

## Polymer Concrete Used to Rehab Bridge Deck on Major East–West Link

St. Louis, MO



– U.S. 40/I–64, a doubledeck bridge complex in downtown St. Louis and critical east—west link across the Mississippi River, recently had its existing asphalt overlay removed and replaced with a Sikadur 22 Lo–Mod polymer concrete overlay. This project is the largest of its kind completed anywhere in the world.

The U.S. 40/I-64 bridge deck was slated for repairs because many areas of the existing concrete deck were suffering from the corrosive effects of de-icing salts. Salt accelerates corrosion of reinforced concrete leading to cracking and spalling in the concrete which appear as potholes on the road surface.

The contractor, Park–Mark of St. Louis, selected Sikadur 22 Lo–Mod epoxy from Sika Corporation, Lyndhurst, NJ as the binder for the new overlay system based on a successful track record of over 10 years on other state bridge decks. Due to the extremely high volume of traffic, the polymer concrete overlay was applied in two 1/8 inch lifts with blast furnace coal slag used as the broadcast aggregate.

The impermeable Sikadur 22 Lo–Mod epoxy effectively sealed the surface from the penetration of salts, water, and other deleterious elements, while the broadcast aggregate provided a smooth and skid resistant wearing surface that resembled asphalt in appearance.



The Sikadur polymer concrete overlay also provided rapid turnaround, which allowed the contractor to install the overlay at night and then reopen the roadway.

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