Attachment 11

Group Specifications #941

Bituminous Concrete - Hot Mix Asphalt

(2020 VPP NYSDOT Specific Projects)

(Federal & State Funds)

IFB# 23194

State of New York Executive Department
Office of General Services
Procurement Services
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GROUP SPECIFICATION

COMMODITY GROUP 31502 - 31503 BITUMINOUS CONCRETE - HOT MIX ASPHALT	**DATE OF ISSUE** November 25, 2019
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BIDDERS ARE REQUESTED TO RETAIN THIS SPECIFICATION FOR FUTURE REFERENCE

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GENERAL INFORMATION

MATERIALS:

The following are the material descriptions of items that may be included in IFB's and contracts derived from this specification:

Item	Material Description
302.01	Bituminous Stabilized Course
402.03810218	Miscellaneous Patching F1, HMA
402.03820218	Miscellaneous Patching F2, HMA
402.03830218	Miscellaneous Patching F3, HMA
402.03890218	Miscellaneous Patching F9, HMA
402.058903	Hot Mix Asphalt, Shim Course F9
402.068103	6.3 F1 Polymer-Modified HMA, 80 Series Compaction
402.068203	6.3 F2 Polymer-Modified HMA, 80 Series Compaction
402.068303	6.3 F3 Polymer-Modified HMA, 80 Series Compaction
402.098103	9.5 F1 Top Course HMA, 80 Series Compaction
402.098203	9.5 F2 Top Course HMA, 80 Series Compaction
402.098303	9.5 F3 Top Course HMA, 80 Series Compaction
402.128103	12.5 F1 Top Course HMA, 80 Series Compaction
402.128203	12.5 F2 Top Course HMA, 80 Series Compaction
402.128303	12.5 F3 Top Course HMA, 80 Series Compaction
402.198903	19.0 F9 Binder Course HMA, 80 Series Compaction
402.258903	25.0 F9 Binder Course HMA, 80 Series Compaction

QUALITY ADJUSTMENT FACTOR (QAF) (QUALITY UNITS):

The Quality Adjustment Factor will be 1.0 for all material produced under resultant contract for any agency other than the New York State Department of Transportation.

The following Quality Unit Index prices will apply to material produced under resultant contracts for the New York State Department of Transportation only:

Region	Index Price ($/Quality Unit)
1	$70
2	$60
3	$60
4	$70
5	$80
6	$70
7	$60
8	$100
9	$70
10	$95
11	$125

GROUP SPECIFICATIONS

GENERAL:

All plant mixed HMA items shall be furnished in accordance with Sections 401 and 402 of the New York State Department of Transportation Standard Specifications, Construction and Materials, most current version at the time of bid opening and can be found at:

https://www.dot.ny.gov/main/business-center/engineering/specifications/updated-standard-specifications-us;

The latest Materials Method 5.16 found at:

https://www.dot.ny.gov/divisions/engineering/technical-services/materials-bureau-repository/mm516.pdf ;

Chapter 6 of the Comprehensive Pavement Design Manual, latest version (Revision 8, dated March 22, 2019) found at:

https://www.dot.ny.gov/divisions/engineering/design/dqab/cpdm/repository/chapter6.pdf ; and

Engineering Instruction 12-008, Optional Use of Warm Mix Asphalt (WMA) Technologies found at:

https://www.dot.ny.gov/portal/pls/portal/mexis_app.pa_ei_eb_admin_app.show_pdf?id=10916 .

