

McGilvray Road Bridge No. 1
(Van Loon Wildlife Area Bridges)
On an abandoned road spanning a
Black River tributary
Van Loon Wildlife Area
La Crosse vicinity
La Crosse County
Wisconsin

HAER No. WI-22

HAER
WIS,
32-LACR.V,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
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HISTORIC AMERICAN ENGINEERING RECORD

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Location: On an abandoned road spanning a Black River tributary in the Van Loon Wildlife Area, 9 miles north of La Crosse, La Crosse County, Wisconsin

UTM: #1 - 15.635640.4875360 to

#6 - 15.633395.4875680

Quad: Galesville

Date of Construction: 1906

Builder: La Crosse Bridge & Steel Company

Present Owner: Wisconsin Department of Natural Resources

Present Use: Pedestrian bridge

Significance: In 1897, Charles M. Horton of Minnesota received a patent for an improvement on trusses and bridges. According to Horton, riveted and bolted connections perforated the metal, needlessly weakening the joints. Instead, he claimed, one could strengthen a bridge by substituting alternative devices, such as hook-clips, for the rivets and bolts. The La Crosse Bridge and Steel Company of La Crosse, Wisconsin, obtained the rights to manufacture Horton's bridge design, when the firm incorporated in 1900. Between 1905 and 1908, the company erected five, possibly six, patent bowstring bridges along the McGilvray Road. This frequently traveled highway served as a natural transportation route from the city of La Crosse to the northwestern part of Wisconsin.

The McGilvray Road bridges are five of only seven remaining bowstrings in the State. They are one of the few surviving records documenting La Crosse Bridge and Steel Company bridge-building activity and possibly the only remaining examples of Charles M. Horton's patented bridge designs. In addition, this section of the McGilvray Road provided the basis of a local controversy that resulted in legislative action and judicial intervention.

Historian: Diane Kromm
Wisconsin Historic Bridges Project
Summer 1987

La Crosse County lies in the western part of Wisconsin along the Mississippi River. The Black River forms the northwest boundary, the Mississippi River is on the west, and the La Crosse River crosses the county from the east to the west. These rivers have numerous tributaries, causing the land to be low and marshy. The Black River, also bordering the southeastern part of Trempealeau County, formed a natural obstacle to transportation routes leading to the northwestern part of Wisconsin. Economically, the region developed around the city of La Crosse, located to the south of the Black River. The lumber industry initiated the city's early growth; eventually, commercial and manufacturing enterprises turned it into a marketing and transportation center.¹

During most of the nineteenth century, ferries transported the public across the Black River. In 1852, Alexander McGilvray arrived from Scotland and established a settlement along the Black River in Trempealeau County. The small village, eventually consisting of a store, blacksmith shop, school and inn, became known as McGilvray's Ferry. Within two years, he established a ferry service, the McGilvray Ferry, that operated until 1892, when a newly-constructed bridge made the service obsolete.² Three years after the ferry service was put into operation, some individuals considered erecting a bridge at McGilvray Ferry. On March 5, 1857, the Wisconsin State Legislature passed an Act permitting Alexander McGilvray and his associates to construct a toll bridge across the Black River, providing the bridge was at least 16 feet wide and did not obstruct river passage to rafts, keel-boats, flat-boats, or steamboats. Log jams interrupted the ferry service for three to seven months out of the year; perhaps McGilvray considered a bridge advantageous, since it would allow for year-round transportation. The bridge apparently was never built.³

McGilvray Road and Bridges

Over the decades, the matter of building a bridge across the Black River took on increasing importance for the residents of Trempealeau and La Crosse counties. In 1882, for example, committees from both county boards met to discuss the practicality of constructing a bridge to link the two communities. On February 14, 1882, they met at three potential sites. The committees considered McGilvray's Ferry the most desirable location, being the natural outlet of Trempealeau valley. But they disqualified the site because the east side of the river was low, swampy, and subject to overflow. They declared Gordon's Ferry impractical since 1) it was located too far up the river to be convenient to most Trempealeau, and 2) the great width of the river would have required an expensive bridge. A slight majority of the joint committee favored Gale's Ferry, a location that required the shortest span and had a narrower marsh area (bottoms) on the east side of the river than at the McGilvray site. The only problem was a ridge on the Trempealeau side, running parallel with the Black River and complicating the western approach. For reasons never recorded, the La Crosse Board of Supervisors considered it imperative to

