMBOLS, ARROWS

Item No. 532 – LEGENDS, LETTERS

Item No. 533 - SYMBOLS, RAILROAD CROSSING

- **DESCRIPTION:** This work shall consist of furnishing and installing <u>no preheat</u> heat applied preformed thermoplastic pavement marking symbols, legends (letters and numbers), and lines (stop bars and crosswalks) as specified in the Contract or as directed by the Engineer.
- **.02 MATERIALS:** Refer to MDOT SHA Standard Supplemental Specifications Section 556.02 provided herein.
- .03 CONSTRUCTION: Refer to MDOT SHA Standard Specification Section 549 and MDOT SHA STANDARD Supplemental Specifications Section 556.03, provided herein and the following:
 - A. Preformed Thermoplastic Pavement Markings shall be a No Preheat type, whereas the paved surface does not need to be preheated before applying the markings. The dimensions of the lines, symbols and legends shall be accordance with Standard Plate No. 508 No Preheat Preformed Pavement Markings Detail.
 - B. The location, color, and orientation of markings shall not change from the existing condition, but shall be replaced in kind, unless otherwise directed by the Engineer.
 - C. Preformed Thermoplastic Pavement Markings shall be placed when the ambient and surface temperatures meet the manufacturer's recommendations.
 - D. Final pavement markings shall be applied within 14 consecutive calendar days of removal of the existing pavements markings. One percent (1%) of the total combined bid value of all Pavement Marking Pay Items (No.'s 525, 526, 527, 528, 529, 530, 531, and 532) will be deducted from the final payment per day per roadway that is not marked in accordance with the timeframes stated above for both the temporary and permanent markings.
- **.04 MEASUREMENT AND PAYMENT:** Refer to MDOT SHA Standard Specification Section 549 and MDOT SHA Standard Specifications Section 556.04, provided herein and the following:

- A. Preformed Thermoplastic Pavement Marking symbols, legends, and lines will be measured and paid for at the Contract unit price per square foot. The square foot pay quantity for symbols and legends will be as specified in the MDOT SHA STANDARD Book of Standards for Highway & Incidental Structures Standard MD-550.01.
- B. The payment will be full compensation for all pavement preparation, furnishing and placing of markings, testing, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
- C. Quality Control will not be measured but the cost will be incidental to the other pertinent items specified.
- D. Payment will be made upon submission of the Quality Control Reports to the County.

Item No. 534 – <u>CONTINGENT: 6 INCH PORTLAND CEMENT CONCRETE</u> PAVEMENT FOR DRIVEWAY MIX 6

.01 DESCRIPTION. This work shall consist of the construction of plain concrete pavement for residential driveway entrances at locations shown on the plans, in accordance with the details, and/or as directed by the Engineer.

.02 MATERIALS.

Curing Materials MDOT SHA Standard Section 902.07
Form Release Compound MDOT SHA Standard Section 902.08
Concrete Mix No.6 MDOT SHA Standard Section 902.10.03
Joint Materials MDOT SHA Standard Section 911

.03 CONSTRUCTION. Refer to MDOT SHA STANDARD Specifications Section 520.03 and the following:

- A. The Contractor will be required to provide as a minimum, test for slump, air content, mix temperature and four (4) cylinders per pour for laboratory testing including delivery to the County approved testing laboratory. Test results shall be provided to the County with copies of all test results provided to the Contractor. Testing and acceptance parameters shall be in accordance with MDOT SHA Standard Supplemental Specifications Section 902, with the exception that the Contractor shall provide and pay for an approved Field Technician to perform the field sampling and testing. Cost associated with field sampling and testing of concrete shall be at the expense of the Contractor.
- B. No thickness checks will be taken.

.04 MEASUREMENT AND PAYMENT. Concrete driveway entrances will be measured and paid for at the Contract unit price bid square yard. The payment will be full compensation for all labor, concrete, forms, curing, finishing, excavation, disposal of excess materials, joint filler, joint sealer, tack coat, casting of cylinders, testing and sampling, delivery to the laboratory, laboratory and field technician costs, and incidentals necessary to complete the work.

A. There will be no price adjustment for pavement thickness.

Item No. 535 – <u>REMOVAL OF EXISTING PAVEMENT MARKING LINES</u> Item No. 536 – <u>CONTINGENT: REMOVAL OF EXISTING PAVEMENT MARKING</u> LETTERS, SYMBOLS, ARROWS AND NUMBERS

- .01 **DESCRIPTION**. Adhere to MDOT SHA Standard Specifications Section 558.01.
- **.02 MATERIALS**. Refer to MDOT SHA Standard Specifications Section 558.02.
- **.03 CONSTRUCTION**. Refer to MDOT SHA Standard Specifications Section 558.03.
- **.04 MEASUREMENT AND PAYMENT.** Refer to MDOT SHA Standard Specifications Section 558.04.

CATEGORY 600 - SHOULDERS

Item No. 601 – CONTINGENT: CONCRETE MOUNTABLE CURB REPLACEMENT

.01 **DESCRIPTION:** This work shall consist of removing and replacing damaged or sunken Concrete Mountable Curb at various locations along the newly paved roadway to maintain appropriate water shed. Work may also consist of removing and replacing Concrete Mountable Curb that is in good condition, but due to low elevation, traps and retains storm water. The Engineer shall designate all locations for construction.

.02 MATERIALS:

Seeding Disturbed Areas

Graded Aggregate MDOT SHA Standard Section 901.01 **Curing Materials** MDOT SHA Standard Section 902.07 Form Release Compound MDOT SHA Standard Section 902.08 Concrete Mix No. 6 MDOT SHA Standard Section 902.10.03 Epoxy Coated Welded Steel Wire Fabric MDOT SHA Standard Section 908 (ASTM A-185) Epoxy Coated Reinforcement Steel Bars MDOT SHA Standard Section 908 Joint Sealer MDOT SHA Standard Section 911.01 Preformed Joint Filler MDOT SHA Standard Section 911.02 **Epoxy Adhesives** MDOT SHA STANDARD Section 921.04 HMA 19.0mm Base SP Item No. 507.02 Furnished Top Soil SP Item No. 701.02

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 602.03.01 and the following.
 - A. Install Concrete Mountable Curb Replacement as directed by the Engineer in accordance with Standard Plate No. 601.

