

SPECIAL SPECIFICATION

5165

Geogrid Reinforcement for Embankments

1. **Description.** Furnish and install geogrid reinforcement.
2. **Materials.** Furnish geogrid as follows.
 - **Type A.** Geogrid for embankment meeting the following requirements.

**Table 1
Geogrid Requirements**

Property	Test Method	Specification Limit
Percent Open Area	Tex-621-J	≥ 50 %
Long-term Design Allowable Strength (LTDA)	Furnish manufacturer's certification that material has been tested in accordance with GRI GG-4*	≥ 1300 lb./ft.

* Determination of the Long-term Design Strength of Stiff Geogrids (GG4a) and the Determination of the Long-term Design Strength of Flexible Geogrids (GG4b) test procedures by the Geosynthetic Research Institute (GRI) at Drexel University, Philadelphia, PA.

- **Type B.** Geogrid for embankment meeting requirements specified on the plans.
3. **Construction.** Prepare subgrade. Install geogrid in accordance with lines and grades shown on the plans. Orient the geogrid such that the strong direction runs perpendicular to the face of the embankment. Place geogrid adjacent to successive placements with no laps or splices in the geogrid treatment perpendicular to the face of the embankment. Cut geogrid as necessary to maintain complete coverage around corners. Use installation methods that keep the geogrid taut throughout the backfilling section. Use anchor pins as necessary to secure the geogrid. Excessive deformation or damage during installation will not be accepted.

Place fill material in lift thicknesses and to the compaction requirements shown on the plans. A minimum fill cover of 6 in. is required to operate tracked construction equipment on the geogrid. If the underlying material can support the loads and if approved by the Engineer, operation of rubber tired equipment directly on the geogrid is allowed as long as the speed is limited to less than 5 mph. Turn equipment gradually to avoid damage to the geogrid. All geogrid sections damaged by construction activity will be replaced at the Contractor's expense. Lap all repaired sections a minimum of 3 ft. in all directions.
 4. **Measurement.** Geogrid will be measured by the square yard of each layer in its final position. No measurement will be made for lapping of material, ties and grid anchor pins.
 5. **Payment.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Geogrid Reinforcement for Embankment" of the type shown. This price is full compensation for furnishing all labor, materials, freight, tools, equipment, and incidentals, and for doing all the work involved in placement of the grid, complete in place.