

## **Attachment 9**

**(Revised May 27, 2020)**

### **Special Notes – NYSDOT Specific Projects**

**Bituminous Concrete – Hot Mix Asphalt**  
**(2020 NYSDOT Specific Projects – 2<sup>nd</sup> Letting)**  
**(State Funds)**

**Award# 23209**

## Table of Contents

SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) .....	5
1.1 Material Descriptions .....	5
1.2 Pre-Paving Meeting.....	6
1.3 Supervision.....	6
1.4 Work Hours .....	6
1.5 Restoration of Disturbed Areas .....	6
1.6 Tack Coat .....	6
1.7 Construction Details.....	6
1.8 Attention: Special Note - Conditioning.....	6
1.9 Work Zone Traffic Control .....	7
1.10 Contract Bonds.....	13
SECTION 2: PROJECTS - SPECIAL NOTES (ALL NYSDOT REGIONS).....	16
2.1 Funding Source. ....	16
2.2 Project Locations.....	16
2.3 Special Note - Coordination with Cold Recycling Projects.....	16
2.4 Special Note – PG Binder and Mix Design Level.....	16
2.5 Special Note – Optional Use of Warm Mix Asphalt (WMA) Technologies .....	18
2.6 Special Note - Railroad Involvement in 100% State Funded Projects.....	19
2.7 Special Note – Asphalt Pavement Joint Adhesive .....	19
SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2).....	20
3.1 Region 2 Special Notes (ALL REGION 2 SITES) – Region 2 Projects .....	20
3.2 Project 2V2011 - Rte. 309 – Gloversville to County Route 112 .....	20
3.3 Project 2V2012 - Rte. 10A – Rte. 29 to Rte. 10.....	20
3.4 Project 2V2021 - Rte. 30 – Lewy Lake to RM 1431 .....	21
3.5 Project 2V2031 - Rte. 51 – Rte. Cedarville to RM 1129 .....	21
3.6 Project 2V2041 - Rte. 12 - Chenango CL to South of Hubbardsville .....	21
3.7 Project 2V2051 - Rte. 161 – Rte. 30A to Rte. 30.....	21
3.8 Project 2V2061 - Rte. 233 – Rte. 412 to Thruway Access Rd.....	22
3.9 HMA/WMA Mixture Evaluation Using Performance Testing.....	23

SECTION 4: PROJECTS - SPECIAL NOTES (NYSDOT REGION 3).....	26
4.1 Holiday and Event Restrictions – Region 3 Projects .....	26
4.2 Pilot Vehicle – Region 3 Projects .....	26
4.3 Region 3 Projects .....	26
4.4 Project 360242 – Oswego County.....	26
4.5 Project 360365 – Cayuga County.....	27
4.6 Project 360405 – Cayuga and Onondaga Counties .....	27
4.7 Project 360406 – Seneca County .....	27
4.8 Project 360407 – Seneca County .....	27
4.9 Project 360408 – Ontario and Seneca Counties.....	27
4.10 Project 360409 – Onondaga County .....	28
4.11 Project 360410 – Oswego County.....	28
4.12 Project 360411 – Tompkins County.....	28
4.13 Project 360412 – Onondaga County .....	28
4.14 Project 360413 – Cortland County.....	28
4.15 Project 360414 – Onondaga County .....	29
SECTION 5: PROJECTS - SPECIAL NOTES (NYSDOT REGION 4).....	30
5.1 Special Note – Region 4 Projects.....	30
5.2 Special Note – Temporary Lane/Shoulder Closure Restrictions for Major Holidays - Region 4 .....	30
5.3 Special Note – Project 403117 – Monroe County (Route 31F, Town of Perinton).....	31
SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5).....	32
6.1 General Special Note – Region 5 Projects .....	32
6.2 Effective PG Binder Content – Region 5 Projects .....	32
6.3 Moisture Susceptibility Testing – Region 5 Projects.....	32
6.4 Dust (Minus 0.075 mm Aggregate) to Effective PG Binder Content Ratio – Region 5 Projects .....	32
6.5 Polymer Modified PG Binder – Region 5 Projects .....	33
6.6 Pavement Markings – Region 5 Projects .....	33
6.7 Abrading Existing Pre-Formed & Epoxy Pavement Markings – Region 5 Projects .....	33
6.8 Milled Surfaces – Region 5 Projects .....	33
6.9 Time Restrictions – Region 5 Projects.....	33
6.10 Project 5V2014 – Cattaraugus County.....	33
6.11 Project 5V2015 – Cattaraugus County.....	33
6.12 Project 5V2025 – Chautauqua County.....	34
6.13 Project 5V2026 – Chautauqua County.....	34

6.14	Project 5V2027 – Chautauqua County .....	34
6.15	Project 5V2028 – Chautauqua County .....	35
6.16	Project 5V2032 – Erie County .....	35
6.17	Project 5V2033 – Erie County .....	35
6.18	Project 5V2034 – Erie County .....	35
6.19	Project 5V2043 – Erie County .....	36
6.20	Project 5V2045 – Erie County .....	36
6.21	Project 5V2046 – Erie County .....	36
6.22	Project 5V2053 – Niagara County .....	39
6.23	Project 5V2054 – Niagara County .....	39
<b>SECTION 7: PROJECTS - SPECIAL NOTES (NYSDOT REGION 7).....</b>		<b>40</b>
7.1	Special Work Zone Traffic Control – Pilot Vehicle – Region 7 Projects .....	40
7.2	Project 7PAV41 – Clinton County .....	40
7.3	Project 7PAV46 – Jefferson County .....	40
7.4	Project 7PAV48 – Lewis County .....	41
7.5	Project 7PAV51 – St. Lawrence County .....	44
<b>SECTION 8: PROJECTS - SPECIAL NOTES (NYSDOT REGION 9).....</b>		<b>45</b>
8.1	Special Notes – Region 9 Projects .....	45
8.2	Projects 9HW021, 9HW022, 9HW041, and 9HW071.....	45
8.3	Projects 9HW012 and 9HW061 .....	45
8.4	Project 9HW051- Otsego County .....	45
8.5	Project 9VHW61 – Schoharie County .....	46
8.6	Project 9HW071- Sullivan County .....	46
8.7	Project 9HW081- Tioga County .....	46
8.8	Projects 9HW021, 9HW022, 9HW061, and 9HW081 – Joint Density Requirements .....	46
8.9	Projects 9HW061 and 9HW081- HMA Mixture Evaluation Using Performance Testing .....	46
8.10	Projects 9HW021, 9HW022 & 9HW041 – Density Measurement Using A Rolling Density Meter .....	49
<b>SECTION 9: SUPERPAVE HOT MIX ASPHALT .....</b>		<b>50</b>
9.1	Superpave Hot Mix Asphalt Design Criteria .....	50
9.2	Project Dimensions .....	50
9.3	Rebates Table .....	50

**SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES)**

**1.1 Material Descriptions**

The following are the material descriptions of Superpave HMA items that may be included in this contract:

<b>Materials Designation</b>	<b>Description</b>
402.017903	Truing & Leveling F9, 70 Series Compaction
402.018903	Truing & Leveling F9, 80 Series Compaction
402.058903	Shim Course F9
402.095203	9.5 F2, 50 Series Compaction
402.096103	9.5 F1, 60 Series Compaction
402.096203	9.5 F2, 60 Series Compaction
402.096303	9.5 F3, 60 Series Compaction
402.097103	9.5 F1, 70 Series Compaction
402.097203	9.5 F2, 70 Series Compaction
402.097303	9.5 F3, 70 Series Compaction
402.098303	9.5 F3, 80 Series Compaction
402.098903	9.5 F9, Shoulder Course, 80 Series Compaction
402.126103	12.5 F1, 60 Series Compaction
402.126203	12.5 F2, 60 Series Compaction
402.126303	12.5 F3, 60 Series Compaction
402.127103	12.5 F1, 70 Series Compaction
402.127203	12.5 F2, 70 Series Compaction
402.127303	12.5 F3, 70 Series Compaction
402.128903	12.5 F9, Shoulder Course, 80 Series Compaction
402.196903	19 F9, 60 Series Compaction
402.197903	19 F9, 70 Series Compaction
402.256903	25 F9, 60 Series Compaction
402.257903	25 F9, 70 Series Compaction
402.068103	6.3 F1, Superthin HMA, 80 Series Compaction
402.068203	6.3 F2, Superthin HMA, 80 Series Compaction
402.068303	6.3 F3, Superthin HMA, 80 Series Compaction
402.000013	Plant Production Quality Adjustment to HMA Items
402.000023	Pavement Density Quality Adjustment to HMA Items
402.000053	Test Section Adjustment to HMA Items
404.09620108	9.5 F2 WMA, 60 Series Compaction
404.09630108	9.5 F3 WMA, 60 Series Compaction
404.09720108	9.5 F2 WMA, 70 Series Compaction
404.09730108	9.5 F3 WMA, 70 Series Compaction
404.12620108	12.5 F2 WMA, 60 Series Compaction
404.12630108	12.5 F3 WMA, 60 Series Compaction
404.12720108	12.5 F2 WMA, 70 Series Compaction
404.12730108	12.5 F3 WMA, 70 Series Compaction
404.06820309	6.3 F2, Superthin WMA, 80 Series Compaction
404.06830309	6.3 F3, Superthin WMA, 80 Series Compaction
404.01790108	Truing & Leveling F9, WMA, 70 Series Compaction
404.01890108	Truing & Leveling F9, WMA, 80 Series Compaction
404.05890108	WMA Shim Course F9

## SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)

### 1.2 Pre-Paving Meeting

The vendor shall schedule a Pre-Paving Meeting with the affected Resident Engineer within one month after the award of the Contract and at least two weeks prior to the start of paving. At this meeting the vendor shall present Certificates of Insurance evidencing compliance with the additional insurance requirements, their proposed paving schedule, equipment, proposed tack coat application procedure and paving procedure, and Work Zone Traffic Control Plan to the State for approval. At least one week prior to the start of paving, the vendor shall coordinate the details of the paving with the Resident Engineer.

### 1.3 Supervision

The Department of Transportation shall provide supervision for the paving operation. The Resident Engineer shall designate a Paving Supervisor and that person shall be in responsible charge of the operation. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

### 1.4 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (09/18). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

### 1.5 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the vendor upon completion of the project.

### 1.6 Tack Coat

The vendor shall provide and apply bituminous tack coat to all existing hot mix asphalt pavement surfaces to be overlaid in this contract (and to all hot mix asphalt pavement surfaces included in this contract that will be overlaid by this contract). Tack coat shall meet the material requirements in Section 407-2 of the Standard Specifications. The application of tack coat shall comply with Section 407-3 of the Standard Specifications. **Tack coat shall be paid under its own item in gallons.**

### 1.7 Construction Details

The construction details shall comply with the requirements specified in Subsections 401-3.01, 402-3 and 407-3 of the Standard Specifications. The Paving Supervisor shall have sole responsibility for determining compliance with the specifications. All orders given to the vendor regarding construction details shall be considered final. The pavement thicknesses and lane and shoulder widths shall be as specified elsewhere in this Invitation for Bids.

### 1.8 Attention: Special Note - Conditioning

The vendor will not be responsible for the initial conditioning of the existing pavement and shoulder surfaces as described in Section 402-3.05 of the NYSDOT Standard Specifications. Patching, joint repair, crack filling and the initial surface cleaning will be done by NYSDOT forces prior to the VPP project. However, once the VPP overlay placement begins, the vendor is responsible for keeping the pavement and shoulders clean until the overlay operations are completed, as per Section 633-3.01 of the NYSDOT Standard Specifications.

## SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)

### 1.9 Work Zone Traffic Control

The vendor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and Sections 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The vendor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Paving Meeting. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the vendor. For two-way roadways, a minimum of three flaggers shall be provided while the paving operation is underway. One shall be stationed at each end of the operation and one shall be stationed with the paver. For one-way roadways, a minimum of two flaggers shall be provided while the paving operation is underway. One shall be stationed at the beginning of the operation and one shall be stationed with the paver. The vendor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs for Work Zone Traffic Control including flagging, temporary pavement marking and/or delineation, and construction signs are included in the price per ton. No separate payment shall be made.

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the contractor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the DO NOT PASS and NO CENTER LINE signs referenced in Section *Special Note - Temporary Pavement Markings*. The contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' x 4" temporary yellow markings are used instead of full barrier pavement markings.

**SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont’d)**

**1.9 Work Zone Traffic Control (Cont’d)**

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At a minimum, the Contractor shall install the following permanent construction signs.

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36” x 18”  Freeways 48” x 24”	On main line upstream of project in each direction.
END ROAD WORK	<u>G20-2</u> Conventional 36” x 18”  Freeways 48” x 24”	On main line after end of project in each direction.
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36” x 36”  Freeways 48” x 48”	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24” x 30”	If 2’x 4” temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction.
NO CENTER LINE	<u>W8-12</u> Conventional 36” x 36”	If 2’x 4” temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first “DO NOT PASS” sign: 300’ urban is preferred (100’ minimum), 500’ rural is preferred (200’ minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36” x 36”  Freeways 48” x 48”	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200’ between signs for rural roads and 100’ on urban. The W8-12 can be moved upstream to accommodate the required spacing).
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36” x 36”  Freeways 48” x 48”	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

\*\*All signs should maintain an absolute minimum spacing of 200’ rural or 100’ urban. 500’ is preferred on rural and 300’ is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.



## SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)

### 1.9 Work Zone Traffic Control (Cont'd)

#### 1.9.1 Special Note - Temporary Pavement Markings

The contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch pavement markings consisting of retro-reflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the State has completed installing the final pavement markings. The State will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the State has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, State must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

#### 1.9.2 Hot Mix Asphalt Overlay Splice (Rebate)

The vendor shall install hot mix asphalt overlay splices (pavement terminations) as per the Detail of Hot Mix Asphalt Overlay Splice (see next page). Hot mix asphalt overlay splices shall be installed at the areas indicated in the Location Table for Hot Mix Asphalt Overlay Splices. The cost for sawcutting, milling rebates and cleaning pavement in the splice area shall be included in the price bid per ton of bituminous concrete. Tack coat shall be paid under its own item as specified elsewhere. No separate payments shall be made for hot mix asphalt overlay splices.

Immediately after the hot mix asphalt overlay splices are milled, a temporary asphalt ramp shall be constructed. A cone or drum shall be installed at the ramp. If the rebate is left in place at night a drum equipped with a Type A flashing warning light shall be used and the ramp sloped in accordance with Table 619-1. No separate payment shall be made for the ramps. The cost shall be included in the price bid per ton of bituminous concrete.

Where rebates are milled and ramps are constructed and traffic is to ride on the milled pavement for more than the one work day in which the rebate is milled, GROOVED PAVEMENT signs (W8-15) shall be installed on the right side of the roadway, 500 feet upstream of the rebate location. No separate payment shall be made for the GROOVED PAVEMENT sign. The cost shall be included in the price bid per ton of bituminous concrete.

#### 1.9.3 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids:

##### Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 feet shall be provided at stationary work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers and shall be used throughout the work zone.

Where tapers are located less than 500 feet from the work site, the 40 foot spacing shall be used in the taper as well.

