

We were out spreading the news on longer lasting roads that save money!



LOST & FOUND: Tom Stephens, one of the earliest Mirafi® salespeople, and his 1983 Texas license plate.



Mark Sikkema recently participated in Geosynthetic's ["GeoTalk" Podcast series](#)! He discusses the development and uses of our Mirafi® H2Ri enhanced wicking geosynthetic.

Expert Corner

I've confirmed the rumors!

Mirafi® H₂Ri provides benefits that other geosynthetics and technologies cannot provide.

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Construction Today

TENCATE GEOSYNTHETICS' PRODUCTS CAN REDUCE THE NEED FOR ROAD REPAIRS

Adding Life

TENCATE GEOSYNTHETICS' PRODUCTS CAN REDUCE THE NEED FOR ROAD REPAIRS. BY ALAN DORICH

In the American Society of Civil Engineers' 2017 Infrastructure Report Card, America's roads received a "D" rating for their poor condition. But TenCate Geosynthetics Americas can help improve our roads, Vice President of Sales and Marketing Todd Anderson says.

Thanks to its products, "You can make a road last longer for the same amount of money or make a road cost less and have a similar lifespan, and, sometimes, you can do offer both lower cost and longer life," Anderson says, noting that its geosynthetics can add many years to the life of a road. "When you lessen the repairs, you get more use of the road."

Based in Pendergrass, Ga., TenCate Geosynthetics provides woven and non-woven geotextiles, geogrids, geotextile tubs, prefab-

ricated vertical grains and composite textiles to customers across the Americas. "We have relationships as far north as Alaska and as far south as Argentina," he describes.

TenCate Geosynthetics serves a broad customer base that ranges from the engineers designing roads to contractors trying to provide more value to owners, Anderson says. "It may be the owners themselves that say, 'We understand the benefit and want to have our parking lots incorporate this technology,'" he says.

The company supports its clients with a network of salespeople and engineers who can answer questions about the benefits of its products, including reducing the amount of material used. For example, a traditional roadway design may call for 24 inches of stone.

"[But if] you incorporated a geosynthetic in there, you might only need 14 inches to get the same performance," he says, noting that this provides significant savings. "By saving 10 inches of stone, [you

TenCate Geosynthetics Americas
www.micraficom

- **Headquarters:** Fendergrass, Ga.
- **Employees:** More than 1,000 globally
- **Specialty:** Geosynthetics and industrial fabrics

"There's a lot that can be done in this young industry."

- Todd Anderson, vice president of sales and marketing

CalContractor Asphalt Construction Issue

CAN INNOVATIVE GEOSYNTHETIC TECHNOLOGIES HELP SAVE CALIFORNIA'S ROADS? (P. 20-22)

CAN INNOVATIVE GEOSYNTHETIC TECHNOLOGIES HELP SAVE CALIFORNIA'S ROADS?

By Brian Hoxby, PhD, Senior Editor



Geosynthesics serve many functions, including the use as geomembranes for waste containment systems, geogrids that offer reinforcement and stability, and geotextiles that provide everything from filtration, erosion, separation, and protection to reinforcement. Geosynthesics were first used in the 1950s, but the term "geotextile" was originally coined in the 1960s. The first geosynthetic was developed in the Netherlands by the Dutch, as a sand device for the protection of dikes. It was then adopted to launch



Above: TenCate Miraflo® E5-Series Woven Geotextiles are used for varying applications including base course reinforcements and subgrade stabilization for road, runway and railway construction.



100 billion square yards of material per year, including their award-winning line of Mirafi® brand products, manufactured in nine plants across the globe.

Todd Anderson is the VP of Sales and Marketing for TenCate Geosynthetics Americas and he has been with TenCate since 1996 when he served as a regional sales manager responsible for promoting the Miraflo product line. "We believe that our products offer real value where road building is concerned," says Anderson. "TenCate's geotextile soft subgrade and subbase materials. The process requires less aggregate and less time when constructing everything from roads, railways, and airfields to a variety of earthwork structures. It is often used in areas where groundwater is an issue as it contains ideal strength characteristics combined with a high modulus of rupture."

of stone into the base, and it will do about last a very long time. The second step is looking for a structure possible, with good geotechnical and environmental conservation, then in where our product comes in. We have some limitations, and if we can get the budget side of the equation taking with the technical side, we can deliver a message that resonates.

State representatives of the industry have long used geos and geotextiles for subgrade stabilization purposes. The primary reason for this is the top of a weak substrate to help stabilize the surface before base materials are placed.

Use of geotextiles has been proven on a wide range of applications over the years. In the U.S., P.E. is a geotechnical engineering consultant and engineer at the University of Nevada at Reno, and the University of Montana State University.