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establish a bridge between the counties, preferably at McGilvray's Ferry. The following month, they appropriated \$1,000 toward the project, providing the supervisors from Trempealeau County made a similar appropriation or authorized bridge construction.⁴

Trempealeau County failed to contribute any money toward the proposed bridge, the beginning of a pattern that would continue throughout the next four decades. Four year later, a group of citizens from Trempealeau County petitioned the La Crosse Board of Supervisors to build a bridge at McGilvray's Ferry. The following year, residents from the township of Holland (La Crosse County) and the Caledonia Township (Trempealeau County) made similar pleas. In 1887, the La Crosse County Board of Supervisors attempted for the second time to raise funds for constructing a bridge across the river, this time at or near Gale's Ferry. Trempealeau County supervisors, once again, made no effort to contribute financial assistance.⁵

Despite the lack of support, the La Crosse supervisors persisted. In December 1890, they appropriated, for a third time, \$1,000 to build a wagon bridge over the Black River. Unlike previous years, the Board agreed to accept from any outside sources and considered building the bridge anywhere between McGilvray's Ferry and North Bend. They also appointed a special committee to examine the most feasible location for the bridge and estimate the project cost. On March 10, 1890, the special committee, along with members from several Trempealeau County townships and the city of La Crosse Common Council and Board of Trade, assembled at the proposed locations. The special committee recommended Gordon Place as the best location, particularly because it would provide a safe crossing throughout the year. At this point, the river was 335 feet wide, with eight rods of low land on the west side of the river, with high, rocky banks. The river width at Gale's Ferry was 200 feet (stone bank on the west side), allowing the bridge to be built in one span. The road through the bottoms on the east side, however, ran three-fourths of a mile, needed to be raised four feet, and required 100 feet of bridging. As in 1882, the committee considered McGilvray's Ferry the least desirable site. The river measured 300 feet, presumably requiring a two-span bridge. The two-mile road across the bottoms had to be raised seven feet, ripped up, and 200 feet of bridging installed over the slough ways.⁶

The matter of raising money for the bridge project had halted previous plans to build a bridge. The County Black River committee then solicited funds from a variety of sources. Representatives from the city of La Crosse were enthusiastic to have a bridge erected over the Black River. The mayor of La Crosse initially proposed contributing \$5,000 in assistance. Members of the La Crosse Common Council felt that a bridge was of great importance to the city and warranted a generous contribution. However, they reduced the appropriation to \$2,500. The Black River Improvement Company offered \$1,500. The townships of Caledonia and the Black River Log-Driving Association each contributed \$1,000. Combined with the La Crosse County allocation of \$2,000,

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the Black River Committee raised \$7,500. For reasons that remain unclear, Trempealeau County supervisors still refused to consider appropriating any money.⁷

The Black River Committee decided to erect the bridge at McGilvray's Ferry, perhaps because the La Crosse mayor, La Crosse city engineer, and the La Crosse Board of Trade favored this location. At this point, the Board of Supervisors in La Crosse County made a decision they would later regret. After receiving a petition from 75 freeholders of the town of Holland, they unanimously agreed to lay and maintain the road through the bottoms leading to the east side of the bridge. The residents of the town of Holland considered it essential to make the road a county responsibility, since the township also maintained roads to Gale's Ferry and Gordon's Ferry.⁸

