

Blood Road Bridge and Woodworth Road Bridge
Blood Road, spanning Johnson Creek, and
Woodworth Road, spanning Johnson Creek
Lyndonville vicinity
Orleans County
New York

HAER No. NY-180

HAER
NY,
37-LYN.V,
1-

PHOTOGRAPHS
WRITTEN HISTORICAL DATA

HAER
NY,
37-LYN.V
1-

HISTORIC AMERICAN ENGINEERING RECORD

BLOOD ROAD BRIDGE AND WOODWORTH ROAD BRIDGE

HAER No. NY-180

Location: The Blood Road Bridge is located on Blood Road across Johnson Creek, Lyndonville vicinity, Orleans County, New York. Bridge is 1,200 feet south of Yates Center Road and 1.5 miles east of the Village of Lyndonville. The Woodworth Road Bridge is located on Woodworth Road across Johnson Creek, 500 feet south of Yates Center Road, 2 miles east of the Village of Lyndonville and one-half mile east (downstream) of Blood Road bridge.

UTM:	(Blood Road Bridge)	(Woodworth Road Bridge)
	N 4801190	N 4801620
	E 714090	E 714910

New York State Quad: Ashwood

Date of Construction: Blood Road Bridge, 1899; Woodworth Road Bridge, 1889-1891.

Style: Single span, low Pratt truss bridges.

Engineer/Builder: Blood Road bridge was fabricated and erected by the Havana Bridge Works, Montour Falls, New York. Woodworth Road bridge was fabricated and erected by W. H. Shepard & Sons, the predecessor of the Havana Bridge Works.

Present Owner: Orleans County, New York.

Present Use and Condition: Blood Road Bridge is currently closed to all traffic. Cross beam and floor stringers at north end of the Blood Road bridge are seriously deteriorated and have failed, leaving bridge with a significant sag at one end. The County Highway Superintendent of Orleans County indicated that, as of April 1987, this bridge will soon be replaced. The Woodworth Road Bridge displays serious corrosion and is also closed. Because Woodworth Road is not paved and is about one-half mile east of Blood Road it appears that this crossing may be permanently abandoned and the bridge closed, but left in place for the immediate future.

Significance: The Blood Road Bridge is one of the few remaining pre-1900 bridges fabricated and erected by the Havana Bridge Works, of Havana, New York. The W. H. Shepard & Sons bridge at Woodworth Road, also discussed in this report, may be one of the first bridges erected by this company, the corporate predecessor of the Havana Bridge Works.

Materials

of Construction: Both the Blood Road and Woodworth Road bridges are low Pratt truss bridges with pin connections and riveted gusset plates carried on field stone abutments with wingwalls. Both bridges have wooden decks. The Woodworth Road Bridge uses 5-inch-wide plates instead of rods as diagonal tension members.

Dimensions:

The Blood Road Bridge has a structure length of 85 feet, and a span length across Johnson Creek of 83 feet. The bridge's out-to-out width is 14 feet 2 inches, its curb-to-curb width is 13 feet 1 inch, and it has a deck area of 1,200 square feet. The bridge deck is approximately 19 feet 6 inches above the lowest point in the stream bed. The Woodworth Road Bridge has a structure length of 76 feet, a span length across Johnson Creek of 74 feet, an out-to-out width of 14 feet 1 inch, a curb-to-curb width of 12 feet 7 inches, and a deck area of 1,100 square feet. The stone abutments at this bridge are approximately 14 feet high.

Significant Ex-

terior Features: Blood Road Bridge has steel plate floor beams with a 22 inch web. This dimension, for a bridge of its relatively short length, is unusual. Some truss members are imprinted with the name "Jones & Laughlin." This bridge also has a wood deck with steel wheel track plates installed around 1972. The Woodworth Road Bridge uses 5 inch plates with reinforced ends and a hole punched for the pin connection as diagonal truss tension members.

**Major Alterations
and Additions:**

Blood Road Bridge was reconditioned and posted for a six ton load limit in 1969. Woodworth Road Bridge received a reconditioning in 1955.

Project

Information:

The documentation of Blood Road Bridge was prepared by the Historic American Engineering Record (HAER), National Park Service, during the summer of 1987 for the New York State Historic Bridges Recording Project. This project was sponsored by the New York State Department of Transportation and under the supervision of Eric DeLony, Chief & Principal Architect, HAER. This report was written by Andrew Cole and Charles Scott. When citing this report, please credit the Historic American Engineering Record and the authors.

