

**PRESTO**



SMART EARTH  
SOLUTIONS

# Intelligent Infrastructure **ROADS & HIGHWAYS**

GEOWEB® SOIL STABILIZATION  
GEOTERRA® CONSTRUCTION MATS



Innovative Solutions for Designing and Building Roads & Road Structures





# GEOWEB®

## 3D Soil Stabilization

### ROAD & HIGHWAY WORK

#### Build higher-performing, lower-maintenance roads and road structures

The GEOWEB® 3D soil stabilization system is the 'go-to' solution in road and highway work for its long-term stability and performance, design flexibility, and adaptability with varying grades, loading stresses, infill materials, and hydraulic conditions. Whether for new construction or repair work, build stronger, lower-maintenance roads and roadway structures with the GEOWEB® system—and with your own road and highway crews.



#### We Help You Find the Right Solution

Our experienced engineering team provides free project evaluations. We analyze each project's details and site conditions—and recommend a solution suited for your project.



### How the GEOWEB® System Lowers Your Operating Costs



Lower Cost Solution



Built Stronger



Lower Transportation Cost



Lower Material Costs



Fast Installation



Lower Environmental Impact



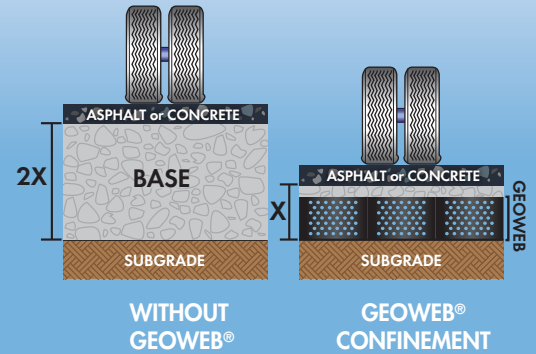
## LOAD SUPPORT

# 50%

Saves on fill material by using 50% less cross-section.

# 30%

Reduces paving depth by up to 30%.



## Base Stabilization

### Long Lasting Roads Start with Strong Foundations

Under asphalt or concrete, the GEOWEB® system performs as a semi-rigid beam, creating a stabilized layer over subbase soils. Deflection and settlement that cause pavement deterioration are significantly reduced. Rutting, potholes, and pavement degradation are also dramatically reduced. Base materials get stronger when confined in the GEOWEB® 3D system.

- Minimizes impact of differential and overall settlement even on low-strength subgrades.
- Reduces base materials by 50% or more by substantially reducing the loading impact on sub-surface soils.

Extend  
Pavement Life.  
Reduce  
Maintenance.





## LOAD SUPPORT

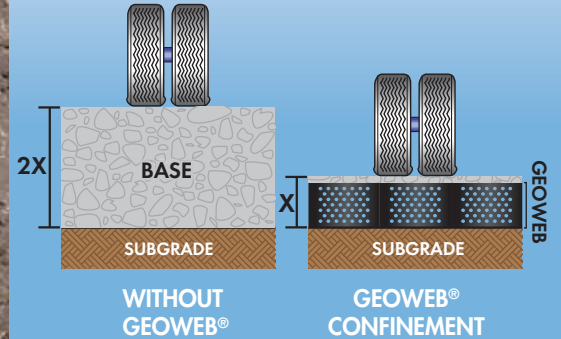


# 50%

Confinement of fill reduces base requirements 50% or more.

# 10X

Stronger base extends pavement life up to 10 times.



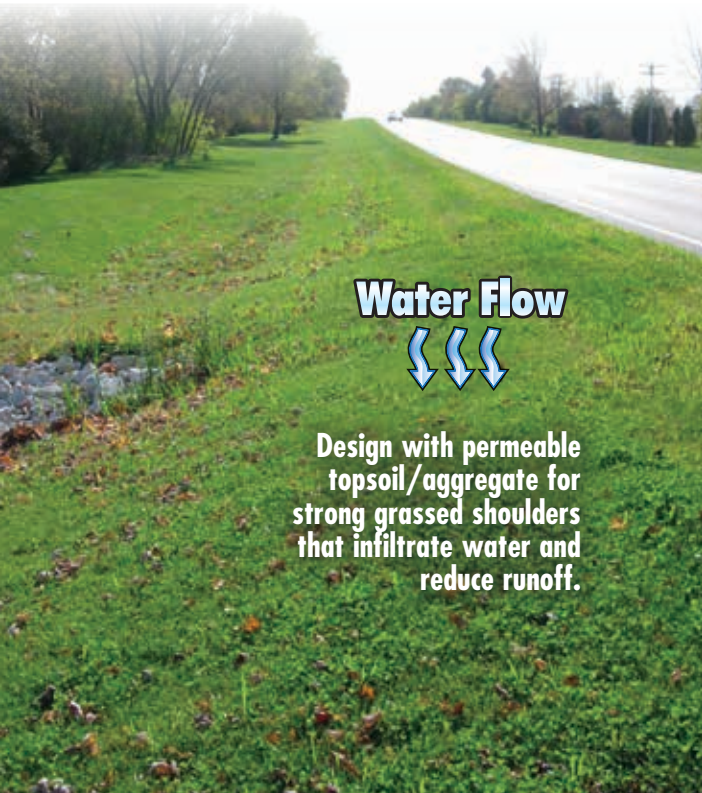
## Unpaved Roads

### Transform Low-Quality Fill for Site Access

GEOWEB® 3D confinement strengthens fill materials to extend pavement life up to 10X with half the base materials. Save by using on-site, lower quality fill. Construct roads over soft soils with **less cross section than geogrids**. Expect fast and efficient installation, even in remote areas.