SP Item No. 702.02

- B. Concrete Mountable Curb Replacement shall be completed and approved by the Engineer before any final surface overlay can occur on the scheduled roadway.
- C. Completely remove to its full depth the existing mountable curb and dispose of at an approved location. Saw cutting shall be required along the perimeter of the removable area to avoid damage to adjacent roadway and driveway pavement, and adjoining existing mountable curb. The Contractor shall not damage sections of existing mountable curb that are not to be removed. Any damage to areas remaining in place shall be repaired or replaced at the Contractor's expense.
- D. Where mountable curb is being replaced against an existing driveway, extra care shall be taken to prevent damage to the adjacent property.

- E. Slope, angle, profile and elevation of concrete mountable curb designated for replacement shall be placed to match slope, angle, profile and elevation of existing curb designated to remain in place. As directed by the Engineer, some locations may be replaced at a higher elevation and sloped accordingly
- F. All replaced concrete mountable curb shall be constructed using MDOT SHA Standard Concrete Mix No. 6 and reinforced using 6" x 6" W2.9 x W2.9 epoxy coated welded wire fabric and #4 epoxy coated rebar. Do not add water to surfaces for finishing. All exposed surfaces shall have a broom finish. Where new mountable curb abuts existing, install ½" expansion joints filled with preformed joint material. Expansion joints shall not exceed a maximum of 40 ft intervals. Install ¼" of the depth of the curb, saw cut control joints at maximum 10 ft intervals.
- G. The Contractor will be required to provide as a minimum, tests for slump, air content, mix temperature and four (4) cylinders every fifty (50) cubic yards placed for laboratory testing including delivery to the County approved testing laboratory. Test results shall be provided to the County with copies provided to the Contractor. The Contractor shall provide and pay for an approved field technician to perform the field sampling and testing. Costs associated with field sampling and testing of concrete shall be at the expense of the Contractor.
- H. Backfill can occur after the new mountable curb has cured for at least 72 hours.
- .04 MEASUREMENT AND PAYMENT: This work will be measured and paid for at the Contract unit price bid per linear foot and will be measured along the front face of the curb. The payment will be full compensation for all removal of existing mountable curb, concrete, steel reinforcement, forms, curing materials, form release compounds, excavation, backfill, graded aggregate, placement and seeding of topsoil, placement of HMA Base, disposal of excess materials, joint sealer, epoxy adhesives, preformed joint filler, testing, casting of cylinders, delivery to the laboratory, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item No. 602 – <u>CONTINGENT: CONCRETE CURB REPLACEMENT</u> Item No. 603 – <u>CONTINGENT: CONCRETE CURB OPENING</u>

.01 **DESCRIPTION:** This work shall consist of removing and replacing damaged or sunken Concrete Curb or Concrete Curb Openings at various locations along the newly paved roadway to maintain appropriate water shed. Work may also consist of removing and replacing Concrete Curb that is in good condition, but due to low elevation, traps and retains storm water. The Engineer shall designate all locations for construction.

.02 MATERIALS:

Graded Aggregate MDOT SHA Standard Section 901.01
Curing Materials MDOT SHA Standard Section 902.07
Form Release Compound MDOT SHA Standard Section 902.08
Concrete Mix No. 3 MDOT SHA Standard Section 902.10.03
Joint Sealer MDOT SHA Standard Section 911.01
Preformed Joint Filler MDOT SHA Standard Section 911.02

HMA 19.0mm Base SP Item No. 507.02 Furnished Top Soil SP Item No. 701.02 Seeding Disturbed Areas SP Item No. 702.02

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 602.03.01 and the following.
 - A. Install Concrete Curb Replacement as directed by the Engineer in accordance with Standard Plate No. 602.
 - B. Install Concrete Curb Opening as directed by the Engineer in accordance with MDOT SHA Standard No. 640.01.
 - C. Concrete Curb Replacement and Concrete Curb Opening shall be completed and approved by the Engineer before any final surface overlay can occur on the scheduled roadway.
 - D. Completely remove to its full depth the existing curb and dispose of at an approved location. Saw cutting shall be required along the perimeter of the removable area to avoid damage to adjacent roadway and driveway pavement, and adjoining existing curb. The Contractor shall not damage sections of existing curb that are not to be removed. Any damage to areas remaining in place shall be repaired or replaced at the Contractor's expense.
 - E. Where curb is being replaced against an existing driveway, extra care shall be taken to prevent damage to the adjacent property.
 - F. Slope, angle, profile and elevation of concrete curb designated for replacement shall be placed to match slope, angle, profile and elevation of existing curb designated to remain in place. As directed by the Engineer, some locations may be replaced at a higher elevation and sloped accordingly.

- A. All replaced concrete curb and new concrete curb openings shall be constructed using MDOT SHA Standard Concrete Mix No. 3. All exposed surfaces shall have a broom finish. Where new curb abuts existing, install ½" expansion joints filled with preformed joint material. Expansion joints shall not exceed a maximum of 40 ft intervals. Install ¼" of the depth of the curb, saw cut control joints at maximum 10 ft intervals.
- B. The Contractor will be required to provide as a minimum, tests for slump, air content, mix temperature and four (4) cylinders every fifty (50) cubic yards placed for laboratory testing including delivery to the County approved testing laboratory. Test results shall be provided to the County with copies provided to the Contractor. The Contractor shall provide and pay for an approved field technician to perform the field sampling and testing. Costs associated with field sampling and testing of concrete shall be at the expense of the Contractor.
- C. Backfill can occur after the new curb has cured for at least 72 hours.
- MEASUREMENT AND PAYMENT: Item No. 602 Concrete Curb Replacement will be measured and paid for at the Contract unit price bid per linear foot and will be measured along the front face of the curb. Item No. 603 Concrete Curb Opening will be measured and paid for at the Contract unit bid price per each. The payment will be full compensation for all saw cutting, removal of existing curb, concrete, forms, curing materials, form release compounds, excavation, backfill, graded aggregate, placement and seeding of topsoil, placement of temporary HMA or CMA Base, disposal of excess materials, joint sealer, epoxy adhesives, preformed joint filler, testing, casting of cylinders, delivery to the laboratory, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item No. 604 – <u>CONTINGENT - SHOULDER EDGE DROP OFF GRADING</u> ADJUSTMENT

