HOT MIX ASPHALT - GENERAL CONSTRUCTION REQUIREMENTS – THICK LIFT

(REV 1-11-22)

ARTICLE 330-10 is deleted and the following substituted:

330-10 Protection of Finished Surface.

Keep sections of newly compacted asphalt concrete, which are to be covered by additional courses, clean until the successive course is laid.

Do not dump embankment or base material directly on the pavement. Dress shoulders before placing the friction course on adjacent pavement.

Equip blade graders operating adjacent to the pavement during shoulder construction with a 2 inch by 8 inch or larger board, or other attachment providing essentially the same results, attached to their blades so it extends below the blade edge and protects the pavement surface from damage by the grader blade.

To prevent rutting or other distortion, protect sections of newly finished dense-graded friction course and the last structural layer before friction course from traffic until the surface temperature has cooled below 160ºF.

For lifts of asphalt placed greater than 4 inches thick, protect the newly finished layer from traffic for six hours or until the temperature on the surface and at the midpoint of the layer has cooled below 160°F. Monitor the temperature of the center of the mat with a temperature measuring device (thermocouple wire or probe) placed approximately 100 feet from the end of each pull for layers greater than 4 inches. Prior to compacting the mat, make a trench 18 inches long from the edge of the pavement inward toward the center of the mat. Make the width of the trench slightly wider than the temperature measuring device. Make the depth of the trench approximately one half the depth of the pavement layer. Insert the temperature measuring device into the trench. Begin compacting the mat after the temperature measuring device has been installed. Protect the newly finished layer for six hours if the temperature measuring device fails or is determined to be unreliable by the Engineer. Trim the thermocouple wire flush with the edge of pavement. Do not remove the thermocouple wire from the pavement. Remove the probe, if desired, without damaging the pavement.

The Contractor may use artificial methods to cool the pavement to expedite paving operations. The Department may direct the Contractor to use artificial cooling methods when maintenance of traffic requires opening the pavement to traffic at the earliest possible time.

SUPERPAVE ASPHALT CONCRETE – THICK LIFT

(REV 1-11-22)

SUBARTICLE 334-1.4 is deleted and the following substituted:

334-1.4 Thickness: The total thickness of the Type SP asphalt layers will be the plan thickness as shown in the Contract Documents. Before paving, propose a thickness for each individual layer meeting the requirements of this specification, which when combined with other layers (as applicable) will equal the plan thickness. For construction purposes, the plan thickness

and individual layer thickness will be converted to spread rate based on the maximum specific gravity of the asphalt mix being used, as well as the minimum density level, as shown in the following equation:

Spread rate (lb/yd^2) = t x G_{mm} x 43.3

Where: t = Thickness (in.) (plan thickness or individual layer thickness)

G_{mm} = Maximum specific gravity from the verified mix design

The weight of the mixture shall be determined as provided in 320-3.2. For target purposes only, spread rate calculations should be rounded to the nearest whole number.

Note: Plan quantities are based on a G_{mm} of 2.540, corresponding to a spread rate of 110 lb/yd^2-in. Pay quantities will be based on the actual maximum specific gravity of the mix being used.

334-1.4.1 Layer Thicknesses: The allowable layer thicknesses for Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....1 to 1-1/2 inches
Type SP-12.5.....1-1/2 to 6 inches
Type SP-19.0.....2 to 6 inches

In addition to the minimum and maximum thickness requirements, the following restrictions are placed on mixes when used as a structural course:

Type SP-9.5 - Limited to the top two structural layers, two layers maximum.

Type SP-9.5 - Do not use for Traffic Level E applications.

Type SP-12.5 – Use a lift thickness of 3 inches or less when used as the final (top) structural layer below FC-5 mixtures.

Type SP-19.0 - Do not use for the final (top) structural layer below FC-5 mixtures. Type SP-19.0 mixtures are permissible for the layer directly below FC-9.5 and FC-12.5 mixtures. Do not use for the final (top) layer of shoulders.

334-1.4.2 Additional Requirements: The following requirements also apply to Type SP Asphalt Concrete mixtures:

1. A minimum 1-1/2 inch initial lift is required over an Asphalt Membrane Interlayer (AMI).

2. When construction includes the paving of adjacent shoulders (less than or equal to 5 feet wide), the layer thickness for the upper pavement layer and shoulder must be the same and paved in a single pass, unless called for differently in the Contract Documents.

3. All overbuild layers must be Type SP Asphalt Concrete designed at the traffic level as stated in the Contract Documents. Use the minimum and maximum layer thicknesses as specified above unless called for differently in the Contract Documents. On variable thickness overbuild layers, the minimum and maximum allowable thicknesses will be as specified below, unless called for differently in the Contract Documents.

Type SP-9.5.....3/8 to 2 inches
Type SP-12.5.....1/2 to 3 inches
Type SP-19.0.....1-1/2 to 4 inches

4. Variable thickness overbuild layers constructed using a Type SP-9.5 or SP-12.5 mixtures may be tapered to zero thickness provided the contract documents require a minimum of 1-1/2 inches of dense-graded mix placed over the variable thickness overbuild layer.

SUBARTICLE 334-8.4 is deleted and the following substituted:

334-8.4 Payment: Payment will be made under:

Item No. 922-334- Superpave Asphaltic Concrete - per ton.