

## DIVISION 300 – PAVEMENT

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### SECTION 302 – HOT MIX ASPHALT [HMA] PAVEMENTS

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#### 302.02 MATERIALS

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*[Include the following with all contracts that include paving:]*

Replace the third paragraph with the following:

**SUPERPAVE HOT MIX ASPHALT 12.5H76 SURFACE COURSE**

Replace the sixth paragraph with the following:

"H" – the third field in the Pay Item description designates the high design compaction level as for the job mix formula based on traffic forecasts as listed in Table 924-2 (other levels may be L=low, and M=medium).

*[Include the following with bridge deck repair contracts:]*

*[Note to Designer: All deck repair contracts shall use Superpave HMA grade 64 Surface Course. If the existing surfacing exhibits moderate stress such as shoving and rutting, the designer can propose Superpave HMA grade 76 Surface Course at specific locations subject to the approval of the Authority's Project Manager. Temporary Surfacing shall be the lowest grade surface course to be used in the project.]*

The following is added:

The HMA Bridge Surfacing mixture to be used for Temporary Surfacing and the Force Account for Emergency and Route Bridge Repairs shall be **[Insert Superpave HMA Surface Course – See Note to Designer]**

At the Contractor's option and subject to the approval of the Engineer, the Contractor may use a higher grade Superpave HMA Surface Course for the Temporary Surfacing and the Force Account for Emergency and Route Bridge Repairs at no additional cost to the Authority.

#### 302.03 CONTRACTOR'S QUALITY CONTROL

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*[Include the following with all contracts that include paving:]*

The following is added:

Prior to the commencement of any paving operations, the Engineer shall conduct a job meeting with the Contractor and Subcontractor, if one is used for paving, in order to review intended methods of grade control proposed by the Contractor, to highlight job requirements and criteria; to insure adequate plant production and number of trucks for material delivery in order to permit continuous placement; and to review specific requirements of any special asphalt or additive.

**(F) Storing or Holding the Mixture**

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*[Include the following with bridge deck repair contracts:]*

The following is added after the first paragraph:

The Contractor shall have at his disposal a portable heated asphalt storage unit with a minimum four ton capacity for the purpose of having hot mix available for the emergency pavement replacement and emergency concrete deck replacement items when material is not available from the asphalt plant. The asphalt storage unit shall be of triple wall construction heated with infrared propane gas burners that supply no more than 45,000 BTU per hour. The unit shall be capable of holding hot asphalt at the proper laydown temperatures for a minimum of 48 hours. The temperature of the inside skin of the storage unit shall not exceed 280°F. Any associated cost shall be included in the unit prices bid for HMA items.

**(H) PLACING LIMITATIONS.**

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*[Include the following with all contracts that include paving:]*

Replace the second paragraph with the following:

Leveling and/or surface courses must be completed in its entirety for the full-length of the paving section attempted that work day. No vertical drop-offs will be allowed at the time the lane or roadway is open to traffic.

The following is added after the second paragraph:

All paving equipment including rollers, pavers, water trucks and tack coat trucks to be utilized for resurfacing during non-daylight hours shall be equipped with a minimum of two (2) lights directed in each direction of travel of the equipment and powered with portable generators. Lights shall not interfere with an active lane or roadway and must be adequate to allow for complete inspection of the paved roadway by the Engineer both before and after compaction.

*[Include the following with bridge deck repair contracts:]*

The following is added after the seventh paragraph:

**Emergency and Routine Repairs**

- (1) In the event that the HMA bridge surfacing cannot be placed at areas of deck slab replacement due to adverse weather conditions or other unforeseen events, the Contractor shall place temporary asphalt surfacing over the spall area, bridge resurfacing area or deck slab replacement area, when so directed by the Engineer, to allow the closed lane to be opened to traffic.

Just prior to placement of the temporary surfacing, the Contractor shall apply an approved bond breaker to the surface of the membrane waterproofing in order to facilitate subsequent removal of the temporary surfacing. Placement and compaction of the temporary surfacing shall be as specified herein for asphalt pavement courses.

After the affected lane can again be closed, the Contractor shall remove the

temporary surfacing, being careful so as not to cause damage to the waterproofing membrane. Saw cutting shall be performed, as may be required, to properly and safely remove the temporary surfacing and to provide vertical faces in the existing adjacent asphalt surfacing. Any damage caused to the concrete deck slab shall be repaired to the satisfaction of the Engineer prior to placement of the HMA bridge surfacing. Any damage to the membrane waterproofing shall be repaired or the membrane replaced as directed by the Engineer. Repairs or replacement of membrane and/or repairs to concrete deck slabs shall be made by the Contractor at no additional cost to the Authority.

