

## TOLEDO ADDS YEARS TO BRIDGE DECK LIFE WITH ADVANCED PAVEMENT OVERLAY

Two bridges in Toledo, Ohio, had undergone routine maintenance over the years. But while the bridges themselves were structurally sound, David Pratt and his public works team soon realized that further repairs to the wear surface were inevitable down the road.

Rather than plan for continual surface maintenance, Pratt, public service commissioner for the city's streets, bridges and harbor, began looking into a permanent pavement overlay as a long-term solution to increase the bridges' longevity.

"The aging structures were in what we considered borderline condition," Pratt said. "We made a couple of small repairs, but we knew in the next few years we had to do something more substantial if we wanted to significantly extend the life of the bridge deck."

After numerous conversations with industry professionals, Pratt discovered a new pavement overlay technology designed to protect infrastructure and provide safer traction for motorists.

"I always like trying new technology," Pratt said. "And once I got buy-in from the city engineers and found money in the budget, we were able to install the overlay on the two bridges."

The pavement overlay Pratt installed on the bridge decks is called SafeLane<sup>®</sup> surface overlay and is produced by Cargill Deicing Technology. The overlay is comprised of epoxy and aggregate to help ensure infrastructure protection from damaging corrosion, increase surface traction and prevent ice formation.

"For us, the waterproofing feature was a huge benefit," Pratt said. "The epoxy helps prevents moisture from getting into the bridge deck and it's held up really well. We haven't had peeling or any other problems since we installed the overlay in 2008." As a result of the pavement overlay, the city of Toledo public works has enjoyed reduced maintenance on the bridges as well as increased driving safety for community members.

# **SafeLane**<sup>®</sup>

*surface overlay*

"Without a doubt, the traction is much better," Pratt said. "It doesn't ice up in the winter, and as a result we've had fewer spinouts on the bridge deck."

As an additional feature of the pavement overlay, the aggregate in the surface can store deicing and anti-icing liquid, such as salt brine, and naturally release it to the surface when temperatures drop below freezing. This process helps prevent slippery conditions, such as the formation of frost, ice and snow pack.

"Right now we treat the bridges with salt, and we've had fewer problems with freezing from the residual," Pratt said. "For the coming year, however, I just ordered seven new trucks with 2,300 gallon tanks on them, so we'll be doing pre-treatment with brine next winter as well."

Having garnered successful results with the two questionable bridges, Pratt and the city of Toledo are looking at budgets and talking about installing the pavement overlay on additional bridges in the future.

"These bridges will probably need to be replaced in the next 10 years or so, but by installing this overlay, we've added an additional 10 to 15 more years to their life." Pratt said. "After several years of evaluation and witnessing how the bridge decks have held up, we feel we got a good bang for our buck."



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