By the end of May 1891, the special bridge committee initiated the project. The previous month, the Wisconsin Legislature had passed another Act permitting La Crosse County and Trempealeau County to build a wagon bridge across the Black River between Gordon's Ferry and McGilvray's Ferry. The only stipulation was that the bridge have sheer booms or some way to allow logs and rafts to pass through. Four companies bid on the Black River Bridge construction: the A. S. Bayne Bridge Company (\$8,000), the Chicago Bridge Company (\$8,498), the Wisconsin Bridge Company (\$8,497), and the Clinton Bridge Company (\$8,500). The Board awarded the contract to the lowest bidder, the Clinton Bridge Company, who agreed to complete the bridge by the end of the year. At the same time, the special committee, along with a civil engineer, located the proposed road leading to the east side of the bridge. The town of Holland had maintained a road, the McGilvray Road, leading to the ferry. The committee chose to relocate the road, so that it ran several rods north of the old road for about half a mile, then crossed the old road, and ran along the south of it. The township of Caledonia was responsible for constructing a suitable roadbed on the west side of the bridge.⁹

Progress on the bridge proceeded only slightly behind schedule. By the end of December, the stringers were laid on the trestle work and 50,000 feet of lumber had arrived. By the end of January, the cylinders were finished, the falsework and traveler built, and the members ready to be assembled. Rising water temporarily delayed filling the cylinders with concrete. It also temporarily halted workers from clearing the east end road. In addition, an accident caused further delay. In mid-February, the traveler ran off its track, throwing down several iron rods. An iron post broke and a worker suffered a broken arm.¹⁰

Workers completed the Black River Bridge, eventually called the McGilvray Bridge, on February 20, 1892. The steel bridge was a 250 foot span, set on cylinder piers 4-1/2 feet in diameter, with 250 feet of trestle approach. The cost of the bridge reached \$7,650. The La Crosse supervisors also appropriated

\$2,000 to build the new McCilvray road and bridges. A few days after the main bridge was completed, workers finished riprapping the road and erecting eight pile bridges.¹¹

Almost immediately, discussion began on building a bridge at Gordon's Ferry, one of the alternative sites. Trempealeau County offered to contribute \$1,000 to the project. A special committee from the La Crosse Board of Supervisors reevaluated the site. Three hundred and fifty voters from the townships of Gale and Ettrick petitioned the La Crosse Board. Another petition came from residents of the city of La Crosse. In 1895, plans to erect the Gordon's Ferry Bridge went into effect.¹²

McCilvray Road Maintenance Problems

At the same time that plans were getting underway for the Gordon's Ferry Bridge, La Crosse County was experiencing problems with maintaining the McCilvray Road. Between May 17-21, 1895, the Black River rose suddenly to an unusually high level. The excessive force of water washed out several pile bridges and undermined the riprapping. The new bridge had to be rebuilt, since the washout caused an additional opening, and three other bridges needed to be repaired. As a precaution, the Special Committee on the McCilvray Road and Bridge had workers install extra long poles and build the bridges one foot above grade. The only problem that the committee encountered was preventing the public from travelling the road when it was unsafe and virtually impassable. The La Crosse Board of Supervisors expended at least \$150 annually for mending washouts, riprapping and repairing bridges. They soon began to object to having sole responsibility for maintaining the main McCilvray Bridge. In 1897, Trempealeau County made a rare offer by appropriating \$85 towards its maintenance. The following year, the La Crosse Supervisors declared the McCilvray Bridge joint property of La Crosse County and the town of Caledonia, Trempealeau County, and requested that the township assume one-half the expenses. Despite these attempts, La Crosse continued to pay nearly all the expenses.¹³

Continued flooding created problems of erosion along McCilvray Road and further damaged the pile bridges. In 1903, the chairman of the La Crosse Board of Supervisors appointed a committee to inspect the condition of the bridges. Committee members found the bridges generally in good shape, although they did recommend raising the third bridge from the east, since it had sunk slightly. Some of the bridges needed new planks and a new bridge would be needed to replace the first bridge from the east. The committee also suggested that two or three of the small bridges next to the main bridge were unnecessary and could be filled in.¹⁴

Building Permanent Bridges

In November 1903, the chairman appointed another committee to investigate the advisability of building permanent bridges on McGilvray Road. At this time, the road was approximately two miles in length with 1,205 lineal feet of bridge floor. Including the main bridge, ten different spans lined the road, with most spans ranging from 32 feet to 195 feet in length. The following month,

the special committee reported its findings. They agreed that La Crosse County and the township of Caledonia in Trempealeau County should jointly keep the main bridge in proper repair. They asked the district attorney to find a legal justification to excuse La Crosse County from having to absorb the total expense. Most of the bridges, they claimed, were defective and would eventually need to be rebuilt. The first span from the east was in particularly dangerous condition. They recommended replacing it with a steel bridge. Unlike the previous committee members, they discouraged closing the two or three small bridges next to the river, since there would not be enough room for water to pass through unless the other bridges were enlarged.¹⁵