**(I) Spreading and Finishing**

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*[Include the following with bridge deck repair contracts:]*

The following is added after the ninth paragraph:

In situations where paving is completed shortly before opening of the lane to traffic and the newly placed asphalt surfacing has not sufficiently cooled, the Contractor shall, upon direction by the Engineer, water down the pavement to accelerate the cooling off process. Any associated cost shall be included in the Superpave HMA items bid in the Proposal.

**(K) Compaction**

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*[Include the following with all contracts that include paving:]*

**(1) Compacted Thickness**

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Replace the third row of the table after the first paragraph with the following:

Leveling Course	3 inches minimum
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*[Include the following with all bridge deck repair contracts:]*

The following is added:

HMA paving mixture placed for bridge surfacing or for approach roadway surfacing shall be placed in one layer to the compacted thickness prescribed in the Standard Specifications which will achieve a smooth profile using the bridge armor joints and/or the bridge profile for control, or as directed by the Engineer. The details shown on the plans shall be followed for transitioning the new pavement to the existing pavement.

The Contractor shall pave so that in the final compacted state, the asphalt surfacing meets top of armoring or if there is no armor joint the surfacing meets joint headers or abutment headblocks with an allowable tolerance of + 1/8 inch to + 1/4 inch. In order to achieve the desired grades, a smooth profile and a smooth riding pavement surface, the Contractor shall employ string lining to take elevations to establish pavement lift control points at the appropriate spacing, as necessary, to develop a profile that meets the aforementioned requirements.

**(2) Rolling.**

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The following is added:

The use of vibrating rollers on bridges will not be permitted.

*[Include the following with all contracts that include paving:]*

**(L) Sampling and Testing**

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**(3) Conformance to Job Mix Formula**

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Replace the second paragraph with the following:

The average of test results for the five samples or less for a lot shall conform to the job mix formula within the applicable tolerances of Sections 924.

**(4) Conformance to Volumetric Requirements**

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Replace the first sentence with the following:

Provisions of Sections 924 and the following shall apply for control only.

**(N) CLEANING OF SHOULDERS.**

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The Contractor shall utilize equipment that can remove debris deposits from the edges of shoulders or closed lanes without restricting the use of active adjacent lanes. The debris removal equipment shall only travel in the direction of traffic and shall be equipped with dust control.

The Contractor shall clean the right shoulders no more than two days prior to shifting traffic on to the shoulder for construction. During the following stages the Contractor shall perform cleaning of traffic lanes (during lane closing) as directed by the Engineer.

All closings for the cleaning of shoulders or lanes shall be performed by the Contractor's forces.

The Contractor shall submit his plan for cleaning of shoulders or lanes to the Engineer for review and approval 30 days after Contract is awarded. The plan shall detail the Contractor's methods for removal of debris deposits, including the work force and number and type of equipment to be used.

Disposal of dirt, debris, and all other products collected during the cleaning of shoulders shall be the responsibility of the Contractor and shall be legally disposed of off the Turnpike property.

**302.07 AIR VOIDS ACCEPTANCE PLAN.**

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**(B) Acceptance Plan**

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Replace the second sentence of the second paragraph with the following:

Air voids content will then be determined from five drilled cores (6" in diameter), taken at random locations from each lot, and tested according to Subsection 924.03 (G) for Superpave HMA.

**302.09 MEASUREMENT**

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*[Include the following, as needed, with all contracts that include paving:]*

Replace the first paragraph with the following:

Superpave Hot Mix Asphalt \_\_\_\_\_ Course will be measured by the total weight of mixture, placed as prescribed, as determined from certified scale weights.

Replace the fifteenth paragraph with the following:

Cleaning Inside Shoulders and Cleaning Outside Shoulders will be measured by the length of each shoulder cleaned, measured separately, regardless of width as directed by the Engineer. Preparation of shoulder cleaning plan, and removal and disposal of debris, will not be measured for payment.

Replace the sixteenth paragraph with the following:

Sealing Cracks in Bituminous Surface will be measured by the linear foot. Preparation and cleaning of cracks will not be measured separately for payment.

The following is added:

Temporary Surfacing will be measured by the total weight of the asphalt concrete mixture required, placed as prescribed in the Plans, or otherwise directed by the Engineer, and as determined from certified scale weights. Temporary Surfacing will not be measured for payment when temporary surfacing is applied because the Contractor is not able to finish work within allowable lane, roadway, shoulder and/or ramp closing durations (see Division 800). Removal and disposal of temporary surfacing will not be measured separately for payment. Labor equipment and materials required for furnishing and applying bond breaking agent to the membrane waterproofing will not be measured separately for payment.