Drums or vertical panels are preferred for long-term stationary and intermediate-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

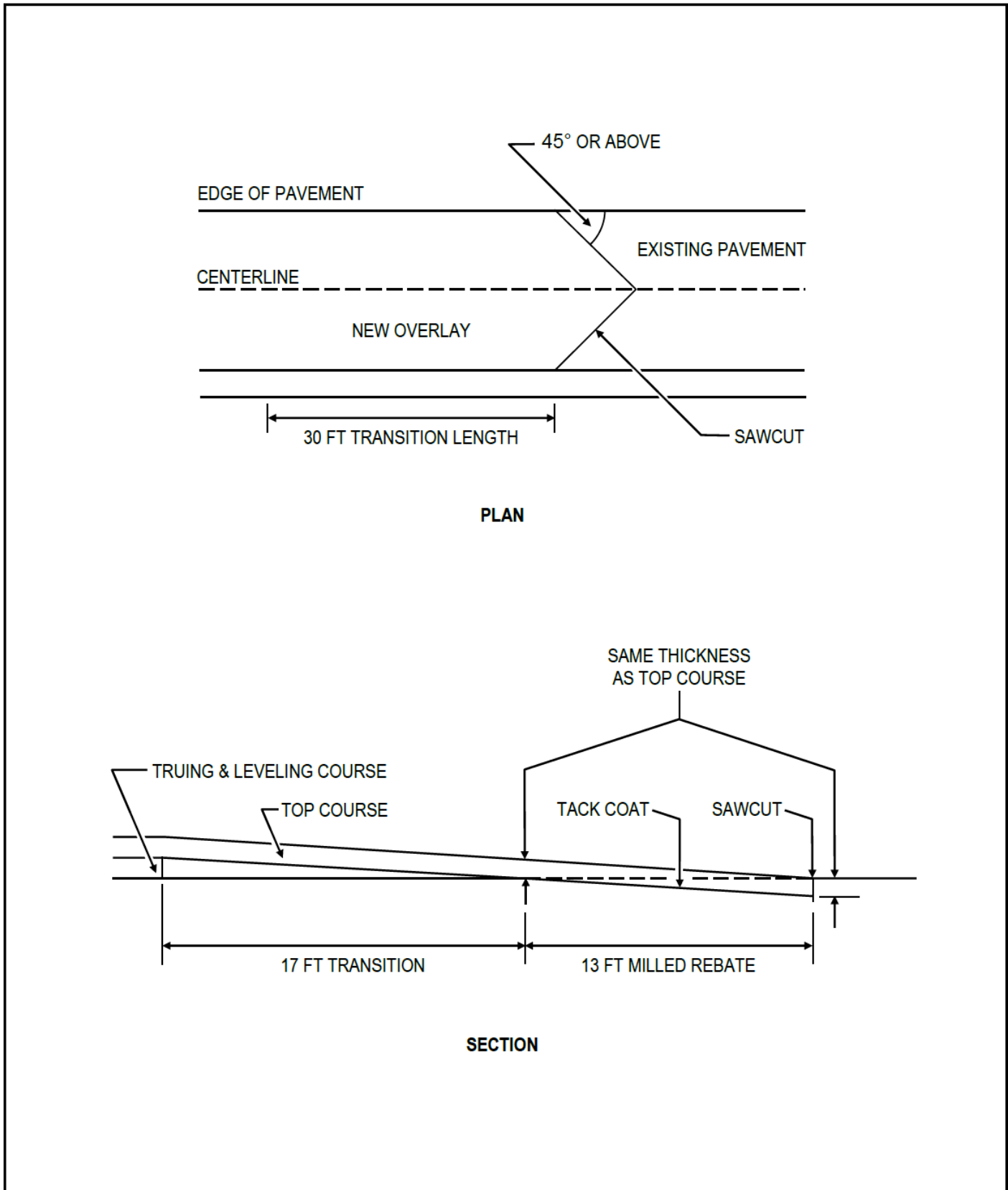
In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800-foot intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot vehicles are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic

## SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)

### 1.9 Work Zone Traffic Control (Cont'd)

#### DETAIL OF HOT MIX ASPHALT OVERLAY SPLICE



## SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)

### 1.9 Work Zone Traffic Control (Cont'd)

#### Flagger Station Enhanced Setups

Additional cones and a flag tree meeting section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is required, the additional cones and flag tree shall also be used. If the flaggers move with the paving operation, the vendor shall ensure that appropriate distances are maintained between the flagger sign series, flag tree and the flaggers. The W20-7 flagger sign shall be a minimum of 300 feet and a maximum of 2,000 feet in advance of the flagger. If two or more sets of signs on an approach are used to maintain appropriate distances, when the operation progresses to the point where the next set of flagger warning signs is activated, the original signs shall be deactivated by removal, turning away from traffic or laying them down in a manner that does not pose a roadside hazard for passing vehicles. Only one series of flagger warning signs per approach shall normally be visible to traffic.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control Drawings in this Invitation for Bids.

### 1.9.4 Temporary Rumble Strips

#### Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

#### Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape.

Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectORIZED removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape.

Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Item 407.0102 Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6 Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10-foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches  $\pm$  0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

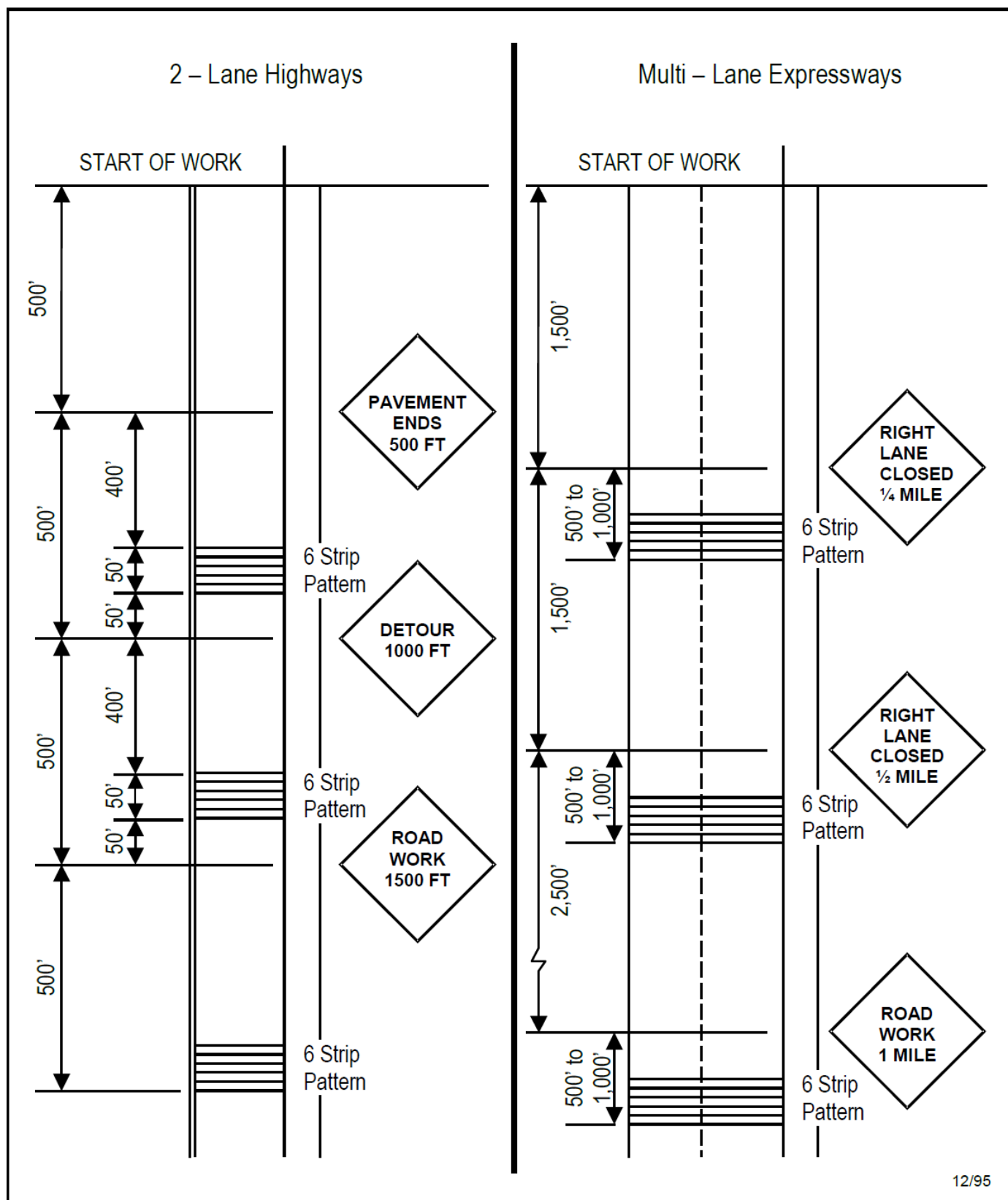
#### Basis of Payment

All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton. No separate payment shall be made.

**SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)**

**1.9 Work Zone Traffic Control (Cont'd)**

**Suggested Layout Details -- Temporary Rumble Strips**



## SECTION 1: HOT MIX ASPHALT – (SPECIFIC CLAUSES) (Cont'd)

### 1.10 Contract Bonds

The Contractor shall provide the State with a Labor and Materials Bond from a Surety Company listed on the U.S. Department of the Treasury listing of Approved Sureties (Treasury Department Circular 570) and licensed to do business in New York State, and with a minimum rating by A.M. Best of (A-) in the “best’s Key Rating Guide”. Treasury Department Circular 570 can be found on the U.S. Department of the Treasury website at [www.fms.treas.gov/c570/index.html](http://www.fms.treas.gov/c570/index.html).

**The Contractor shall procure and deliver the bond to the State at the Pre-Paving Meeting** referenced in Section *Pre-Paving Meeting* and shall maintain it at its own expense and without expense to the State during the Contract and until three months after the OGS contract ending date. If the contract is extended, the Labor and Materials Bond shall be extended until three months after the new contract ending date. The Surety Company shall append a statement of its financial condition and a copy of the resolution authorizing the execution of Bonds by the officers of the Company to the bond.

#### 1.10.1 Labor and Material Bond

The Contractor shall provide a bond in the form prescribed by the Commissioner of the New York State Department of Transportation (NYSDOT), shown in the NYSDOT Standard Specification for Design and Construction, Sub-Section 103-08 Sample Form of Labor and Material Bond, with sufficient sureties, approved by said Commissioner, guaranteeing prompt payment of monies due all persons supplying the Contractor with labor and materials employed and used in carrying out the contract, which bond shall inure to the benefit of the persons supplying such labor and materials. The amount of the Labor and Material Bond shall be 100% of the amount of the total contract bid price.

#### 1.10.2 Labor and Material Bond Example

See the sample Labor and Materials Bond language below.

S A M P L E (page 1 of 2)

103-08 SAMPLE FORM OF LABOR AND MATERIAL BOND

KNOW ALL PERSONS BY THESE PRESENTS, that \_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address)  
(hereinafter called the “Principal”) and the

\_\_\_\_\_ a corporation created and existing under the laws of the State of \_\_\_\_\_ having its principal office in the City of \_\_\_\_\_ (hereinafter called the “Surety”), are held and firmly bound unto the People of the State of New York (hereinafter called the “State”) by and through its Department of Transportation (hereinafter called the “Department”), in the full and just sum of [Total Contract Bid Price or the “A Portion” of Total Contract Bid Price Dollars (\$.....)] good and lawful money of the United States of America, for payment of which said sum of money, well and truly to be made and done, the said Principal binds itself, its heirs, executors and administrators, successors and assigns, and the said Surety binds itself, its successors and assigns jointly and severally, firmly by these presents:

WHEREAS, said Principal has entered into a certain written contract, on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ with the Department of Transportation, 50 Wolf Road, Albany, New York 12232.

(Project Description)

In the county/counties of which constitutes Contract No. NOW, THEREFORE, the condition of this obligation is such, that if the said Principal shall promptly pay all monies due to all persons furnishing labor or materials to it or its SubContractors in the prosecution of the work provided for in said contract, then this obligation shall be void, otherwise to remain in full force and effect; Provided, however, that the Comptroller of the State of New York having required the said Principal to furnish this bond in order to comply with the provisions of Section 137 of the State Finance Law, all rights and remedies on this bond shall inure solely to such persons and shall be determined in accordance with the provisions, conditions and limitations of said Section to the same extent as if they were copied at length herein; and Further, provided, that the place of trial of any action on this bond shall be in the county in which the said contract was to be performed, or if said contract was to be performed in more than one county then in any such county, and not elsewhere.

IN TESTIMONY WHEREOF, the said Principal has hereunto set his/her (their, its) hand and the said Surety has caused this instrument to be signed by its authorized officer, the day and year above written.

Signed and delivered \_\_\_\_ day of \_\_\_\_\_ 20\_\_ in the presence of

\_\_\_\_\_)  
(Company)  
By \_\_\_\_\_) Principal  
(Signature)  
\_\_\_\_\_)  
(Title)  
\_\_\_\_\_)  
(Company)  
By \_\_\_\_\_) Surety  
(Signature)  
\_\_\_\_\_)  
(Title of Authorized Officer)

(The Surety Company shall append a single copy of a statement of its financial condition and a copy of the resolution authorizing the execution of Bonds by officers of the Company to the bond(s).

S A M P L E (page 2 of 2)

103-08 SAMPLE FORM OF LABOR AND MATERIAL BOND

(Acknowledgment of principal, unless it be a corporation)

STATE OF NEW YORK ss. :

COUNTY OF \_\_\_\_\_

On this \_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_, before me personally came \_\_\_\_\_ to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged that he/she executed the same.

\_\_\_\_\_  
Notary Public

(Acknowledgment of principal, if a corporation)

STATE OF NEW YORK ss. :

COUNTY \_\_\_\_\_

On this \_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_, before me personally came \_\_\_\_\_ to me known and known to me to be the person, who being by me duly sworn, did depose and say that he/she resides in \_\_\_\_\_ that he/she is the \_\_\_\_\_ of the \_\_\_\_\_ the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said Corporation.

\_\_\_\_\_  
Notary Public

(Acknowledgment of Surety Company)

STATE OF NEW YORK ss. :

COUNTY OF \_\_\_\_\_

On this \_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_, before me personally came \_\_\_\_\_ to me known and known to me to be the person, who being by me duly sworn, did depose and say that he/she resides in \_\_\_\_\_ that he/she is the \_\_\_\_\_ of the \_\_\_\_\_ the corporation described in the foregoing instrument; and that he/she signed his/her name thereto by order of the Board of Directors of said Corporation.

\_\_\_\_\_  
Notary Public

State Of New York Office of the Attorney General

I hereby approve the foregoing contract and bond as to form and manner of execution



## SECTION 2: PROJECTS - SPECIAL NOTES (ALL NYSDOT REGIONS)

### 2.1 Funding Source.

All projects in this solicitation will be 100% **State funded**.

### 2.2 Project Locations

The specific locations for all projects listed in this Invitation for Bids can be found in Attachment 1 - *Pricing*.

### 2.3 Special Note - Coordination with Cold Recycling Projects

Prior to HMA overlay, Projects 2V2012, 2V2051, 360365, 360406, 9HW021, 9HW022, 9HW041, and 9HW071 involve cold recycling and Projects 2V2011, 2V2021, 2V2041, 2V2061, 360411, and 9HW051 involve heater scarification through separate contractor(s). These VPP overlay projects require that the paving contractor coordinates their work with the corresponding cold recycling/ heater scarification contractor to allow required curing period before placing the HMA overlay as well as to minimize disruption to the traveling public and the time traffic is running over a recycled surface.

### 2.4 Special Note – PG Binder and Mix Design Level

#### 2.4.1 PG 64S-22

Requirements of this note apply to all Section 402 and Section 404 Asphalt (HMA and WMA) items in this contract as outlined in Section *Superpave Hot Mix Asphalt Design Criteria* table.

