

Executive Summary

On a quiet spring morning, before many commuters began the weekday trek to work, a tanker truck carrying 7,500 gallons of diesel fuel overturned on I-81's Ramp B to U.S. Route 22/322 westbound. The driver escaped, and no other vehicles were involved; however, the ensuing fire made national headlines and severely damaged the Ramp B structure and the Route 22/322 eastbound structure above.

Given that nearly 85,000 travelers pass through this section of I-81 everyday, the I-81 River Relief Route Emergency Design Work project required an immediate response and the use of Accelerated Bridge Construction (ABC) techniques to help the Pennsylvania Department of Transportation (PennDOT) repair and reopen the interchange in a timely manner.

To begin, a team of PennDOT officials and Gannett Fleming engineers joined forces to assess the damage, establish repair and removal plans, and begin the design process to reopen damaged structures within seven months.

Pennsylvania Governor Tom Corbett signed a disaster emergency proclamation for the accident site, making this the commonwealth's first emergency proclamation of its kind since an accident on I-95 in Delaware county 25-years ago. This placed even more emphasis on the efficiencies of the ABC process.

The interchange complex consists of three levels and directional curved ramp alignments, limiting access points to reconstruct the damaged structures. The design team responded by not only repairing the structures, but improving their safety characteristics. Through a highly coordinated process, the interchange was repaired and reopened seven months after the fire.