

# Special Specification 4019

## Prefabricated Soil Drainage Mats




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### 1. DESCRIPTION

Polymer core covered by a suitable filter fabric and shall be placed as shown on project plans or as directed by the Engineer. The Contractor shall furnish all necessary labor, equipment, and materials and perform all operations necessary for the installation of prefabricated soil drainage mats in accordance with the details shown on the plans and with the requirements of this specification.

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### 2. MATERIALS

- 2.1. **Physical Requirements** Filter fabric shall conform to the requirements of Departmental Materials Specification DMS-6200, "Filter Fabric". The filter fabric shall be uniformly bonded to the core to prevent fabric intrusion into the core channels during backfilling.

The drain core shall provide substantial support for the filter fabric and provide an adequate waterway for efficient hydraulics. For embankments with a low risk to exposure to gasoline, a High Impact Polystyrene drain core will be permitted. For embankments with a high risk to gasoline exposure, the drain core shall be inert to gasoline and a Polystyrene drain core will not be permitted.

The drain core shall have a compressive strength of 4000 psf minimum when tested in accordance with ASTM D 1621 (Procedure A). The core shall have a minimum overall thickness of 0.300 in. The core shall permit unobstructed flow through a minimum of 50% of the geocomposite surface in contact with the soil backfill. The geocomposite surface is defined as the combined fabric/polymer plane separating the soil from the innermost water flow channel.

- 2.2. **Packaging Requirement** The soil drainage mat shall be standard uniform sheets of specified length, width and number. Mats shall be packaged in a suitable wrapper to protect the mat from damage due to ultraviolet light and moisture during normal storage and handling.
- 2.3. **Identification Requirement** Each package shall be labeled or marked in such a manner that the information for sample identification and other quality control purposes can be read from the label without opening the packaging. Each package shall be identified by the manufacturer with the number and dimensions of mats enclosed.

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### 4. CONSTRUCTION

Place mats as directed. Overlapping of drainage mats will be permitted but not required. Where overlapped, a minimum 6 in. overlap will be required. Fabric overlap shall be in the direction of water flow.

The filter fabric shall be wrapped under the exposed ends of the drainage core to prevent soil migration into the core.

Where drainage mat terminates in filter material, the end shall extend into the filter material a minimum of 6 in. and be no closer than 3 in. from the edge of the filter material.

Where drain pipe is indicated, place the drain pipe next to the core and wrap the fabric around the pipe and tuck it securely behind the core. The fabric shall overlap the bottom of the core by a minimum of 6 in.

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5. **MEASUREMENT AND PAYMENT**

No direct measurement and payment will be made for the work performed or the equipment and materials to be furnished under this Item. Payment for all work and materials shall be considered subsidiary to the various bid items of which the mat is a part as required by the plans.