##### **PG Binder**

Use a **PG 64S-22** (Standard) meeting the requirements of AASHTO M 332, *Standard Specification for Performance Graded Asphalt Binder using Multiple Stress Creep Recovery (MSCR)*, for the production of hot mix asphalt mixtures for this project. Terminal Blend Crumb Rubber modifier may be used for this PG binder.

When terminal blend CRM PG binder is used, the following shall apply:

- Crumb rubber particles shall be finer than #30 sieve size.
- The CRM PG binder shall be storage-stable and homogeneous.
- The Dynamic Shear Rheometer (DSR) shall be set at 2-mm gap.
- The CRM PG binder shall be 99% free of particles retained on the 600 µm sieve as tested in accordance with Section 5.4 of M 332.

Use of polyphosphoric acid (PPA) to modify the PG binder properties is prohibited for mixtures under this contract. This prohibition also applies to the use of PPA as a cross-linking agent for polymer modification.

##### **Mix Design**

The mixture designs must be developed in accordance with the criteria specified in the HMA items that are appropriate for an Estimated Traffic Level as noted in Section *Superpave Hot Mix Asphalt Design Criteria* table.

**Note:** The PG binder for this project may be modified with CRM additives to meet the requirements stated above. Handling of the HMA shall be discussed at the pre-paving meetings

#### 2.4.2 PG 64V-22

Requirements of this note apply to all Section 402 and Section 404 Asphalt (HMA and WMA) items in this contract as outlined in Section *Superpave Hot Mix Asphalt Design Criteria* table.

##### **PG Binder**

Use polymer or Terminal Blend Crumb Rubber modified **PG 64V-22** (Very High) meeting the requirements of AASHTO M 332, *Standard Specification for Performance Graded Asphalt Binder using Multiple Stress Creep Recovery (MSCR)*, for the production of hot mix asphalt mixtures for this project. In addition, the binder grade must also meet the **elastomeric** properties as indicated by one of the following equations for %R<sub>3.2</sub>:

1. For  $J_{nr3.2} \geq 0.1$ ,  $\%R_{3.2} > 29.371 * J_{nr3.2}^{-0.2633}$
2. For  $J_{nr3.2} < 0.1$ ,  $\%R_{3.2} > 55$

Where: R<sub>3.2</sub> is % recovery at 3.2 kPa

J<sub>nr 3.2</sub> is the average non-recoverable creep compliance at 3.2 kPa.



## SECTION 2: PROJECTS - SPECIAL NOTES (ALL NYSDOT REGIONS) (Cont'd)

### 2.4.2 PG 64V-22 (Cont'd)

When terminal blend CRM PG binder is used, the following shall apply:

- Crumb rubber particles shall be finer than #30 sieve size.
- The CRM PG binder shall be storage-stable and homogeneous.
- The Dynamic Shear Rheometer (DSR) shall be set at 2-mm gap.
- The CRM PG binder shall be 99% free of particles retained on the 600 µm sieve as tested in accordance with Section 5.4 of M 332.

Use of polyphosphoric acid (PPA) to modify the PG binder properties is prohibited for mixtures under this contract. This prohibition also applies to the use of PPA as a cross-linking agent for polymer modification.

#### **Mix Design**

The mixture designs must be developed in accordance with the criteria specified in the HMA items that are appropriate for an Estimated Traffic Level as noted in Section *Superpave Hot Mix Asphalt Design Criteria* table.

**Note:** The PG binder for this project will be modified with polymer or CRM additives to meet the requirements stated above. Handling of the HMA shall be discussed at the pre-paving meetings.

### 2.4.3 PG 64H-22

Requirements of this note apply to all Section 402 and Section 404 Asphalt (HMA and WMA) items in this contract as outlined in Section *Superpave Hot Mix Asphalt Design Criteria* table.

#### **PG Binder**

Use a **PG 64H-22** (High) meeting the requirements of AASHTO M 332, *Standard Specification for Performance Graded Asphalt Binder using Multiple Stress Creep Recovery (MSCR)*, for the production of hot mix asphalt mixtures for this project. Terminal Blend Crumb Rubber modifier may be used for this PG binder.

When terminal blend CRM PG binder is used, the following shall apply:

- Crumb rubber particles shall be finer than #30 sieve size.
- The CRM PG binder shall be storage-stable and homogeneous.
- The Dynamic Shear Rheometer (DSR) shall be set at 2-mm gap.
- The CRM PG binder shall be 99% free of particles retained on the 600 µm sieve as tested in accordance with Section 5.4 of M 332.

Use of poly-phosphoric acid (PPA) to modify the PG binder properties is prohibited for mixtures containing limestone, limestone as an aggregate blend component, limestone as a constituent in crushed gravel aggregate, or recycled asphalt pavement (RAP) that includes any limestone. This prohibition also applies to the use of PPA as a cross-linking agent for polymer modification.

#### **Mix Design**

The mixture designs must be developed in accordance with the criteria specified in the HMA items that are appropriate for an Estimated Traffic Level as noted in Section *Superpave Hot Mix Asphalt Design Criteria* table.

**Note:** The PG binder for this project may be modified with CRM additives to meet the requirements stated above. Handling of the HMA shall be discussed at the pre-paving meetings.

### 2.4.4 PG 64E-22

Requirements of this note apply to all Section 402 and Section 404 Asphalt (HMA and WMA) items in this contract as outlined in Section *Superpave Hot Mix Asphalt Design Criteria* table.

#### **PG Binder**

Use polymer or Terminal Blend Crumb Rubber modified **PG 64E-22** (Extreme) meeting the requirements of AASHTO M 332, *Standard Specification for Performance Graded Asphalt Binder using Multiple Stress Creep Recovery (MSCR)*, for the production of hot mix asphalt mixtures for this project. In addition, the binder grade must also meet the **elastomeric** properties as indicated by one of the following equations for %R<sub>3.2</sub>:

1. For  $J_{nr3.2} \geq 0.1$ ,  $\%R_{3.2} > 29.371 * J_{nr3.2}^{-0.2633}$
2. For  $J_{nr3.2} < 0.1$ ,  $\%R_{3.2} > 55$

Where: R<sub>3.2</sub> is % recovery at 3.2 kPa

J<sub>nr 3.2</sub> is the average non-recoverable creep compliance at 3.2 kPa.

## SECTION 2: PROJECTS - SPECIAL NOTES (ALL NYSDOT REGIONS) (Cont'd)

### 2.4.4 PG 64E-22 (Cont'd)

When terminal blend CRM PG binder is used, the following shall apply:

- Crumb rubber particles shall be finer than #30 sieve size.
- The CRM PG binder shall be storage-stable and homogeneous.
- The Dynamic Shear Rheometer (DSR) shall be set at 2-mm gap.
- The CRM PG binder shall be 99% free of particles retained on the 600 µm sieve as tested in accordance with Section 5.4 of M 332.

Use of poly-phosphoric acid (PPA) to modify the PG binder properties is prohibited for mixtures containing limestone, limestone as an aggregate blend component, limestone as a constituent in crushed gravel aggregate, or recycled asphalt pavement (RAP) that includes any limestone. This prohibition also applies to the use of PPA as a cross-linking agent for polymer modification.

#### **Mix Design**

The mixture designs must be developed in accordance with the criteria specified in the HMA items that are appropriate for an Estimated Traffic Level as noted in Section *Superpave Hot Mix Asphalt Design Criteria* table.

**Note:** The PG binder for this project will be modified with polymer or CRM additives to meet the requirements stated above. Handling of the HMA shall be discussed at the pre-paving meeting.

### 2.5 Special Note – Optional Use of Warm Mix Asphalt (WMA) Technologies

The contractor has the option of using an Approved WMA Technology in the production of all 402, *Hot Mix Asphalt (HMA)* items, except *SUPERPAVE HMA with Ice Retardant* items, *Waterproofing Bridge Deck HMA* items, and *Paver-Placed Surface Treatment* items, at no additional cost to the State.

If the contractor chooses to use a WMA technology, the provisions of §401 and §402 shall apply including the following:

1. Use an approved technology appearing on the Approved List for *Technologies for Warm Mix Asphalt*. Design a mixture using a WMA Technology in accordance with MM 5.16, *Superpave Hot Mix Asphalt Mixture Design and Mixture Verification Procedure*. At a minimum, a one-point verification of the mixture's volumetric properties is acceptable for the following situations:
  - When the WMA mix design is based on an existing Production Status HMA mix design.
  - When the WMA mix design is based on, and utilizes a different WMA technology than, an existing Production Status WMA mix design.
2. Comply with the latest manufacturer's "Production, Testing, and Compaction Details" from the Approved List for incorporating the WMA technology. Test specimens may be made from plant produced or laboratory prepared WMA. Test specimens must be made from plant produced WMA if adding the WMA technology in the lab does not simulate the production process. The Regional Materials Engineer (RME) may require a State representative be present during the fabrication and testing. Submit the WMA design to the RME for review and verification at least 14 calendar days before production, including:
  - Name of WMA technology and the target dosage rate.
  - If using an additive other than water,
    - Submit a MSDS for the additive.
    - Submit either enough of the additive for the laboratory mix design verification, or the additive pre-blended in the PG Binder at the correct dosage. If the additive is not pre-blended into the PG Binder, include directions for properly incorporating the additive into the laboratory made mixture.
  - Prior to the submission of any mix design, contact the RME to determine if there is an increased concern regarding the mixture's moisture susceptibility based on the WMA technology and/or the type of aggregate being used, or the performance of similar mixes. The RME may require AASHTO T 283 moisture susceptibility test results, meeting a minimum Tensile Strength Ratio (TSR) of 80%, as part of the mix design submission.
3. Submit Production Quality Control Plan revisions incorporating the WMA technology if not previously submitted.
4. For 80 Series Compaction Method, complete all breakdown roller passes before the mat temperature falls below 230° F, unless approved by the Director, Materials Bureau.
5. When the asphalt mixture is being placed over a Sheet-Applied Waterproofing Membrane, maintain a minimum delivery temperature in accordance with the Material Detail Sheets prepared by the membrane manufacturer.

**SECTION 2: PROJECTS - SPECIAL NOTES (ALL NYSDOT REGIONS) (Cont'd)**

**2.6 Special Note - Railroad Involvement in 100% State Funded Projects**

Bidders are advised that there may be active at grade railroad crossings within the limits of projects in this Invitation for Bids. The following at grade railroad crossings have been identified, but there may be others within the limits of these projects that have not been identified:

Project Number	County	Route	Railroad Name	Location
360408	Ontario	318	Norfolk Southern	RM 318-4401-1002
360409	Onondaga	173	NYS&W	RM 173-3301-3029
5V2026	Chautauqua	62	Southern Tier Extension RR Authority, Operator: WNY-Penn	Between RM 62 5201 1140 and 1141

At the identified at grade crossings, and any other active at grade railroad crossings encountered on the projects in this Invitation for Bids, the contractor shall coordinate with the corresponding Railroad as per follows:

**Coordination with Railroad(s)**

**The Contractor shall note that this project may require close coordination with a railroad and railroad protective flagging services**

**DESCRIPTION**

The Contractor shall conduct its work and handle its equipment such that no part of any material or equipment shall foul a track, catenary, electrical facility or signal facility without written permission from the chief engineer of the railroad company(s) affected. A track is fouled when any object is brought within 7.62 M (25') of the centerline of the track or the nearest point of a railroad's catenary, electrical facility or signal facility.

**CONSTRUCTION DETAILS**

In the event the Contractor's work does foul a railroad facility the Contractor shall obtain a permit in order to enter railroad property and to cover the costs of the railroad's force account services. The Contractor will not be allowed to enter onto the railroad's property to perform contract work, nor will the railroad provide services occasioned by the Contractor's operations unless the Contractor notifies the Railroad and receives the railroad's prior approval. A railroad will not provide any services necessitated by the Contractor's operations until the permit is obtained. These railroad's costs will include but may not be limited to costs incurred by the railroad to provide flaggers, spotters, engineering services, administrative services, construction inspection, or other labor, material or equipment necessary to provide a safe environment for both the Contractor's and Railroad's forces.

The Contractor is advised that a railroad may not be able to provide flag persons on a daily basis due to the railroad's operational necessities. The Contractor shall coordinate and schedule his construction activities with the railroad's engineer no later than two weeks prior to the start of the work, in consultation with the State's Engineer-in-Charge, so that a workable schedule can be formulated and agreed upon. In addition to the above, the Contractor shall also comply with the current Standard Specifications §105-09 WORK AFFECTING RAILROADS.

**BASIS OF PAYMENT**

All costs incurred by the contractor to comply with the requirements in this Special Note shall be included in the price bid per ton of bituminous concrete. No extra payment shall be made.

**2.7 Special Note – Asphalt Pavement Joint Adhesive**

The vendor shall apply Asphalt Pavement Joint Adhesive to all longitudinal and transverse construction joints prior to placing asphalt mixture in order to provide bonding with newly laid pavement. Joint adhesive shall be placed in accordance with the NYSDOT Standard Specifications. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the vendor's operations shall be the vendor's responsibility.

All cost for Asphalt Pavement Joint Adhesive shall be included in the prices per ton of bituminous concrete. No separate payment shall be made.

## SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2)

### 3.1 Region 2 Special Notes (ALL REGION 2 SITES) – Region 2 Projects

1. It shall be the Contractor’s responsibility to inventory and document the existing pavement marking patterns prior to milling and/or resurfacing and submit to the Engineer a copy of the inventory prior to beginning work. The Contractor shall be responsible for completing all layout work necessary for the installation of all final pavement markings. If the original markings are obliterated, the contractor shall contact the Resident Engineer for guidance on their location.
2. Prior to paving operations, the contractor will lay out the centerline with paint. The cost of this work to be included in the price bid for the WMA items.
3. RAP PG Binder Contribution - When greater than 10% of recycled asphalt pavement (RAP) is utilized in the production of hot mix asphalt (HMA) Top Course for this contract, the following minimum asphalt content will be utilized in the final mixture design calculation for optimum asphalt content:

HMA Mixture	Minimum Asphalt Content (%)
6.3 HMA	6.2
9.5 HMA	6.0
19.0 HMA	4.7

The mixture design will be formulated such that all the volumetric properties are within the criteria specified in the latest Material Method 5.16. The total targeted asphalt content of virgin binder and the accepted RAP asphalt contribution shall not be less than the minimum asphalt content of the mix design during production indicated in the above table.

4. **MIX DESIGN** - The mixture designs must be developed in accordance with the criteria specified in the HMA items that are appropriate for an Estimated Traffic Level of <0.3 Million ESALs.
  - a. The Gradation Design Control Points outlined in MM 5.16, Table 1 shall be modified as follows: For 9.5 Top Course HMA, the minimum passing the 12.5 mm sieve shall be 100%.
5. All mixtures require the use of an approved WMA additive or foaming process and PG 64V-22 binder.
6. Intersections at all sites will require a separate paving operation from mainline (top course only). The rebate width listed in the VPP Table of Rebates is the distance measured from the edge of the main line shoulder along the centerline of the intersecting road to the rebate terminus. All State Highway intersections require PG 64V-22. For all other sidelines a PG 64S-22 may be used in lieu of the required PG 64V-22 at the contractor’s discretion.
7. Mainline pavement overlay splices will be in accordance with Standard Sheet 402-01. This will be discussed at the pre-paving meeting.  
<https://www.dot.ny.gov/main/business-center/engineering/cadd-info/drawings/standard-sheets-us-repository/402-01.pdf>
8. Tack coat is to be overlapped a minimum of 8” at all longitudinal paving joints.

