

Yellow Creek Bridge

The Yellow Creek Bridge, a 104 foot long pin-connected steel Pratt thru truss, stands near Hopewell Township, in Bedford County. Built in 1889, it is one of very few surviving examples of the work of the Keystone Bridge Company. As PennDOT documents note, it is both “...historically and technically significant as an early and complete example of an important bridge type and the work of an early national bridge building company.”

Despite its technical significance, by 2008 the bridge was suffering from deterioration and could no



Yellow Creek Bridge after Rehabilitation

longer meet the transportation needs of the community it served. Specifically, its inability to carry loads greater than 6 tons (the weight of a large pickup truck) meant that it could no longer meet a critical need—23 ton emergency vehicles needed to be able to cross.

This weight requirement was a particular problem because the original structure could not be strengthened sufficiently to bring it up to that standard—most 19th century metal truss bridges were designed to carry horses and carriages, not cars and heavy trucks. As a result, the only option for Yellow Creek (beyond outright replacement with a new structure) was to replace a majority of the tension members with new steel members

that were slightly larger and could support the greater loads.

This sparked a difficult historic preservation question. If a majority of a structure will be replaced in a way that matches the original appearance, can that be considered rehabilitation, or does it constitute replacement? In the case of the Yellow Creek Bridge, all replacements carefully followed the original design including improving the overall appearance of the truss, replacing members in kind (slightly but not perceptibly larger), maintaining the same systems of linkages (pins), and preserving/repairing any decorative features (the company sign and web-like portal braces). That is to say, despite some necessary modern improvements, the project was determined to be a rehabilitation.

While the question of what to call a project may seem largely philosophical, terming a PennDOT project rehabilitation versus replacement can represent a considerable difference in how quickly a project is delivered. At the end of the day, replacing sections of the structure while ultimately retaining it within its original historic environment and for its original use, was the best preservation option.

One of the most important factors behind the decision to rehabilitate the bridge was the community's desire to keep it. Although technical feasibility and engineering standards certainly determine whether a bridge *can* be rehabilitated, it is often community involvement that determines whether a bridge *is* rehabilitated. In the case of the Yellow Creek Bridge, community interest helped to carry the day, and resulted in the rehabilitation of the bridge that still stands.