

**Missouri Department of Transportation**

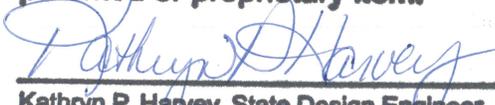
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TO: Llans Taylor  
MoDOT Innovations Engineer

CC: Jim Smith  
Mark Croarkin  
Jeff Bohler

FROM: Dustin Dorenkamp  
Transportation Project Designer  
MoDOT – St. Louis

**I do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), no equally suitable alternate exists for this patented or proprietary item.**

  
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**Kathryn P. Harvey, State Design Engineer**

DATE: March 7, 2013

PROJECT: J6I3036, I-55/ I-64/ I-70, St. Louis City

SUBJECT: Request for Proprietary Items on the Poplar Street Bridge Deck

The Poplar Street Bridge (PSB) carries Interstates 55, 64, and 70 over the Mississippi River from downtown St. Louis to Illinois. The bridge consists of a steel orthotropic deck that requires very specialized products. We submit for your approval the use of Kwik Bond polyester polymer and T-48 epoxy polymer for use on the orthotropic steel plate deck of the Poplar Street Bridge. Due to the steel deck and the epoxy overlay being only 1/2" thick, a specialty product is needed that bonds well to the steel.

Requested Products:

Transpo T-48: Polysulfide Epoxy Thin Slurry Overlay

Kwik Bond PPC 1121 OSD: Polyester Polymer Concrete with Zinc Primer KBP 204 HMWM

The existing deck of the PSB and many repairs on the deck consist primarily of the Transpo T-48 product. Mark Croarkin, the St. Louis District Bridge Maintenance Engineer, has also more recently used the product with a zinc primer on approximately 8,000 SF of repairs. Mark has requested that the

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Kwik Bond product also be allowed as an option in this contract. Kwik Bond was first used on the PSB with the collaboration of Bridge Division, including a verbal approval from Dennis Heckman, the State Bridge Engineer. Kwik Bond was used after reviewing extensive research that was performed by the University of Missouri, Columbia for an orthotropic deck project in the State of California. Polyester concrete was the only option studied that could be installed thin enough to match the existing overlay, and Kwik Bond is the only known source with a Zinc Primer. Since T-48 has repeatedly been spelled out as a proprietary product for this structure and Kwik Bond polyester has performed well to date, these are the only two products that should be allowed on this specialty deck without significant research. We request permission to specify these two products for use on this project and future bridge maintenance contracts on this bridge until it is overlaid in 2016.

There will be no additional cost to use these products because there are no other known products that can be used for this location. The contractor will have the option to choose between the two so there will be more competition than there has been previously on this structure where previously only T-48 was specified.

The unique situation that requires specifying these two products is the need for the product to bond to steel and not to concrete as other similar products typically do. Both of these products have proven track records on orthotropic steel bridge decks and have been designed to fit that specialty situation.

