

TECHNICAL SPECIFICATIONS  
FOR  
GEOTEXTILES

1. Description

This work shall consist of placing the approved geotextile fabric over a prepared area in preparation for pavement overlay, slope protection, subsurface drainage applications, base reinforcement, or erosion stabilization.

2. Materials

- (a) Geotextile Fabric for Pavement Overlay shall be a fabric produced specifically for overlaying existing pavement in preparation for an overlay of asphaltic concrete base, leveling, or surface course. Acceptable fabric shall be produced by a reputable manufacturer engaged in the production of such fabrics and shall include, but not limited to the following: AMOPAVE as manufactured by AMOCO Fabrics Co., Dupont Repave Style T-376 Paving Fabric, Mirafi, 900N as manufactured by Dominion Textile Co., Petromat non-woven fabric as manufactured by Phillips Petroleum Co., or Trevira Spunbond Engineering Fabric for Asphalt Pavement Systems as manufactured by Hoechst Fiber Industries. Other fabrics may be submitted for approval by the Engineer.
- (b) Tack Coat for Pavement Overlay shall be Asphalt Cement or Emulsified Asphalt meeting the requirements of Section 7.0 of these Specifications for the referenced materials.
- (c) Geotextile Fabric for Slope Protection shall be a non- woven fabric of polyester or polypropylene inert to commonly encountered chemicals, hydrocarbons, mildew and rot resistant, resistant to ultraviolet light exposure, insect and rodent resistant, and conform to the following properties:

Grab Tensile Strength (ASTM D1682)	200 lbs min
Puncture Strength (ASTM D751)	125 psi min
Equivalent Opening Size (CW2215)	
No larger than USS Standard Sieve No. 50	
or smaller than 100	

- (d) Geotextile Fabric for Subsurface Drainage Applications shall be a nonwoven fabric of polyester or polypropylene inert to commonly encountered chemicals, hydrocarbons, mildew and rot resistant, insect and rodent resistant and conform to the following properties:

Grab Tensile Strength (ASTM D1682)	90 lbs min
Puncture Strength (ASTM D751)	125 psi min
Coefficient of Normal Permeability - K	0.1 cm/sec
Equivalent opening size (CW 2215)	
No larger than U.S. Standard Sieve No. 50 or smaller than 100	

- (e) Securing pins for anchoring c) and d) above shall be 3/16 inch steel bars, pointed at one end and fabricated with a head to retain a steel washer having an outside diameter of not less than 1.5 inches. The pin shall not be less than 18 inches. U-shaped pins shall be an acceptable option.
- (f) Geotextile for base reinforcement shall be a heavy duty geotextile produced specifically for base reinforcement such as Synthetic Industries 300 ST, Mirafi 600X, Exxon GTF 300, or approved equal.
- (g) Geotextile for Erosion Stabilization shall be a three dimensional, polypropylene geotextile specially designed for erosion control applications on steep slopes and vegetated waterways. The matrix shall be composed of monofilament strands woven into a uniform, dimensionally stable configuration of resilient pyramid-like projections and shall have the following properties:

Mechanical Properties

Tensile Strength:	3,200 x 2,200 lb/ft per ASTM D-4595
Tensile Elongation:	55% (max.) per ASTM D-5035
Tensile Strength at 10% Elongation:	1,850 x 1,600 lb/ft (typ) per ASTM D-4595

Physical Properties

Thickness:	0.5" per ASTM D-1777
Mass per Unit Area:	14 oz./square yard per ASTM D-5621
Resiliency:	80% per ASTM D-1777

Endurance

UV Resistance at 1,000 hours:	80% per ASTM D-4355
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The Geotextile for Erosion Stabilization shall be Synthetic Industries, Pyramat High Performance Turf Reinforcement Mat, or equal.

3. Equipment

All equipment necessary for the placing of the geotextile fabric shall be approved before the work will be permitted to begin.

#### 4. Construction Requirements

The special conditions will generally identify which street will require the use of geotextile fabric for Pavement Overlay; however, the Engineer may select additional streets or specific areas of certain streets from which deletions or additions of fabric will be made.

- (a) The adhesive or tack coat application for Geotextile Fabric for Pavement Overlay will be in accordance with the manufacturers written recommendations.
- (b) The placing and lap for the fabric will be in accordance with the manufacturers written recommendations.
- (c) The placing and lap for the Geotextile Fabric for Pavement Overlay will be in accordance with the manufacturers written recommendations.
- (d) The installation of Geotextile Fabric for Slope Protection and Subsurface Drainage shall be in accordance with the Plans and the manufacturer's recommendations. Overlaps when necessary shall be 18 inches minimum. Securing pins shall be used when necessary to insure proper anchoring of the fabric.
- (e) The installation of geotextile for base reinforcement shall be in accordance with manufacturer's recommendations. Overlaps at ends of rolls and at roll widths shall be in accordance with manufacturer's recommendations or as directed by the Engineer.
- (f) The installation of geotextile for erosion stabilization shall be in accordance with the manufacturer's recommendation. Overlaps at ends of rolls and at roll widths shall be in accordance with the manufacturer's recommendations or as directed by the Engineer.

#### 5. Method of Measurement

The Geotextile Fabric shall be measured by the square yard or fraction thereof in place.

#### 6. Basis of Payment

Unless otherwise noted in the Plans, the accepted quantity of Geotextile Fabric complete in place will be paid for at the contract unit price per square yard. This price shall constitute full compensation for all work materials, labor and other incidentals required to complete the work in accordance with these Specifications. Payment will be made under the following bid items as set forth in the Bid Schedule:

- Geotextile Fabric for Pavement Overlay
- Geotextile Fabric for Slope Protection
- Geotextile Fabric for Subsurface Drainage
- Geotextile Fabric for Base Reinforcement
- Geotextile Fabric for Erosion Stabilization