### 3.2 Project 2V2011 - Rte. 309 – Gloversville to County Route 112

1. This site will be Hot in Place Recycled (HIPR) under a separate contract. No paving can begin until the HIPR project is complete.
2. Item 404.05890108 will be placed full width on the travel lanes and the shoulders.

### 3.3 Project 2V2012 - Rte. 10A – Rte. 29 to Rte. 10

1. The “HMA/WMA Mixture Evaluation Using Performance Testing” Note shall apply to this site. All mix will be paid at a QAF of 1.0 in accordance with the note.
2. This site will be cold in place recycled under a separate contract. This will require coordination between the awarded paving contractor under this contract and the recycling contractor. The overlay cannot be placed until the 10 Day CIPR cure period is complete.
3. Paving operations shall progress in the opposite direction of traffic.
4. Rte. 10A over Caroga is scheduled for replacement in 2021. The T&L course will end approximately 100’ from the north end and 500’ from the south end of the approach slabs. The exact limits will be marked out prior to paving.
5. Item 404.01790108 will be placed full width on the travel lanes and the shoulders. The mixture used for item 404.01790108 (T&L) shall be 19mm and shall be placed the full width of the pavement and shoulders. No wedge joint will be allowed for this mix. Lanes must be matched up daily.

## SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2) (Cont'd)

### 3.4 Project 2V2021 - Rte. 30 – Lewy Lake to RM 1431

1. This site will be Hot in Place Recycled (HIPR) under a separate contract. No paving can begin until the HIPR project is complete.
2. The Snowy Mountain parking area at RM 30-2206-1432 will be paved with 1-1/2" of Item 404.06830309. Prior to paving, the gore striping at the parking area shall be removed. The cost of the gore striping removal shall be included in the paving items.
3. Item 404.05890108 will be placed full width of the travel lanes and feathered 4' onto the shoulders.

### 3.5 Project 2V2031 - Rte. 51 – Rte. Cedarville to RM 1129

1. The "HMA/WMA Mixture Evaluation Using Performance Testing" Note shall apply to this site. All mix will be paid at a QAF of 1.0 in accordance with the note.
2. This site will be milled under a separate contract. The milled surface will be initially swept by DOT Forces. The milled surface will require re-sweeping immediately prior to paving by the paving contractor. The cost will be included in the price bid for HMA items.
3. Item 404.01790108 will be placed full width on the travel lanes and the shoulders.
4. The mixture used for item 404.01790108 (T&L) shall be 12.5 Top and shall be placed the full width of the pavement and shoulders. No wedge joint will be allowed for this mix. Lanes must be matched up daily.

### 3.6 Project 2V2041 - Rte. 12 - Chenango CL to South of Hubbardville

1. This site will be Hot in Place Recycled (HIPR) under a separate contract. No paving can begin until the HIPR project is complete.
2. Item 404.05890108 will be placed full width on the travel lanes and the shoulders.
3. As part of this contract, the contractor is required to install Centerline Audible Roadway Delineators, (CARDS) and Secondary Highway Audible Roadway Delineators (SHARDS) for the full length of the project in accordance with Item 649.11 and 649.21 and NYS Standard Sheets 649-03 and 649-04. The cost of all associated work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

### 3.7 Project 2V2051 - Rte. 161 – Rte. 30A to Rte. 30

1. The "HMA/WMA Mixture Evaluation Using Performance Testing" Note shall apply to this site. All mix will be paid at a QAF of 1.0 in accordance with the note.
2. This site will be cold in place recycled under a separate contract. This will require coordination between the awarded paving contractor under this contract and the recycling contractor. The overlay cannot be placed until the 10 Day CIPR cure period is complete.
3. Paving operations shall progress in the opposite direction of traffic.
4. Item 404.01790108 will be placed full width on the travel lanes and the shoulders. The mixture used for item 404.01790108 (T&L) shall be 19mm and shall be placed the full width of the pavement and shoulders. No wedge joint will be allowed for this mix. Lanes must be matched up daily.

## SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2) (Cont'd)

### 3.8 Project 2V2061 - Rte. 233 – Rte. 412 to Thruway Access Rd.

1. The following locations will be Hot in Place Recycled (HIPR) under a separate contract. No paving can begin until the HIPR is complete.
  - a. RM 233-2601-1015 ((+100') to RM 233-2601-1033 (+90')
  - b. RM 233-2601-1036 to RM 233-2601-1055 (+400')
2. Item 404.05890108 will be placed full width of the travel lanes and feathered 4' onto the shoulders. Where the shoulders are 4' or less there is no need to feather the thickness of the shim. Where there are curbed segments the shim shall be full width.
3. The following locations will require a full width, 1-1/2" depth micro mill a minimum of 1 week prior to paving. The micro milled surface will not be paved for a minimum of 5 days.
  - a. Rte. 233 / Rte. 412 Intersection
    - i. RM 233-2601-1011 (+400') to RM 233-2601-1015 (+100')
    - ii. Approximately 125' in each direction on College Hill Rd. / Rte. 412
  - b. Rte. 233 / Rte. 5 Intersection
    - i. RM 233-2601-1033 (+90 – Begin Curb) to RM 233-2601-1034 (+100' – Rte. 5 Joint)
    - ii. RM 233-2601-1034 (+250' – Rte. 5 Joint) to RM 233-2601-1036 (End of Curb)
  - c. Westmoreland & Rte. 233/ Cider St.
    - i. RM 233-2601-1055 (+400' – Begin Curb) to 233-2601-1066 (+350' – 233 / I90 - BIN 1042230)
  - d. The following locations will require a micro mill 1" depth at the gutter edge feathered to 0" at the edge of the travel lane. 6RM 233-2601-1045 (East side only – 275' long)
  - e. RM 233-2601-1048 (West side only – 275' long)
  - f. RM 233-2601-1053 (East side only – 475' long)
4. All micro milling included in notes 3 & 4 shall include sweeping and removal of all millings. Millings will become the property of NYS DOT. They shall be delivered to the Oneida East Residency, 2436 Chenango Rd., Utica, NY 13502. The contact is Charles Walz, Resident Engineer, 315-733-8032.
5. Payment for all micro milling, cleaning of the milled surface and delivery of the millings to the Residency will be included in the price bid for Item 404.06830309.
6. As part of this contract, the contractor is required to install Centerline Audible Roadway Delineators, (CARDS) and Secondary Highway Audible Roadway Delineators (SHARDS) at the locations listed below in accordance with Item 649.11 and 649.21 and NYS Standard Sheets 649-03 and 649-04.
  - a. RM 233-2601-1011 (+350') to RM 233-2601-1055
  - b. RM 233-2601-1064 to RM 233-2601-1066

The cost of all associated work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of WMA.



**SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2) (Cont'd)**

**3.9 HMA/WMA Mixture Evaluation Using Performance Testing**

This note shall apply to the sites listed below. All mixture placed will receive a QAF of 1.0 in accordance with the note.

2V2012 - Rte. 10A – Rte. 29 to Rte. 10

2V2031 - Rte. 51 – Rte. Cedarville to RM 1129

2V2051 - Rte. 161 – Rte. 30A to Rte. 30

**Description:**

This note covers the requirements for Hot Mix Asphalt verification and production under a performance testing process. Plant Quality Adjustment Factors do not apply for asphalt mixtures produced for this contract under this note. Department mixture Quality Assurance will consist of paver sampling and review of Contractor control charts.

All provisions of Sections 401 Asphalt Production and 402 Hot Mix Asphalt (HMA) Pavements of the NYS Standard Specifications apply except as modified below.

**Mixture Design Process**

HMA mixtures shall be designed to meet the requirements of New York State Materials Method 5.16.

In no case shall the job mix tolerance fall outside the general limits.

Additionally, the mixtures shall be tested to meet the performance testing requirements specified in Table 1.

**Table 1 – Performance Testing**

Test Methods	Criteria	Design Value	COV
AASHTO TP124-18 Flexibility Index Test	Flexibility Index	6	≤20
ASTM D6931-17 Indirect Tensile Strength Test	IDT Strength	100 psi	≤20
ASTM D8225-19 Determination of CT Index	CT Index	-	-

**Sample Fabrication & Testing**

1. Contractor – The Contractor shall make and test samples under the methods provided in Table 1. The Contractor shall also fabricate and provide another full set of finished samples a minimum of 14 days before production, for the same performance testing by the Department. Additionally, the Contractor shall provide to the Department enough of the raw aggregate and liquid asphalt binder to fabricate a third set of samples for testing.
  - a. For mixtures currently in Production Status the Regional Materials Engineer (RME) may allow the Contractor to use plant produced mixture for the mix design testing.
2. Regional Materials Lab (RML) – The RML will use the raw aggregate and liquid asphalt binder from the Contractor to make enough samples to perform all performance testing. The RML will test the Department fabricated samples, as well as the Contractor fabricated samples, according to the referenced test methods in Table 1.

**Acceptance of the Design**

The RML will calculate the average and standard deviation of all representative samples tested by the Contractor and the Department. The RML will determine the Coefficient of Variation for each criterion listed in Table 1. The RML will calculate the Coefficient of Variation (COV) using the following formula:

$$COV = \frac{\text{Standard Deviation of Criteria (FI, IDT)}}{\text{Average Criteria Value}} * 100$$

The Regional Materials Engineer (RME) will assign Production Status and accept the design for use when the mix design performance satisfies criteria covered in Table 1 and the COV is ≤20. If the COV for either criterion is greater than 20, the RME may elect to accept the design for use with the concurrence of the Materials Bureau Director or their representative.

Modification to the gradation targets or binder content will not be permitted after design acceptance. The target RAP content may be reduced with the prior approval of the RME as stated in MP 401.

## SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2) (Cont'd)

### 3.9 HMA/WMA Mixture Evaluation Using Performance Testing (Cont'd)

#### Quality Control Process

The Department's Quality Assurance Technician (QAT) may be present at the HMA plant during production at the discretion of the Regional Materials Engineer (RME). The QAT will not be responsible for any activities at the production facility.

The results of all tests outlined in Table 2 shall be recorded by the Contractor on control chart templates provided by the Department. These control charts shall be used by the Contractor to identify any changes in the mixture production. The control charts shall be filled out and submitted to the Regional Materials office daily.

**Table 2 - Testing and Sampling Table**

Plant Test Property	Test Method	Contractor Testing Frequency <sup>1</sup>	Department Testing Frequency <sup>2</sup>
Aggregate Gradation	AASHTO T27	One per Sublot	One per Day (enough material for two tests)
Aggregate Moisture	AASHTO T255	One per Lot	Monitor and Verify
Mix Temperature	-	Two per Sublot	-
Air Voids	MM 5.16, AASHTO T269	One per 3 Lots	One per 3 Days
Indirect Tensile Strength	ASTM D6931-17	One per 3 Lots	One per 3 Days
Semi-Circular Bending	AASHTO TP124-18	One per 3 Lots	One per 3 Days
Determination of CT Index	ASTM D8225-19	One per 3 Lots	One per 3 Days

1. All sampling at the plant
2. All sampling at the paver

Material sampling points for Quality Control activities shall be at the discretion of the Contractor, within the provided ranges. Sampling points shall be identified on all Control Charts. All other testing covered under MP 401, but not addressed in Table 2, is required but will not be included on the Control Charts. The RME, or their representative, will sample the mixture at the paver under NYS Method MP 402-03. The sample points will be recorded on Control Charts and sent back to Contractor for reference.

For Contractor testing, every 3 consecutive lots shall be considered a Test Cycle. For each full or partial Test Cycle, all testing in Table 2 shall be required over the course of that production.

The Contractor shall retain all samples until the project is accepted by the department. The Contractor may discard the samples sooner with the approval of the RME.

#### Mixture Production

HMA Mixture requirements are as follows:

**Table 3 - Mixture Gradation, Absolute Difference Value**

Limits (Test Value – JMF Value)	Sieve Sizes		
	#50 and Larger (300 µm and Larger)	#100 (150 µm)	#200 (75 µm)
Production	0.0 – 5.0	0.0 – 4.0	0.0 – 2.0
Action	5.0 – 8.0	4.0 – 6.0	2.0 – 4.0
Evaluation	>8.0	>6.0	>4.0



## SECTION 3: PROJECTS - SPECIAL NOTES (NYSDOT REGION 2) (Cont'd)

### 3.9 HMA/WMA Mixture Evaluation Using Performance Testing (Cont'd)

#### Gradation Limits During Production

- **QC Production Limits** – If the gradation absolute difference falls within the Production Limits as stated in Table 3 no corrective action is needed for gradation.
- **QC Action Limit** - If the gradation absolute difference value falls within the Action Limits stated in Table 3 the Contractor shall take corrective actions to bring the gradation back within the production limits. If test results for two consecutive sublots fall within the action limits, the production shall be immediately terminated and shall not resume until the Regional Materials Engineer is satisfied with the actions taken.
- **QA Evaluation/Rejection Limit** - If the gradation absolute difference value falls outside the Evaluation Limits stated in Table 3 for any Department paver sample, the following will apply:
  - The RML will fabricate samples according to AASHTO T-312 with material sampled at the paver. If paver samples are not available, pavement cores will be required. These samples/cores will be tested and evaluated by the RME against the performance criteria in Table 1. These performance results are for information only.
  - The RME will evaluate the subject material to determine if it will be left in place. The RME may require the contractor to core the pavement at no additional cost to the State. When cores are required, the Engineer will divide the pavement area being evaluated into 4 sublots in accordance with the requirements of §402-3.08, *Pavement Density Samples*. The material will be left in-place when all the following conditions are met.
    - The pavement section achieved field density greater than or equal to 92% of MMTD.
    - There are no defects such as, but not limited to, cracking, raveling, rutting, shoving, or bleeding, and the asphalt content, based on automation, is within +/- 0.2% of production target.
    - The average of all the QA gradation samples tested is within the general limits
    - The % aggregate friction meets the requirements for the item specified in the project.

If the material does not meet the above conditions the RME will determine if the material in question may remain in-place considering, but not limited to, the following:

- Type of material produced
- The layer in which the material was placed
- The location and traffic volume
- Laboratory test results
- Field test results, such as density

If the subject material is left in-place, it will be paid in full at bid price. If it is determined the subject material will not be left in-place, the Contractor shall remove and replace the material at no additional cost to the Department.

## SECTION 4: PROJECTS - SPECIAL NOTES (NYSDOT REGION 3)

### 4.1 Holiday and Event Restrictions – Region 3 Projects

All Region 3 Projects shall follow the following holiday restrictions:

There shall be no temporary lane closures permitted on the following dates:

6:00 am Friday, May 22, 2020 thru 6:00 am Tuesday, May 26, 2020 - (Memorial Day Holiday)

6:00 am Thursday, July 2, 2020 thru 6:00 am Monday, July 6, 2020 - (July 4<sup>th</sup> Holiday)

6:00 am Friday, September 4, 2020 thru 6:00 am Tuesday, September 8, 2020 - (Labor Day Holiday)

6:00 am Wednesday, November 25, 2020 thru 6:00 am Monday, November 30, 2020 - (Thanksgiving Holiday)

#### **2020 ADDITIONAL TEMPORARY LANE/SHOULDER CLOSURE RESTRICTIONS FOR OTHER HOLIDAYS AND/OR SPECIAL EVENTS**

There shall be no pavement marking paint work permitted during the following special event on the roadways designated below:

Onondaga County Projects 360409, 360412 and 360414: Routes 173, 48 & Route 298 (Syracuse Nationals Weekend). No pavement marking paint work permitted only. Beginning 6:00 am Friday, July 17, 2020 ending 6:00 am Monday, July 20, 2020.

