

FEATURED PROJECTS

Applications Like These – and Hundreds More

BROOKWORTH PLAZA SHOPPING CENTER EAST BRADFORD TOWNSHIP, PENNSYLVANIA

The Challenge: Utilize a green installation to construct a detention pond behind a new retail strip center.

The Solution: A 16.3 ft Mesa Wall, built to retain the pond, was combined with a 30 ft high SierraScape Wall seeded with a native grass. Free-draining imported stone was used in the reinforced zone up to the spillway elevation.



LOWE'S HOME IMPROVEMENT WAREHOUSE MORGANTON, NORTH CAROLINA

The Challenge: Retain a detention pond and support a building pad for store expansion onto adjoining property.

The Solution: A 12,151 sq ft Mesa Wall was installed in less than three weeks. The Mesa Systems' near vertical face easily accommodated the site's tight property line restrictions.



MECHANICALLY STABILIZED EARTH STRUCTURES FOR DETENTION AND STORAGE PONDS

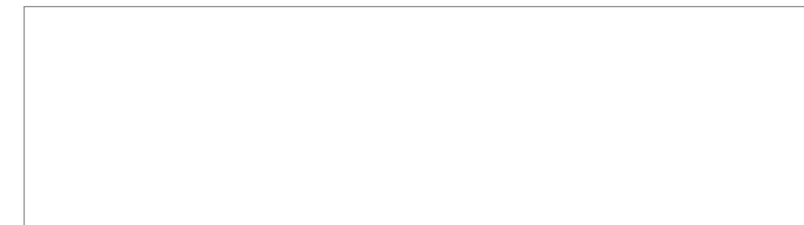
APPLICATION BULLETIN

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Tensar®

► Mesa® Walls provide the dependability engineers require, the efficient installation contractors have come to expect and the aesthetics owners and architects demand in the industry today.



Tensor® MSE Systems Provide Attractive, Reliable and Cost-Effective Solutions for Pond Applications

Stormwater issues present ongoing challenges to engineers, owner/developers, contractors and governing authorities for a number of important reasons. Enacted in 1999, the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Program extended permitting requirements to smaller communities (under 100,000) and larger construction sites (one acre or more), with strict criteria for runoff control and post-construction management. Developable land continues to be at a premium, and water storage remains a constant design challenge.

Federal, state and local authorities have increasingly restricted stormwater runoff to pre-development conditions; both detention (dry) ponds and extended storage ponds offer effective solutions. While both types of ponds provide runoff

rate control, extended storage ponds allow particulates and debris to settle out, improving water quality as well.

Thus, developers are faced with meeting current stormwater quality standards and regulations while maximizing land use. A number of conventional approaches provide adequate solutions. But three of Tensor International Corporation's (Tensor) Mechanically Stabilized Earth (MSE) Systems provide innovative, cost-effective solutions to increase storage volume while minimizing the impact on usable land. Each of these systems can be used to steepen the interior sides of a pond or the external sides of a berm. More economical and attractive than concrete structures, our MSE Systems add aesthetic and environmental value too.

Tensor® MSE Systems Engineered for Pond Applications

MESA® RETAINING WALL SYSTEMS

With superior holding capabilities, the Mesa® Systems' positive, mechanical connection makes it the ideal solution for detention pond applications. The Systems' connection components are unaffected by abrasion, tearing and hydrolysis – real considerations that undermine the performance of frictional systems using woven polyester geogrid reinforcement. The result is exceptional performance and uncompromised structural integrity under a variety of soil and moisture conditions.



SIERRASCAPE® RETAINING WALL SYSTEMS

The SierraScape® Retaining Wall Systems, easy-to-install wire form walls, are resistant to environmental degradation, low maintenance and versatile in design, making them the ideal choice for any detention pond application. SierraScape Systems offer many different facing options to meet your design needs, including: stone facing, vegetative facing and architectural veneers. In addition to these facing options, the SierraScape Systems is a cost-effective solution versus traditional retaining wall systems.



