

ITEM P-682

GEOTEXTILE FOR DRAINAGE AND EROSION CONTROL

DESCRIPTION

682-1.1 Prepare surfaces and furnish and place geotextiles for embankment drainage as shown on the Plans.

MATERIALS

682-2.1 Use geotextiles that conform to the following:

- a. Drainage.** Geocomposite comprised of a tri-planar geonet structure with thermally bonded non-woven geotextile on both sides, capable of removing subsurface water from the embankment. Meet ASTM D-4716 for Transmissivity.

The Drainage Geocomposite shall be:

ROADRAIN 7100-2
TENAX Corporation, Geosynthetics Division
4800 East Monument Street
Baltimore, MD 21205
1-800-356-8495
www.tenax.net

or approved equal.

CONSTRUCTION REQUIREMENTS

682-3.1 Surface Preparation. Prepare Borrow surface by removal of stumps, brush, boulders, and sharp objects. Borrow surface should be smooth and to the design grade. Fill holes and large ruts with Borrow, or as approved.

682-3.2 Geotextile Placement. Unroll geotextile directly onto the prepared surface. Rolls shall be placed along roadway direction, with the main flow direction orientated down slope towards roadway edge. Stretch geotextile to remove any creases or wrinkles. Do not expose geotextiles to the elements for longer than 5 days.

682-3.3 Joining. Side-to-Side joints shall overlap a minimum of 3 inches. End-to-End joints shall be overlapped a minimum of 3 inches or butted together. The top geotextile layer shall be sewn together at the seams using butterfly or j-seams. All seams shall be double-lock stitched.

682-3.4 Material Placing and Spreading. During placing and spreading, maintain a minimum depth of 12 inches of cover material at all times between the fabric and the wheels or tracks of the construction equipment.

Spread the material in the direction of the fabric overlap. Maintain proper overlap and fabric continuity. If sewn or bonded seams are used, place the cover material and spread in only one direction for the entire length of the geotextile. On weak subgrades spread the cover material simultaneously with dumping to minimize the potential of a localized subgrade failure.

Compact using a smooth drum roller. Do not allow construction equipment to make sudden stops, starts, or turns on the cover material.

682-3.5 Geotextile Repair. Prior to covering the deployed geocomposite, each roll shall be inspected for damage. Potential repair techniques will be separated for just geotextile damage and for damage resulting on the entire geocomposite (geonet damaged).

- a. **Geotextile damage:** Small holes shall be patched with an 8" x 8" geotextile piece. Apply spray adhesive to one side of the 8x8" textile patch. Firmly press 8x8" textile patch over repair area. If the damaged area of the geotextile is greater than this patch size, a bigger patch is recommended. If the geotextile is damaged beyond 50 percent of the width of the roll, a continuous piece of fabric the same width as the repaired geocomposite may be cap-stripped directly to the adjacent seams by sewing a portion of new geotextile in place.
- b. **Geocomposite damage:** If rip, tear or damaged area on the deployed geocomposite is more than 50 percent of the width of the roll, the damaged area shall be cut out and the two portions of the geonet shall be joined as explained above. Other rips, tears or damaged areas on the deployed geocomposite shall be removed and patched by placing a patch extending 12 inches beyond the edges of the damaged area. The patch shall be secured to the original geonet with cable ties.

METHOD OF MEASUREMENT

682-4.1 By multiplying plan neat line width by the measured length in final position parallel to installation centerline along the ground surface. No allowance will be made for overlap, whether at joints or patches.

BASIS OF PAYMENT

682-5.1 Payment will be made at the contract unit price per square yard.

Material used to fill ruts and holes will be paid for at the unit price for the type of material used.

Payment will be made under:

Item P-682a Geotextile, Drainage - per square yard