Fortrac® 3D
An Advancement In Erosion Control and Slope Repair

Revegetation and Erosion Control going hand in hand
Applications for Fortrac 3D

- **Fortrac 3D** - Erosion Control – slopes, channels, stream banks, levees

- **Fortrac 3D-A** - Engineered Slope Repair and Reinforcement – Repairing shallow slope failures with Fortrac 3D and earth anchors
Benefits of Fortrac 3D verses other TRM’s

• **Strength Options** of Uniaxial Geogrid
  – Fortrac 3D 30,60,90,120 - combines high wide width tensile strength options (2055 lb/ft – 8220 lb/ft per ASTM D-6637)

• **Low Elongation** (12% Maximum vs. up to 65% in other TRM’s)

• **Variable Mesh Density** to match soil and vegetation type to be used

• **Wider and Longer Roll Size** (14.76’ x 328.1’ = 538 yd2 per roll) Allows for longer continuous runs and reduces overlaps and end laps
Fortrac 3D Application Concepts

Direction of Ult. Tensile of Fortrac 3D

Cover soil/vegetation

Sliding force

Friction Interaction - Fortrac with fill soil

Fortrac 3D Maintains Intimate contact with underlying soil

Friction Interaction - Fortrac 3D with soil
The roots of plants intertwine with the grid structure of Fortrac 3D adding reinforcement to surface
Variable Density Options on Fortrac 3D
Benefits of Fortrac 3D-A System

- Designed for Shallow Plane Slope Failures
- Low impact solution, no large equipment or slope cut/fill required
- Slopes can be vegetated creating a storm water Best Management Practice
- Huesker Design support
- Aesthetically pleasing
- Less costly than traditional repairs
Typical Slope Failures
Original ground before slippage

Re-grade the slope with existing or select fill

Install Fortrac 3D over face of slope

Install earth anchors and drains as designed
Recent Projects with Fortrac 3D-A System

• St. Mark Catholic School, Huntersville NC
• Carolinas Medical Center, Northcross NC
Preparing Failed slope
St. Mark Catholic School During Fortrac 3D-A Installation

Fortrac 3D Installed and Anchor Positions Marked

Note NO End laps
St. Mark Catholic School During Fortrac 3D-A Installation

Fortrac 3D Installed and Anchor Positions Marked
St. Mark Catholic School During Fortrac 3D-A Installation

1000 lb. strength Earth Anchors being installed

Note Rubber Tracks ONLY
Completed Earth Anchor Installation – Top View
Completed Installation 5 weeks after seeding
Vegetation after Approximately 6 months
Vegetation after Approximately 1 year
6 weeks after Installation
ALL VOLUNTEER VEGETATION
6 weeks after Installation
ALL VOLUNTEER VEGETATION
Fortrac 3D Installation

Anchor trench at the top edge of the slope

Properties of the material against erosion, as well as the number of pins or anchors will be calculated in the design.
Anchor trench at the top of the slope
Erosion Control of Slopes
Further examples from other markets

E75 – Macedonia
Problem
Erosion Control and Slope Reinforcement
E75 Project - Macedonia

Note Long Continuous Runs Down Slope With NO End laps
E75 Project - Macedonia

Before Fortrac 3D Installation

Approximately 1 Year After Fortrac 3D Installation
Field testing of Fortrac® 3D reinforced levee
Usage at bridge slopes
Reinforcement of the river shore and reservoir
Reduction to Strain and Movement
Questions ?