### **302.10**

### **PAYMENT**

*[Include the following with bridge deck repair contracts:]*

The following is added:

<b>PAY ITEM</b>	<b>PAY UNIT</b>
Temporary Surfacing.....	Ton

No separate payment will be made for the labor, equipment and materials required for the removal and disposal of temporary surfacing, or for the furnishing and applying the bond breaking agent placed on the membrane waterproofing, but the costs thereof will be included in the unit price bid for the pay item "Temporary Surfacing". No payment will be made for temporary surfacing that is installed because the Contractor is not able to finish work within allowable lane, roadway, shoulder and/or ramp closing durations (see Division 800).

*[Include the following, as needed, with all contracts that include paving:]*

No separate payment will be made for the preparation of shoulder cleaning plan, and removal and disposal of debris, but the costs thereof will be included in the unit price bid for the pay items "Cleaning Inside Shoulders" and "Cleaning Outside Shoulders". Payment for all closings required for the cleaning of shoulders shall be in accordance with Section 802

## **SECTION 903 – HOT MIX ASPHALT (HMA)**

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*[Include the following, as needed, with all contracts that include paving:]*

### **903.01 COMPOSITION OF MIXTURES**

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*Replace the first four paragraphs in their entirety with the following:*

*The composition of the mixture for HMA surface courses shall be coarse aggregate, fine aggregate, and asphalt binder and may also include mineral filler and up to 10 percent RAP. RAP will not be permitted in surface course mixes used for Bridge Deck Resurfacing. The composition of the mixture for base or intermediate courses shall be coarse aggregate, fine aggregate, and asphalt binder and may also include mineral filler and up to maximum of 30 percent by weight of RAP as follows:*

<i>Recycled Materials</i>		
<i>Percent</i>	<i>Reclaimed Asphalt Pavement (RAP) Source</i>	<i>Maximum Recycled Percent</i>
<i>0 to 10</i>	<i>Open System</i>	<i>10</i>
<i>11 to 30</i>	<i>Open System</i>	<i>30</i>

*The grade of asphalt binder shall be determined by the Contractor, and submitted for approval by the Authority, for those projects that include the use of 11 to 30 percent of RAP.*

*Reclaimed asphalt pavement, RAP, may be used in base and leveling course mixes. The RAP shall be the product resulting from the cold milling or crushing of an existing hot mix asphalt pavement and shall be so processed so that 100 percent will pass the maximum aggregate size for the mixture being produced. RAP shall not exceed 30 percent of mass (weight) of the total mixture.*

### **903.02 GRADING REQUIREMENTS**

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*Delete this subsection in its entirety.*

### **903.03 JOB MIX FORMULA**

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*Delete this subsection in its entirety.*

### **903.04 SAMPLING AND TESTING**

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*Delete this subsection in its entirety.*

### **903.05 TABLES**

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*Delete this subsection in its entirety.*

## SECTION 924 – SUPERPAVE HOT MIX ASPHALT (HMA)

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### 924.01 COMPOSITION

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*Replace the first paragraph with the following:*

*The composition of the mixture for HMA surface courses shall be coarse aggregate, fine aggregate, and asphalt binder and may also include mineral filler and up to 10 percent RAP. RAP will not be permitted in surface course mixes used for Bridge Deck Resurfacing. The composition of the mixture for base or intermediate courses shall be coarse aggregate, fine aggregate, and asphalt binder and may also include mineral filler and up to maximum of 30 percent by weight of RAP.*

*Replace the first sentence of the fifth paragraph with the following:*

*The several mineral constituents shall be combined in such proportions that the resulting mixture meets the grading requirements in Subsection 924.04.*

### 924.02 JOB MIX FORMULA

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*The following is added to the end of the subsection:*

*The Contractor may submit to the Engineer for approval job-mix formulas of the type specified in the contract documents which have been previously approved for use by the NJDOT. Such job-mix formulas shall include the NJDOT Laboratory Serial Number. Submission of pre-approved job-mix formulas on NJDOT Producers Analysis of Materials and Job Mix Formulas form are acceptable.*

*The Contractor is advised that NJTA Standard Supplementary Specifications allow 10% RAP content in dense graded surface course mixes. RAP is not permitted in OGFC and bridge deck surface mixes. As such, a NJDOT approved job-mix formula with a RAP content of greater than 10% will not be permitted unless specifically approved by the Engineer.*

### 924.04 TABLES

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*The heading for Table 924-6 is replaced as follows:*

Table 924-6 Additional Fine Aggregate Requirements for Superpave		
Mix Compaction Level	Fine Aggregate Angularity % Air Voids (minimum)	Clay Content Sand Equivalent <sup>(2)</sup> % (minimum)

*Delete the last row from Table 924-2.*

*Delete the last row from Table 924-3.*

*Delete Note No. 2 from Table 924-3.*

*Delete the last row from Table 924-4.*

*Delete Note No. 3 from Table 924-4.*

*Delete the last row from Table 924-5.*

*Delete the last row from Table 924.6.*