Considering the financial commitment needed to erect permanent bridges along the road and the legal obligation to maintain the main bridge, the supervisors asked the special committee to consider the possibility of abandoning the road. The following March, the committee issued a detailed report on McGilvray Road and the ten bridges. They found the bridges in fair to poor condition. Only two bridges, Nos. 3 and 7, needed to be replaced immediately. Another two bridges, Nos. 8 and 9, could be eliminated entirely (necessary only when backwater was unusually high). Another suggestion included filling the center of the road with clay or gravel, although this improvement could be delayed. Most important, the committee considered it impractical to vacate the road for several reasons. First, people from La Crosse and Trempealeau counties still traveled the road extensively. Second, the road was a natural transportation route from the southern portion of La Crosse County to the northern and western portion of the State. Third, the committee doubted whether state laws would allow the county to discontinue a highway so long established and traveled.¹⁶

The La Crosse Board of Supervisors agreed to continue the road and install a series of permanent bridges. In November 1904, the board appropriated \$3,000 to build two steel bridges in places of Nos. 3 and 7. The following month, the La Crosse Bridge and Street Company submitted a successful bid (2,970) for the project and, by March 25, 1905, they completed the bridges.¹⁷ Having replaced bridges No. 3 and 7, the committee had eliminated the bridges in the worst condition. Over the next three years, members of the special committee on the McGilvray Road turned their attention to replacing the other wooden structures. In November 1905, the board allocated \$3,200 toward erecting a 130-foot steel bridge in place of bridge No. 1. Several companies submitted bids:

Continental Bridge Co. (for two 65-foot spans)	\$3,790.00
Hennepin Bridge Co. (for one 130-foot span)	\$4,837.00
Clinton Bridge Co. (for two 65-foot spans)	\$3,750.00
Clinton Bridge Co. (for one 130-foot span)	\$4,600.00
Wisconsin Bridge Co. (for two 65-foot spans)	\$3,870.00
La Croese Bridge & Steel Co. (for two 65-foot spans)	\$3,655.00
La Crosse Bridge & Steel Co. (for one 130-foot span)	\$4,450.00
A. Y. Bayne & Co. (for two 65-foot spans)	\$3,990.00
A. Y. Bayne & Co. (for one 130-foot span)	\$4,675.00

The La Crosse Bridge & Steel Company, having submitted the lowest bid, received the contract for a patent bridge of two 65-foot spans, at a cost of \$3,600.¹⁸ One year later, the La Crosse Bridge & Steel Company fulfilled another contract: a two span steel bridge, 65 feet each with 16-foot roadway, and concrete floor, for \$4,380. It apparently replaced bridge No. 4. On April 9, 1908, the committee approved yet another bridge, this one replacing bridge No. 2. At a cost of \$4,000, the La Crosse Bridge & Steel Company erected a two-span bridge, each span measuring 70 feet, with cement floor. By 1908, five steel bowstring bridges, possibly six, lined McGilvray Road: Bridge No. 1 (1906); Bridge No. 2 (1908); Bridge No. 3 (1905); Bridge No. 4 (1907); Bridge No. 5 (unknown); and Bridge No. 6 (1905).¹⁹ No written records indicate whether a steel bridge was built at the site of Bridge No. 5. Until recently, a wooden kingpost spanned the channel, possibly erected c. 1920.

