

White River Bridge (Bienemann Bridge)
Spanning Honey Creek, on Bienemann Road
Burlington
Racine County
Wisconsin

HAER No. WI-16

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51-BURL,
4-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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Historic American Engineering Record
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White River Bridge
(Bienemann Bridge)

Location: Spanning Honey Creek, on Bienemann Road,
Burlington, Racine County, Wisconsin

UTM: 16.393860.4727290
Quad:

Date of Construction: 1877; moved to present location in 1922

Builder: Milwaukee Bridge and Iron Works

Present Owner: Roger Bienemann
Bienemann Road
Burlington, Wisconsin

Previous Owners: George Bienemann, 1947-
John Frey, 1922-1947
City of Burlington, 1877-1922

Present Use: Private vehicular bridge, 1922-

Previous Use: Public vehicular bridge 1877-1922

Significance: The White River Bridge, a nineteenth-century Pratt through truss, is the oldest known remaining truss bridge in the State of Wisconsin. It was designed and built by Milwaukee Bridge and Iron Works of Milwaukee, Wisconsin, a company which became a leading bridge building firm in the central states region by the twentieth century. The bridge is a good example of the work of the company in its formative years.

Historian: Lola Bennett
Wisconsin Historic Bridges Recording Project
June 1987

HISTORY OF BURLINGTON

Located at the fork of the Fox and White rivers, the village of Burlington was little more than a small cluster of buildings for twenty years, following its settlement in 1835. After the coming of the Racine and Mississippi Railroad in 1855, however, the village of Burlington began to flourish, and eventually became a major textile manufacturing center in southern Wisconsin. Residential districts rapidly expanded on both sides of the two rivers, creating the need for bridges.¹ An 1858 map of Burlington shows that two bridges spanned the rivers in the center of the town.² The bridge at the junction of Chestnut Street, Columbus Street and Second Street was the predecessor of the White River Bridge. It served as the link between the commercial district on the southwest side of the forks and a residential district on the northeast side of the forks.

By the 1870s, the town of Burlington found it necessary to replace its early wooden bridges with more durable structures.³ One editorial comment in the Burlington newspaper said, "It is no comfort to the traveling public to cross Fox River Bridge at Burlington. It would be a blessing to have the bridge collapse of its own accord and float away."⁴ After an inspection of several bridges in other towns, it was decided that "an iron bridge is the bridge for us," and a contract was awarded to the Wrought Iron Bridge Company of Canton, Ohio.⁵ In 1876, in preparation for the United States' centennial celebration, the new Fox River Bridge became the town's first iron bridge.

In June 1877, the decision was made to build an iron bridge over the White River.⁶ After obtaining bids from four companies, the Town Board of Supervisors awarded the project to Milwaukee Bridge and Iron Works, "[its plan] being the strongest and best plan presented."⁷ The contract price was \$2,200.

MILWAUKEE BRIDGE AND IRON WORKS

Milwaukee Bridge and Iron Works, established as a small, private business in 1870, had become by the last decade of the nineteenth century one of the largest bridge building firms in the central states region. In 1890, the firm received more than \$800,000 worth of contracts and the directors confidently expected the following year to net them upwards to one million dollars.⁸ The company was involved in all phases of bridge building, including design, fabrication and construction. Most of the company's business was in bridges, although contracts were also accepted for diversified iron and steel projects.⁹ At the turn of the century, the American Bridge Company, a consolidation of twenty-seven leading bridge firms, absorbed Milwaukee Bridge and Iron Works. From 1900 until about 1929, the Milwaukee firm served as the Wisconsin branch of the large corporation.¹⁰

