

SECTION 2500

HOT BITUMINOUS PAVING

1.00 GENERAL

1.01 Scope. Work to be performed under this section shall include all labor, equipment, materials and miscellaneous items necessary to furnish and install one or more courses of bituminous mixture constructed on a prepared surface in accordance with the Specifications or as shown on the Drawings. The finished product shall be in close conformity with the lines, grades, thickness, and typical cross sections shown on the Drawings or as established in the field.

1.02 Related Work Specified Elsewhere.

Section 2140 - Embedment and Base Course Aggregate

1.03 Reference Standards. All work is to be performed in accordance with the "State Department of Highways - Division of Highways - State of Colorado - Standard Specifications for Road and Bridge Construction", latest edition as revised herein. The reference Specifications are not reproduced in their entirety.

1.04 Submittals.

- A. Mix Design. Provide complete mix design by independent testing laboratory, including certifications of all material compliance.
- B. Prime Coat. Certification of material.
- C. Tack Coat. Certification of material.

1.05 Coordination. It shall be the responsibility of the Contractor under this section to coordinate this work with all other trades involved in the project. No paving work shall be started until the work of others has progressed to a point that a definable area can be paved; patching, blending, butting, etc. of work under this section will not be allowed except as required as part of the normal paving operation.

2.00 MATERIALS

2.01 Composition of Mixture. Reference Section 403.02 (further reference 401.02 through 401.06) Section 702, Section 703, and Section 704, with revisions and additions as follows:

- A. Use Grading E (Reference Section 703.04); maximum aggregate size may be 5/8".
- B. Asphalt Cement to be Viscosity Grade AC-10 (ASTM D946), 5.7% by \pm 0.5% by weight of mix.
- C. Marshall Property Requirements:

Stability, lbs.	500 min.
Flow, 0.02 inch	8-18
Voids, total mix %	3-11
Aggregate voids filled %	65-75
Compaction, blows ea. end	50

- D. Immersion-Compression:

Voids in total mix %	3% - 6%
Compressive strength psi	250 min.
Retained strength %	75
- E. Minimum temperature of mixture emptied from pugmill, 280°F.
- F. Delete last sentence, second paragraph, Section 401.06.
- G. Delete Section 702.05.
- H. Contractor to provide to the Engineer, a job mix composition meeting this section. Submittal shall include testing results sufficient to show compliance. Testing shall be under the certification of an independent testing laboratory acceptable to the Engineer.
- I. Contractor may use an approved anti-stripping additive.

2.02 Prime Coat. Reference Section 702.03.

- A. Prime coat shall be MC-70 (ASTM D2026)

2.03 Tack Coat. Reference Section 702.04.

- A. Tack Coat to be SS-1 or SS-1n (ASTM D977) or CSS-1h (AASHTO M208).

3.00 METHODS AND PROCEDURES

Reference Section 403.03 (further reference 401.07 through 401.20) and Section 407.04 through 407.08.

- A. Maximum compacted pavement depth per pass to be 2½". Minimum compacted pavement depth per pass to be 1 1/2 times the maximum aggregate size.
- B. Prime not required unless indicated on Drawings. Prepared base course or subgrade surfaces receiving pavement courses shall be primed at Contractor's expense if the surface has deteriorated, due to traffic, weather or time lapse between surface preparation and placement of bituminous materials, such that in the opinion of the Engineer, use of prime coat is required.
- C. Tack coat required between lifts, on all abutting old pavement surfaces and for overlays on existing pavements unless waived by Engineer. Application rate shall be 0.05 to 0.10 gallons per square yard diluted.

Dilution shall be one part tack emulsion to one part water.

All cut asphalt surfaces that are to butt new pavement sections shall be tacked with a liberal application of tack coat prior to paving.

3.01 Compaction. Minimum density of 95% of a laboratory job mix specimen.

3.02 Surface Tolerances. Section 401.20. No skin patching will be allowed.

4.00 FIELD QUALITY CONTROL

4.01 Inspection and Testing. Inspection and testing to be performed at the direction of the Engineer. Contractor to cooperate fully with all persons engaged in testing.

4.02 Density Testing and Control.

- A. Reference Standards. Density relationship to be developed in accordance with ASTM D2950.
- B. Field Testing. Testing for density during compaction operations to be done using nuclear density methods.
- C. Frequency of Testing. Minimum of three tests or one test per every 2000sf per lift whichever is greater.
- D. The Town reserves the right to base final acceptance on core samples and tests.
- E. Retesting. In the event of failure to meet compaction criteria, Contractor shall recompact and/or replace defective work at direction of the Town. All retesting to be paid for by Contractor and to be performed by a testing firm approved by the Town.

End of Section