

- **Bridge Rehabilitation & Repair Projects**



Bridge 153 Rehabilitation: Tippecanoe County (Des. No. 0710298). The project involved the removal of an existing non-composite concrete deck on steel beams and replacement of the deck with a new fiber reinforced polymer (FRP) deck with a polymeric concrete wearing surface. The reconstruction provided a wider, lighter, corrosion resistant bridge deck. The existing five steel beams were cleaned, painted, and re-positioned to provide a widened deck and limit the overhang length at the copings.

Hog Point Bridge Rehabilitation: The structure is a four span, 399 ft. long, arch bridge spanning the Tippecanoe River. The rehabilitation included the replacement of the existing arch earth fill with a light weight material allowing for the construction of a widened, cantilever



deck over the existing arch structure without increasing dead loads to the substructure. The project widened the deck from 24'-0" to 30'-4". The project was featured in "Roads & Bridges" magazine, and received an "Achievement Award for Excellence in Concrete" from the Indiana Ready Mixed Concrete Association.



Americus Bridge Repairs: HSK evaluated the beams in this 7-span 687 foot long, 28 year old prestressed I beam structure, and developed detailed repair plans and specifications. The moderate-sized cracks that had developed near the ends of several beams were treated by epoxy injection (shown in the photo at right). Beam



strengthening was provided in accordance with ACI 440 by the installation of bonded FRP U-wrap at the beam ends (seen in the photo at left). HSK provided all design and construction inspection services for this project.





Davis Ferry Bridge Rehabilitation: The bridge is a 1,130 ft. long, 10 span, two lane structure across the Wabash River. The bridge carries 7,000 vehicles per day. All work was completed under traffic, limiting restrictions to between 10 AM and 4PM through one lane flagging.

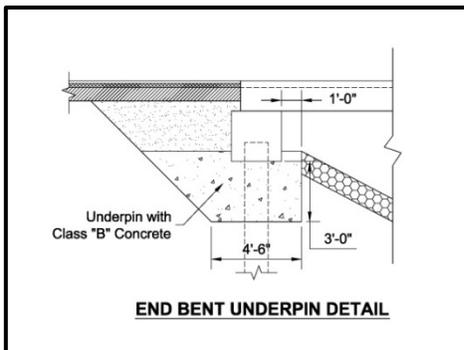
The first portion of the project included a series of spot deck patches along with deck joint repairs. Once the new patches were cured, the entire deck was diamond ground as shown above to provide a smooth profile and prepare the surface for an overlay. Sealer/Healer was applied followed by a polymeric deck overlay as shown at right.



Bridge 109 Rehabilitation: The bridge over Indian Creek, as shown in the picture to the left, is a single span adjacent box beam structure with a composite concrete deck. As part of a **three (3) bridge deck overlay contract**, the bridge deck was milled and a latex modified concrete overlay was applied.

The work at this bridge included an asphalt mill and overlay of the approaches to provide a smooth transition to the new deck surface.

2010 Bridge Rehabilitation Contract: The Tippecanoe County contract included **eight (8) bridges** in a single contract. The project included a total of 360



linear feet of BS and SS joint repairs as well as 645 square feet of partial and full depth deck patching. Several of the bridges required end bent underpinning and bank protection. Mud-jacking was also incorporated at one of the sites to repair a sunken approach slab. The project also included linear grading and approach overlays at many of the sites.





The Rehabilitation of the John T. Myers Pedestrian Bridge over the Wabash River and the James F. Riehle Plaza Pedestrian Bridge over the Norfolk Southern and

CSX Railroads is currently in design. The Project includes extensive superstructure as well as substructure renovations. The project also includes the

addition of new ADA compliant bridge ramps. As seen in the photos the inspection process has included a wide range of detailed inspections including GPR and IR investigations and lighting and elevator system evaluations.

