SECTION 401 – HOT MIX ASPHALT (HMA) PAVEMENT

Make the following amendments to said Sections:

(I) Amend **Section 401.02(A) General**, by adding the following paragraph after line 24:

"The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these specifications. WMA processes include combinations of organic additives, chemical additives, and foaming."

(II) Amend **Section 401.02(A) General**, by replacing lines 36 - 37 to read as follows:

"In surface and binder courses, aggregate for HMA may include RAP quantities up to 20 percent of total mix weight."

(III) Amend **Section 401.02(C) Submittals**, by adding the following paragraph after line 89:

"The Contractor may use warm mix asphalt (WMA) processes in the production of HMA. The Contractor shall submit to the Engineer for approval, the proposed process and how it will be used in the manufacture of HMA. The process submittal shall include the temperature range of the WMA."

(IV) Amend **Section 401.03(B)(3) Asphalt Pavers**, from line 200 to include the following:

"**(h)** Equipped with a mean of preventing the segregation of the coarse aggregate particles from the remainder of the bituminous plant mix when that mix is carried from the paver hopper back to the paver augers. The means and methods used shall be approved by the paver manufacturer and may consist of chain curtains, deflector plates, or other such devices and any combination of these.

The following specific requirements shall apply to the identified bituminous pavers:

(1) Blaw-Knox bituminous pavers shall be equipped with the Blaw-Knox Materials Management Kit (MMK).

(2) Cedarapids bituminous pavers shall be those that were manufactured in 1989 or later.

(3) Barber-Green/Caterpillar bituminous pavers shall be equipped with deflector plates as identified in the December 2000 Service Magazine entitled “New Asphalt Deflector Kit {6630, 6631, 6640}”.

Prior to the start of using the paver for placing plant mix, the Contractor shall submit for approval a full description in writing of the means and methodologies that will be used to prevent bituminous paver segregation. Use of the paver shall not commence prior to receiving approval from the Engineer.

The Contractor shall supply a Certificate of Compliance that verifies that the approved means and methods used to prevent bituminous paver segregation have been implemented on all pavers used on the project and is working in accordance with the manufacturer’s requirements.”

(V) Amend **Section 401.03(F)(1) HMA Pavement Courses One and a Half Inches Thick Or Greater**, from lines 499 to 505 to read as follows:

“**(1) HMA Pavement Courses One and a Half Inches Thick Or Greater.** Where HMA pavement compacted thickness indicated in the contract documents is 1-1/2 inches or greater, compact to not less than 93.0 percent nor greater than 97.0 percent of the maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate.”

(VI) Amend **Section 401.03(F)(3) HMA Pavement Courses One and a Half Inches Thick or Greater In Special Areas Not Designated For Vehicular Traffic**, from lines 530 to 538 to read as follows:

“**(3) HMA Pavement Courses One and a Half Inches Thick or Greater In Special Areas Not Designated For Vehicular Traffic.** For areas such as bikeways that are not part of roadway and other areas not subjected to vehicular traffic, compact to not less that 90.0 percent of maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate. Increase

asphalt content by at least 0.5 percent above that used for HMA pavements designed for vehicular traffic."

(VII) Amend **Section 401.04 Measurement**, from lines 597 to 603 to read as follows:

"**401.04 Measurement.**

(A) Asphalt concrete pavement will be paid on a lump sum basis. Measurement for payment will not apply.

(B) The Engineer will measure asphalt concrete pavement per ton in accordance with the contract documents.

(C) The Engineer will measure leveling course per ton in accordance with the contract documents."

(VIII) Amend **Section 401.05 Payment**, from lines 605 to 635, to read as follows:

"**401.05 Payment.** The Engineer will pay for the accepted pay items listed below at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
(A) HMA Pavement, Mix No. IV	Ton

(1) 80% of the contract unit price upon completion of submitting a job-mix formula acceptable to the Engineer; preparing the surface, spreading, and finishing the mixture; and compacting the mixture;

(2) 20% of the contract unit price upon completion of cutting samples from the compacted pavement for testing; placing and compacting the sampled area with new material conforming to the surrounding area; protecting the pavement; and final analysis.

The Engineer will pay for cold planing in accordance with and under Section 415 – Cold Planing of Existing Pavement.

The Engineer will pay for adjusting existing frames and covers and valve boxes in accordance with and under Section 604 – Manholes, Inlets and Catch Basins and Section 626 – Manholes and Valve Boxes for Water and Sewer Systems.

The Engineer may, in lieu of requiring removal and replacement, use the sliding scale factor to accept HMA pavements compacted below 93.0 percent and above 97.0 percent. The Engineer will make payment for the material in that production day at a reduced price arrived at by multiplying the contract unit price by the pay factor shown in Table 401.05-1.

Table 401.05-1 – Sliding Scale Pay Factor for Compaction

Percent Compaction	Percentage Payment
Greater than 98.0	Removal
Greater than 97.0 - 98.0	95
93.0 - 97.0	100
90.0 – less than 93.0	80
Less than 90.0	Removal

"

END OF SECTION 401