FREDERICK S. ILSLEY

Curiously, the contract for the White River Bridge does not mention Milwaukee Bridge and Iron Works by name, but instead mentions the Frederick S. Ilsley Company of Milwaukee. Milwaukee Bridge and Iron Works was, for a short time, under the proprietorship of the Frederick S. Ilsley Company.¹¹ The Ilsley family was a prominent family of bankers in Milwaukee. City directories first list Frederick Ilsley as a bank teller in 1860. By 1876, he had become banker with the Marshall and Ilsley Bank, one of the city's oldest and most prominent banks. In 1877, Frederick Ilsley went into business with Garth W. James, a co-founder of Milwaukee Bridge and Iron Works.¹² According to newspaper articles, the company did very well in the summer and fall of 1877. By December of that year, the company was engaged in the construction of ten bridges, including two drawbridges, in Wisconsin, Missouri and Iowa. They had just completed a 500-foot, six-span bridge in Stevens Point, Wisconsin, and iron bridges in the towns of Rochester and Burlington.¹³ Exactly how long Frederick Ilsley stayed with the firm is uncertain, but by February 1878, Milwaukee Bridge and Iron Works had come under the new proprietorship of James H. Cunningham and William H. Keepers.¹⁴

NEWTON P. DELAPLAIN

Newton R. Delaplain supervised the actual construction of the White River Bridge. Listed in the Milwaukee City Directory as a carpenter in 1876, Mr. Delaplain worked in subsequent years, until 1888, as a bridge carpenter, bridge builder and superintendent bridge builder.

CONSTRUCTION OF THE WHITE RIVER BRIDGE

Construction began on the new White River Bridge in the summer of 1877. An editorial comment in the Burlington newspaper, dated August 30, 1877, stated:

The work on the new iron bridge over White River at the foot of Chestnut Street is progressing finely. The material seems to be more substantially made than on the one over Fox River--the durability of the latter, we, however, by no means intend to depreciate by this comparison. When this one will be completed, Burlington will have reason to boast of two of as nice durable and ornamental bridges, as may be found in the state of Wisconsin.¹⁵

The following week, newspaper headlines announced that the new bridge had fallen in the river a few days earlier, "in consequence of not being sufficiently braced before removing the scaffold which supported both sides."¹⁶ Mr. Delaplain stated that he left the braces off to permit opening of the bridge one day earlier than was scheduled. Damages were estimated at \$100. The paper went on to say, "It is a mishap, an accident

and nothing more, and our citizens seem to be fully aware of the fact, and are sympathizing with the company and the builder."¹⁷ The staging was reset, and the bridge was completed within two weeks. Painted red and white, the bridge was opened to the public on September 15, 1877.¹⁸ The old bridge timbers were auctioned off a few weeks later.¹⁹

MOVING OF THE WHITE RIVER BRIDGE

The introduction of the automobile in the early part of the century meant heavier and faster traffic. This, in turn, created increased stresses on many older bridges which were designed for horses and carriages. The White River Bridge was no exception to this trend.

In August 1920, warning signs were posted on the White River Bridge.²⁰ The bridge was declared unsafe in March 1921, and the Board of Public Works was authorized to procure plans and estimates for a replacement.²¹ Road improvements, for both the city and the county, were headline news that year. In fact, the county highway program broke its record by spending \$787,000 on county roads.²²

Plans for proposed concrete bridges for the city were presented to the City Council in July 1921, and the Board of Public Works was authorized to advertise for bids.²³ The City Council awarded the contract for the new White River Bridge to W. H. Shons of Freeport, Illinois.²⁴ The contract, totaling \$15,289, called for moving the old iron bridge thirty feet up the river, in order to retain a river crossing while the new bridge was being built.²⁵ This was accomplished in September, with construction of the new concrete structure beginning shortly thereafter; however, because of inclement weather, the bridge was not completed until July 1922.²⁶ The Board of Public Works sold the old iron bridge to John Frey, a private citizen of the town, in April 1922, for the sum of \$300.²⁷ Soon after the opening of the new bridge over the White River, the old span was disassembled and reconstructed over Honey Creek on the Frey Farm.²⁸ The Bienemann family bought the farm in 1947. Members of the family have owned and maintained the old White River Bridge since that time.²⁹

