

## Technical Specification

### - StabiliGrid™ soil stabilizing grid system

#### Division 32 00 00 of the CSI Master Format 2004

#### Subdivisions 32 05 19, 32 12 43, 32 14 43

#### -StabiliGrid™ when used for Exterior Improvements

Including, but not limited to: roadways, pathways, ramps, and parking lots.

### 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. If using as a separation layer, provide and install clean overfill of the grid system (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 Finish Surfaces, specifically note that any backfill of the proposed grid unit area must be hard, clean, angular medium, minimum 1” and maximum 4” aggregate size, and of a type that will not degrade or decompose over time.
  - b. For Vegetated Finish Surfaces, the leveling layer should be a minimum of 4” thick, and contain approx. 75% clean angular aggregate and 25% sandy soil (well mixed), engineered to meet any load bearing and vegetative requirements.
  - c. It is recommended the base of the sub grade (before any backfill or 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 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:

[http://www.ecoterr.com/ecoterr\\_stores\\_locations/index.htm](http://www.ecoterr.com/ecoterr_stores_locations/index.htm) for closest supplier or call (425) 657-7958.

C. Technical & Installation Support: Charles Baker (425) 864-1701

## 2.02 Materials

### A. Leveling Layer under **StabiliGrid**<sup>TM</sup>:

1. For Gravel Finished Applications, sources of the material can include only 5/8" or 3/4" gravel material from local sources, and must consist of clean, screened angular rock that will not break down over time.
2. For "vegetative" finished applications, an engineered mix of 75% gravel (as listed herewith) and 25% sandy soil is recommended.
3. Alternative materials may apply and must be submitted and approved in advance.

B. **StabiliGrid**<sup>TM</sup> Units: Lightweight injection molded, 100% recycled plastic (PE) tile units 33x33 cm (13.1233" x13.1233") with hollow cells. Units will be shipped in pre-assembled layers of 3 tiles x 4 tiles equaling 14.3519 square feet. Standard colors are black, with custom colors available for special orders. Minimum 50,000 sq. ft. order required for custom colors.

C. Gravel Grid Fill: Obtain clean, screened gravel (free of all fines or shavings), of a size not to exceed 1/2", 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 and size as designed by Engineer.

E. Parking Markers: Optional white plastic parking markers are available. The markers are sized and designed to "snap in" to one of the many square cells consistent within each grid piece. Spacing and layout as per Designers specifications.

## **PART 3 - EXECUTION**

### 3.01 Inspection

A. Examine sub grade and base course installed conditions. Do not start **StabiliGrid**<sup>TM</sup> 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 2" 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. Thickness of leveling layer per engineer's specifications.

For best visual appearance of **flat** surfaces (sloped or not), grading should be "straight" to within 1/4" for every three feet in length, and not create a sharp "point" in the grade. Use a straight edge or laser level to assist and verify. If designed in, rolling "contours" 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 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 typically) 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, 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 3/4" 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 surface stabilization layer, and overfill 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” are broken, or if 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