DESCRIPTION: This work shall consist of constructing the area adjacent to the outside edge of the pavement to eliminate the shoulder edge drop off. This item is intended for use at various locations along the roadway where the outside edge of the shoulder is greater than 2 ½ inches above the existing ground line. Placement shall be at locations as directed by the Engineer.

.02 MATERIALS:

Crusher Run Aggregate CR-6

MDOT SHA Standard Section 901.01

A. A representative sample of the material type shall be submitted to the County for approval prior to its use.

B. The material gradation shall conform to the following guideline;

Sieve Size	Percent Passing by Weight
2 Inch	100
1 ½ Inch	90-100
³ / ₄ Inch	60-90
No. 4	30-60
No. 200	0-15

C. Gradation results, from a pre-approved laboratory, shall be submitted to the County for approval prior to its use.

.03 CONSTRUCTION:

- A. Materials relative to this Contingent Item shall be placed at locations as directed by the Engineer.
- B. The Contractor shall confirm all locations with the Engineer prior to placement of shoulder edge drop off materials.
- C. If the Engineer determines that a roadway will require shoulder edge drop off materials, the Crusher Run Aggregate shall be placed no later than two (2) working days after the final surface course.
- D. The slope and extent of Shoulder Edge Drop Off Grading shall be determined by the Engineer.
- E. Pavement broken up due to drop-offs not being backed up appropriately shall be replaced at no expense to the County.
- **MEASUREMENT AND PAYMENT:** Shoulder Edge Drop Off Grading Adjustment will be measured and paid for at the Contract unit price bid per ton. The payment will be full compensation for all material, hauling, placing, compacting, labor, equipment, tools and incidentals necessary to complete the work.

Item No. 605 - <u>CONTINGENT: 5 INCH CONCRETE SIDEWALK AND CONCRETE</u> SIDEWALK RAMPS

.01 DESCRIPTION. This work shall consist of constructing concrete sidewalks (5" depth) and sidewalk ramps as shown on the Plans, Details, and/or as directed by the Engineer.

.02 MATERIALS.

Curing Materials

Form Release Compound

Concrete Mix No.3

Welded Wire Fabric

Joint Sealer

Preformed Joint Filler

Roofing Paper

MDOT SHA Standard Section 902.10.03

MDOT SHA Standard Section 908

MDOT SHA Standard Section 911.01

MDOT SHA Standard Section 911.02

MDOT SHA Standard Section 911.07

.03 CONSTRUCTION. Refer to MDOT SHA Standard Specifications Section 603.03 and the following:

A. The Contractor will be required to provide as a minimum, test for slump, air content, mix temperature and four (4) cylinders per pour for laboratory testing including delivery to the County approved testing laboratory. Test results shall be provided to the County with copies of all test results provided to the Contractor. Testing and acceptance parameters shall be in accordance with MDOT SHA Standard Specifications Section 902, with the exception that the Contractor shall provide and pay for an approved Field Technician to perform the field sampling and testing. Cost associated with field sampling and testing of concrete shall be at the expense of the Contractor

.04 MEASUREMENT AND PAYMENT. Refer to MDOT SHA Standard Specifications Section 603.04 and the following:

A. Casting of cylinders, testing and sampling, delivery to the laboratory, laboratory and field technician costs shall be considered incidental to unit price bid.

Item No. 606 – <u>CONTINGENT: DETECTABLE WARNING SURFACES FOR CURB</u> RAMPS

- .01 **DESCRIPTION:** Refer to MDOT SHA Standard Specifications Section 611.01.
- **.02 MATERIALS:** Refer to MDOT SHA Standard Specifications Section 611.02 and the following:

Detectable Warning Surfaces MDOT SHA Standard Section 925. Removable, Vitrified Polymer Composite (Yellow – Color)

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specification 611.03 and the following:
 - A. The Contractor shall install the system in conformance with the manufacturer's recommendations. These recommendations shall address the conditions of the concrete surface on which the system is to be applied, surface finish, presence of curing compound, length of cure, etc. The recommendations shall also address ambient temperature, moisture conditions, adhesive shelf life, set time, tools

required, and other details about the technique of system installation.

.04 MEASUREMENT AND PAYMENT: Refer to MDOT SHA Standard Specifications Section 611.04.

CATEGORY 700 - LANDSCAPING

Item No. 701 – CONTINGENT - PLACING FURNISHED TOPSOIL, 4" DEPTH

- **DESCRIPTION**: This work shall consist of constructing the area adjacent to the outside edge of the pavement to eliminate the shoulder edge drop off. This item is intended for uses at various locations along the roadway where the edge drop off occurs along manicured lawns. Placement shall be at locations as directed by the Engineer.
- .02 MATERIALS:

Furnished Topsoil

MDOT SHA Standard Spec. Section 920.01.02

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 701.03 and the following:
 - A. Place topsoil to those areas throughout the project area, as directed by the Engineer.
 - B. Following the initial placement of the topsoil, the Contractor shall rework and or regrade any areas disturbed by water runoff, vehicular traffic, construction activity, etc. at no additional expense to the County.
- **MEASUREMENT AND PAYMENT:** Placing Furnished Topsoil will be measured for payment. The payment will be based on the Contract unit price bid per square yard and shall include all topsoil, labor, tools, equipment, hauling, placing, spreading and other necessary incidentals.

