February 27, 2006

Greg Lyons - Application Specialist
Saint-Gobain Technical Fabrics America, Inc.
345 Third St. Suite 615
Niagara Falls, NY 14303-1117 USA

Re: GlasGrid on NCAT Track

Dear Mr. Lyons,

On June13, 2000 a product known as GlasGrid #8501 was placed in between two 2-inch layers of SMA on section W1 of the inaugural NCAT Pavement Test Track. This material was installed at the request of the Alabama Department of Transportation, who wanted to document any construction difficulties or performance issues that would result from its use. No geotextile interlayer was installed in the first 100 feet of section W1 in order to provide for a control. The entire Track was supported by 20-inch of HMA base in order to isolate distresses to the top 4 inches, which varied by section.

The test mix was a ½ inch NMAS Marshall SMA design containing crushed granite from Columbus, Georgia and flyash mineral filler. Aggregates were blended with 6.2 percent SBR-modified PG76-22 liquid binder and 0.4 percent mineral fiber to ensure thick film thicknesses. A Marshall hammer was used to design the research mix for 4 percent air voids before construction. During construction, air voids in quality control specimens averaged 3.5 percent. An emulsion tack coat of type CQS-1h was applied at a rate of 0.03 gallons per square yard before the placement of each lift of mix, with the GlasGrid product placed after the application of tack for the upper lift. The average density of the lower lift (in the outside research lane) was 96.0 percent, while the average density of the upper lift was 94.5 percent. Inclusion of the GlasGrid product did not create any problems during construction.

Since the time section W1 was placed, our fleet of heavy triple trucks have run approximately 3.3 million miles around the Track's 1.7-mile oval in order to apply over 20 million ESALs of accelerated pavement damage. It would take over 20 years for a typical interstate pavement to experience this level of load-induced damage. Since the SMA mix sandwiching the GlasGrid product in section W1 was of high quality, there is no appreciable difference in performance between the first and last 100 feet, with the exception of longitudinal cracking along the centerline joint between the inside and outside lanes. Longitudinal cracking was observed throughout the first 100 (control) feet, while no longitudinal cracking was observed in the last 100 (treatment) feet. An exploratory slab cut after 5 ½ years and 20 million ESALs revealed the GlasGrid product was still intact and bonded to the sandwiching layers of experimental SMA mix.

If additional information is required in order to assess the placement of GlasGrid on the NCAT Pavement Test Track, please do not hesitate to contact me.

Sincerely,

R. Buzz Powell
Test Track Manager

Cc: File