

Technical Specification
StabiliGrid soil stabilizing grid system
www.stabiligrd.com

SECTION 320519 of the CSI Master Format 2004

-**StabiliGrid** when used as geo-synthetic grids for Exterior Improvements Including, but not limited to, roadways, pathways, ramps, and driveways.

PART 1 - GENERAL

1.01 General Provisions

A. The Conditions of the Contract and all Sections of Division 00 through 01 are hereby made a part of this Section.

1.02 Description of Work

A. Work Included:

1. Provide and install a suitable, stable sub-base as per Geotechnical Engineer's recommendations and/or as shown on drawings, to provide adequate support for project designs loads.
2. Provide **StabiliGrid** products and installation per the manufacturer's instructions furnished under this section.
3. Provide and install clean gravel fill or planting of the **StabiliGrid** grid units.
4. Provide and install clean overfill of the grid system, if specified (not recommended for vehicular traffic areas).

B. Related Work:

1. Sub grade preparation under Division 310000 – Earthwork, and all related sections and sub-sections.
 - a. For Gravel Finished Surfaces, specifically note that any backfill of the proposed grid unit area must be hard, clean, angular rock, minimum 2” and maximum 3” size, and of a type that will not degrade or decompose over time.
 - b. For “Green” finished surfaces, the backfill and leveling layer should contain 70% aggregate and 30% soil, engineered to meet any load bearing requirements.
 - c. It is recommended the base of the sub grade (before any layering) should be native, undisturbed soil, with all contaminants removed.

1.03 Quality Assurance

A. Follow Section 014300 requirements.

B. Installation: Performed only by skilled work people with satisfactory record of performance on Geogrid applications. A Certification for installation of **StabiliGrid** is available upon request, but is not required.

1.04 Submittals

A. Submit manufacturer's product data and installation instructions.

B. Submit 1 tile section of **StabiliGrid** product for review. Reviewed and accepted samples need not be returned to the Contractor.

C. Verify fill type/requirements with designer, client, or engineer. Submit material certificates and samples for base course and fill materials prior to installation.

1.05 Delivery, Storage, and Handling

A. Protect **StabiliGrid** material units from damage during delivery and storage. Allow product to be delivered and “exposed”, or be acclimated to the current elements for at least one day prior to

installation. Allow individual, pre-assembled grid layers to lie in the installation area for at least 2 minutes prior to connecting together.

1.06 Project Conditions

- A. Review installation procedures and coordinate **StabiliGrid** work with other work affected.
- B. All hard surface paving adjacent to **StabiliGrid** areas, including concrete walks and asphalt paving, may need to be completed prior to installation of **StabiliGrid**. Coordinate with job site Supervisor/Project Manager.
- C. Cold weather:
 - 1. Do not use frozen materials or materials mixed or coated with ice or frost.
 - 2. Do not build on frozen, saturated, or muddy sub grade.
- D. Protect partially completed installation against damage from other construction traffic when work is in progress.
- E. Protect adjacent work from damage during **StabiliGrid** installation.

PART 2 - PRODUCTS

2.01 Availability

- A. Distributor: Eco-Terr Distributing Inc., 3020 Iss-Pn Lk Rd PMB 202, Sammamish, WA 98075. Call from USA (425) 864-1701; Fax (425) 391-4890.
- B. Supplier: Please check our website at www.stabiligrd.com for closest supplier or call (425) 657-7958.