### 4.2 Pilot Vehicle – Region 3 Projects

Unless otherwise specified, the highway shall be kept open to traffic at all times. Traffic shall be discontinued on the lanes where work is being performed on these projects; and as soon as paving is done and rolled, controlled traffic may be permitted thereon. For Region 3 projects in this Invitation for Bids, the Contractors shall provide sufficient two-way radio equipped pilot vehicles to guide traffic around paving work at a speed not to exceed 15 mph. The pilot vehicles shall be equipped with construction signs meeting the requirements of Section 6F.58 of the Manual of Uniform Traffic Control Devices and a rotating amber beacon:

SIGN	MINIMUM SIZE	LOCATION
PILOT VEHICLE FOLLOW ME	G20-4 CONVENTIONAL 36"x 18"	ON BACK OF PILOT VEHICLES

The pilot vehicle shall have the name of the Contractor prominently displayed.

All cost for Work Zone Traffic Control including flagging, temporary pavement markings, channelizing devices, construction signs, and pilot vehicles shall be included in the prices per ton of bituminous concrete. No separate payment shall be made.

**The use of the pilot shall be as ordered by the Resident Engineer.**

### 4.3 Region 3 Projects

State Forces will perform initial sweeping of milled surfaces. It is the Contractor's responsibility to ensure the surface is clean prior to paving and sweep if necessary, before and during paving operation. Payment for sweeping shall be included in the price bid per ton for the HMA. No separate payment shall be made.

On specific projects listed below where noted the paving contractor shall be responsible for milling side road intersections 1.5" depth and provide paving 25 ft beyond the edge of mainline shoulders, the contractor shall pave all milled intersections under the pay item for top course HMA.

The contractor shall also mill/trim rebates at the end of the project and around any bridge joints to provide a uniform edge for the paving joint.

### 4.4 Project 360242 – Oswego County

This project requires production milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

## SECTION 4: PROJECTS - SPECIAL NOTES (NYSDOT REGION 3) (Cont'd)

### 4.5 Project 360365 – Cayuga County

This project requires cold-in-place recycling on travel lanes and shoulders prior to paving. Coordination will be required between the paving contractor and the CIPR contractor.

This project requires cold milling on travel lanes and shoulders prior to paving in the curbed section. Coordination will be required between the paving contractor and the milling contractor.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

### 4.6 Project 360405 – Cayuga and Onondaga Counties

This project requires production milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

### 4.7 Project 360406 – Seneca County

This project requires cold recycling prior to paving. Coordination will be required between the paving contractor and the recycling contractor.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

At the bridge over pass at RM 1173: The paving contractor will pave the T&L course 30 ft past the CIPR/Milled joint tapering down to 0" depth on the milled surface on both sides of the bridge crossing.

### 4.8 Project 360407 – Seneca County

This project requires cold milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

### 4.9 Project 360408 – Ontario and Seneca Counties

This project requires cold milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

## SECTION 4: PROJECTS - SPECIAL NOTES (NYSDOT REGION 3) (Cont'd)

### 4.10 Project 360409 – Onondaga County

#### **Production Cold Milling to be Performed by the Paving Contractor:**

The project includes production cold milling to be performed by the paving contractor or their designated sub-contractor within the project limits specified in the contract documents or as ordered by the Engineer. The production cold milling includes milling an estimated 229,000 square yards at a milling depth of 1.5". The Paving contractor shall coordinate their paving schedule with the selected Production Cold Milling contractor, such that the milled surface is not left open to traffic for a period longer than ten days. The contractor shall provide the necessary work zones, work zone signage and clean-up effort, including sweeping of the milled surface contemporaneous with the milling operation. The contractor will be responsible for disposal of the milled materials. All disposal locations shall be approved by the Engineer prior to disposal. All disposal operations must be done in accordance with all Federal, State, and local rules and regulations. Material removed shall be disposed of in accordance with the provisions of section 107-10 of the Standard Specifications, or as ordered by the Engineer. The contractor shall provide temporary pavement markings on the milled surface in accordance with the requirements of Section 619-3.06 of the Standard Specifications. The costs shall be included in the bid prices for the VPP project.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

### 4.11 Project 360410 – Oswego County

This project requires production milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

### 4.12 Project 360411 – Tompkins County

This project requires Heater Scarification prior to paving. Coordination will be required between the paving contractor and the Heater Scarification contractor.

This project requires cold milling in the curbed section prior to paving. Coordination will be required between the paving contractor and the milling contractor.

### 4.13 Project 360412 – Onondaga County

This project requires cold milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

### 4.14 Project 360413 – Cortland County

#### **Production Cold Milling to be Performed by the Paving Contractor:**

The project includes production cold milling to be performed by the paving contractor or their designated sub-contractor within the project limits specified in the contract documents or as ordered by the Engineer. The production cold milling includes milling an estimated 64,000 square yards at a milling depth of 2.25". The Paving contractor shall coordinate their paving schedule with the selected Production Cold Milling contractor, such that the milled surface is not left open to traffic for a period longer than ten days. The contractor shall provide the necessary work zones, work zone signage and clean-up effort, including sweeping of the milled surface contemporaneous with the milling operation. The contractor will be responsible for disposal of the milled materials. All disposal locations shall be approved by the Engineer prior to disposal. All disposal operations must be done in accordance with all Federal, State, and local rules and regulations. Material removed shall be disposed of in accordance with the provisions of section 107-10 of the Standard Specifications, or as ordered by the Engineer. The contractor shall provide temporary pavement markings on the milled surface in accordance with the requirements of Section 619-3.06 of the Standard Specifications. The costs shall be included in the bid prices for the VPP project.

## **SECTION 4: PROJECTS - SPECIAL NOTES (NYSDOT REGION 3) (Cont'd)**

### **4.15 Project 360414 – Onondaga County**

This project requires cold milling prior to paving. Coordination will be required between the paving contractor and the milling contractor.

The paving contractor shall be responsible to mill and pave the side road intersections from the edge of the mainline shoulder treatment to the rebate termination on the side road at locations listed in the rebate table. Intersections shall be milled and paved a length of 25 ft from the edge of the mainline shoulder treatment to the rebate termination location, nominal depth of 1.5". The rebates shall be milled by the paving contractor in accordance with the rebate table of widths. The 25 ft length of milling and paving of side road intersections will be included in the bid cost of the top course HMA.

## SECTION 5: PROJECTS - SPECIAL NOTES (NYSDOT REGION 4)

### 5.1 Special Note – Region 4 Projects

1. Local fire, police, ambulance, and school authorities shall be notified by the Contractor prior to commencing work in order to maintain sufficient emergency services and to allow school officials sufficient time to plan alternative bus routes, if necessary.
2. Prior to the start of work, the contractor shall inventory all pavement markings and provide the engineer with a copy of the inventory. As part of a pavement marking program update, the Regional Traffic and Safety group is reviewing all pavement markings within the limits of paving projects. Upon their review, there may need to be adjustments to the pavement marking layout. The contractor shall be responsible for completing striping layout, including changes as indicated by the Regional Traffic and Safety Group.
3. The contractor shall remove any plowable reflective markers in the pavement, if present, prior to paving. The hole left in the existing pavement, shall then be filled with a hot mix asphalt material; 9.5 mixture, or mixture approved by the Resident Engineer. Cost to be included in the bid price for the associated project.
4. **Contractor shall use non-vibratory rolling over culverts or known utilities within the project limits or as ordered by the engineer in charge. Specific locations for non-vibratory rolling will be discussed at the pre-pave meeting.**
5. Some projects may require loop detectors to be re-established prior to or once paving has been completed. This will be done by others and coordinated by the Resident Engineer.
6. The installation of temporary rumble strips at the beginning of each project work zone shall be at the discretion of the engineer.
7. Any and all debris generated as part of the work shall be removed by the contractor within five days of completion paving operations.

### 5.2 Special Note – Temporary Lane/Shoulder Closure Restrictions for Major Holidays - Region 4

There shall be no temporary lane/shoulder closures on roadway facilities owned and/or maintained by NYSDOT on the major holidays listed below.

Construction activities that will result in temporary lane/shoulder closures shall be suspended to minimize travel delays associated with road work for major holidays as follows:

HOLIDAY	FALLS ON	TEMPORARY LANE CLOSURES ARE NOT ALLOWED DURING THE FOLLOWING TIMES
New Year's Day Independence Day Christmas Day	Sunday or Monday	From 6:00 AM on the Friday before the holiday to 6:00 AM on the Tuesday after the holiday
	Tuesday	From 6:00 AM on the Saturday before the holiday to 6:00 AM on the Wednesday after the holiday.
	Wednesday	From 6:00 AM on the Tuesday before the holiday to 6:00 AM on the Thursday after the holiday
	Thursday	From 6:00 AM on the Thursday before the holiday to 6:00 AM on the Monday after the holiday
	Friday or Saturday	From 6:00 AM on the Thursday before the holiday to 6:00 AM on the Monday after the holiday
Memorial Day Labor Day	Monday	From 6:00 AM on the Friday before the holiday to 6:00 AM on the Tuesday after the holiday
Thanksgiving Day	Thursday	From 6:00 AM on the Wednesday before the holiday to 6:00 AM on the Monday after the holiday

## SECTION 5: PROJECTS - SPECIAL NOTES (NYSDOT REGION 4) (Cont'd)

### 5.2 Special Note – Temporary Lane/Shoulder Closure Restrictions for Major Holidays – Region 4 (Cont'd)

Exceptions can only be made under the following conditions:

- Emergency work.
- Work within long-term stationary lane/shoulder closures.
- Safety work that does not adversely impact traffic mobility and has been authorized by the Regional Traffic Engineer.

**Note:** The Department reserves the right to cancel any work operations, including lane closures and/or total road closures, that would create traffic delays by unforeseen events. The Contractor would be notified at least seven (7) calendar days prior to the proposed work.

### 5.3 Special Note – Project 403117 – Monroe County (Route 31F, Town of Perinton)

1. This project is a Mill and Fill project. The Contractor will be required to place HMA only, milling will be completed by others. Coordination will be required between the Contractor and NYSDOT to schedule work operations. Since milling will be completed by others, no rebates will be required. HMA Contractor is responsible to start paving within 7 calendar days from the completion of the cold milling by others.
2. The 402.096203 9.5 F2 Top Course shall contain number 1 stone in the mix design. The maximum amount of number 1 stone in the HMA will be 15%.
3. The Contractor shall clean milled pavement surface daily prior to paving operations.
4. This project will require signal loop detectors to be re-established prior to the paving being completed. This work will be done by others and will require coordination with the Resident Engineer or designee.
5. Time Restrictions:
  - a) Major Holiday Lane Restriction Special Note applies to this project.
  - b) There are no daily time restrictions within the project limits.
6. **The Contractor is advised that approximately 3.3 CL miles of Centerline Audible Roadway Delineators (CARDS) exist within the proposed project limits on NYS Rte. 31F. The Contractor is required to record the existing locations of CARDS and re-establish them, after the completion of the HMA overlay, in accordance with Item 649.11 and NYS Standard Sheet 649-03. The cost of all associated work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of the HMA overlay Item.**
7. Contractor shall coordinate construction activities with other projects in the area. The following projects are known to be constructed in the year 2020. Monroe County highway preventive maintenance #7 PIN 4MN004, Turk Hill Rd from County Line to Rt. 31F.



## SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5)

### 6.1 General Special Note – Region 5 Projects

The paving operations shall be progressed in a segment by segment basis. No longitudinal paving joints shall be allowed at the end of the workday. The segments shall be based on the Contractor’s daily work capacity and shall not end within an intersection.

### 6.2 Effective PG Binder Content – Region 5 Projects

1. **9.5 HMA Mixture Design:** The mixture design shall be formulated in accordance with Materials Method 5.16. Additionally, the mixture shall meet the minimum effective asphalt,  $P_{bc}$ , in the table below. The  $P_{bc}$  shall be calculated using the specific gravities of aggregates tested within 14 days prior to production.

Minimum Effective AC	
Aggregate SG, $G_{sb}$	$P_{bc}$
2.250 to 2.274	6.2
2.275 to 2.324	6.1
2.325 to 2.374	6.0
2.375 to 2.424	5.9
2.425 to 2.474	5.8
2.475 to 2.524	5.7
2.525 to 2.574	5.6
2.575 to 2.624	5.5
2.625 to 2.674	5.4
2.675 to 2.724	5.3
2.725 to 2.774	5.2
2.775 to 2.824	5.1
2.825 to 2.874	5.0
2.875 to 2.924	4.9
2.925 to 2.974	4.8
2.975 to 3.024	4.7
3.025 to 3.074	4.6

### 2. Mixture Production:

- a. At no point, shall the mixture be produced below the design asphalt content with a production tolerance of 0.1%. If the design asphalt content falls below the allowable target, the subplot will be given a QAF of 1.00 or less, and necessary changes shall be made to the production to meet the target.
- b. The effective asphalt shall be calculated for every subplot during production. If the effective asphalt falls below the minimum, the subplot will be given a QAF of 1.00 or less.

### 6.3 Moisture Susceptibility Testing – Region 5 Projects

The Contractor will be required to submit to the Regional Material Engineer (RME) AASHTO T-283 moisture susceptibility test results prior to production of HMA Top Course. The results shall be a minimum Tensile Strength Ratio (TSR) of 80%. If the asphalt binder source is changed after being tested for moisture susceptibility, the mixture may require testing again at the RME’s discretion. The NYSDOT may sample and test the above mixture during production to verify the moisture susceptibility requirement is met. If the results do not meet the production requirement (minimum TSR of 80%), the producer will need to take corrective action. If during production, the TSR test results fall below 70%, the RME will immediately suspend production for this project according to Section 105, Control of Work, and Section 106, Control of Material, of the Standard Specifications.

### 6.4 Dust (Minus 0.075 mm Aggregate) to Effective PG Binder Content Ratio – Region 5 Projects

In addition to AASHTO T283 testing, the NYSDOT will verify the Contractor’s Dust (Minus 0.075 mm Aggregate) to Effective PG Binder Content Ratio during production. The minus 0.075 mm material will be determined using washed aggregate analysis and the ratio result shall be within the limits of 0.8 to 1.6.



## SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)

### 6.5 Polymer Modified PG Binder – Region 5 Projects

All Region 5 Projects require the use of Polymer Modified (64V-22) PG Binder.

### 6.6 Pavement Markings – Region 5 Projects

It shall be the contractor's responsibility to inventory and document the existing pavement marking patterns prior to milling and/or resurfacing and submit to the Engineer a copy of the inventory prior to beginning work. The contractor shall be responsible for completing all layout work on the roadway necessary for the installation of all final pavement markings. If the original markings are obliterated, the contractor shall contact the resident engineer for guidance on their location.

### 6.7 Abrading Existing Pre-Formed & Epoxy Pavement Markings – Region 5 Projects

The Contractor shall remove any pre-formed and epoxy pavement markings. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the Contractor's operations shall be the Contractor's responsibility. Waste material generated by the abrading operation shall be cleaned up and disposed of by the contractor. When the contractor abrades the existing pre-formed and epoxy pavement markings, the contractor shall place temporary pavement markings as specified elsewhere in this Invitation for Bids under Work Zone Traffic Control, unless the HMA will be placed the same day as the markings are abraded. The contractor shall make every effort to expeditiously place the HMA in areas where the markings have been abraded. Under no circumstances will temporary pavement markings be allowed for more than five calendar days in areas where markings are abraded. In this event, the contractor shall be required to place full pavement markings at no cost to the State. During the abrading operation, traffic shall be controlled by the contractor in accordance with Work Zone Traffic Control requirements included herein. The contractor shall submit a proposed Work Zone Traffic Control Plan to the Resident Engineer for approval. The plan may be based on the Work Zone Traffic Control drawings included in this Invitation for Bids. Payment for abrading shall be included in the price bid per ton for the HMA. No separate payment shall be made.

