

# Warehouse/Data Center Solutions

Ground Stabilization Solutions to Speed Construction and Lower Costs



Soft ground presents great challenges for the construction of distribution centers and eCommerce facilities. These conditions substantially increase project costs, slow down construction schedules and cause future maintenance issues. Owners and contractors rely on proven, engineered solutions from Tensar® and Geopier® to provide an economical solution to what could otherwise be a costly problem. Our proven ground stabilization solutions work to meet performance requirements and get budgets – and schedules - back on track.

For foundation support, Geopier ground improvement systems deliver cost-effective solutions for the support of foundations and floor slabs by either eliminating deep foundations or eliminating the removal and replacement of poor soils.

Tensar's TriAx® Geogrid technology reduces the required materials for constructing roads, parking lots, perimeter roads,

crane pads and laydown yards. Construction schedules are also shortened due to the reduction of excavation/ haul-off.

We offer you:

- Proven engineered alternative solutions to standard design practices
- Shorter construction schedules due to simplified construction and installation
- Cost savings resulting from lower cost materials (foundations, platforms and pavements)
- Superior strength and stiffness to provide reliable settlement control and longer lasting surfaces
- Proven experience with over 12,000 successful projects worldwide



## GAIN THE ADVANTAGE WITH TENSAR AND GEOPIER TECHNOLOGY

### Site Development

- Build quickly over soft ground
- Reduce aggregate - up to 60%
- Extend pavement life - 5x

### Foundations

- Fast construction - accelerate schedule
- Cost savings - up to 40%
- Support foundation and floor slabs



Tensar TriAx® Geogrid



Tensar® and Geopier® Ground Stabilization



Geopier® Ground Improvement

Whether you are an engineer, contractor, or owner - We can help.

**Tensar® / GEOPIER®**



# Ground Stabilization Solutions for Warehouses

Proven technology behind the solutions

## GEOPIER® GROUND IMPROVEMENT

Distribution centers and eCommerce facilities typically have column loads in excess of 1,000 kips and slab loads of 1,000 psf or greater. Geopier's patented systems can meet the challenge of these heavy loads by reinforcing the unsuitable bearing soils to create a very dense/stiff crust that limits the total and differential settlements to meet the project requirements. Furthermore, Geopier ground improvement systems can add significant value versus other traditional methods as noted below:

### Over Removal & Replacement of Poor Soils

- Reduction in earth moving costs;
- Reductions in schedule; and,
- Significant reduction in foundation sizes

### Over Installation of Deep Foundations

- Reduced installation costs (typically due to shallower installation depths);
- Reduced installation schedules; and,
- Reduced foundation and slab costs (spread footing and slab-on-grade vs. pile caps and heavily reinforced structural slabs).

## TENSAR® GEOGRID TECHNOLOGY

Tensar developed TriAx Geogrid to improve the performance of soil and granular materials, offsetting construction costs and extending service life. When compared to traditional design methods, extensive research proves TriAx Geogrid can:

- Reduce asphalt layer thickness 15-30%;
- Reduce aggregate requirements up to 60%;
- Extend service life up to 5x and reduce maintenance costs;
- Improve concrete areas, truck court designs and perimeter roads; and,
- Better manage risk on challenging sites

## TENSAR® AND GEOPIER® APPLICATIONS

The Tensar Corporation is a premier provider of technology driven site solutions based on advanced soil stabilization technologies that incorporate high performance, patented products. The benefits of combining two or more of our company's products, services, applications and/or systems result in faster, stronger and more economical solutions that save time and money when compared to conventional alternatives. Tensar also offers customized, engineering-based solutions that address a wide range of site development challenges.



640,000 Sq. Ft. Fulfillment Center: Bondurant, Iowa  
7,600 Geopier® elements piers were constructed in 48 days, shaving three weeks from the construction schedule.



855,000 Sq. Ft. Distribution Center: Cleveland, Ohio  
Maximum column loads up to 710 kips, wall loads up to 10 klf. 6,400 Geopier® elements were constructed in six weeks.



TriAx® Geogrid was used for this warehouse distribution site for its high performance and ability to extend maintenance cycles.



TriAx® Geogrid reduces material costs for paved structures like roads and parking lots.

Whether you are an engineer,  
contractor, or owner  
- We can help.

**Tensar®**

Tensar International Corporation  
2500 Northwinds Parkway, Suite 500  
Alpharetta, GA 30009  
800-TENSAR-1  
www.TensarCorp.com

**GEOPIER®**

Geopier Foundation Company  
130 Harbour Place Drive, Suite 280  
Davidson, NC 28036  
(800) 371-7470  
www.Geopier.com