He has been with the university for 15 years, and has been involved as the program manager for the International Maintenance and Materials program. He has 18 years of experience with geos and geotextiles and developing new test procedures for geosynthetics. He has been involved in "A new dimension is concerned." A year back, I conducted a study where I had a number of geosynthetics from several companies in a side-by-side comparison."

monitored and analyzed full-scale field test sections with funds provided by nine state department of transportation entities." According to Cuello, 17 test sections were constructed to evaluate the performance of several geosynthetic products from a variety of companies. Each test section was 50 feet in length, and the subgrade soil was prepared and installed into a 16 feet wide, 3 feet deep trench that stretched 860 feet. "We used and tested 12 separate products from different manufacturers. Most of them were geogrid products with two being geotextiles, one of which was from

We also set up multiple control test sections where concrete aggregates were used to compare the results from reinforced test sections back to "do nothing" situations. Cyclic loading was applied using a dump truck at a 1-m/s traffic rate to drive a fully loaded, tandem axle dump truck at 15 m/s to traffic the test sections. Measurements of the longitudinal rut, transverse cracking, and rut depth were taken for the reinforced and control geosynthetic strain, and subgrade pore water pressure were taken during trafficking. 740 passes were made over the test sections to early November and testing continued until rut levels reached approximately 13 mm, at which time the remaining sections were allowed to remain in place to allow the remaining sections to be trafficked until failure. Forensic investigations were conducted after trafficking to assess damage and determine proper placement and to facilitate strength, stiffness and moisture measurements of the base and subgrade. The magnitude of the damage to the reinforced sections without any geosynthetic additives were the first to fail. Damage to the geosynthetic was



Mirafi® RSi installed on Irvine Road, Laramie, WY

NEWS

AASHTO

Important Changes

AASHTO has released M288-17 "Standard Specification for Geosynthetic Specification for Highway Applications". This update has two significant changes you should be aware of:

Class 1A Enhanced Geotextile

This specification is for the use of a geotextile over a wet, saturated soil having a California Bearing Ratio less than or equal to 1. Both Mirafi® HP570 & Mirafi® RS580i meet the criteria for Class 1A enhanced geotextile. Mirafi® RSi-Series remains the best geosynthetics choice for roadway reinforcement, as demonstrated by the Montana State study published in 2014. This level of performance is accomplished by optimizing the benefits of separation, filtration, reinforcement and confinement in one product line. TenCate continues to heavily invest in the Mirafi® RSi-Series in order to maximize benefits to designers, owners and contractors.

Section 11 Geotextile and Geogrid Property Requirements for Reinforced Soil Applications

This specification is applicable to the placement of a geotextile or geogrid between layers of compacted fill for reinforced soil structures such as retaining walls or reinforced slopes. This section of the specification should NOT be used for other applications such as roadways.

[Click to read the full text.](#)

Geosynthetica

NEW COAL ASH POND CAPPING SERIES—MARCH 28, 2017



One of the fastest-growing markets for civil engineering in the United States is in capping coal combustion residuals. Tencate, one of the world's largest manufacturers of geosynthetics, has been well involved in the sector and now has added Mirafi® CR-Series Pond Capping Geosynthetic Solutions to its engineered offerings...

SECONDARY GEOGRID REINFORCEMENT IN MSE WALLS—APRIL 10, 2017



The concept of secondary geogrid layers located at the face of a mechanically stabilized earth wall is similar to the use of secondary geogrid reinforcement in MSE reinforced slopes. In slopes, the secondary geogrid layers are used to stabilize the slope face between the primary geogrid layers...

GEOSYNTHETIC REINFORCEMENT IN CCR SURFACE IMPOUNDMENT CLOSURES—MAY 9, 2017



In-place closure of coal combustion residual surface impoundments presents numerous challenges. Common methods of capping include placing 0.46 m (1.5 ft) of a compacted clay soil cap with an additional 0.15 m (0.5 ft) of vegetated cover. Geomembranes and geosynthetic clay liners are often considered as viable, cost-effective options to clay...

GEOSYNTHETIC REINFORCEMENT FOR WIND ENERGY—JUNE 29, 2017



Subsidies and federal energy policies get most of the headlines, but

with the increasing size of wind turbines and the scale of wind farms, few sites can be developed without soil reinforcement technologies. Geosynthetics provide the stable base for construction works and long-term access on wind energy sites...

Ledger Dispatch

ARE GEOSYNTHETIC ROADWAYS RIGHT FOR AMADOR?—JUNE 29, 2017

Are Geosynthetic Roadways Right for Amador?

Rachel Norris Jun 29, 2017



The Caltrans Highway 12 Project from Rio Vista to Terminous. The project used TenCate H2Ri and RS580i high strength woven geotextiles.

[TenCate's] award-winning line of Mirafi products have provided solutions for reinforcement across the nation and are widely accepted and used in almost every country in the world. One Mirafi product specifically has outperformed every geosynthetics tested in the Western Transportation Institute and Montana State University research study "The Relative Operational Performance of Geosynthetics Used as Subgrade Stabilization" study on road construction, which is called Mirafi RS580i...

... Maybe the next time Amador County receives funds for rebuilding our infrastructure, we can consider this new innovation to use our funding more efficiently.