

Lake Creek Bridge Rehab

Project: T-48 Slurry, U.S. 95 South
Location: Lake Creek Bridge, Worley, ID
Size: 8,000 Square Feet
Application Time: One Week
Owner: Idaho Transportation Department
Engineer: HDR
Contractor: Max J. Kuney, Spokane WA



Approximately 3,000 vehicles a day use the US-95 Bridge over Lake Creek near the Coeur d' Alene Casino Resort. The original deck, built in 2007, was cast in place micro-silica concrete. High winds and low temperatures during construction resulted in some problems with a 250 linear foot section of the new bridge deck. Idaho DOT engineers observed that the "dough balls" in the original placement had begun to pop off leaving voids in the bridge deck surface where water and ice have potential to collect.

In addition to these pop off's the micro-silica deck had a large quantity of shrinkage cracks in the surface, which if left untreated, would more than likely lead to premature deck failure.

IDOT specified that the contractor install a T-48 Thin Polysulfide Epoxy Slurry Overlay manufactured by Transpo on the sections of the bridge deck with the problems. The polysulfide epoxy resin based system resists the effects of UV degradation, while the unique slurry application method allows for installation with minimum traffic disruption. The 3/8" thick waterproof overlay adds minimal dead load to the structure (3 to 4 lbs/ sq ft), while the broadcast aggregate surface will maintain high skid resistance for many years.

Repairing Provencher Bridge

The City of Winnipeg, Canada, experienced excessive cracking in the concrete deck of Provencher Bridge constructed using High Performance Concrete (HPC). The city maintenance engineer and the city's consultants, Wardrop Engineering, contacted Specialty Construction Products to inspect the structure and make a recommendation for a repair procedure and material.

Based on the inspection, the cracking appeared to be from shrinkage during curing of the new HPC bridge deck. The total deck surface of 10,000 square feet (3,048m²) had a large amount of small cracks in addition to approximately 1,600 linear feet (487m) of larger width cracks.

Based on its experience, Specialty Construction Products recommended that Sealate T-70/MX-30, manufactured by Transpo Industries, be applied.

Sealate T-70/MX-30 is a specially formulated High Molecular Weight Methacrylate (HMWM) penetrating crack healer sealer for use on concrete surfaces. The material's very low viscosity of 25cps allows it to penetrate deep into cracks. Once Sealate T-70/MX-30 is fully cured it will restore over 50% of the original strength of the concrete across the crack.

Specialty Construction Products treated the larger cracks individually to make sure they were completely filled with the Sealate T-70/MX-30. Once the material cured, the entire surface of the bridge was treated with a flood-coat, which not only fills the smaller cracks that are too extensive to seal individually, but also allows the resin to penetrate into any open pores in the concrete. This process increases the strength of the concrete surface and reduces the permeability of the deck. Before the flood-coat is allowed to cure, a light broadcast of coarse sand is applied to the surface. This increases skid resistance until the excess sealer wears off the surface.





20 Jones St.
New Rochelle NY 10801-6098
914-636-1000

Grainfield Kansas T-48 Story

Transpo Industries, Inc. announced today that T-48 Thin Polysulfide Epoxy Slurry Overlay was the material of choice for the rehabilitation of the Interstate 70 overpass in Grainfield, Kansas.

It took the crew approximately 2.5 hours to complete each half of a 6200 square foot bridge deck. Wildcat Concrete Services was the contractor for the T-48 overlay application and all work was observed by Kansas DOT engineer David Meggers. This was the first thin slurry type overlay used by the Kansas DOT.

T-48 resists the effects of UV degradation, while the unique slurry application method allows for installation with minimum traffic disruption. The 3/8" thick waterproof overlay adds minimal dead load to the structure, while the broadcast aggregate surface will maintain high-skid resistance for many years.

Transpo Industries Inc. specializes in the development and manufacturing of specialized polymer materials for bridge rehabilitation and preservation.

Transpo Industries has ISO 9001/2001 certification and the Castek division has ISO 9002/2001 certification for the design, manufacture and supply of transportation construction materials and safety products.

For more information, visit the Transpo website: www.transpo.com/ThinOverlay.htm



6,200 square feet of T-48 was applied in about 2.5 hours

NJ Parking Garage Sealed with T-70/MX-30



16,000 square feet of Sealate® was applied in just 3.5 hours

The garage structure in Woodcliff Lake, New Jersey is the North American headquarters for a major European manufacturer of high-end vehicles, some hand-constructed.

The structure, a double "T" design, was never sealed properly. Over twenty years later: water, salt and normal expansion/contraction caused cracking and spalling. The resulting leakage was causing harm to the automobiles stored in the lower level of the garage.

Hoffman Architects of New Haven investigated the use of High Molecular Weight Methacrylate (HMWM) that would penetrate and seal the existing concrete cracks.

Transpo's T-70/MX-30 was the material of choice for its ability to seal and fill deep cracks. Other benefits include ease of installation, single application, low volatility/viscosity, and cost.

Schnell Contracting Services was chosen to perform the work in August of 2008. The crew removed all of the previous ineffective caulking, shot-blasted the surface and mixed the material onsite. It took the crew of seven just 3.5 hours to seal 16,000 square feet of concrete surface.

For more information, visit our website: www.transpo.com/sealate.htm