2.02 Materials

- A. Leveling Layer under StabiliGrid:
 - 1. For Gravel Finished Applications, sources of the material can include only 5/8" (-) or similar gravel material from local sources, and consist of clean, screened angular rock that will not break down over time.
 - 2. For "Green" Finished Applications, an engineered mix of 70% gravel and soil.
 - 3. Alternative materials are not recommended.
- B. **StabiliGrid** Units: Lightweight injection molded, 100% post-consumer recycled plastic LDPE tile units 33x33x5 cm (13.1233"x13.1233"x 1.9685" high,) with hollow cells. Units will be shipped in pre-assembled layers of 3 tiles x 4 tiles equaling 14.3519 square feet. Load bearing capability is equal to 35.843 tons/ft² for **StabiliGrid** when level filled with gravel, over appropriate depth of leveling layer and stable sub base. Standard colors are black, with custom colors available for special orders. Minimum order required for custom colors.
- C. Gravel Fill: Obtain clean, screened gravel (free of all fines or shavings), of a size not to exceed 5/8", to fill the grid cells to "level full"
- D. Anchors: Anchors are not required for flat or minor sloped areas. Typical anchors for medium to heavy slopes shall be 8" minimum long "j-hook" type pins, all galvanized metal or similar corrosion resistant coating. Anchors may vary in size and type based on source and availability. Spacing as required to limit downward movement, typically approx. 12 feet apart in all directions.

PART 3 - EXECUTION

3.01 Inspection

- A. Examine sub grade and base course installed conditions. Do not start **StabiliGrid** installation until unsatisfactory conditions are corrected. Check for poor drainage, improperly compacted trenches, debris, and improper gradients.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance. If existing conditions are found unsatisfactory, contact Project Manager for resolution.

3.02 Preparation

A. Place a minimum of 1" of the Leveling Layer material (over prepared sub base) to grades shown on plans, in lifts not to exceed 2" (if using a plate compactor or large rolling machine), compacting each lift separately enough to provide a stable, flat, non-shifting surface. **Do not "over compact"**. For intended or specified **flat** surfaces (sloped or not), grading should be "straight" to within 1/4" for every three feet in length, and not create a "point" in the grade. Use a straight edge or laser level to assist and verify. Rolling contours within these tolerances will not affect the grid unit performance.

3.03 Installation of **StabiliGrid**

A. Establish a layout line (using string and stakes) from one corner, heading 2 directions to form a 90 degree guide point. For radius applications, use a center layout line approach to keep the grid units straight in the radius area.

Install the **StabiliGrid** units by starting in one corner, with one layer unit, with the "tabs" (not the slots) facing the directions of installation.

Allow individual, pre-assembled grid layers to "lie" in the installation area for at least 2 minutes, but no more than 5 minutes, prior to connecting together. Do this by "staging" the next row before actually connecting it to the next grid section.

Then proceed to connect additional units perpetually until the entire surface has been covered.

Slightly "stretch" each unit apart after connecting to the previously installed unit. **Do not install the units from the outside edges to the center!** Cutting can be performed with hand saws, or a portable power saw. When anchors are required (for sloped areas only) install as described above before filling the grid cells.

B. Deliver gravel or soil fill to the grid area by using a tractor or other spreading apparatuses. Dump trucks and tractors may drive on the grid as long as they do not exceed the load-bearing capacity of the grid and sub base engineering. Sharp turning of heavy construction vehicles on empty grid units must be minimized. **The Fill should be first delivered to the center of the area.**

The Fill is then spread laterally out from the center to the edges, equally from all sides of the pile, using power brooms, blades, flat bottomed shovels and/or wide "asphalt rakes" to fill the cells. A stiff bristled broom may be used for final "finishing".

a. Gravel Fill should be "lightly compacted" using a vibrating plate or sod roller, with the finished Fill equal to the top of cells.

b. For Soil/Seed Fill, soil should be saturated and at a finished level approx. 1/4" min. to 1/2" max. below the surface of the grid cells. Seed or hydro-seed as specified or desired.

3.04 Finished Surface

A. no overfill is required for the grid to perform as a separation or surface stabilization layer, and is not recommended for vehicular traffic applications. Consult Designer for over fill requirements for foot paths, cart ways, etc, if any.

3.05 Cleaning

A. Remove and replace tile segments of **StabiliGrid** units where 2 or more "tabs" or cell walls are broken or damaged, reinstalling as specified, with no evidence of replacement.

B. Perform cleaning during the installation of work and upon completion of the work. Remove all excess materials, debris, and equipment from site. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

END OF SECTION