DESCRIPTION

The bridge is 106 feet long and 17 feet wide. It has pinned connections and a wood plank deck. The top chords are two upright wrought iron channels connected with cast iron splice plates and cover plates. The bottom chords are upset punched wrought iron eyebars, supported by rolled iron floor beams. Wooden 3x12-inch stringers run the length of the bridge between the floor beams and the deck. Lateral bracing consists of upset-punched wrought-iron rods. The bridge is divided into six panels by a series of webbed wrought-iron verticale. The portal strut consists of a wrought-iron top and bottom flange, supported by wrought-iron T-bars. On either side of the southwest portal, the batter posts are pinned to a cast-iron shoe resting on roller bearings.

Beneath the roller bearings, a cast-iron bed plate is bolted to the concrete abutment. The northeast portal is identical, except it has a pinned connection instead of roller bearings.

SIGNIFICANCE

The White River Bridge is a good example of a nineteenth-century wrought iron Pratt through truss, and is the oldest known remaining truss bridge in the State of Wisconsin. It is also an important example of the work of Milwaukee Bridge and Iron Works in the company's formative years.

FOOTNOTES

- 1 "History of Burlington Government," one of 13 sections, Burlington Standard Press, Centennial Edition, 1963.
- 2 Redding and Watson, Plan of Burlington, 1858.
- 3 Reference made to auctioning of bridge timbers (Burlington Standard Press, October 4, 1877). Reference made to boys carving their names in the bridge timbers (Standard Press, October 25, 1877).
- 4 "An Iron Bridge for Burlington in '76," Standard Press, January 12, 1876, p. 6.
- 5 Ibid.
- 6 Standard Press, June 14, 1877.
- 7 Standard Press, June 28, 1877. Also see bridge contract.
- 8 Milwaukee Sentinel, An Illustrated Description of Milwaukee (Milwaukee: Burdick, Armitage & Allen, Printers, 1890), p. 149.
- 9 Wisconsin State Gazeteer and Business Directory (Milwaukee: William Hogg, 1879), p. 562.
- 10 George M. Danko, "A Selective Survey of Metal Truss Bridges in Wisconsin" (State Historical Society of Wisconsin, 1977).
- 11 Milwaukee City Directory, 1877
- 12 Milwaukee City Directories, 1860-1890.
- 13 Milwaukee Sentinel, December 3, 1877, p. 3.

- 14 Milwaukee Sentinel, February 18, 1878, p. 8. Also see city directories.
- 15 Standard Press, August 30, 1877.
- 16 Standard Press, September 6, 1877.
- 17 Ibid.
- 18 Standard Press, September 20, 1877.
- 19 Standard Press, October 4, 1877.
- 20 Standard Press, August 5, 1920, p. 8.
- 21 Standard Press, March 10, 1921, p. 1.
- 22 Standard Press, July 21, 1921, p. 1.
- 23 Standard Press, July 7, 1921, p. 1.
- 24 Standard Press, August 25, 1921, p. 8.
- 25 Standard Press, September 8, 1921, p. 1; September 22, 1921, p. 1.
- 26 Standard Press, July 13, 1922, p. 1; April 27, 1922, p. 1.
- 27 Standard Press, April 14, 1922, p. 1.
- 28 Standard Press, July 20, 1922, p. 5; August 17, 1922, p. 5.
- 29 Joy Bienemann, interview conducted by Diane Kromm, project historian, June 15, 1987; Norma Bienemann, interview conducted by Lola Bennett, project historian, June 18, 1987; George M. Danko, Transcript of interview with George Bienemann, Sr., July 1977; "Burlington Man Has Bridge Bought from City in 1920," Pictorial News Advertiser, January 17, 1966, p. 30; "An Iron Bridge for Burlington in '76," Standard Press, January 12, 1976, p. 6.

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