

**TECHNICAL SPECIFICATION 255
PAVEMENT OVERLAY FABRIC**

255.1 SCOPE OF WORK

This technical specification covers the labor, materials, tools, and equipment to furnish and install pavement overlay fabric in accordance with these specifications and manufacturer's recommendations on a pavement surface ready to accept this application.

255.2 MATERIALS

A. Fabric:

Fabric shall be a needle punched, non-woven polypropylene fabric meeting the following specifications:

	Typical	Minimum
Weight, oz / sq. yd.	4.6	3.6
Tensile Strength, lbs. (1)	120	90
Elongation-at-Break, % (1)	65	50
Bituminous Retention, gals / sq. yd.	--	0.20
Color	Black	
Width, inches	150	
Length / Roll, yds.	100	

(1) ASTM Method D-4632, Heat Bonded one-sided

B. Tack Coat:

Tack coat shall conform to Form 816, Section M.04.03.

255.3 EQUIPMENT

A. Bituminous Distributor:

The distributor must be suitably metered and capable of spraying the bituminous sealant at a prescribed uniform application rate. No puddles of sealant shall be allowed to form on the surface and there shall be no skipped areas. The Engineer may require satisfactory test applications at an off-site area to insure proper equipment performance. The distributor should be equipped with a single nozzle hand spray and a positive shut-off valve.

B. Fabric Laydown Equipment:

Mechanical laydown equipment must be capable of handling full rolls of fabric, and shall be capable of laying the fabric smoothly, without excessive wrinkles and/or folds. When manual laydown is required, a length of standard 1 inch pipe, together with suitable roll tension devices, are required for proper roll handling.

255.4 CONSTRUCTION METHODS

A. Surface Preparation:

The surface on which the fabric is to be placed should be free of dirt, water and vegetation.

B. Tack Coat Application:

The tack coat must be uniformly spray applied at the rate recommended by the manufacturer. The quantity specified will vary with the surface condition of the existing pavement, but will normally be applied at the rate of 0.25 to 0.30 gallons per square yard (gsy) residual bituminous. At least 0.20 gsy residual bituminous, under heat of the applied overlay, is absorbed by the fabric alone. Within street intersections or other zones where vehicle speed change is commonplace, reduce the prescribed application rate by 20 percent.

Application will be by distributor equipment wherever possible, with hand spraying kept to a minimum. Temperature of the bituminous must be sufficiently high to permit a uniform spray pattern. For bituminous cements, the minimum recommended temperature is 290° F. (NOTE: If the fabric is oversprayed, distributor tank temperatures should not exceed 325°F to avoid damage to the fabric).

The target width of the bituminous sealant application should be the fabric width plus a minimum of 6 inches on each side. Any excess bituminous sealant shall be cleaned from the road surface to avoid flushing and possible fabric movement at these bituminous-rich areas.

The quantity of bituminous applied to the fabric is extremely important. The object is to fully seal the membrane, but not to use an excessive quantity, which might cause a slippage plane.

Bituminous sprayed over the fabric should be confined to the fabric area. Excess bituminous applied outside this area may cause bleeding.

C. Fabric Placement:

The fabric shall be placed into the tack coat with a minimum amount of wrinkles prior to the time the bituminous has cooled and lost tackiness. The fabric is unrolled so that the bearded (fuzzy) side is unwound into the sealant, thus providing optimum bond between fabric and pavement during the construction process.

As directed by the Engineer, wrinkles severe enough to cause "folds" shall be slit and layed flat. Brooming will maximize fabric contact with the pavement surface. Small wrinkles, which flatten under compaction, are not detrimental to performance.

Overlap of fabric joints should be 6 inches to ensure full closure of the joint. Transverse joints should be "shingled" in the direction of paving to prevent edge pick-up by the paver. As directed by the Engineer, additional sealant of about 0.20 gsy shall be applied to fabric joint.

Placement of the bituminous concrete overlay (which is not a part of this Pay Item) should closely follow fabric laydown. In the event that the sealant bleeds through the fabric before the hot mix is placed, it may be necessary to blot the sealant by spreading sand or hot mix over the affected areas. This will prevent any tendency for construction equipment to pick up the fabric when driving over it.

D. Ambient Temperatures:

Air temperatures during fabric installation should be greater than 50°F to allow adequate tack from the bituminous sealant to hold the fabric in place. At drains, manholes, watergates, or other pavement penetrations, the fabric can be placed over the opening and excess fabric shall be cut and removed within 2 inches of the opening.

E. Clean Up:

The Contractor shall be responsible for clean up and disposal of all waste materials. All waste or excess materials shall be cleaned up daily and removed from the site.

255.5 MEASUREMENT

Measurement for this item will be based on the number of square yards of pavement surface of fabric completed in place and accepted.

255.6 PAYMENT

Payment for this item will be based on the contract unit price per Square Yard, completed, in place, including all labor, materials, tools, and equipment necessary to complete the work as specified.

PAY ITEM	PAY UNIT
Pavement Overlay Fabric	S. Y.