

August 14, 2018

Just a little off the top, please!

Baumann Road over I-70 Bridge Deck Replacement

53 years is a long time to sit outside in the Illinois weather. And the concrete deck of the Baumann Road Bridge over I-70 was definitely showing the effects. With the bridge in dire need of a facelift, work was underway to use Hydro-scarification to prepare the old concrete deck for resurfacing. This commonly-used procedure using ultra-high-pressure water typically removes, at most, about an inch or so of the old concrete. This usually reveals a solid surface that can form a great bond with a new concrete overlay.

But half a century of road salt had reacted with the old concrete, weakening its internal bonds and, instead of removing the first inch or so, the high-pressure water blew right through the entire bridge deck! Suddenly, instead of looking at a healthy thickness of concrete, the contractor was staring at daylight from below.



Damaged Deck After Hydro-Scarification

Fortunately, the first surprise hole was over the shoulder and no debris fell on the I-70 traffic below. But IDOT reacted quickly and closed the bridge while inviting WHKS engineers to develop a fast-tracked solution.

A thorough inspection showed that the bridge abutments, piers and girders were in fine shape but the deck had to be replaced. The design also called for new structural bearings in several locations, a number of upgrades to address changes in the seismic codes and a traffic management plan for I-70 during the repair work.



View of Baumann Road Bridge from I-70

Responding to the hurry-up call from IDOT, WHKS took just three months to inspect the bridge, survey the structure, prepare both preliminary and final plans, specifications and cost estimates and a traffic management plan for I-70.

So the next time you're thinking about getting that exfoliation treatment at the spa...

