SECTION 1300 PRIME AND TACK COAT

1301 SCOPE. This section governs the requirements for all labor, equipment and materials for the application of liquid asphalt to a prepared pavement (concrete, asphaltic concrete), granular base or subbase. The type and grade of asphalt material to be used as prime or tack coat, is as specified in the special Provisions or as indicated by the plans.

1302 LIQUID ASPHALT MATERIAL. The liquid asphalt material to be used for surface preparation shall be as listed in the following table.

Condition	Type	Gal./Sq.Yd.	Usage	Temperature	Cure Time
Concrete	RC-70	.05-.10	Tack	100-140	1-6 hours
Asphalt	Emulsion	.05-.12	Tack	120-170	1-3 hours
	SS-CRS	.05-.12	Tack	120-170	1-4 hours
	RC-70	.05-.12	Prime	100-140	1-6 hours
Treated	CRS	.10-.20	Prime	120-170	1-3 hours
Base	MC-70	.10-.20	Prime	100-140	24-48 hours
	RC-800	.10-.20	Prime	150-225	1-6 hours
Rock	MC-70	.2-.5	Prime	100-140	24-48 hours

The asphalt material shall conform to the latest ASTM specifications for "Asphalt Cements and Liquid Asphalts." Sampling shall be in accordance with ASTM D-140.

1303 SAND COVER. Sand cover, if used, shall be any clean granular mineral meeting the following grading requirements. When tested with laboratory sieves one hundred (100) percent shall pass the No. 4 sieve and not more than two (2) percent shall pass the No. 200 sieve. The moisture content of the sand shall not exceed three (3) percent by weight.

1304 APPROVAL OF MATERIALS. Asphalt materials shall be approved by the Engineer prior to use in the work. The Engineer may accept a certified analysis by the refinery laboratory when a copy of the certified analysis accompanies each shipment of asphalt to the project. The Engineer will reserve the right to make check tests of the asphalt received on the job and, if the system of certified analysis proves to be unsatisfactory to the Engineer, he may discontinue this arrangement.

1305 PRESSURE DISTRIBUTOR. The distributor used in applying bituminous materials shall be of a self-propelled pressure type, equipped with suitable mechanical circulating appliances which will provide a uniform temperature in the entire mass of the material. The distributor shall be so constructed and equipped as to meet the following requirements:

A. It shall be capable of applying bituminous material on the street at an accurately controlled uniform rate within the range of 0.01 to .050 gallons per square yard throughout the entire length of the bar, regardless of the load carried, gradient or change in direction of the street.

B. The spray bar shall be equipped with nozzles of such design and size that they can be adjusted to height and able to produce a uniform application, without streaks or ridges, throughout the entire width of application. The Contractor and/or developer shall make tests and adjustments as necessary to insure that a uniform application is obtained. If nonuniform spraying occurs during priming operations, the Contractor and/or developer shall correct the malfunction. If the malfunction cannot be corrected, a different distributor that functions properly shall be obtained, or operations will be terminated until corrections are made. The Contractor and/or developer shall make a test application with the repaired or substituted distributor to insure proper operation of such equipment.

C. The pressure system on the spray bar shall be controlled to maintain a uniform pressure throughout the entire length of the spray bar at all times.

D. The distributor shall be equipped with a heating and circulating device to maintain the bituminous material within the bar at the specified temperature at all times.

E. The distributor or spray bar shall be equipped with a shutoff valve constructed and located as to provide instantaneous discharge of the bituminous material from the spray nozzles when the valve is opened, and instantaneous shutoff of the bituminous material discharge, without dripping, when the valve is closed.

F. The spray bar shall be so constructed that the width of application can be varied from four (4) feet to thirteen (13) feet.

G. The circulating system shall be equipped with a readily accessible strainer in the discharge line.

H. The distributor tank shall be equipped with a thermometer placed so that it will accurately indicate the temperature of the contents of the distributor.

I. A calibrated measuring stick graduated in gallons shall be supplied to accurately determine the volume of the bituminous material in the distributor tank. If so directed by the Engineer, the measuring stick shall be recalibrated on the job and the Contractor and/or developer shall furnish all equipment, materials and labor for such calibration.

J. A meter shall be provided, operated by an independent wheel, to indicate the speed in feet per minute. It shall be located in such a position that is readily visible to the driver when the vehicle is in operation.

K. An auxiliary spraying hose equipped with a shutoff valve on the operating handle shall be provided for attachment to the pressurized system.

1306 PREPARATION OF EXISTING SURFACE. Immediately before applying the prime or tack coat, the area to receive asphalt shall be dry and cleaned of all undesirable material.

1307 APPLICATION OF ASPHALT MATERIAL. Application of the asphalt material shall be made uniformly at the rate of gallons per square yard as specified in Section 1302 and shall be applied with a pressure distributor unless otherwise directed by the Engineer.

The spray bar shall be cut off instantaneously after each application to secure a straight line and full application of asphalt primer. If necessary, to prevent dripping and excess leakage, a drip pan shall be inserted under the nozzles when the application is stopped.

An auxiliary spraying hose shall be used to apply asphalt material to any and all locations that are unavoidably missed by the spray bar. The auxiliary spraying hose shall be used to apply material to small irregular areas not practical to apply with the spray bar. Hand spraying shall not be performed on any stretch of roadway in excess of one hundred (100) feet in length unless authorized.

1308 APPLICATION OF SAND COVER. If the asphalt material is not completely cured within the maximum specified curing time, sufficient sand shall be spread over the surface with a mechanical spreader to blot up the excess asphalt. The rate of application shall be specified or approved by the Engineer. Prior to placing an asphalt paving course, all loose sand shall be swept from the primed or tacked surface.