



NCAT PAVEMENT TEST TRACK OPELIKA, ALABAMA

Application: Asphalt pavement reinforcement for National Center for Asphalt Technology (NCAT) test track.

The Challenge: The Alabama Department of Transportation requested that GlasGrid® 8501 be installed on the NCAT test track so that any construction difficulties or performance issues would be documented. In June 2000, GlasGrid 8501 was installed by Industrial Fabrics between

a pair of two inch layers of stone matrix asphalt (SMA) on section W1 of the inaugural NCAT Pavement Test Track.

Testing Conditions: The entire track is supported by 20 inches of hot mix asphalt (HMA) base to isolate distresses to the top four inches. The first 100 feet of section W1 contained no reinforcement and acted as a control section for testing. The Marshall SMA test mix consisted of a ¾ inch nominal maximum aggregate size, crushed granite and flyash mineral filler. A 6.2 percent SBR-modified PF76-22 liquid binder was specified. An emulsion tack coat of type CSS-1h was applied at a rate of 0.03 gallons per square yard before the placement of each lift of asphalt; the GlasGrid was placed after the application of the tack coat on the binder course. Since section W1 was installed in 2000, a fleet of heavy triple axle trucks have applied over 20 million ESALs (Equivalent Single Axle Loads). Typically, it would take over 20 years for an interstate pavement to experience this level of load induced damage. In 2006, the section was excavated and tested.

Results: Following trafficking, longitudinal cracking was observed in the control test section. No longitudinal cracking was observed in the last 100 feet where GlasGrid was used to reinforce the



Glas Grid® Pavement Reinforcement was installed at the National Center for Asphalt Technology (NCAT) Pavement test track in Opelika, AL

PROJECT HIGHLIGHTS

Project:

NCAT Pavement Test Track

Location:

Opelika, Alabama

Installation:

NCAT Test Track Section W1

Product/System:

GlasGrid® Pavement
Reinforcement System

Quantity:

300 square yards of
GlasGrid 8501

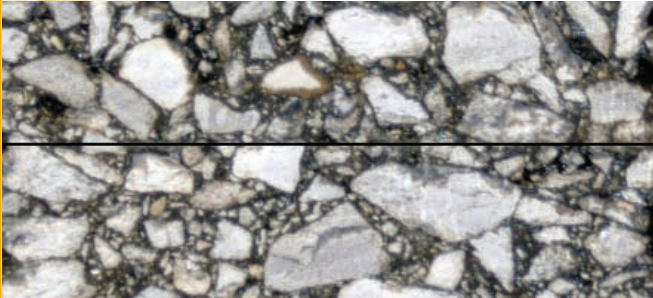
CASE STUDY

ASPHALT OVERLAY

CASE STUDY

asphalt. The cracking in the unreinforced area appeared along the centerline joint between the inside and outside lanes.

A core sample removed prior to the main excavation revealed that the GlasGrid was still intact and bonded to the sandwiching layers of the SMA mix. (see photo)



Buzz Powell, Test Track Manager of the NCAT organization, noted “GlasGrid did not create any problems during the installation of the product.”

The GlasGrid Advantage: Introduced in 1989, GlasGrid consists of stiff environmentally-friendly fiberglass material coated with an elastomeric polymer. The grid is rolled out over a thin leveling course placed before the main asphalt overlay. With its pressure-sensitive adhesive backing, installation of GlasGrid for reinforcement is easy and generally considered the most expedient installed interlayer system available.

GlasGrid has been successfully used within asphalt overlays throughout the world to combat reflective cracking initiated by one or more of the following:

- Concrete pavement longitudinal and transverse joints
- Thermal loading
- Lane widening
- Cement treated or stabilized layer shrinkage cracks
- Block cracks
- Asphalt construction joints

Additional Information and Services:

Tensar International Corporation, the leader in geosynthetic soil reinforcement, offers a variety of solutions for foundation and roadway projects. Our products and technologies, backed by the most thorough quality assurance practices are at the forefront of the industry. Highly adaptable, cost effective and installation-friendly, they provide exceptional, long-term performance under the most demanding conditions. Our support services include site evaluation, design consulting and site construction assistance. For innovative solutions to your engineering challenges, rely on the experience, resources and expertise that have set the industry standard for more than two decades.

For more information on the GlasGrid System or other Tensar Systems, call **800-TENSAR-1**, e-mail info@tensarcorp.com or visit www.tensar-international.com.

Authorized Representative:



Tensar International Corporation
5883 Glenridge Drive, Suite 200
Atlanta, GA 30328
1-800-TENSAR-1
www.tensar-international.com

*exclusive distributors
in the Americas for:*



©2006, Tensar International Corporation, Limited LLC, Inc. Certain products and/or applications described or illustrated herein are protected under one or more U.S. patents. Other U.S. patents are pending, and certain foreign patents and patent applications may also exist. Trademark rights also apply as indicated herein. Final determination of the suitability of any information or material for the use contemplated, and its manner of use, is the sole responsibility of the user. Printed in the U.S.A.