

Trout Brook Pony Truss Bridge

Alna, Maine



Cooperative Agreement P14AC01002 was entered into by and between the Department of the Interior, National Park Service (NPS) and the National Society for the Preservation of Covered Bridges (NSPCB) for a research project for the National Historic Covered Bridge Preservation Program.



This phase of the project includes reconstructing the Moose Brook Bridge (formerly of Gorham, New Hampshire) for the Wiscasset, Waterville and Farmington Railway in Alna, Maine.

In 1891-93, the Concord & Montreal Railroad built a 30-mile, single-track branch line from its main line at Whitefield, NH to Berlin, where lumber and paper industries were booming. The line passed through the towns of Jefferson, Randolph, and Gorham. Shortly after the line's completion, the Boston & Maine Railroad leased the branch. No information has been found concerning the first bridge at this location, but presumably it was a wood structure. This bridge is one of three known Howe pony truss bridges built on the line in 1918 to accommodate heavier rolling stock. Only the Snyder Brook Bridge in Randolph survives.



Moose Brook Bridge Before the Fire.
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was favored by railroads for its rigidity and simple framing connections, and was used extensively on railroad lines in the United States and Europe in the nineteenth century.

This line saw regular use for both passenger and freight trains until the 1960s. It was leased to Guilford in 1983 and to New Hampshire & Vermont Railroad in 1989. In 1996, the corridor from Waumbek Junction to Berlin was abandoned. The New

While it was accepted that wood bridges might have a shorter service life than steel bridges, they were economical to build, could be easily repaired, and gave evidence of distress long before failure. The Howe pony truss was the truss of choice for shorter spans on Boston & Maine lines. Patented in 1840 by Massachusetts millwright William Howe, the Howe truss addressed the inherent difficulty on constructing tension connections in wood by using adjustable

wrought iron rods instead of wood posts for vertical tension members.

The Howe truss



Moose Brook Bridge Before the Fire.
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Hampshire Division of Parks and Recreation (Department of Resources and Economic Development) purchased the corridor and created the Presidential Range Rail Trail along the line.



In May 2004, vandals set fire to the Moose Brook Bridge. The NSPCB was contacted for assistance in preserving the structure. NSPCB took possession of the remaining parts with the hope of ultimately rebuilding the structure.



Drawings of the bridge were prepared by the Historic American Engineering Record (HAER) in 2008 and are available on their website at <http://www.loc.gov/pictures/item/nh0298/>.

The bridge was considered an ideal candidate for a research project proposed by Case Western Reserve University (CWRU) for testing Howe trusses. The iron parts were trucked to the CWRU campus in Cleveland, Ohio, and the trusses rebuilt with new timbers. CWRU has completed their research and is now ready to remove the structure from the campus.



Christopher Marston, National Park Service; David Wright, past President, NSPCB; Dario Gasparini, CWRU; c2008

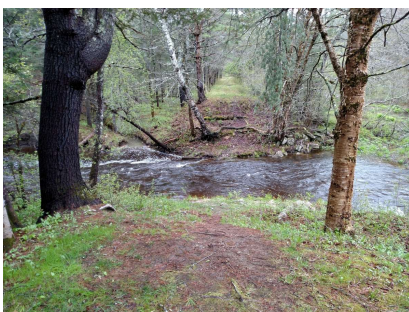
The NSPCB investigated a number of sites for the bridge's ultimate location and it was decided to reconstruct the structure as part of the Wiscasset, Waterville and Farmington Railway in Alna, Maine. The WW&F is a non-profit organization working to reconstruct part of a former narrow gauge railroad which was abandoned in the 1930's. A Memorandum of Understanding was signed in July 2017 to start this process. The bridge structure was completed and ownership transferred to the WW&F on June 9, 2018.



Trusses at CWRU, September 2014

At its future location, the bridge will once again carry rail traffic as part of the line's tourist operation. Through this current Task Agreement, the National Park Service has made \$110,000 available for the project.

A copy of a presentation on the Moose Brook Bridge offered at the 2013 Covered Bridge Conference in Dayton, Ohio, is available at http://www.woodcenter.org/docs/dayton-conference/marstonandrewsmesler_moosebrook.pdf. It provides numerous photos of the bridge removal after it was damaged by arson, and its reconstruction in Cleveland.



Proposed Bridge Location in Alna, Maine



Bridge Under Construction, Alna, Maine, December 16, 2017



*Transfer of Ownership
June 9, 2018*