- Create grass and aggregate permeable pavements that infiltrate stormwater and reduce runoff.

Use Local  
Low-Quality Fill.  
Bridge Soft  
Subgrades.



Water Flow



Design with permeable topsoil/aggregate for strong grassed shoulders that infiltrate water and reduce runoff.

## Road Shoulders

### Safe, "Structural Road Shoulders"

Protect asphalt and concrete from deterioration and edge breaks with GEOWEB®-reinforced shoulders. Eliminate low and soft shoulder problems. Minimize erosion areas and rutting while maintaining safe, drivable functionality.



# 3X

Reduce typical shoulder maintenance up to 3 times.



# EMBANKMENT STABILIZATION



## Slope Protection

### Create Stable, Erosion-Resistant Embankments

Protect road embankments susceptible to stability and erosion issues. The GEOWEB® 3D structure encapsulates the slope surface fill material—limiting movement and protecting the surface from sheet flow, preventing erosion. The cellular network offers a stable growth environment for vegetation.

Design with topsoil/vegetation, aggregate or concrete.

- Attain deep protection not provided by 2D planar 'cover-only' systems (e.g. erosion blankets, TRMs).
- Build slopes steeper (>45 deg) than when surface is unconfined.

Stabilize Slopes.  
Minimize  
Erosion Damage.



## Bridge Abutments

### Embankment Stabilization and Bridge Pier Erosion Control

Design structurally sound GEOWEB® bridge embankments with topsoil/vegetation, aggregate, or hard-armor concrete.

- Vegetation blends with the natural environment.
- Aggregate and concrete slopes protect environments that are arid, prone to heavy surface runoff, and lack sunlight and moisture.





# EARTH RETENTION



## Retaining Walls

### Steep Embankment Protection and Change-in-Grade Construction

GEOWEB® retaining walls create naturally-vegetated living structures while meeting structural design requirements. They are highly adaptable—tolerating reasonable differential settlement better than rigid MSE wall systems and **retaining structural integrity even in poor base conditions**. Design GEOWEB® retaining walls as gravity or reinforced structures.

### Natural Aesthetics and Water Infiltration

Vegetation is the most common treatment for GEOWEB® walls, allowing them to blend naturally with their environment. The open front cells allow rain water to permeate—and infiltrate runoff from road surfaces above the wall.



Green Alternative to MSE Block Walls.



## Rockface Protection and Rockfall Control

GEOWEB® rockface walls are designed as slope veneers without the need for additional earth reinforcement. They provide natural barriers to protect vulnerable embankments from erosion and potential rock fall along roadways.



Presto offers free licensed retaining wall design software. Request license on [prestogeo.com](http://prestogeo.com)



# CHANNEL STABILIZATION



## Channel Protection

### Drainage Ditches and Stormwater Channels to Resist Any Hydraulic Condition

Design GEOWEB® channels to control erosion on channel slopes exposed to intermittent or continuous flow conditions with single or multi-layered systems.

### Naturally-Vegetated Channels

Replace costly rip-rap with low-maintenance, grassed GEOWEB® channels in drainage ditches.

- GEOWEB®/TRM channels resist higher velocities and shear stresses (30 ft/sec, 9m/sec) than when topsoil is unconfined.
- Obtain greater storage volume where space is limited with multi-layered channels.



Control Runoff.  
Expedite Drainage.  
Mitigate Flooding.

## Hard-Armored Channels

### FLEXIBLE, POURED-IN-PLACE CONCRETE

Replace gabions and articulated concrete block systems with GEOWEB® concrete channels.

- No added formwork or reinforcement required.
- Safe installation; no heavy/special lifting equipment required.





# TEMPORARY ACCESS MATS



**Fast to Install.  
Safest Mat  
on the Market.**

## GEOTERRA® Mats

**Fast and Easy to Mobilize and Install  
without Special Equipment.**

For accessing new road construction sites or for repair work, GEOTERRA® mats are the safest, most economical way to get in and out at a fraction of the cost of timber or heavy HDPE composite mats. No special equipment is needed—so less downtime and less injuries. No aggregate cleanup. Weather resistant.

## 12 inches

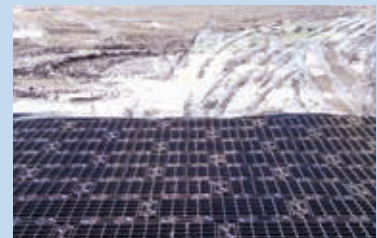
mat strength equivalent  
to 12 inches of  
aggregate.

## 40-70%

lower cost than  
alternative mats.



## Solve Common Site Problems



Soft Ground, Deep Ruts,  
Turf Damage

Mud Tracking, Wet Areas





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670 N Perkins Street • Appleton, Wisconsin  
800-548-3424 or 920-738-1328 • Fax: 920-738-1222  
Email: [info@prestogeo.com](mailto:info@prestogeo.com) • [www.prestogeo.com](http://www.prestogeo.com)

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