### 6.8 Milled Surfaces – Region 5 Projects

State Forces will perform initial sweeping of milled surface. It is the Contractor's responsibility ensure the surface is clean prior to paving and sweep, if necessary, before and during paving operation. Payment for sweeping shall be included in the price bid per ton for the HMA. No separate payment shall be made.

### 6.9 Time Restrictions – Region 5 Projects

All Region 5 Projects shall follow the time restrictions outlined in the "Work Zone Traffic Control - for Design/Construction on State Highways in Region 5" available on the NYSDOT website or through the Regional Transportation Systems Operations group. Follow the link below for more information.

[https://www.dot.ny.gov/regional-offices/region5/repository/R05\\_2012\\_WZTC\\_Typicals.pdf](https://www.dot.ny.gov/regional-offices/region5/repository/R05_2012_WZTC_Typicals.pdf)

### 6.10 Project 5V2014 – Cattaraugus County

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay.

As part of this contract, contractor shall install Centerline Audible Roadway Delineators (CARDS) from RM 39-5102-1037 to RM 39-5102-1052. The contractor is required to install the CARDS in accordance with Item 649.11 and NYS Standard Sheet 649-03. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

### 6.11 Project 5V2015 – Cattaraugus County

The roadway contains epoxy pavement markings. See NYSDOT Region 5 Special Notes in this contract regarding abrading of the pavement markings prior to overlay.

Milled In Audible Roadway Delineators (MIARDS) exist on both shoulders from RM 17-5112-1033 to RM 17-5112-1104 which will be filled in with the overlay. As part of this contract, the contractor is required to re-establish MIARDS in accordance with Item 649.01 and NYS Standard Sheet 649-02. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

## SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)

### 6.12 Project 5V2025 – Chautauqua County

The roadway contains paint pavement markings and will not require abrading of the pavement markings prior to overlay.

The contractor is advised that Centerline Audible Roadway Delineators (CARDS) exist from RM 60-5201-3175 to RM 60-5201-3219 which will be filled in with the overlay. As part of this contract, the contractor is required to re-establish the CARDS in accordance with Item 649.11 and NYS Standard Sheet 649-03. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

#### Intelligent Compaction (IC)

This project requires the utilization of Intelligent Compaction (IC) rollers for the compaction of asphalt mixtures in compliance with the Standard Specification for §402-3.07 Compaction.

IC is defined as a process that uses static and/or oscillatory rollers equipped with a measurement/documentation system that automatically displays and records various critical compaction parameters correlated to the Department's standard protocols in real-time during the compaction process. The IC information is visually displayed and mapped relative to Global Positioning System (GPS) information.

The contractor shall provide IC rollers equipped with the integrated on-board display, Global Positioning System (GPS), and IC data processing, recording, and transfer software. The IC rollers shall be self-propelled double-drum rollers and equipped with the following:

1. A non-contact temperature sensor for measuring pavement surface temperatures.
2. GPS radio and receiver units to monitor the drum locations within  $\pm 6$ -inch tolerance and track the number of roller passes.
3. Integrated on-board documentation system capable of displaying real-time color-coded maps of roller location, the number of roller passes, pavement surface temperature, and roller speed. The display unit shall be capable of transferring the data by means of a USB port.

The Contractor shall submit a paper report to the Engineer at the end of each day's paving. The report for each roller used shall include data such as percent coverage, minimum and maximum speed, mat temperatures, and total passes made. The electronic data files shall be saved on a flash drive or other methods acceptable to the Engineer and submitted to the Engineer following each workday or shift with the report. Data files shall be compatible with the latest IC data analysis software VETA.

A technical representative from the IC and GPS equipment supplier shall be present for training and technical support on the first day of asphalt placement and 2 additional days during the paving operations.

The Contractor shall conduct daily testing for all GPS devices in accordance with the manufacturer's written instructions during paving operations to ensure consistency and accuracy of GPS measurements.

The Contractor shall enter the number of passes required to meet the established density into the IC roller's on-board documentation system using the color codes for the passes. Ensure the entire width of the paved lane is compacted with the IC roller such that display shows the final color for the completed passes as green.

The cost of supplying IC rollers shall be included in the bid price for the asphalt item.

### 6.13 Project 5V2026 – Chautauqua County

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay.

This project contains an at-grade railroad crossing owned by Southern Tier Extension Railroad Authority and operated by WNY-Penn. The railroad shall be notified to provide flaggers in order to pave up to the railroad tracks.

As part of this contract, contractor shall install Centerline Audible Roadway Delineators (CARDS) from RM 62-5201-1055 to RM 62-5201-1068. The contractor is required to install the CARDS in accordance with Item 649.11 and NYS Standard Sheet 649-03. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

### 6.14 Project 5V2027 – Chautauqua County

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay.

The paving SHALL take place after **September 15, 2020**.

## SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)

### 6.15 Project 5V2028 – Chautauqua County

The ramps, shoulders, gore areas and U-Turnarounds, when present, will be production milled at full width prior to HMA overlay. This project contains ramps at exit 4, exit 11, exit 12, exit 13 and exit 14. This project also contains 17 U-turnarounds between RM 17-5211-1002 and RM 17-5211-1377.

### 6.16 Project 5V2032 – Erie County

This project will begin at the pavement joint just west of Delaware Rd where 2020 overlay ends and ends at the pavement joint just east of Eggert Rd.

In addition to the main line there will be minor intersection paving at Delaware Rd up to the entire crosswalk width, Colvin Blvd. up to the entire crosswalk width, Belmont Ave. up to the entire crosswalk width, Ashford Ave up to the entire crosswalk width, Parker Blvd. up to the entire crosswalk width, Parkhurst Blvd. up to the entire crosswalk width, and Eggert Rd up to the entire crosswalk width.

All median turnarounds shall be included in the overlay.

The roadway contains epoxy pavement markings. See NYSDOT Region 5 Special Notes in this contract regarding abrading of the pavement markings prior to overlay.

The contractor SHALL ensure there is no more than 1" of material at the drainage structures after the overlay.

### 6.17 Project 5V2033 – Erie County

This project will begin at the stop bar across NY 265 south of Kenmore Ave. and ends at the pavement joint approximately 140' south of Delton St.

In addition to the main line there will be minor intersection paving at Kenmore Ave (south) up to the entire crosswalk width, Kenmore Ave (north) up to the entire crosswalk width, Woodward Ave. up to the entire crosswalk width, Ensminger Rd up to the stop bar, and Knoche Rd up to the entire crosswalk width.

The roadway contains epoxy pavement markings. See NYSDOT Region 5 Special Notes in this contract regarding abrading of the pavement markings prior to overlay.

In order to maintain the existing clearance under the two I-290 bridges, the roadway will be micro-milled to a depth of 1" at the bridge location only. This milling will be bid and performed under a separate contract from this paving contract.

Coordination with the schedules may need to take place.

The contractor SHALL ensure there is no more than 1" of material at the drainage structures after the overlay.

### 6.18 Project 5V2034 – Erie County

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay. This project will begin at the existing pavement joint at east side of Townline Rd from paving in 2019 and ends at an existing pavement joint approximately 150' east of County Line Rd. between Erie and Genesee counties.

In addition to the main line there will be minor intersection paving at Townline Rd up to the stop bar, 2 Rod Rd up to the stop bar, 3 Rod Rd up to the stop bar, Approximately 80' to the existing pavement joint on W. Main St in the Village of Alden, and Crittenden Rd up to the stop bar.

Care shall be taken to pave no more than 1.5" under the railroad bridge in the Village of Alden. A recent project fixed the clearance issue at this bridge and paving to thick here will result in bridge hits again.

Contractor SHALL be required to tandem pave the roadway.

The contractor is advised that Centerline Audible Roadway Delineators (CARDS) exist from RM 20-5302-1451 to RM 20-5302-1458 which will be filled in with the overlay. As part of this contract, the contractor is required to re-establish the CARDS in accordance with Item 649.11 and NYS Standard Sheet 649-03. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

**SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)**

**6.19 Project 5V2043 – Erie County**

This project will begin at the existing pavement joint on the south side of the intersection with Amsdell Rd and ends at the existing concrete pavement at the Rte 62 intersection.

In addition to the main line there will be minor intersection paving at Amsdell Rd up to the entire crosswalk width, Rogers Rd up to the entire crosswalk width, Sowles Rd. up to the entire crosswalk width, and Howard Rd up to the entire crosswalk width.

The roadway contains epoxy pavement markings. See NYSDOT Region 5 Special Notes in this contract regarding abrading of the pavement markings prior to overlay.

Half the roadway is concrete at the Rte 75 intersection and at the Rte 62 intersection. The asphalt section in this location will be micro-milled using a different contract separate from this paving contract. Coordination to have these half asphalt roadway sections milled out prior to the overlay will be needed with the separate milling contractor.

The contractor SHALL ensure there is no more than 3/4" depth at the drainage structures after the overlay.

**6.20 Project 5V2045 – Erie County**

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay. Route 950M will begin at the existing pavement joint at west side of Onondaga Rd and ends at the stop bar on the west side of Rte 240. Route 16 will begin at the stop bar at west side of Route 240 and end at the stop bar at west side of Wildwood Ave.

Care shall be taken to maintain the existing clearance under the I-90/US 219 bridges and not pave more than 1.5" which result in less clearance.

**6.21 Project 5V2046 – Erie County**

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay. This project begins at the north pavement edge projection of Route 249 and ends at the south pavement edge projection of Eden-Evans Center Road.

The contractor is advised that Centerline Audible Roadway Delineators (CARDS) exist from RM 20-5302-1026 to RM 20-5302-1087 which will be filled in with the overlay. As part of this contract, the contractor is required to re-establish the CARDS in accordance with Item 649.11 and NYS Standard Sheet 649-03. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

**HMA MIXTURE EVALUATION USING PERFORMANCE TESTING**

**Description:**

This note covers the requirements for Hot Mix Asphalt verification and production under a performance testing process. Plant Quality Adjustment Factors do not apply for asphalt mixtures produced for this contract under this note. Department mixture Quality Assurance will consist of paver sampling and review of Contractor control charts.

All provisions of Sections 401 Asphalt Production and 402 Hot Mix Asphalt (HMA) Pavements of the NYS Standard Specifications apply except as modified below.

**Mixture Design Process**

HMA mixtures shall be designed to meet the requirements of New York State Materials Method 5.16. Additionally, the mixtures shall be tested to meet the performance testing requirements specified in Table 1.

**Table 1 – Performance Testing**

Test Methods	Criteria	Design Value	COV
AASHTO TP124-18 Flexibility Index Test	Flexibility Index	6	≤20
ASTM D6931-17 Indirect Tensile Strength Test	IDT Strength	100 psi	≤20
ASTM D8225-19 Determination of CT Index	CT Index	-	-

**SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)**

**6.21 Project 5V2046 – Erie County (Cont'd)**

**Sample Fabrication & Testing**

1. Contractor – The Contractor shall make and test samples under the methods provided in Table 1. The Contractor shall also fabricate and provide another full set of finished samples for the same performance testing by the Department. Additionally, the Contractor shall provide to the Department enough of the raw aggregate and liquid asphalt binder to fabricate a third set of samples for testing.
2. Regional Materials Lab (RML) – The RML will use the raw aggregate and liquid asphalt binder from the Contractor to make enough samples to perform all performance testing. The RML will test the Department fabricated samples, as well as the Contractor fabricated samples, according to the referenced test methods in Table 1.

**Acceptance of the Design**

The RML will calculate the average and standard deviation of all representative samples tested by the Contractor and the Department. The RML will determine the Coefficient of Variation for each criterion listed in Table 1. The RML will calculate the Coefficient of Variation (COV) using the following formula:

$$COV = \frac{\text{Standard Deviation of Criteria (FI,DT)}}{\text{Average Criteria Value}} * 100$$

The Regional Materials Engineer (RME) will assign Production Status and accept the design for use when the mix design performance satisfies criteria covered in Table 1 and the COV is ≤20. If the COV for either criterion is greater than 20, the RME may elect to accept the design for use with the concurrence of the Materials Bureau Director or their representative.

Modification to the gradation targets or binder content will not be permitted after design acceptance. The target RAP content may be reduced with the prior approval of the RME as stated in MP 401.

**Quality Control Process**

The Department’s Quality Assurance Technician (QAT) is not required at the HMA plant during production and the QAT will not be responsible for any activities at the production facility.

The results of all tests outlined in Table 2 shall be recorded by the Contractor on control chart templates provided by the Department. These control charts shall be used by the Contractor to identify any changes in the mixture production. The control charts shall be filled out and submitted to the Regional Materials office daily.

**Table 2 - Testing and Sampling Table**

<b>Plant Test Property</b>	<b>Test Method</b>	<b>Contractor Testing Frequency<sup>1</sup></b>	<b>Department Testing Frequency<sup>2</sup></b>
Aggregate Gradation	AASHTO T27	One per Sublot	One per Day (enough material for two tests)
Aggregate Moisture	AASHTO T255	One per Lot	Monitor and Verify
Mix Temperature	-	Two per Sublot	-
Air Voids	MM 5.16, AASHTO T269	One per 3 Lots	One per 3 Days
Indirect Tensile Strength	ASTM D6931-17	One per 3 Lots	One per 3 Days
Semi-Circular Bending	AASHTO TP124-18	One per 3 Lots	One per 3 Days
Determination of CT Index	ASTM D8225-19	One per 3 Lots	One per 3 Days

1. All sampling at the plant
2. All sampling at the paver

**SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)**

**6.21 Project 5V2046 – Erie County (Cont'd)**

Material sampling points for Quality Control activities shall be at the discretion of the Contractor, within the provided ranges. Sampling points shall be identified on all Control Charts. All other testing covered under MP 401, but not addressed in Table 2, is required but will not be included on the Control Charts. The RME, or their representative, will sample the mixture at the paver under NYS Method MP 402-03. The sample points will be recorded on Control Charts and sent back to Contractor for reference.

For Contractor testing, every 3 consecutive lots shall be considered a Test Cycle. For each full or partial Test Cycle, all testing in Table 2 shall be required over the course of that production.

**Mixture Production**

HMA Mixture requirements are as follows:

**Table 3 - Mixture Gradation, Absolute Difference Value**

Limits (Test Value – JMF Value)	Sieve Sizes		
	#50 and Larger (300 µm and Larger)	#100 (150 µm)	#200 (75 µm)
Production	0.0 – 5.0	0.0 – 4.0	0.0 – 2.0
Action	5.0 – 8.0	4.0 – 6.0	2.0 – 4.0
Evaluation	>8.0	>6.0	>4.0

**Gradation Limits During Production**

- **Production Limits** – If the gradation absolute difference falls within the Production Limits as stated in Table 3 no corrective action is needed for gradation.
- **Action Limit** - If the gradation absolute difference value falls within the Action Limits stated in Table 3 the Contractor shall take corrective actions to bring the gradation back within the production limits. If test results for two consecutive lots fall within the action limits, the production shall be immediately terminated and shall not resume until the Regional Materials Engineer is satisfied with the actions taken.
- **Evaluation/Rejection Limit** - If at any time during production the gradation absolute difference value falls below the Evaluation Limits stated in Table 3, all mixture production shall be immediately terminated and the RME or their representative shall be contacted. The RML will fabricate three samples according to AASHTO T-312 with material sampled at the paver. These samples will be tested and evaluated by the RME against the performance criteria in Table 1. If paver samples are not available, the Department will randomly core the representative area, in locations free from localized issues, as determined by the RME, in order to acquire sufficient material to test.

