



N. Causeway Blvd.

Metairie, Louisiana

APPLICATION: In 2002, the pavement condition from I-10 to the beginning of the Lake Pontchartrain causeway had deteriorated significantly over many years and was in need of rehabilitation. One of the longest in the world, the 28-mile causeway connects the Mandeville area to New Orleans with 43,000 vehicles traveling the causeway daily. It's also the most direct evacuation route in the event of hurricanes or other inclement weather.

THE CHALLENGE: The pavement surface was exhibiting a great deal of transverse and longitudinal cracking distress as a result of the many years of heavy traffic volume and loading. Given the high daily traffic volume combined with the severe cracking, long lane closures would be necessary to carry out full depth rehabilitation. Although this would restore the road's base strength to handle both current and future traffic loadings, there was no reasonable way to reroute the traffic for lane closures.

SITE CONDITIONS: Summer temperatures range from 80-90 °F and temperatures can drop below freezing during winter nights. After years of exposure to the sun, the asphalt had oxidized and become quite brittle resulting in large concentration of cracking throughout the pavement section.



Pavement after GlasGrid installation

ALTERNATIVE SOLUTIONS: The level of distress was significant and this led to the rejection of a simple mill and fill (3"-6") strategy fearing the cracking would reflect through soon after the overlay was installed. Other options such as, full depth reconstruction, would require long lane closures and much higher construction costs.

THE SOLUTION: The GlasGrid® Pavement Reinforcement System along with a slightly modified "mill and fill" approach was selected as a lower cost alternative to reconstruction. Reinforcing the roadway pavement with GlasGrid provided the asphalt with a much greater ability to resist tensile stresses in the pavement.

PROJECT HIGHLIGHTS

Project:

N. Causeway Blvd.

Location:

Metairie, Louisiana

Installation:

August 2002

Product/System:

Glasgrid 8501; 50,000 SY

Owner/Developer:

Greater New Orleans Expressway
Commission and Jefferson Parish

Design Engineer:

Krebs, LaSalle, LeMieux
Consultants, Inc..

General Contractor:

Angelo Iafate Construction, LLC

Distributor/Installer:

Industrial Fabrics, Inc.

INSTALLATION:

Approximately 3" of the existing pavement was milled off to accommodate the 1.5" leveling course and a 1.75" overlay. GlasGrid 8501 comes with a high quality pressure sensitive adhesive that provided the bond to the new leveling course and permitted the construction traffic to proceed without any delays. Industrial Fabrics's installation crew placed the GlasGrid immediately ahead of the paving crew. This limited the work to one lane, permitting traffic to travel passed the paving and installation crews with minimal disruption to the flow.

THE RESULTS:

Over the last 17 years, this 1.5 mile section has performed extremely well and remains essentially crack free, even through significant weather events such as Hurricane Katrina in 2005. Although a few small cracks can be found in the area immediately next to the curb, the main travel section areas are crack free. Over the same time period, the section of N. Causeway Blvd that is located south of Veterans was rehabilitated without GlasGrid® and is demonstrating a large degree of cracking. This section will soon need to be rehabilitated."

THE GLASGRID® SYSTEM ADVANTAGE:

Introduced in 1989, the GlasGrid System consists of stiff environmentally friendly fiberglass material coated with a specially formulated elastomeric polymer. It's 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•



Project site was re-visited in 2019 and very minimal cracking was observed.



A pavement section rehabilitated without GlasGrid has demonstrated significant cracking over this same time period.

ADDITIONAL INFORMATION AND SERVICES:

Tensar International is the exclusive distributor in the Americas for GlasGrid System. As the leader in geosynthetic pavement reinforcement, we offer a variety of solutions for foundation and roadway applications. Our support services include site evaluation, design consulting and site assistance.

For innovative solutions to your site work 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, email info@tensarcorp.com or visit www.tensarcorp.com.

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