Item No. 702 - CONTINGENT - SEEDING DISTURBED AREAS - TYPE II

- **.01 DESCRIPTION:** This work shall consist of soil preparation, seeding, fertilizing, liming if required, and mulching on all disturbed areas and in areas as directed by the Engineer.
- .02 MATERIALS:

Agricultural Limestone

MDOT SHA Standard Section 920.02

CONTRACT NO. MS-PMP-285-28

SPECIAL PROVISIONS

Fertilizer MDOT SHA Standard Section 920.03.01 Mulch Binder MDOT SHA Standard Section 920.05.04

Seed MDOT SHA Standard Section 920.04.01 and 920.04.02 Mulch MDOT SHA Standard Section 920.05.03 and 920.05.04

Miscellaneous MDOT SHA Standard Section 920.08

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 705.03 and the following:
 - A. Seeding dates shall be as follows:

Spring and Fall - March 1 to May 15; August 1 to October 20

Summer - May 16 to July 31

Late Fall - October 21 to November 20

- B. The seed mixes and application rates included in this section are to be considered as a guide only and are intended to establish the minimums to be used on this project.
- C. All seeding must be completed within (2) two working days of placement of approved topsoil.
- D. The Contractor will be required to establish an acceptable stand of vegetation; therefore he should satisfy himself as to the adequacy of the mixes and application rates to be used. Any additional watering required to establish an acceptable stand of vegetation shall be incidental.
- E. The method of seed application shall be by **hydro-seeding** unless otherwise directed by the Engineer.
- F. Seed Mixes and Application Rates:

Seed: 85% Tall Fescue 125 lbs. per acre

10% Perennial Ryegrass 15 lbs. per acre 5% Kentucky Bluegrass 10 lbs. per acre

Fertilizer: 10-10-10 600 lbs. per acre

Mulch: 1.5 tons per acre

Lime: Two tons dolomitic limestone per acre

.04 MEASUREMENT AND PAYMENT: Seeding Disturbed Areas will be measured and paid for at the Contract unit price bid per square yard and shall include all seed, fertilizer, mulch, binder, labor, equipment, tools and incidentals necessary to establish an acceptable stand of vegetation.

No additional payments will be made to the Contractor for the reseeding and mulching of areas that must be reseeded in order to establish an acceptable stand of vegetation. The term "acceptable stand of vegetation" shall be interpreted to mean an established growth over at least 95% of the initial disturbed area.

Item No. 703 - CONTINGENT - TURFGRASS SOD ESTABLISHMENT

.01 DESCRIPTION: This work shall consist of soil preparation and establishment of turfgrass sod in areas as directed by the Engineer.

.02 MATERIALS:

Limestone	MDOT SHA Standard 920.02.01
Sulfur	MDOT SHA Standard 920.02.02
Gypsum	MDOT SHA Standard 920.02.04
Compost	MDOT SHA Standard 920.02.05
Fertilizer	MDOT SHA Standard 920.03.01
Turfgrass Sod	MDOT SHA Standard 920.04.06
Fasteners	MDOT SHA Standard 920.05.02
Water	MDOT SHA Standard 920.09.01

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 708.03.
- **.04 MEASUREMENT AND PAYMENT:** Refer to MDOT SHA Standard Specifications Section 708.04 and the following:
 - A. Turfgrass Sod Establishment will be measured and paid for at the Contract unit price bid per square yard and shall include all preparing soil, applying fertilizer placing sod and fasteners, initial watering and all labor, equipment, tools and incidentals necessary for establishment of turfgrass sod.
 - B. Limestone, sulfur, gypsum, compost and additional watering, if needed, shall be incidental to the cost of this item.
 - C. Any watering required to maintain the health of the installed sod shall be incidental.

Item No. 704 - CONTINGENT - TYPE A SOIL STABILIZATION MATTING

.01 DESCRIPTION: This work shall consist of furnishing, placing, and securing matting in areas as directed by the Engineer.

.02 MATERIALS:

Excelsior Matting MDOT SHA Standard Spec. Section 920.05 Staples MDOT SHA Standard Spec. Section 920.05.01

- **.03 CONSTRUCTION:** Refer to MDOT SHA Standard Specifications Section 709.03, provided herein, and the following:
 - A. Soil stabilization matting shall be stapled and overlapped in accordance with the manufacturer's recommendations. Staples shall be driven vertically into the soil and flush with the surface.
 - B. The Contractor shall handle and place the soil stabilization material so as to avoid tears and puncture holes in the material. Any holes or openings created during the installation shall be overlaid with additional material at no additional cost.
- **MEASUREMENT AND PAYMENT:** CONTINGENT Type A Soil Stabilization Matting will be measured and paid for at the Contract unit price bid per square yard installed and accepted by the Engineer. The payment will be full compensation for all materials, equipment, labor, supervision and other related incidentals necessary to construct the soil stabilization matting as shown on the plans or as directed by the Engineer.

CATEGORY 800 - TRAFFIC

Item No. 801 - CONTINGENT - TRAFFIC SIGNAL LOOP DETECTOR

- **.01 DESCRIPTION:** This work shall consist of replacing loop detectors as required to perform the milling and asphalt pavement repairs of various County Roadways as directed by the Engineer.
- **.01 MATERIALS:** Refer to the MDOT SHA Standard Specifications for Materials Section 810.02.
- **.01 CONSTRUCTION:** Refer to the MDOT SHA Standard Specifications for Materials Section 810.03 and the following:
 - A. Loop Detectors shall be installed prior to the replacement of the final layer of HMA pavement.
 - B. The Contractor shall notify the Engineer seven (7) calendar days in advance of performing any work, which may affect a traffic signal loop detector.
 - C. The Contractor shall provide the Engineer with details of each loop detector twenty-eight (28) calendar days in advance of the proposed work. Details shall include subcontractor (if applicable), materials and a sketch with dimensions.
- **.01 MEASUREMENT AND PAYMENT:** Traffic Signal Loop Detectors will be measured and paid for at the Contract unit price bid per each. The payment will be full compensation for all loop detectors, loop lead in cables, materials, tools, equipment, saw cutting, sealant, sub-contractor coordination, supervision, labor, maintenance of traffic, and all incidentals necessary to complete the work.

