

**SPECIAL PROVISION**

**REGARDING**

**BITUMINOUS PLANT MIX (HOT MIX) THIN LIFT FRICTION COURSE**

**Description:** This specification covers the requirements for the placement of a thin lift hot mix overlay. The work shall consist of the design and construction of an Asphalt Concrete surface in accordance with Sections 407, 411, and 903 of the Specifications.

**Aggregate:** Aggregate shall meet the requirements of Section 903.11 of the Standard Specifications. A minimum of 50% of the aggregate shall be crushed to meet the requirements of **Subsection 903.11(c) Grading D** for the appropriate traffic level.

**Mixture Design Requirements:** The mixture shall be designed in accordance with section 407.03 of the Standard Specifications except as stated below. The combined gradation shall meet the following:

**Composition by percent weight**

| <b>Sieve Size</b>             | <b>Percent Passing<br/>(% weight)</b> |
|-------------------------------|---------------------------------------|
| 1/2 in.                       | 100                                   |
| 3/8 in.                       | 100                                   |
| #4                            | 89 - 94                               |
| #8                            | 53 - 77                               |
| #30                           | 23 - 42                               |
| #50                           | -                                     |
| #100                          | 9 - 18                                |
| #200                          | 6 - 14                                |
|                               |                                       |
| <b>Asphalt Cement</b>         | 5.7% - 7.5%                           |
| <b>Design Air Voids</b>       | 4.0% ± 0.2%                           |
| <b>Production Air Voids</b>   | 3 - 5.5%                              |
| <b>Stability</b>              | 2,000 lbs.                            |
| <b>Dust/Asphalt</b>           | 1.0- 2.0                              |
| <b>VMA</b>                    | 16 min.                               |
| <b>Tensile Strength Ratio</b> | Per specification section 407.03      |

The mixture shall contain a maximum of 15% natural sands and a maximum of 15% Recycled Asphalt Pavement (RAP). All RAP shall be processed for consistency such that all RAP passes the 5/16” screen.

**Weather Limitations:** The thin lift mixture shall be placed only when the pavement surface temperature and the ambient air temperature are a minimum 55° F and rising. The placement of the thin lift mixture shall be limited to the period from April 1 to November 1.

**Compaction and Density:** A minimum of 2 rollers meeting the requirements of section 407.07 will be required. Breakdown rolling shall be performed, as soon as possible and while the mixture is sufficiently hot, by a pneumatic tire roller having a minimum contact pressure of 85 psi (585 kPa). A combination roller may be substituted for a pneumatic roller. The paver speed shall be regulated so rollers can maintain proper compaction of the mixture as determined by the Engineer.

**Method of Measurement:** The accepted quantities of thin lift mixture shall be paid for at the respective contract unit price per ton. For bidding purposes, the asphalt cement content for thin lift hot mix shall be 6.3%.

**Basis of Payment:** The unit price per ton shall include all labor, materials and equipment necessary to complete the work. Mixture acceptance shall be in accordance with section 407.20.

| <b><u>Item Number</u></b> | <b><u>Description</u></b>              | <b><u>Unit</u></b> |
|---------------------------|--|--------------------|
| 411-03.07                 | ACS MIX (PG64-22) THIN LIFT CS ASPHALT | TON                |
| 411-03.08                 | ACS MIX (PG70-22) THIN LIFT CS ASPHALT | TON                |
| 411-03.09                 | ACS MIX (PG76-22) THIN LIFT CS ASPHALT | TON                |