

Section 96 Geosynthetics

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Section 96 Geosynthetics

4-9601 General

Section 96, "Geosynthetics," of the *Standard Specifications* provides material requirements for various types of geosynthetics for use as geotechnical subsurface reinforcement, geocomposite wall drain, geosynthetic pavement interlayer, paving mat, paving grid, paving geocomposite grid, geocomposite strip membrane, filter fabric, subgrade enhancement geotextiles (SEG), biaxial geogrids, silt fence fabric, gravel-filled bags, sediment filter bags, and temporary cover for water pollution control.

Geosynthetic pavement interlayer is used as an interlayer in asphalt concrete overlays to minimize surface water infiltration and to minimize reflective cracking through the overlay. Filter fabric is placed between a freely draining aggregate and soil to allow passage of water and to retain fine soil particles. Rock slope protection (RSP) fabric serves the same purpose. As with filter fabric, RSP fabric is placed between RSP and the underlying foundation material. Geocomposite wall drains provide drainage in backfill applications on retaining walls and structure approaches. Geotechnical subsurface reinforcement stabilizes embankments. SEG are placed between the pavement and the subgrade providing filtration and separation of the base materials. Biaxial geogrids stabilize the subbase or the base aggregate by interlocking with the apertures in the geogrid.

The following sections of the *Standard Specifications* give geosynthetic placement requirements:

- Section 13, "Water Pollution Control," provides specifications for placing silt fence fabric, gravel filled bags, sediment filter bags, and temporary cover.
- Section 19, "Earthwork," details the requirements for placing subsurface reinforcement and SEG.
- Section 26, "Aggregate Bases," provides the placement requirements for biaxial geogrids.
- Section 39, "Asphalt Concrete," includes requirements for placing geosynthetic pavement interlayer.
- Section 68, "Subsurface Drains," provides requirements for placing filter fabric used with underdrains and edge drains, and placement of geocomposite wall drains.
- Section 72, "Slope Protection," provides specifications for placing RSP fabric.

4-9602 Before Work Begins

Before work begins, verify that Form CEM-3101, "Notice of Materials to Be Used," includes geosynthetics. Refer to Section 6-202, "Responsibilities for Acceptance of Manufactured or Fabricated Materials and Products," of this manual for details.

Verify that geosynthetics listed on Form CEM-3101 are on the DataMine list of the National Transportation Product Evaluation Program website:

<http://www.ntpep.org/Pages/default.aspx>

4-9603 During the Course of Work

Do not permit the use of geosynthetics until certificates of compliance covering the material have been submitted.

Ensure that certificates of compliance are received for each type of geosynthetic.

Ensure that geosynthetics are properly covered for protection against damage.

4-9604 Payment

Payment clauses are included in the *Standard Specification* sections or special provisions providing for placement of the various types of engineering fabrics.