

SECTION 401 GENERAL REQUIREMENTS FOR SURFACES

401.01. DESCRIPTION.

This Section covers requirements common to all types of surface construction.

401.02. MATERIALS.

Materials as required for construction of the various surface types shall meet the requirements set forth in the appropriate Subsections of Section 700 - Materials, where a Subsection is designated for each surface type.

401.03. EQUIPMENT.

Maintain and operate all equipment in accordance with the manufacturers' recommendations.

- (a) **Distributors and Supply Tanks.** Apply bituminous material, at uniform heat, uniformly on variable widths of surface up to 26 feet (7.8 m) at readily determined and controlled rates from 0.1 to 1.0 gallons per square yard (0.45 to 4.5 L/m²) with uniform pressure.

NOTE: Allowable variation from any specified rate must not exceed 0.03 gallon per square yard (0.14 L/m²).

Distributor equipment shall include a tachometer, pressure gauges, accurate volume metering devices or a calibrated tank, and a thermometer for measuring temperatures of tank contents. Distributors shall be equipped with a power unit for the pump and with full circulation spray bars adjustable laterally and vertically.

The distributor shall also be equipped with a positive shut-off valve and fittings as needed to prevent the spray bar or other mechanisms from dripping bituminous material; make sure that there will be sufficient material left in the distributor at the end of each application to insure uniform distribution.

NOTE: In no case should you allow the distributor to "blow."

Check the angle of the spray nozzles and the height of the spray bar frequently, and adjust them to insure uniform distribution of the bituminous material. Drilling, clogging, or streaking of the bituminous material is not an acceptable application; in the event these problems occur, take necessary corrective measures before resuming distribution.

Make a check of the distribution rate and the uniformity of the distribution when directed by the Engineer.

Supply tanks shall meet the requirements of AASHTO M-156 Section 3.

- (b) **Compactors.** Rollers shall be steel wheel, pneumatic tire, vibratory, or a combination of these types. They shall be in good condition, capable of reversing without backlash, and operable at speeds slow enough to avoid displacement of the bituminous mixture. Vibratory rollers shall be equipped with amplitude and/or frequency controls specifically designed for compaction of

the material on which it is to be used. The type, number, and weight of rollers shall be sufficient to compact the mixture to the required density while it is still in a workable condition.

NOTE: The use of equipment which crushes the aggregate will not be permitted.

401.04. CONSTRUCTION METHODS.

- (a) **Tolerances.** In order to provide acceptable smoothness, width, and thickness, maintain accurate control in placing, spreading, finishing, and compacting surface courses. Use equipment as may be required to provide acceptable construction within the prescribed tolerances.

<u>SURFACE TYPE</u>	<u>SECTION</u>	<u>TOLERANCES</u>	
		<u>SURFACE</u>	<u>THICKNESS</u>
Open Graded Friction Course	406	1/8 inch in 10 feet (3 mm in 3 m)	Reasonable Conformity with the Plans
Plant Mix Asphalt Concrete Pavement	411	1/8 inch in 10 feet (3 mm in 3 m)	same as above
P.C. Concrete Pavement	414	1/8 inch in 10 feet (3 mm in 3 m)	See Section 414

All pavement will be subject to straightedge inspection during construction operations. The Engineer will make tests with a 10 foot (3m) straightedge or other approved device for compliance with specified surface tolerances at selected locations. The variation of the surface from the testing edge of the straightedge between any two contacts with the surface shall at no point exceed the specified tolerance. Correct humps or depressions exceeding the specified tolerance in an acceptable manner.

- (b) **Traffic.** Prior to construction equipment being placed on new or existing pavement, provide the Engineer with a procedure that contains all of the measures and methods to be used to protect the pavement from damage. If any spalling, cracking, chipping, rutting, or other defacing of the pavement is caused by construction operations, repair the surface(s) to new-pavement condition at no additional cost to the Department of Transportation. Refer to Section 105.07 of the Standard Specifications for projects with multiple Contractors in the same project limits.

SECTION 402 BITUMINOUS SURFACE TREATMENT

402.01. DESCRIPTION.

This work shall consist of the construction of an acceptable single- or double-surface treatment of aggregates and bituminous materials; this means that the surface is free from bleeding, loose chips, loss of imbedded aggregates, or other defects in accordance with these Specifications, and is in reasonably close conformity with the lines shown on the Plans or established by the Engineer.