FY'21 HMA ROAD LISTING PROJECT NO. 28-285

												<u> </u>		<u> </u>						<u> </u>			<u> </u>			
SUMMARY OF QUAN	TITIES			<u> </u>			102 103	03 201 202	2 501 502	503	504 505 506	507 508	509 510 511	512 513	514 515 516	517 518	519 520 521	522 523 524	525 526 527	528 529 530	531 532 533	534 535 536	601 602	603 604 605	606 701	702 703 704 801
		LENGT	AVG.	Extra Surface Total S	Surface HMA We	dge & Milling M	Milling TEMPORARY CONTING	NGENT CONTINGENT CONTIN	GENT CONTINGENT CONTINGENT	T CONTINGEN	CONTINGENT Superpave Superpave Superpave 4.75 9.5 mm 12.5 mm	Superpave Superpave Bo	tra-Thin CONTINGENT Wedge	9.5 mm Wedge &	Paving Paving CONTINGEN C	CONTINGENT HMA Pat	tch HMA Patch NT Saw Cut	Milling Milling	Adjust 5" Wide Pymnt 5" Wide	10" Wide 24" Wide 12" Wide Pymnt Pymnt	de Pymnt Pymnt Pymnt	CONTINGENT Removal of Removal	ENT CONTINGENT CONTINGEN	CONTINGENT	T 5 CONTINGENT CONTINGENT CO	NTINGENT CONTINGENT Seeding Sodding CONTINGENT Type A Traffic Signa
DOAD NAME	EDOM.	LENGI	WIDTH Surface AREA	AREA AR	REA AREA A	REA 0-2" LENGTH LE	ENGTH SIGNS PVM	MS Pavement Cur	b Type 1 Type 2	T 4"GAB	mm 3/4" 1.5" Depth 2" Depth Depth (PG64S-22) (PG64H-22)	3" Depth 4" Depth Co	Vearing Driveway Tie-in 9.5 mm	Course 0- 19.0 mm	oint Repair Fabric Mat	Paving Base M	lix Surface Mix Patch Base Mix Saw Cut Patch Surface Mix	0-2" 0-6" Crack Fill	Riser Lines, Paint Print Lines, P	Thermo Stop Bars, Crosswa Thermo Thermo Therm	Thermo Thermo Thermo	Driveway Mix No. 6 Pavement Lines Letters	Mountable Curb Replacemen	or the Curb Brop On Sidewalk a Ramps Adjustment	Marning Topsoil, 4" Dist	urbed Areas Disturbed Areas Stabilization Loop Detector
ROAD NAME	FROM	MILE	FT SY	% S	% %	% SY	SY SF DAY	AY CY LF	CY CY	TON	TON TON TON	TON TON	SY TON TON	TON TON	LF SY SY	LF TON	TON TON TON	SY SY LB	EACH LF LF	LF SF SF	SF SF SF	SY LF EACH	LF LF	EACH TON SF	SF SY	SY SY EACH
PATCH & OVERLAY																										
Cavetown Church Road Grosh Avenue	MD 64 Hickory School Road	Mapleville Road 0.82 Dead End 0.19	20 9,563	3% 15%	9,850 25% 1 2,756 25% (0% -				-	- 971 - - 247 -		- 10 - 10	73	- 9,850 -	- 4	489		- 17,213 -	- 24 - 24						
Beckley Road	Virginia Avenue - MD 11	Dead End 0.15	21 1,848	15%	2,125 25% 5	0% -				-	- 209 -		- 25 1	60		-			1	- 48						
Barrett Court Dustin Court	Woburn Road Woburn Road	Cul-de-sac 0.16 Cul-de-sac 0.12	30 2,816 20 1,408	8%	3,041 40% 2 1,521 20% 1	5% - 5% -				-	- 273 - - 136 -		- 20 - 10	22	- 3,041 - - 1,521 -	- 4	402 75			- 24 - 24						
Broadfording Road	Martin Street	Blair's Valley Road 0.80	21 9,856	3% 1	10,152 9% 2	5% -				-	- 910 -		- 22 3	75	- 10,152 -	- ;	302			- 24						
Cristins Circle	Robinw ood Drive Robins Glenn Drive	Kellys Lane 0.10 Cul-de-sac 0.05	37 2,214 32 845	5%	2,214 5% 2 887 12% 2	5% - 5% -				-	- 218 - - 87 -		- 42	7		-	44			- 24						
Daniels Circle Kellys Lane	Kellys Lane Daniels Circle	Cul-de-sac 0.11	35 2,156 36 1,267	5%	2,264 0% 2	5% -				-	- 223 -		- 20	17		-	112			- 24						
Hartle Road	Mount Aetna Road	Cul-de-sac 0.33	24 4,689	8%	5,064 0% 2	0% -				-	- 454 -		- 34	19	- 5,064 -		402		- 234 -	- 24						
Pacer Avenue Trotter Drive	Mapleville Road - MD 66 Cul-de-sac	Cul-de-sac 0.11 Cul-de-sac 0.38	24 1,492 26 5,796	0% 8%	1,492 0% 9 6,260 6% 9	9% - 5% -				-	- 134 - - 561 -		- 16 - 30	28 - <i>-</i> 42 - <i>-</i>		-	59 112			- 24 - 24						
Horseshoe Lane	Mapleville Road - MD 66	Cul-de-sac 0.21	23 2,874	5%	3,018 3% 1	2% -				-	- 270 -		- 21	22		-	30			- 24						