If test results do not meet the required values, the RME will evaluate the pavement section where the subject material was placed to determine if it will be left in-place. The following criteria will be used in the evaluation:

1. The pavement section achieved field density greater than or equal to 93% of MMTD.
2. There are no defects such as, but not limited to, cracking, raveling, rutting, shoving, or bleeding, and the asphalt content, based on automation, is within +/- 0.2% of production target.

If the subject material is left in-place, it will be paid in full at bid price. If it is determined the subject material will not be left in-place, the Contractor shall remove and replace the material at no additional cost to the Department. The cost for this procedure shall be included in the bid price for the asphalt item.



## SECTION 6: PROJECTS - SPECIAL NOTES (NYSDOT REGION 5) (Cont'd)

### 6.22 Project 5V2053 – Niagara County

The traveled way, shoulders, turning lanes, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay. This project will begin at a pavement construction joint approximately 125' north of the NY 104 bridge over 18 and end approximately 440' east of Blairville Rd with the centerline of NY 18 at a pavement construction joint.

In addition to the main line there will be minor intersection paving at Blairville Rd. approx. 110' from the northern pavement edge projection.

As part of this contract, contractor shall install Centerline Audible Roadway Delineators (CARDS) from RM 18-5401-1013 to RM 18-5401-1053. The contractor is required to install the CARDS in accordance with Item 649.11 and NYS Standard Sheet 649-03. All work required to complete this work, including any additional temporary pavement striping as well as work zone traffic control, shall be included in the bid price per ton of HMA.

### 6.23 Project 5V2054 – Niagara County

The traveled way, shoulders, and center median turning lanes, when present, will be production milled at full width prior to HMA overlay. This project will begin approximately 75' west of the centerline of Porter Center Rd. and end approximately 100' east of the centerline of Ransomville Rd.

In addition to the main line there will be minor intersection paving at the northern pavement edge projection of Porter Center Rd. for approx. 20', southern pavement edge projection of Porter Center Rd. for approx. 50', southern pavement edge projection of Dickersonville Rd. for approx. 35', northern pavement edge projection of Old Lake Rd. for approx. 35', and the southern pavement edge projection of Ransomville Rd. for approx. 45'.

#### DENSITY MEASUREMENT USING A ROLLING DENSITY METER:

This project will require the final compacted pavement surface to be measured with a Rolling Density Meter (RDM). The RDM utilizes ground-penetrating radar system to continuously measure asphalt mixture density.

The RDM will be capable of the following;

- Collecting and storing GPR data.
- Exporting to .csv or similar format.
- Collecting and storing GPS location information with dielectric measurement.

The Contractor shall perform all manufacturers' recommended calibration procedures prior to the collection of data.

The Contractor shall record data from the entire mat placed, including the longitudinal joint. Measurements shall be recorded after the last pass of the finish roller and before the lane is opened for traffic. The Engineer will identify any density core locations to the operator of the RDM after the final pass of the roller. The RDM operator will record the GPS coordinates of the proposed core location.

The Contractor shall provide the Engineer

- .CSV file with all recorded data
- A report indicating percent density achieved relative to the area paved
- .KML file which expresses the density recorded on a map of the project. Core locations will be identified in the .KML file.

The cost for this procedure shall be included in the bid price per ton of HMA.

## SECTION 7: PROJECTS - SPECIAL NOTES (NYSDOT REGION 7)

The following Special Notes for Region 7 Projects shall supersede any other sections of this Award or the Standard Specifications referenced herein.

### 7.1 Special Work Zone Traffic Control – Pilot Vehicle – Region 7 Projects

Unless otherwise specified, the highway shall be kept open to traffic at all times. Traffic shall be discontinued on the lanes where work is being performed on these projects; and as soon as HMA is applied and rolled, controlled traffic may be permitted thereon. For Region 7 VPP projects in this solicitation, the Contractors shall provide sufficient two-way radio equipped pilot vehicles to guide traffic around paving work at a speed not to exceed 15 mph. The pilot vehicles shall be equipped with G20-4 “PILOT CAR FOLLOW ME” signs meeting the requirements of Sections 6F.58 and 6C.13 of the Manual on Uniform Traffic Control Devices. The delineation of the closed lane (cone placement) as required by Section 619-3.02J of the Standard Specifications shall be evaluated by the Resident Engineer based on the traffic control plan presented by the Contractor and, after consultation with the Regional Traffic Safety & Mobility Office, a determination will be made as to what will be required on the project. **Daytime lane closures may be used in lieu of pilot vehicles on controlled access highways as deemed appropriate by the Resident Engineer at the time of preconstruction meeting.**

SIGN	MINIMUM SIZE	LOCATION
PILOT VEHICLE FOLLOW ME	G20-4 CONVENTIONAL 36”x 18”	ON BACK OF PILOT VEHICLES

The pilot vehicle shall have the name of the Contractor prominently displayed.

All cost for Work Zone Traffic Control including flagging, temporary pavement markings, channelizing devices, construction signs, and pilot vehicles shall be included in the prices per ton for the bituminous concrete. No separate payment shall be made.

### 7.2 Project 7PAV41 – Clinton County

#### Parking Area/Snow Plow Turnaround Requirements:

The following location shall be included in the paving limits for the respective project:

PIN 7PAV41 – RM 3 7108 1066

### 7.3 Project 7PAV46 – Jefferson County

#### DENSITY MEASUREMENT USING A ROLLING DENSITY METER:

This project will require the final compacted pavement surface to be measured with a Rolling Density Meter (RDM). The RDM utilizes a ground-penetrating radar system to continuously measure asphalt mixture density.

The RDM will be capable of the following:

- Collecting and storing GPR data.
- Exporting data in .csv or similar format
- Collecting and storing GPS location information with dielectric measurement.

The Contractor shall perform all manufacturer’s recommended calibration procedures prior to the collection of data.

The Contractor shall record data from the entire mat placed, including the longitudinal joint. Data will be collected and reported at a frequency of 1’ or less. Measurements shall be recorded after the last pass of the finish roller and before the lane is opened for traffic. The Engineer will identify any density core locations to the operator of the RDM after the final pass of the roller. The RDM operator will record the GPS coordinates of the proposed core locations.

The Contractor shall provide the Engineer:

- .csv file with all recorded data, including offset in lane, location, and corresponding density
- A report indicating percent density achieved relative to the area paved
- .kml file.
- Core location in the exported files

The cost for this procedure shall be included in the bid price per ton of HMA.



## SECTION 7: PROJECTS - SPECIAL NOTES (NYSDOT REGION 7) (Cont'd)

### 7.4 Project 7PAV48 – Lewis County

#### NON-TRACKING TACK COAT:

This project will require the substitution of Non-Tracking Tack Coat for Diluted Tack Coat, Item 407.0102. The work will consist of preparing and treating the pavement surface with non-tracking tack coat in accordance with the Contract documents and as directed by the Engineer.

Non-Tracking Tack Coat emulsion shall meet the requirements below:

Saybolt Furol Viscosity @ 77 deg F	AASHTO T 59	100 max
Residue by Distillation	AASHTO T 59	50 min
Oil Distillate, Volume of Total	AASHTO T 59	2 max
Penetration on Residue from Distillation @ 77 deg F, 100 g, 5 sec	AASHTO T 49	40 ma Softening
Point on Residue from Distillation	AASHTO T 53	140 deg F min

#### Approved Suppliers

Seaboard Asphalt Products Company, EM-50-TT  
Midland Asphalt Materials Inc., CNTT

Equivalent Non-Tracking Tack Coat as approved by the Director of Materials Engineering Bureau

All requirements under Section 407-3, 407-4, and 407-5 of the New York State Department of Transportation Standard Specifications shall apply. Application must be within the ranges specified for Diluted Tack Coat in Table 407-1.

The Contractor will provide the Engineer a copy of the manufacturer's technical data sheet as well as recommendations for surface preparation, application temperature, and set time.

#### SHIM COURSE:

Item 402.058903 (Shim Course) is being utilized at an average thickness of  $\frac{3}{4}$ ". Region 7 is requiring the use of either:

- 6.3 HMA mix meeting the requirements of 402.068303, but meeting F9 Friction requirements, and PG 64S-22 may be utilized in lieu of PG 64V-22. (This applies only as a substitution to Item 402.058903 for this contract only)
- Misc. Patching HMA mix meeting the requirements of Item 402.03890118 in the currently active OGS HMA FOB Contract, Comprehensive Bituminous Concrete.

#### HMA MIXTURE EVALUATION USING PERFORMANCE TESTING:

##### Description

This note covers the requirements for Hot Mix Asphalt verification and production under a performance testing process. Plant Quality Adjustment Factors do not apply for asphalt mixtures produced for this contract under this note. Department mixture Quality Assurance will consist of paver sampling and review of Contractor control charts.

All provisions of Sections 401 Asphalt Production and 402 Hot Mix Asphalt (HMA) Pavements of the NYS Standard Specifications apply except as modified below.

##### Mixture Design Process

HMA mixtures shall be designed to meet the requirements of New York State Materials Method 5.16.

In no case shall the job mix tolerance fall outside the general limits.

Additionally, the mixtures shall be tested to meet the performance testing requirements specified in Table 1.

**SECTION 7: PROJECTS - SPECIAL NOTES (NYSDOT REGION 7) (Cont'd)**

**7.4 Project 7PAV48 – Lewis County (Cont'd)**

**Table 1 – Performance Testing**

Test Methods	Criteria	Design Value	COV
AASHTO TP124-18 Flexibility Index Test	Flexibility Index	6	≤20
ASTM D6931-17 Indirect Tensile Strength Test	IDT Strength	100 psi	≤20
ASTM D8225-19 Determination of CT Index	CT Index	-	-

**Sample Fabrication & Testing**

1. Contractor – The Contractor shall make and test samples under the methods provided in Table 1. The Contractor shall also fabricate and provide another full set of finished samples a minimum of 14 days before production, for the same performance testing by the Department. Additionally, the Contractor shall provide to the Department enough of the raw aggregate and liquid asphalt binder to fabricate a third set of samples for testing.
  - a. For mixtures currently in Production Status the Regional Materials Engineer (RME) may allow the Contractor to use plant produced mixture for the mix design testing.
2. Regional Materials Lab (RML) – The RML will use the raw aggregate and liquid asphalt binder from the Contractor to make enough samples to perform all performance testing. The RML will test the Department fabricated samples, as well as the Contractor fabricated samples, according to the referenced test methods in Table 1.

**Acceptance of the Design**

The RML will calculate the average and standard deviation of all representative samples tested by the Contractor and the Department. The RML will determine the Coefficient of Variation for each criterion listed in Table 1. The RML will calculate the Coefficient of Variation (COV) using the following formula:

$$COV = \frac{\text{Standard Deviation of Criteria (FI, IDT)}}{\text{Average Criteria Value}} * 100$$

The Regional Materials Engineer (RME) will assign Production Status and accept the design for use when the mix design performance satisfies criteria covered in Table 1 and the COV is ≤20. If the COV for either criterion is greater than 20, the RME may elect to accept the design for use with the concurrence of the Materials Bureau Director or their representative.

Modification to the gradation targets or binder content will not be permitted after design acceptance. The target RAP content may be reduced with the prior approval of the RME as stated in MP 401.

**Quality Control Process**

The Department’s Quality Assurance Technician (QAT) may be present at the HMA plant during production at the discretion of the Regional Materials Engineer (RME). The QAT will not be responsible for any activities at the production facility.

The results of all tests outlined in Table 2 shall be recorded by the Contractor on control chart templates provided by the Department. These control charts shall be used by the Contractor to identify any changes in the mixture production. The control charts shall be filled out and submitted to the Regional Materials office daily.

**SECTION 7: PROJECTS - SPECIAL NOTES (NYSDOT REGION 7) (Cont'd)**

**7.4 Project 7PAV48 – Lewis County (Cont'd)**

**Table 2 - Testing and Sampling Table**

Plant Test Property	Test Method	Contractor Testing Frequency <sup>1</sup>	Department Testing Frequency <sup>2</sup>
Aggregate Gradation	AASHTO T27	One per Sublot	One per Day (enough material for two tests)
Aggregate Moisture	AASHTO T255	One per Lot	Monitor and Verify
Mix Temperature	-	Two per Sublot	-
Air Voids	MM 5.16, AASHTO T269	One per 3 Lots	One per 3 Days
Indirect Tensile Strength	ASTM D6931-17	One per 3 Lots	One per 3 Days
Semi-Circular Bending	AASHTO TP124-18	One per 3 Lots	One per 3 Days
Determination of CT Index	ASTM D8225-19	One per 3 Lots	One per 3 Days

1. All sampling at the plant
2. All sampling at the paver

Material sampling points for Quality Control activities shall be at the discretion of the Contractor, within the provided ranges. Sampling points shall be identified on all Control Charts. All other testing covered under MP 401, but not addressed in Table 2, is required but will not be included on the Control Charts. The RME, or their representative, will sample the mixture at the paver under NYS Method MP 402-03. The sample points will be recorded on Control Charts and sent back to Contractor for reference.

For Contractor testing, every 3 consecutive lots shall be considered a Test Cycle. For each full or partial Test Cycle, all testing in Table 2 shall be required over the course of that production.

The Contractor shall retain all samples until the project is accepted by the Department. The Contractor may discard the samples sooner with the approval of the RME.

**Mixture Production**

HMA Mixture requirements are as follows:

**Table 3 - Mixture Gradation, Absolute Difference Value**

Limits (Test Value – JMF Value)	Sieve Sizes		
	#50 and Larger (300 µm and Larger)	#100 (150 µm)	#200 (75 µm)
Production	0.0 – 5.0	0.0 – 4.0	0.0 – 2.0
Action	5.0 – 8.0	4.0 – 6.0	2.0 – 4.0
Evaluation	>8.0	>6.0	>4.0

## SECTION 7: PROJECTS - SPECIAL NOTES (NYSDOT REGION 7) (Cont'd)

### 7.4 Project 7PAV48 – Lewis County (Cont'd)

#### Gradation Limits During Production

- **QC Production Limits** – If the gradation absolute difference falls within the Production Limits as stated in Table 3 no corrective action is needed for gradation.
- **QC Action Limit** - If the gradation absolute difference value falls within the Action Limits stated in Table 3 the Contractor shall take corrective actions to bring the gradation back within the production limits. If test results for two consecutive sublots fall within the action limits, the production shall be immediately terminated and shall not resume until the Regional Materials Engineer is satisfied with the actions taken.
- **QA Evaluation/Rejection Limit** - If the gradation absolute difference value falls outside the Evaluation Limits stated in Table 3 for any Department paver sample, the following will apply:
  - The RML will fabricate samples according to AASHTO T-312 with material sampled at the paver. If paver samples are not available, pavement cores will be required. These samples/cores will be tested and evaluated by the RME against the performance criteria in Table 1. These performance results are for information only.
  - The RME will evaluate the subject material to determine if it will be left in place. The RME may require the contractor to core the pavement at no additional cost to the State. When cores are required, the Engineer will divide the pavement area being evaluated into 4 sublots in accordance with the requirements of §402-3.08, *Pavement Density Samples*. The material will be left in-place when all the following conditions are met.
    - The pavement section achieved field density greater than or equal to 92% of MMTD.
    - There are no defects such as, but not limited to, cracking, raveling, rutting, shoving, or bleeding, and the asphalt content, based on automation, is within +/- 0.2% of production target.
    - The average of all the QA gradation samples tested is within the general limits.
    - The % aggregate friction meets the requirements for the item specified in the project.