(The links are from the NYS Department of Transportation website at www.dot.ny.gov)

References are made herein to New York State Department of Transportation, Standard Specifications, Construction and Materials, most current version at the time of bid opening. A copy may be obtained through the following link:

https://www.dot.ny.gov/main/business-center/engineering/specifications/updated-standard-specifications-us

GROUP SPECIFICATIONS

HOT MIX ASPHALT CONCRETE PAVEMENT WITH CRUSHED GLASS

SCOPE:

This specification covers the requirements for the addition of crushed glass to asphalt concrete mixes. The provisions of Section 401 – Plant Production and Section 402 - Hot Mix Asphalt (HMA) Pavements applies except that the Contractor has the option of blending crushed glass in the following mixes:

37.5 Nominal Max. Size
25.0 Nominal Max. Size
19.0 Nominal Max. Size
Truing and Leveling Course

If the Contractor chooses the crushed glass option, the following modifications to the Standard Specifications shall apply:

MATERIAL REQUIREMENTS:

Crushed glass shall be subject to the approval of the Regional Materials Engineer prior to its use. The crushed glass shall contain no more than 1% (by weight) contaminants and shall meet the following gradation:

Sieve Size	Percent Passing
3/8 in.	100
1/4 in.	90-100
No. 20	0-20

Note: The gradation requirements may be modified upon approval of the Regional Materials Engineer.

Crushed glass may be included in the mixture up to 5%, maximum, of the total aggregate weight. The crushed glass, aggregate and added asphalt cement shall meet the requirements specified in Table 401-1, Composition of Hot Mix Asphalt Mixtures and latest MM 5.16, for aggregate gradation, PG binder content, PG binder grade and temperature range.

CONSTRUCTION DETAILS:

The crushed glass shall be proportioned from a separate feed bin approved by the Regional Materials Engineer. In addition, all requirements pertaining to aggregate shall apply to crushed glass including the equipment requirements for automatic proportioning and recording stipulated for aggregate in §401-3.08.

METHOD OF MEASUREMENT:

The provisions of Section 401-4 shall apply.

BASIS OF PAYMENT:

The provisions of Section 402-5 shall apply.

GROUP SPECIFICATIONS

MISCELLANEOUS HOT MIX ASPHALT (HMA) PATCHING MATERIALS

SCOPE:

This specification covers the requirements for Miscellaneous Hot Mix Asphalt (HMA) patching materials. The requirements of Section 401- Plant Production and Section 402 – Hot Mix Asphalt (HMA) Pavements shall apply.

DESCRIPTION

This work shall consist of developing an HMA mixture for pothole patching, small pavement repairs, and paver placed patching.

MATERIALS

The materials and composition for Miscellaneous Patching mixtures shall meet the requirements specified in §401-2 and §402-2, Materials, except as noted herein.

TABLE 1 - COMPOSITION OF MISCELLANEOUS PATCHING HOT MIX ASPHALT

Screen Sizes	General Limits % Passing[1]	Job Mix Tolerance %[2]
1/2 in.	100	-
3/8 in.	95-100	-
1/4 in.	90-100	-
No. 4	67-85	±4
No. 8	35-60	±6
No. 16	24-50	±7
No. 30	12-34	±7
No. 50	6-22	±4
No. 100	3-11	±3
No. 200	2-6	±2
Asphalt Content, %[3,4]	6.0 – 8.0	±0.4
Mixing and Placing Temperature Range °F	250-325	

Notes:

1. All aggregate percentages are based on the total weight of the aggregate.
2. In no case shall the job mix tolerance fall outside the general limits.
3. The asphalt content is based on the total weight of the mix. When using slag aggregates in the mix, the asphalt content shall be increased accordingly, a minimum of 25 percent for an all slag mix.
4. Use a standard Performance-Graded Binder (PG Binder) appropriate for the county in which the mix shall be used, as specified in Table 6-4 Performance Graded Binder Selection of the Comprehensive Pavement Design Manual (CPDM).

GROUP SPECIFICATIONS

MISCELLANEOUS HOT MIX ASPHALT (HMA) PATCHING MATERIALS (Cont'd)

MATERIALS (Cont'd)

Use Table 2, Pay Item Selection Criteria, to select the appropriate friction requirements for the location and type of use for the mixture.