Wagaman Road Wandering Lane	Sharpsburg Pike - MD 65 Wagaman Road	Garis Shop Road 1.00 Cul-de-sac 0.51	22 12,907 30 8,976	5%	12,907 5% 0 9,425 12% 0)% -)% -				-	- 1,157 - - 845 -		- 21 2 - 21 3	48 - 160 48		- ;	307		2 10,560 -	- 48 - 24	1: 					
Pierce Court	Wandering Lane	Cul-de-sac 0.06	28 986 5.15 72,089	13%	1,114 5% ()% -	-			-	- 100 - - 6,926 -		- 21	11	- 29.627 -	- 2			5 28.007 -	- 24						
MILL O OVER AV		Sub Total	72,089	<u> </u>	7.0,413		-	- -	- -		- 0,920 -	- -	<u>- 363 1,4</u>	- <u> 16U </u>	- 23,021 -	- 2,		- - -	5 20,007 -	- 430	<u>- </u>	·· - -	- - -	- -	- -	- - -
MILL & OVERLAY Hickory School Road	Virginia Avenue - MD 11	School Transition 0.26	28 4,271	0%	4,271 6%	2% 4,271				-	- 421 -		- 25	17		-	51	4,271	6 - 5,568	- 24	33 -					
Mount Aetna	White Hall Road Jefferson Bouevrd - MD 64	Mapleville Road - MD 66 1.38 Beaverbrooke 0.34	24 19,430 35 6,981	0% 1	19,430 3% 2 6,981 5% 2	2% 19,430 0% 6,981				-	- 1,915 - - 688 -		- 25	77		-	116	19,430 6,981	29,236 	- 24						
Navajo Circle	Seminole Drive	Seminole Drive 0.05	30 880	0%	880 12% 2	0% 880				-	- 87 -		- 9	13		-	21	880		- 24						
Ottaw a Drive Comanche Drive	Seminole Drive Ottaw a Drive	Comanche Drive 0.19 Seminole Drive 0.23	22 2,452 33 4,453	0%	2,452 5% 4,453 4%	3% 2,452 3% 4,453				-	- 242 - - 439 -		- 9 - 15	5		-	24 - - 35 - -	2,452 4,453		- 24 - 24						
Mohaw k Drive	Seminole Drive	Seminole Drive 0.28 Seminole Drive 0.13	31 5,092 33 2,517	0%	5,092 4% 8	3% 5,092 3% 2,517				-	- 502 -		- 9	30		-	40	5,092		- 48						
Iroquis Avenue Weaver Avenue	Jefferson Boulevard - MD 64 Maugans Avenue	Seminole Drive 0.13 Show alter Road 0.51	27 8,078	0%	2,517 8% 8,078 8%	2,517 0% 8,078				-	- 248 796		- 9	10		-	128	2,517 8,078	3	- 48 - 48						
Ronnie Drive Margaret Drive	Jefferson Boulevard - MD 64 Jefferson Boulevard - MD 64		35 4,312 33 3,291	0%	4,312 5% 3,291 9%	2% 4,312 7% 3,291				-	- 425 - - 324 -		- 20 - 20	17 16		-	43	4,312		- 24 - 24						
Marvin Avenue	Margaret Drive	Belvedere Road 0.19	38 4,236		4,236 5%	7% 4,236				-	- 418 -		- 21	59		-	42	4,236		- 96						
Evelyn Avenue Belvedere Road	Ronnie Drive Jefferson Boulevard - MD 64		36 2,957	0%	2,957 5% 3	3% 2,957				-	- 291 -		- 21	18		-	29	2,957		- 48						
Bennie Road	Belvedere Road	Dead End 0.17	39 3,890	0%	3,890 9%	1% 3,890				-	- 383 -		- 21	31		-	69	3,890		- 24						
Bailey Road	Mount Aetna	Martin Circle 0.26	34 5,186	0%	5,186 2%	1% 5,186				-	- 511 -		- 21	10		-	21	5,186		- 48						
Martin Circle	Martin Circle O'Toole Drive	Cul-de-sac 0.68 Cul-de-sac 0.15	33 2,904	8%	3,136 5% (2% 11,170 0% 3,136				-	- 309 -		- 20 -			-	31	3,136								
Walters View	O'Toole Drive	Cul-de-sac 0.12	24 1,690	 	1,825 5%	2% 1,825				-	- 180 -		- 15	7		-	18	1,825		- 24						
Carter Way Roberts Lane	O'Toole Drive O'Toole Drive	Cul-de-sac 0.1 Cul-de-sac 0.11	24 1,408 24 1,549		1,521 6% 1,673 6%	1,521 1% 1,673				-	- 150 - - 165 -		- 15 - 7	13		-	20	1,521		- 24						
Roxbury Road	Garis Shop Road	Pavement Transition 0.87	25 12,760		12,760 5% (0% 12,760				-	- 1,258 -					-	127	12,760	17,084	- 24	160					
Donelson Drive Hampton Road	Viginia Avenue - MD 11 Donelson Drive	Tammany Manor Road 0.2 Tammany Manor Road 0.33	26 3,051 28 5,421	0%	3,051 10% 2 5,421 5%	2% 3,051 1% 5,421				-	- 301 - - 534 -		- 20 - 25	12 11		-	61	3,051 5,421	5 100 -	- 48 - 72	 		 			
Mount Williams Circle	Donelson Drive	Tammany Manor Road 0.15				1,760				-	- 173 -		- 20	10			21	1,760		- 48						
Maugansville Road	I-81 Ramp Transition	Maugansville Railroad Crossing 1.75 Sub Total 7	7.46 22.5 23,100 147,203		25,410 0% (5 0.117	124,707				-			25,410 25,410 395 6	12		- 1,:	<u>- </u>	124,707	- 36,960 - 17 37,160 51,888	- 48 - 1.008 -	<u> </u>	- 36,960 - 36,960	4 4			