If the material does not meet the above conditions the RME will determine if the material in question may remain in-place considering, but not limited to, the following:

- Type of material produced
- The layer in which the material was placed
- The location and traffic volume
- Laboratory test results
- Field test results, such as density

If the subject material is left in-place, it will be paid in full at bid price. If it is determined the subject material will not be left in-place, the Contractor shall remove and replace the material at no additional cost to the Department.

### 7.5 Project 7PAV51 – St. Lawrence County

#### Paving Operations:

Paving operations shall progress in the opposite direction of traffic when paving on Cold Recycled roadways. This provision may only be waived by the Region 7 Materials Engineer, and this waiver will be rescinded if damage to the top course occurs.

## SECTION 8: PROJECTS - SPECIAL NOTES (NYSDOT REGION 9)

### 8.1 Special Notes – Region 9 Projects

All Region 9 projects in this solicitation are Warm Mix Asphalt (WMA) projects. WMA specifications can be found in Attachment 10.

Projects Paving operations shall progress in the opposite direction of traffic when paving on roadways. This provision may only be waived by the Region 9 Materials Engineer or Resident Engineer, and this waiver will be rescinded if damage to the top course occurs.

Item 404.05890108 (Shim Course) is being utilized at an average thickness of ½” to ¾”. Region 9 is requiring the use of either:

- 6.3 asphalt top course mix meeting the requirements of 404.06830309, but meeting F9 Friction requirements, and PG 64S-22 may be utilized in lieu of PG 64V-22. (This applies only as a substitution to Item 404.05890108 for this contract only)
- Misc. Patching WMA mix meeting the requirements of Item 402.03890218 in the currently active OGS HMA Contract, Comprehensive Bituminous Concrete. This mix must utilize WMA technology in the mix design.

### 8.2 Projects 9HW021, 9HW022, 9HW041, and 9HW071

These projects shall be cold-in-placed recycled prior to the overlay. The cold-in-placed recycle will be performed under separate contract(s). This will require coordination between the awarded paving contractor under this contract and the cold-in-placed contractor, in order to minimize the time between cold-in-placed recycling and paving. The contractor shall sweep ahead of the tack coat operation to ensure a clean surface. The cost of this work shall be incorporated in the cost per ton of asphalt pavement, no separate payment shall be made for this operation.

### 8.3 Projects 9HW012 and 9HW061

These projects shall be milled prior to the overlay. The milling will be performed under a separate contract. This will require coordination between the awarded paving contractor under this contract and the milling contractor, in order to schedule the project to minimize traffic riding on the milled surface. The contractor shall sweep ahead of the tack coat operation to ensure a clean surface. The cost of this work shall be incorporated in the cost per ton of asphalt pavement, no separate payment shall be made for this operation.

### 8.4 Project 9HW051- Otsego County

This project shall be hot-in-placed recycled prior to the overlay, the contractor shall coordinate with the recycling contractor. In certain locations this project will be milled under a separate contract. This will require coordination between the awarded paving contractor under this contract and the milling contractor, in order to schedule the project to minimize traffic riding on the milled surface. The contractor shall sweep milled areas ahead of the tack coat operation to ensure a clean surface. The cost of this work shall be incorporated in the cost per ton of asphalt pavement, no separate payment shall be made for this operation.

The intersection of Hollenbeck Rd (Route 992A) shall be paved approximately 100 feet from the edge of the mainline in each direction.

Contractor is to be aware that there will be several other Contracts in the area. Contractors shall coordinate their work to minimize disruption to the traveling public. Project Locations Nearby -

- 1) 9HW061 Rt 7 Otsego County Line to Cobleskill Creek VPP
- 2) D264101 I-88 Worcester to Schoharie County Line and Bridge Replacements near Exit 20
- 3) D264037 Otsego County Large Culvert Replacement Block.

**SECTION 8: PROJECTS - SPECIAL NOTES (NYSDOT REGION 9) (Cont'd)**

**8.5 Project 9VHW61 – Schoharie County**

The following intersections shall be paved approximately 100 feet from the edge of the mainline in each direction:

Location	Roadway Width
Hite Road	50
Snowplow Turnaround near Boughton Road	20

This project will be milled under separate contract prior to paving in certain locations.

Contractor is to be aware that there will be several other Contractors in the area. Contractors shall coordinate their work to minimize disruption to the traveling public.

Project Locations Nearby:

1. 9HW051 Rt. 7 Worcester to Schoharie County Line VPP Paving
2. Rt. 10 Richmondville Slope Failure Project
3. I-88 Worcester to Schoharie County Line Paving and Bridge Replacements near Exit 20.
4. D264037 culvert replacement on Route 7

This project has several schools and SUNY Cobleskill located near or along the project limits. This project shall be paved outside of the school year between July 1, 2020 and September 4, 2020. All other holiday restrictions apply as well.

**8.6 Project 9HW071- Sullivan County**

Prior to commencement of this project please contact the Sullivan Residency for coordination of schedules with the residency for the contractor working on BIN 1026880 NYS Route 52 A over Jones Brook. The schedule for this structure indicates completion in early August. It is desired to progress the CIPR and paving operations following completion of work on BIN 1026880.

Contractor should be aware that the Route 17B Spur to Route 97 is included in the quantities. It is approximately 450' long.

**8.7 Project 9HW081- Tioga County**

Portions of this project will be milled prior to the overlay. The milling will be performed under a separate contract. This will require coordination between the awarded paving contractor under this contract and the milling contractor, in order to schedule the project to minimize traffic riding on the milled surface. The contractor shall sweep ahead of the tack coat operation to ensure a clean surface. The cost of this work shall be incorporated in the cost per ton of asphalt pavement, no separate payment shall be made for this operation.

It shall be the Contractor's responsibility to inventory and document the existing pavement marking patterns prior to resurfacing and submit to the Engineer a copy of the inventory prior to beginning work. The Contractor shall be responsible for completing all layout work necessary for the installation of all final pavement markings. If the original markings are obliterated, the contractor shall contact the Resident Engineer for guidance on their location.

**8.8 Projects 9HW021, 9HW022, 9HW061, and 9HW081 – Joint Density Requirements**

The Contractor should be aware that this is a performance-related project in which the Contractor is responsible for compacting the mainline pavement under the 60 Series requirements as detailed in §402-3.07 of the Standard Specification and the mainline longitudinal joint as detailed in the special specification Item 402.00003302, which can be found in the Attachment 11 – Group Specifications. The Contractor must be prepared to select, operate, and control the paving and compaction equipment, to monitor the results, and make necessary adjustments to achieve the specified density results.

**8.9 Projects 9HW061 and 9HW081- HMA Mixture Evaluation Using Performance Testing**

**Description:**

This note covers the requirements for Hot Mix Asphalt verification and production under a performance testing process. Plant Quality Adjustment Factors do not apply for asphalt mixtures produced for this contract under this note. Department mixture Quality Assurance will consist of paver sampling and review of Contractor control charts.

All provisions of Sections 401 Asphalt Production and 402 Hot Mix Asphalt (HMA) Pavements of the NYS Standard Specifications apply except as modified below.

**SECTION 8: PROJECTS - SPECIAL NOTES (NYSDOT REGION 9) (Cont'd)**

**8.9 Projects 9HW061 and 9HW081- HMA Mixture Evaluation Using Performance Testing (Cont'd)**

**Mixture Design Process**

HMA mixtures shall be designed to meet the requirements of New York State Materials Method 5.16. Additionally, the mixtures shall be tested to meet the performance testing requirements specified in Table 1.

**Table 1 – Performance Testing**

Test Methods	Criteria	Design Value	COV
AASHTO TP124-18 Flexibility Index Test	Flexibility Index	6	≤20
ASTM D6931-17 Indirect Tensile Strength Test	IDT Strength	100 psi	≤20
ASTM D8225-19 Determination of CT Index	CT Index	-	-

**Sample Fabrication & Testing**

1. Contractor – The Contractor shall make and test samples under the methods provided in Table 1. The Contractor shall also fabricate and provide another full set of finished samples for the same performance testing by the Department. Additionally, the Contractor shall provide to the Department enough of the raw aggregate and liquid asphalt binder to fabricate a third set of samples for testing.
2. Regional Materials Lab (RML) – The RML will use the raw aggregate and liquid asphalt binder from the Contractor to make enough samples to perform all performance testing. The RML will test the Department fabricated samples, as well as the Contractor fabricated samples, according to the referenced test methods in Table 1.

**Acceptance of the Design**

The RML will calculate the average and standard deviation of all representative samples tested by the Contractor and the Department. The RML will determine the Coefficient of Variation for each criterion listed in Table 1. The RML will calculate the Coefficient of Variation (COV) using the following formula:

$$COV = \frac{\text{Standard Deviation of Criteria (FI, IDT)}}{\text{Average Criteria Value}} * 100$$

The Regional Materials Engineer (RME) will assign Production Status and accept the design for use when the mix design performance satisfies criteria covered in Table 1 and the COV is ≤20. If the COV for either criterion is greater than 20, the RME may elect to accept the design for use with the concurrence of the Materials Bureau Director or their representative.

Modification to the gradation targets or binder content will not be permitted after design acceptance. The target RAP content may be reduced with the prior approval of the RME as stated in MP 401.

**Quality Control Process**

The Department’s Quality Assurance Technician (QAT) is not required at the HMA plant during production and the QAT will not be responsible for any activities at the production facility.

The results of all tests outlined in Table 2 shall be recorded by the Contractor on control chart templates provided by the Department. These control charts shall be used by the Contractor to identify any changes in the mixture production. The control charts shall be filled out and submitted to the Regional Materials office daily.



**SECTION 8: PROJECTS - SPECIAL NOTES (NYSDOT REGION 9) (Cont'd)**

**8.9 Projects 9HW061 and 9HW081- HMA Mixture Evaluation Using Performance Testing (Cont'd)**

**Table 2 - Testing and Sampling Table**

<b>Plant Test Property</b>	<b>Test Method</b>	<b>Contractor Testing Frequency<sup>1</sup></b>	<b>Department Testing Frequency<sup>2</sup></b>
Aggregate Gradation	AASHTO T27	One per Sublot	One per Day (enough material for two tests)
Aggregate Moisture	AASHTO T255	One per Lot	Monitor and Verify
Mix Temperature	-	Two per Sublot	-
Air Voids	MM 5.16, AASHTO T269	One per 3 Lots	One per 3 Days
Indirect Tensile Strength	ASTM D6931-17	One per 3 Lots	One per 3 Days
Semi-Circular Bending	AASHTO TP124-18	One per 3 Lots	One per 3 Days
Determination of CT Index	ASTM D8225-19	One per 3 Lots	One per 3 Days

1. All sampling at the plant
2. All sampling at the paver

Material sampling points for Quality Control activities shall be at the discretion of the Contractor, within the provided ranges. Sampling points shall be identified on all Control Charts. All other testing covered under MP 401, but not addressed in Table 2, is required but will not be included on the Control Charts. The RME, or their representative, will sample the mixture at the paver under NYS Method MP 402-03. The sample points will be recorded on Control Charts and sent back to Contractor for reference.

For Contractor testing, every 3 consecutive lots shall be considered a Test Cycle. For each full or partial Test Cycle, all testing in Table 2 shall be required over the course of that production.

**Mixture Production**

HMA Mixture requirements are as follows:

**Table 3 - Mixture Gradation, Absolute Difference Value**

Limits (Test Value – JMF Value)	Sieve Sizes		
	#50 and Larger (300 µm and Larger)	#100 (150 µm)	#200 (75 µm)
Production	0.0 – 5.0	0.0 – 4.0	0.0 – 2.0
Action	5.0 – 8.0	4.0 – 6.0	2.0 – 4.0
Evaluation	>8.0	>6.0	>4.0

**Gradation Limits During Production**

- **Production Limits** – If the gradation absolute difference falls within the Production Limits as stated in Table 3 no corrective action is needed for gradation.
- **Action Limit** - If the gradation absolute difference value falls within the Action Limits stated in Table 3 the Contractor shall take corrective actions to bring the gradation back within the production limits. If test results for two consecutive lots fall within the action limits, the production shall be immediately terminated and shall not resume until the Regional Materials Engineer is satisfied with the actions taken.
- **Evaluation/Rejection Limit** - If at any time during production the gradation absolute difference value falls below the Evaluation Limits stated in Table 3, all mixture production shall be immediately terminated and the RME or their representative shall be contacted. The RML will fabricate three samples according to AASHTO T-312 with material sampled at the paver. These samples will be tested and evaluated by the RME against the performance criteria in Table 1. If paver samples are not available, the Department will randomly core the representative area, in locations free from localized issues, as determined by the RME, in order to acquire sufficient material to test.

## SECTION 8: PROJECTS - SPECIAL NOTES (NYSDOT REGION 9) (Cont'd)

### 8.9 Projects 9HW061 and 9HW081- HMA Mixture Evaluation Using Performance Testing (Cont'd)

If test results do not meet the required values, the RME will evaluate the pavement section where the subject material was placed to determine if it will be left in-place. The following criteria will be used in the evaluation:

1. The pavement section achieved field density greater than or equal to 93% of MMTD.
2. There are no defects such as, but not limited to, cracking, raveling, rutting, shoving, or bleeding, and the asphalt content, based on automation, is within +/- 0.2% of production target.

If the subject material is left in-place, it will be paid in full at bid price. If it is determined the subject material will not be left in-place, the Contractor shall remove and replace the material at no additional cost to the Department.

### 8.10 Projects 9HW021, 9HW022 & 9HW041 – Density Measurement Using A Rolling Density Meter

This project will require the final compacted pavement surface to be measured with a Rolling Density Meter (RDM). The RDM utilizes a ground-penetrating radar system to continuously measure asphalt mixture density.

The RDM will be capable of the following:

- Collecting and storing GPR data.
- Exporting data in .csv or similar format.
- Collecting and storing GPS location information with dielectric measurement.

The Contractor shall perform all manufacturer's recommended calibration procedures prior to the collection of data.

The Contractor shall record data from the entire mat placed, including the longitudinal joint. Data will be collect and reported at a frequency of 1' or less. Measurements shall be recorded after the last pass of the finish roller and before the lane is opened for traffic. The Engineer will identify any density core locations to the operator of the RDM after the final pass of the roller. The RDM operator will record the GPS coordinates of the proposed core locations.

The Contractor shall provide the Engineer:

- .csv file with all recorded data, including offset in lane, location, and corresponding density.
- A report indicating percent density achieved relative to the area paved.
- .kml file.
- Core location in the exported files.

## SECTION 9: SUPERPAVE HOT MIX ASPHALT

### 9.1 Superpave Hot Mix Asphalt Design Criteria

Design criteria for SUPERPAVE Hot Mix Asphalt Items for projects contained in the Invitation for Bids can be found in Attachment 12 – *Superpave Hot Mix Asphalt Tables*.

**NOTE:** Please see Section 2.4 Special Notes – PG Binder and Mix Design Level

### 9.2 Project Dimensions

Project Dimensions for projects contained in the Invitation for Bids can be found in Attachment 12 – *Superpave Hot Mix Asphalt Tables*.

### 9.3 Rebates Table

Rebates for projects contained in the Invitation for Bids can be found in Attachment 12 – *Superpave Hot Mix Asphalt Tables*.