

Ultraseal Creates a Strong Partnership for Protecting Infrastructure Investments

Crafco, Inc. helped the Kansas DOT improve the performance of their bridges, winning a state-wide Excellence in Partnering Award for their joint effort



OVERVIEW:

Crafco has a reputation for delivering value and quality and being a true partner for state departments of transportation. One of those long-term relationships is with the Kansas Department of Transportation (DOT). It was no surprise, then, when in 2015, Kansas DOT turned to Crafco to implement innovative ways to preserve their bridges. "It's a major capital project to build a bridge," Lisa Zentner, Director of Specialty Products at Crafco, Inc. says. Every few years, the driving course on a bridge is milled off and an asphalt overlay is put

down to help protect the bridge. Whether it's brand new bridge construction or scheduled maintenance of an existing bridge, there's an opportunity to waterproof and protect the deck.

To make the most out of taxpayer dollars on a large capital expenditure in Topeka, Kansas DOT partnered with Crafco and contractors HAMM Companies and Bettis Asphalt to install Crafco's Ultraseal Waterproofing system that would protect and extend the investment the state has made in their infrastructure.

BACKGROUND:

Protecting taxpayers' and contractors' investments in their projects is a Crafco priority. Crafco was founded in 1976 and is the world's leading manufacturer in both quantity and diversity of packaged pavement preservation products for asphalt and concrete. Even today as Crafco has grown to serve construction professionals worldwide, the company prides itself on empowering customers through selfless service.

“The thing that you want to do from the moment you have finished a bridge is protect the decks. Protecting that concrete is going to make sure you maximize the life cycle of the structure.”

Crafco's representatives share that ideal. Most are long-time construction industry veterans and many come from generations of contractors. Crafco's midwest regional sales manager Pat Stivers, who collaborated on the Topeka project, has an even more unique perspective: He's the mayor of Maize, Kansas. "I look at things differently because I deal with budgets, and I represent the taxpayers," Stivers explains.

Crafco's Ultraseal Waterproofing System brings that value to taxpayers. It is designed to protect concrete surfaces from chlorides, water penetration and other harmful materials. Its liquid application conforms to all surface irregularities and cracks, while its self-leveling ability makes it easy to install. Because of its proven performance, it is used by contractors, agencies and DOTs across North America.

The hot applied waterproofing process has been used successfully for more than 60 years but has more recognition in Canada than in the U.S. for bridge deck usage.

“Almost every single bridge, and we're talking thousands and thousands of bridges all throughout Canada, has this type of hot-applied waterproofing system as their main source of protection.”



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Kansas had been using a different product to protect their bridges, but application in a state known for its intense weather isn't always easy. They were experiencing issues with delamination, complex installation and with finding a solution that was heavy duty enough to hold up for 30+ years. They also wanted a solution that could work within various paving operations that they would have during maintenance.

“One of the things they indicated as a problem was installation of the peel-and-stick product they were used to,” Stivers says. “It's windy in Kansas, and the other product has to be put down in long strips from a roll. They had a really hard time getting it uniform and getting it to not cause bumps in the bridge deck.”

The old process was also a pre-formed system, which meant the area needed to be completely free of debris, a challenge on a heavily truck-trafficked bridge experiencing vibration. In Kansas, the vibration has a unique effect: It causes kernels of corn to drop out of the transport trucks.

“That had caused some major issues with the pre-formed membranes they were using,” Zentner says. With Ultraseal, the kernels could be plucked out or left to be encompassed within the membrane without decreasing the effectiveness of the system. This type of impediment could cause failures and delamination in other types of systems.

SOLUTION:

As Crafco and Kansas DOT solidified their partnership back in 2018, they selected the Topeka bridge as their test initiative. Before starting, the Crafco team met with Bettis Asphalt to go over the waterproofing process and installation of the protecting boards, which would be done before the asphalt overlay.

“We met with Bettis at their location and explained to the crew exactly what was going to happen and how we were going to do it,” Stivers says. “We actually worked along with Bettis. Bettis was a great teammate.”

Using Ultraseal helped the Kansas DOT with the following issues:

- **Easier, More Uniform Application:** Crews preferred the waterproofing process and the build-in-place system over the pre-formed application. Plus, surface contact with waterproofing membrane is improved, ensuring no air voids.
- **Lasting Results in Freeze/Thaw Zones:** Salt can be very caustic to concrete and cause premature aging. UltraSeal protects the bridge from these damaging materials.
- **Ensured Success Through Product Support:** CrafcO worked hand-in-hand with the Kansas DOT, Bettis and HAMM to ensure they were getting the right product for the project and that everyone on the job knew exactly what they were doing and how.

RESULTS:

The project not only was received well by the crew, it also earned an Excellence in Partnering Award from the Kansas Contractors Association (KCA) and Kansas DOT. This distinction recognizes superior collaboration in construction planning, design and execution.

The Excellence in Partnering Awards competition is open to member organizations across the state of Kansas. Its 12-person Partnering Committee judges projects by their processes, complexities, and challenges. Just 13 awards are given each year, making selection highly competitive. The Ultraseal bridge deck waterproofing project received one of two honors in District 1 — ranking as top choice in the “under \$1.5MM” category.

“Effective pavement preservation requires great partnership,” Stivers says, “and the teams here truly stepped up to that thinking.”

For more information, visit www.crafco.com

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