PATCH & CRACK FILL			, , , , , , , , , , , , , , , , , , , ,					L L								, , , , , , , , , , , , , , , , , , ,				,,,,,						
Cedar Ridge Road	Clear Spring Road - MD 68	Rufus Wilson Road 1.92	24 27,034	- 2	27,034 12%	5% -				-			1	00		-	644 361	17,000	00 - 10,137 -	- 24						
Orange Blossom	Crystal Falls Drive Neck Road	Cul-de-sac 0.30	30 5,280		5,280 18% ()% -)%				-						-	189 111	2,715	15	- 168						
Ayoub Lane	Sasha Boulevard	Cul de sac 0.62 Top Flite Court 0.18	32 11,639 34 3,590		3,590 10% (0% -				-						-	71 39	5,61 ² 1,629	29							
Shaool Place	Ayoub Lane	Cul-de-sac 0.05	34 997	-	997 10%)% -)%				-						-	20 11	450	53							
Chuck Lane	Sasha Boulevard Shalom Lane	Cul-de-sac 0.35 Cul-de-sac 0.14	34 6,981 34 2,793	-	6,981 10% 2,793 10%)% -				-						-	55 30	3,168 1,267	50				 			
		Sub Total	3.56 58,315	5	58,315	-				-		-	- 1	00		- 1,	349 755	31,843	- 10,137 -	- 192						
PREP WORK FOR CHIP SE		DA Lina	720 40.0		20,000 50/	20/								20												
Sandy Mile Road Creek Road	Western Pike - MD 144 Sandy Mile Road	PA Line 1 Hancock Town Limits 2	1.720 19.9 20,080 2.350 19.9 27,435	- 2	20,080 5% 27,435 10%	2% -	- 24 - 24			-				49 -		-										
Broadfording Road Trego Mountain Road	Blair's Valley Road Trego Road	St. Paul Road - MD 57 2 Chestnut Grove Road 1	2.710 49.5 78,698 1.900 17.0 18.040	- 7	78,698 10% (2% -	- 24			-				388 -		-										
Marble Quarry Road	Mount Briar Road	Rohrersville Road - MD 67 1	1.300 23.7 18,075	- 1	18,075 12%	3% -				-				40 107 -		-										
Burnside Bridge Road Crystal Falls Drive	High Street Orange Blossom Drive	Porterstow n Road 4 National Pike - MD 40 5	1.280 23.5 59,007 5.680 23.6 78.641	- 5	59,007 10% 2 78,641 12% 3	2% - 1% -	- 24 - 24			-				37 291 - 58 465 -		-										
Republican Avenue	Mapleville Road - MD 66	Crystal Falls Drive 0	0.800 19.7 9,246	-	9,246 15% (0% -				-				68 -		-										
Black Rock Lane White Oak Drive	Crystal Falls Drive Crystal Falls Drive	Cul de sac 0 Dead End 0	0.240 21.0 2,957 0.350 22.9 4,702	-	2,957 25% 4,702 10%	0% -				-				23 -		-										
Academy Lane Jugtow n Road	Crystal Falls Drive Dead End	Gate 0 End of Pavement 0	0.280 22.9 3,762 0.380 24.5 5.462	-	3,762 15% (5,462 10% ()% -)% -				-				28 -		-							 			
Neck Road	Falling Waters Road	Dead End 2	2.530 24.5 36,365	- 3	36,365 5%	2% -	- 24			-				54 90 -		-										
Natural Well Road Dellinger Road	Falling Waters Road Neck Road	Dam #4 Road 1 Dam #4 Road 1	1.840 24.5 26,447 1.840 24.5 26,447	- 2	26,447 6% 26,447 5%	2% -	24			-				78 - 39 65 -		-					 		 			
Avis Mill Road	Dellinger Road	Dead End 0 Sub Total 28	0.650 24.5 9,343 8 850 425 617	-	9,343 16%	5% -				-				35 74 - 06 2.064		-										
		Sub lotal 28	425,617	42	LU,U11		192			-			4	2,004 -		-										
CONTINGENT QUANTITIES						-		20 20	50 100 10	100	250 - 100	100 100			500 - 500	500	50 25	- 1,000 -		250 -	- 45	10 250	5 100 1	00 2 350	00 20 2,000	2,000 250 1,000
		GRAND TOTALS 45.02	703,223.84	709,4	167.86		192 20	0 20 50	100 100	100	250 19,217 100	100 100 25	25,410 778 2,582	2,064 160	500 29,627 500	500 5,175	5 755 50 25	124,707 1,000 31,843	22 75,304 51,888	250 1,656 160	45 33 130	10 37,210 9	100 100	2 350 100	20 2,000	2,000 250 1,000 2 SY SY SY EACH
		MILE	SY	s	SY		SF DAY	AY CY LF	CY CY	TON	TON TON TON	TON TON	SY TON TON	TON TON	LF SY SY	LF TON	TON TON TON	SY SY LB	EACH LF LF	LF SF SF	SF SF SF	SY LF EACH	LF LF	EACH TON SF	SF SY	SY SY EACH