TABLE 2 - PAY ITEM SELECTION CRITERIA

Use Type	Traffic Volume[2]	Location[3]	Pay Items
Paver-Placed Patching and Pavement Repairs greater than 10 feet in length[1]	High	Downstate	402.03810218 (Type F1 Conditions)
		Upstate	402.03820218 (Type F2 Conditions)
	Low	Statewide	402.03830218 (Type F3 Conditions)
Pothole Patching and Pavement Repairs 10 feet or less in length[1]	High or Low	Statewide	402.03890218 (Type F9 Conditions)

Notes:

1. Pavement Repair lengths are measured in the longitudinal direction of the roadway.
2. "High Volume" refers to 2- or 3-lane highways with design-year, two-way AADT over 8,000, or for more than three lanes with a two-way AADT over 13,000. "Low Volume" refers to highways with lower volumes for the specified number of lanes.
3. The City of New York and the surrounding counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester are referred to as "Downstate." All other areas are referred to as "Upstate."

A. ***Coarse Aggregate Type F1 Conditions***

1. Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
2. Use gravel or blend two or more of: gravel, limestone, dolomite, sandstone, granite, chert, traprock, ore tailings, slag, or other similar materials to produce a final blend of which the non-carbonate plus 1/8-inch particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). In addition, at least 90.0% of the plus No. 4 particles must be non-carbonate.

B. ***Coarse Aggregate Type F2 Conditions***

1. Limestone, dolomite, or a blend of the two having an acid-insoluble residue content of not less than 20.0%.
2. Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
3. Gravel or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag, or other similar materials, meeting the following requirement:
   Noncarbonate plus 1/8 in. particles must comprise a minimum of 10.0% of the total aggregate (by weight, with adjustments to equivalent volumes for materials of different specific gravities). Additionally, a minimum of 20.0% of plus No. 4 particles must be noncarbonate.

GROUP SPECIFICATIONS (Cont'd)

MISCELLANEOUS HOT MIX ASPHALT (HMA) PATCHING MATERIALS (Cont'd)

MATERIALS (Cont'd)

C. ***Coarse Aggregate Type F3 Conditions***

1. Limestone or a blend of limestone and dolomite having an acid-insoluble residue content of not less than 20.0%.
2. Dolomite.
3. Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
4. Gravel or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag, or other similar materials, meeting the following requirement:

   Noncarbonate plus 1/8 in. particles must comprise a minimum of 10.0% of the total aggregate (by weight, with adjustments to equivalent volumes for materials of different specific gravities). Additionally, a minimum of 20.0% of plus No. 4 particles must be noncarbonate.

D. ***Coarse Aggregate Type F9 Conditions.***

Use coarse aggregate meeting the requirements of § 703-02, Coarse Aggregate.

CONSTRUCTION DETAILS

The provisions of §401-3 and §402-3, Construction Details, shall apply except as noted herein.

Compact the pavement in accordance with 402-3.07 D. 80 Series Compaction Method. Use the same number of passes as for 9.5 Top Pavement Course in Table 402-6, Number of Passes.

METHOD OF MEASUREMENT

The provisions of §401-4 and §402-4, Method of Measurement, shall apply. A QAF of 1.00 will be assigned to material meeting the specification requirements as certified by the QCT. A QAF of 0.85 will be assigned to material that fails to meet the specification as tested by the QAT. Quality Units will be determined when there is a disincentive and will be calculated as per §402-4, Method of Measurement.

BASIS OF PAYMENT

The provisions of subsection 402-5 Basis of Payment shall apply. Payment will be made under:

ITEM NO	ITEM	PAY UNIT
402.03810218	Miscellaneous Patching F1, Hot Mix Asphalt	Ton
402.03820218	Miscellaneous Patching F2, Hot Mix Asphalt	Ton
402.03830218	Miscellaneous Patching F3, Hot Mix Asphalt	Ton
402.03890218	Miscellaneous Patching F9, Hot Mix Asphalt	Ton

- THE END OF GROUP SPECIFICATION -