



Bridge Deck Waterproofing

Product in Action



George Washington Bridge . New York . USA



Client: PORT AUTHORITY OF NEW YORK & NEW JERSEY
Authorised Contractor: MULTISEAL INC. , GRANDVIEW WATERPROOFING INC.

New York City Vital Link

The two-level George Washington Bridge, which spans the Hudson River, is a vital element in the smooth running of the traffic of New York City. It joins upper Manhattan to the suburbs and industrial areas of New Jersey and is part of Interstate I 95, which runs down the eastern side of the United States from the Canadian border to Florida.

The bridge is the world's only 14-lane suspension bridge, with 8 lanes on the upper level and 6 on the lower. On an average work day, the bridge is subjected to the weight of 300,000 vehicles, of which 175,000 to 185,000 use the upper lever. Since 11 September 2001, all trucks are required to use the upper level, and comprise over half the volume.



In 1977/78, the upper level was converted to a steel orthotropic deck, with the addition of end dams, joints, scuppers and curb end plates set for a 11mm thick asphaltic pavement. In 1998, the owner, the Port Authority of New York & New Jersey found that the asphalt on the east bound lane showed signs of cracking, disbanding and breaking up under the weight of the vehicular traffic and there was evidence of corrosion to the steel deck.

They chose to replace the asphalt, and specified the use of the **Eliminator** membrane system to waterproof and protect the steel deck. **Eliminator** is a two-coat spray applied methyl methacrylate system, consisting of a primer and two discrete colour-coded coats. Each can be over coated within 40 minutes of application and the complete system is fully serviceable within one hour.

Aggregate Scatter for Greater Adhesion

For this application the client specified an aggregate broadcast into the second coat of the membrane.

The system was completed with Stirling Lloyd's proprietary Bond Coat SA1030 to provide maximum bond between the membrane and surfacing. The Port Authority was so pleased with the performance of the membrane that they specified the same system for the west bound lanes of the upper level of the bridge in 2002.

Both sets of lanes are performing well, with no deterioration to the pavement under the extra weight of traffic, and providing 100% waterproofing to the steel deck beneath.

Ref. PIA_Elim017(3E).pdf
Available from stirlinglloyd.com



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