SUMMARY SCHEDULE OF PRICES

PAVEMENT MAINTENANCE & REHABILITATION PROGRAM FY-'21 HOT MIX ASPHALT (HMA) APPLICATIONS

Category	100		\$
Category	200		\$
Category	300		N/A
Category	400		N/A
Category	500		\$
Category	600		\$
Category	700		\$
Category	800		\$
		PROJECT TOTAL	\$

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
101	1	Lump	Maintenance of Traffic	<u>\$</u>	<u>\$</u>
102	192	SF	Temporary Traffic Signs	\$	\$
103	20	DAY	CONTINGENT - PVMS	\$	\$
END (CATEGORY	100		SUB TOTAL	\$

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
201	20	СУ	CONTINGENT: Removal of Existing Pavement, Sidewalk, and Paved Ditches	<u>\$</u>	<u>\$</u>
202	50	LF	CONTINGENT: Removal of Existing Curb or Combination Curb and Gutter	\$	\$
END (CATEGORY	200		SUB TOTAL	<u>\$</u>

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
501	100	CY	CONTINGENT – Stabilization, Type-1	\$	<u>\$</u>
502	100	CY	CONTINGENT – Stabilization, Type-2	\$	<u>\$</u>
503	100	TON	CONTINGENT – 4" Graded Aggregate Base	\$	<u>\$</u>
504	250	TON	CONTINGENT: Superpave Asphalt Mix 4.75 mm (PG64-22)	\$	<u>\$</u>
505	19,217	TON	Superpave Asphalt Mix 9.5 mm (PG64S-22)	\$	<u>\$</u>
506	100	TON	Superpave Asphalt Mix 12.5 mm (PG64H-22)	\$	<u>\$</u>
507	100	TON	CONTINGENT: Superpave Asphalt Mix 19.0 mm (PG64S-22)	\$	<u>\$</u>
508	100	TON	CONTINGENT - Superpave Asphalt Mix 25.0 mm (PG64S-22)	\$	_\$
509	25,410	SY	Ultra-Thin Bonded Wearing Course	\$	_\$
CA	TEGORY 50	00		SUB TOTAL	ON PAGE BF-18

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
510	778	TON	CONTINGENT: HMA 9.5MM Driveway Tie-in Handwork	<u>\$</u>	<u>\$</u>
511	2,582	TON	Superpave Asphalt Mix 9.5 mm (PG64S-22) for Wedge & Leveling	\$	<u>\$</u>
512	2,064	TON	Superpave Asphalt Mix 9.5 mm (PG64S-22) for Level Course 0-1"	\$	\$
513	160	TON	Superpave Asphalt Mix 19.0 mm (PG64S-22) for Wedge & Leveling	\$	<u>\$</u>
514	500	LF	Paving Fabric, Joint Repair	\$	<u>\$</u>
515	29,627	SY	Paving Fabric	<u>\$</u>	<u>\$</u>
516	500	SY	CONTINGENT: Paving Mat	\$	\$
517	500	LF	CONTINGENT: Paving Membrane	\$	\$
518	5,175	TON	HMA Patch Base Mix	\$	<u>\$</u>
CA	TEGORY 50	0		SUB TOTAL	ON PAGE BF-18

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
519	755	TON	CONTINGENT: HMA Patch Surface Mix	\$	<u>\$</u>
520	50	TON	CONTINGENT – Saw Cut Patch Base Mix	\$	<u>\$</u>
521	25	TON	CONTINGENT – Saw Cut Patch Surface Mix	\$	<u>\$</u>
522	124,707	SY	Milling Hot Mix Asphalt Pavement 0"-2" Depth	<u>\$</u>	<u>\$</u>
523	1,000	SY	Milling Hot Mix Asphalt Pavement 0"-6" Depth	\$	<u>\$</u>
524	31,843	LB	Crack Filling	\$	<u>\$</u>
525	22	EA	Adjust Existing Manhole	\$	<u>\$</u>
526	75,304	LF	Pavement Marking Paint – 5" Wide Lines	\$	<u>\$</u>
527	51,888	LF	Lead Free Reflective Thermoplastic Pavement Markings, 5" Wide Lines	\$	<u>\$</u>
CATEGORY 500				SUB TOTAL	ON PAGE BF-18

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
528	250	LF	Lead Free Reflective Thermoplastic Pavement Markings, 10" Wide Lines	_\$	<u>\$</u>
529	1,656	SF	No Preheat Heat Applied Permanent Preformed Thermoplastic Pavement Markings – Lines, 24" Wide Stop Bars	\$	<u>\$</u>
530	160	SF	No Preheat Heat Applied Permanent Preformed Thermoplastic Pavement Markings – Lines, 12" Wide Crosswalks	\$	<u>\$</u>
531	45	SF	No Preheat Heat Applied Permanent Preformed Thermoplastic Pavement Markings – Symbols, Arrows	<u>\$</u>	<u>\$</u>
532	33	SF	No Preheat Heat Applied Permanent Preformed Thermoplastic Pavement Markings – Legends, Letters	<u>\$</u>	<u>\$</u>
533	130	SF	No Preheat Heat Applied Permanent Preformed Thermoplastic Pavement Markings – Symbols, Railroad Crossing	<u>\$</u>	<u>\$</u>
534	10	SY	CONTINGENT: 6 Inch Driveway Mix No. 6	<u>\$</u>	<u>\$</u>
535	37,210	LF	Removal of Existing Pavement Markings, Lines	<u>\$</u>	<u>\$</u>
536	5	EA	CONTINGENT: Removal of Existing Pavement Markings, Letters, Symbols, Arrows, and Numbers	<u>\$</u>	<u>\$</u>
END CATEGORY 500				SUB TOTAL	<u>\$</u>

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
601	100	LF	CONTINGENT - Concrete Mountable Curb Replacement	\$	<u>\$</u>
602	100	LF	CONTINGENT - Concrete Curb Replacement	\$	<u>\$</u>
603	2	EA	CONTINGENT - Concrete Curb Opening	<u>\$</u>	<u>\$</u>
604	350	TON	CONTINGENT – Shoulder Edge Drop Off Grading Adjustment	<u>\$</u>	<u>\$</u>
605	100	SF	CONTINGENT – 5 Inch Concrete Sidewalk and Concrete Sidewalk Ramps	<u>\$</u>	<u>\$</u>
606	20	SF	CONTINGENT – Detectable Warning Surface	<u>\$</u>	<u>\$</u>
END	CATEGORY	600		SUB TOTAL	<u>\$</u>

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
701	2,000	S.Y.	CONTINGENT – Placing Furnished Topsoil, 4" Depth	\$	<u>\$</u>
702	2,000	S.Y.	CONTINGENT – Seeding Disturbed Areas, Type II	\$	<u>\$</u>
703	250	S.Y.	CONTINGENT – Turfgrass Sod Establishment	\$	<u>\$</u>
704	1,000	S.Y.	CONTINGENT – Type A Soil Stabilization Matting	\$	<u>\$</u>
END	CATEGORY	700		SUB TOTAL	<u>\$</u>

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL
801	2	EA	CONTINGENT – Traffic Signal Loop Detector	<u>\$</u>	<u>\$</u>
END CATEGORY 800				SUB TOTAL	<u>\$</u>