SIERRA® SLOPE RETENTION SYSTEM

The Sierra® Slope Retention System is a complete and fully integrated MSE System. Working together, these components create a solution whose structural integrity and dependability have been proven in a variety of detention pond applications. The Sierra System saves 30% to 60% over concrete retaining walls, blends with the surrounding environment and offers a soil-bioengineered green facing options.



Tensor® Systems Provide Long-Term Performance

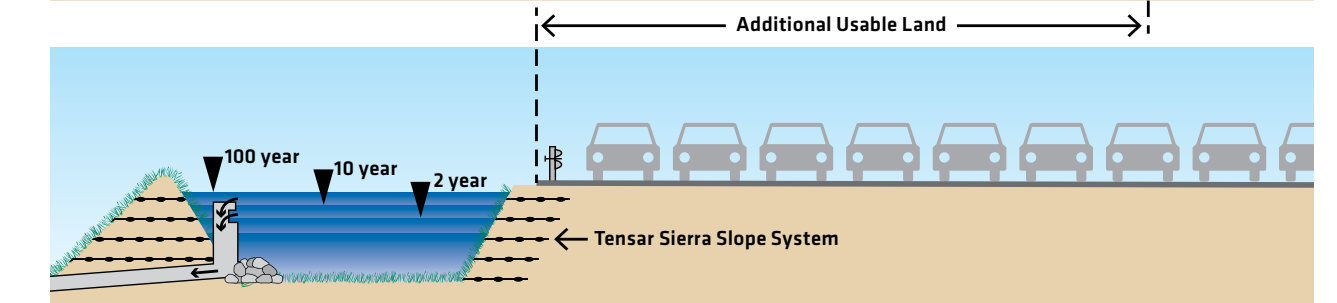
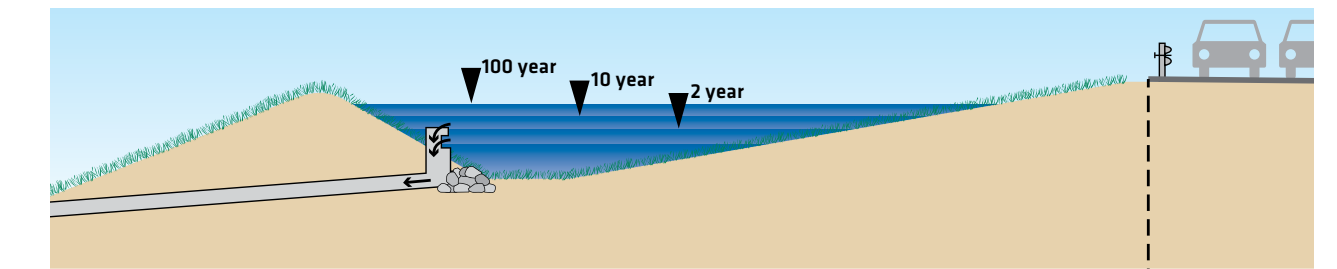
All of our MSE Systems feature reinforcement with strong and durable Tensor® Uniaxial (UX) Geogrids. Made of high-density polyethylene (HDPE), UX Geogrids resist chemical, biological and environmental degradation, including hydrolysis. Unlike polyester, HDPE geogrids are not affected by the presence of water and their open aperture structure promotes excellent soil drainage.

By incorporating a UX Geogrid made with HDPE, the geogrid will not degrade from moisture and high pH environments ensuring a longer lasting, more durable wall. This type of environment is typical between a dry cast segmental retaining wall unit in which moisture creates an area of high pH.

Tensor provides a number of services for your pond application needs, including:

- Site Evaluation
- Conceptual Engineering
- Design Drawings
- Value Engineering
- Construction Assistance

For more information about our MSE Systems, call **800-TENSAR-1** or visit **www.tensarcorp.com**.



Traditional detention pond construction methods typically involve using 2:1 or 3:1 side slopes. With Tensor MSE, side slopes can be designed up to 70° with native vegetation or built near vertical with stone or concrete block veneer. This ability to steepen the pond's side slopes allows you to economically increase your usable land without reducing the pond's volume capacity.