The Blood Road Bridge across Johnson Creek near Lyndonville, in the Town of Yates was erected in 1899 by the Havana Bridge Works, of Havana, New York (now Montour Falls). The bridge is an example of the pre-1900 style of bridges fabricated by this New York state bridge builder. The company traces its origins back to 1878 and continues today as the Shepard-Niles Company of Montour Falls, New York.

Blood Road was built in 1867 and crossed the farm of Cyrus J. Blood. The first bridge to cross Johnson Creek at Blood Road was built in 1871. Cyrus Blood built the abutments and embankments for the bridge for \$1,350. Blood was also given the privilege to use the abutments and adjacent embankments at the bridge as part of his hydraulic power mill dam in exchange for his maintaining and repairing the bridge sub-structures. The Blood Road bridge erected in 1871 was a two span wooden pony truss with two stone abutments and a single stone pier.

According to the Minutes of the Yates Town Board, on August 1, 1896 a special meeting of the Yates Town Board "considered the advisability of repairing Blood [Road] Bridge" and then adjourned the meeting to inspect the structure. The following week the Board approved the specifications of the repairs to the wooden bridge. Despite these repairs the bridge must have continued to rapidly deteriorate, because on March 14, 1899, at the annual town meeting, the citizens of Yates voted to raise \$1,250 for a new bridge at the Blood Road crossing of Johnson Creek. In June, the Town Board awarded the bridge building contract to the Havana Bridge Works and approved borrowing \$1,250 for the initial payment. About two months later, at a Special Meeting held on August 2, 1899, the Board officially accepted the "new bridge crossing Johnson Creek on Blood Road." Total cost of the bridge was \$1,730, with the original \$1,250 of bridge bonds and a balance due note of \$480 to the Havana Bridge Works both repaid in 1900.

The completion of the Blood Road Bridge did not end the relationship between the Town of Yates and the Havana Bridge Works. Two days after the board had accepted the Blood Road Bridge, it accepted a proposal from Havana Bridge Works agent Frank Stoekley for a new iron truss bridge costing \$375 for the McKinley Road crossing of Marsh Creek.

The history of the Havana Bridge Works began in 1878 when William H. Shepard and his sons William H. Jr. and James A., purchased a share of the Novelty Foundry, in Havana, (Schuyler County) New York. Two years later the Shepards acquired complete control of the foundry and renamed the business William H. Shepard & Sons. They originally produced farm implements, but subsequently expanded into the production of structural iron and bridges. In

April 1892, after the accidental death of William H. Shepard Jr., the company was reorganized as the W. H. Shepard & Sons Bridge Company, with John E. Mulford as President, Francis VanDuzer as Vice-President, and James A. Shepard as Secretary, Treasurer, and General Superintendent. The company also erected a new and larger plant on the line of the Northern Central Railway and across the street from its original shop. The new plant included:

...the Offices (new and in good modern style); the Foundry; the Machine and Pattern Shops; the Hammer Shops, the Rivet Shop, - making the total area of floor space occupied (under cover) about 32,000 square feet; while the premises belonging to the company embrace three acres of ground...These works, when running to their full capacity will use 10,000 tons of material (steel and iron) annually, ... employing 50 to 75 men.

The bridge shop produced fixed truss iron and steel railroad and highway bridges and a few swing spans, as well as turntables, iron columns and girders, stand pipes and tanks, and boilers.

By February 1894 the company had completed at least nine bridges and by May 1895 was erecting bridge number twenty-eight. The company was reorganized in 1895 and renamed the Havana Bridge Works. The company fabricated and erected bridges into the early 1900's, including bridges for the Erie Canal, before abandoning bridge fabrication and concentrating instead on the manufacture of overhead industrial cranes. A merger with the Niles Company in 1928 produced the Shepard-Niles Company. This company, still located at the original W. H. Shepard & Sons Bridge Co. plant site in Montour Falls, produces industrial cranes and hoists.

Prior to erecting the Blood Road Bridge, the Shepard Company had erected a low Pratt truss bridge for the Town of Yates at Woodworth Road. The distinctive half circle bridge plates, affixed to the trusses at the center of the span, read "Wellington Beecher, Commissioner" and "W. H. Shepard & Sons." Wellington Beecher was the Yates Highway Commissioner between the latter half of 1888 and the first half of 1891. During this time period the Town of Yates recorded an "extraordinary" road and bridge expense of \$1,556.25 during the year 1889. This is most likely the payment for the Shepard bridge at Woodworth Road.

The Woodworth Road Bridge is located approximately one-half mile downstream (east) of the Blood Road Bridge and is unusual because of the use of five inch wide, one-half inch thick plates as tension rods. The end of each plate is reinforced by another short plate on each side and the pin connection sleeve hole is drilled through all three plates.

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