Controversy Develops Over Maintaining Road

Even with the permanent bridges, the McGilvray Road continued to be a financial burden on La Crosse County. In the summer of 1905, three months after the first two steel bridges were installed, the rising Black River severely damaged the road. The water washed out openings totalling 988 feet in length and an average of 5-2/3 feet deep. Repairs totalled nearly \$1,000. In addition, the main bridge required extensive maintenance. In 1908, the La Crosse County spent \$2,014.25 for steel I-beams (supplied by the La Crosse Bridge and Steel Company), new railing, "eteel bents," and new flooring.²⁰

In 1910, the La Crosse Board of Supervisors voted to compel Trempealeau County authorities to defray expenses of maintaining the McGilvray Bridge. If they refused to cooperate, La Cross County would consider abandoning the McGilvray Bridge and road. The town of Caledonia agreed to maintain the road and approach to the main bridge, but Trempealeau County supervisors, by a narrow majority, refused to accept the bridge as joint property. In an attempt to settle the dispute, the La Crosse County supervisors agreed to submit the matter to the Wisconsin State Legislature, asking this body to determine how and by whom joint county roads and bridges should be maintained. Within a month, the State Legislature passed an act relating to highway and bridges on town lines. According to the law, any bridge over a river forming a boundary

between two counties should be maintained by the adjoining municipalities. If an adjoining municipality failed to cooperate, the other municipality could close the bridge.²¹ The Trempealeau County Supervisors ignored the judicial ruling and, once again, refused to assume any portion of the cost of maintaining the road, bridge, or approaches. In frustration, La Crosse County Board members voted to temporarily close the main bridge until the Trempealeau supervisors agreed to assume one-half the expense of maintenance. If Trempealeau failed to respond, the La Crosse Supervisors threatened to initiate proceedings to permanently discontinue the road and bridges. To complicate matters, in October 1911, a flood severely damaged McGilvray Road.²²

The controversy continued to develop over the next nine years. During much of that time, the McGilvray bridge and road was impassable to traffic, because it was out of repair. The La Crosse County supervisors repeatedly voted down resolutions to repair the road and bridges. Only occasionally did they authorize money for minor repairs. The Trempealeau County supervisors suggested that the respective counties include the McGilvray Road on a list of prospective state highways. For unexplained reasons, the La Crosse supervisors refused to consider this alternative until two years later.²³

Frustrated county residents petitioned and sought court orders to force the county to reopen the road. In December 1911, several residents from the town of Caledonia appeared before the La Crosse Board, requesting that some action be made to repair and improve the McGilvray Road and bridge. After the County Highway Commissioner refused to repair the road, claiming it was not a county road, La Crosse county residents initiated legal proceedings against the commissioner to compel the county to reopen the road. A 1914 Wisconsin Supreme Court decision declared the McGilvray Road was a county road and held the county board responsible for maintenance (although the ruling did not compel the county supervisors to open it).²⁴

The La Crosse supervisors ignored the Supreme Court ruling. They chose, instead, to eliminate the problem entirely by reverting sole control of the road to the Holland Township, effective September 22, 1914. To justify their action, they cited the provisions of Section 1310 of the 1914 Wisconsin laws. The town of Holland refused to acknowledge the notice, considering it legally invalid.²⁵

In 1915, the Wisconsin State Legislature passed another act relating to the maintenance of bridges between two counties. Unlike the first act, this law compelled the counties to jointly maintain the bridge. This legal mandate finally prompted the Trempealeau County supervisors to take action. Initially hesitant, they agreed to appoint a committee and hire an engineer to determine the cost of repair. One month later, still no action had taken place. A frustrated town of Caledonia resident served a notice to the county officers demanding they abide by the law and immediately repair the bridge and approach. By the end of the year, Trempealeau County supervisors established a committee to meet with a similar committee from the La Crosse Board to determine the cost.

of repairs of the McGilvray Bridge. The joint meeting failed to resolve the dispute. Members of Trempealeau County Committee declared the La Crosse proposals unfair. They claimed that La Crosse County would not appropriate one cent to repair the main bridge unless Trempealeau County paid a proportionate share of repair on the McGilvray approach. Both committees agreed to have the district attorneys reach an agreement. No action apparently took place.²⁶

Two years later, the Wisconsin Supreme Court issued a mandamus, compelling the Board of Supervisors in La Crosse to repair and rebuild the McGilvray Bridge. The supervisors, however, continued to avoid the expense of repairing, rebuilding, and maintaining the bridge and road. This time, they devised a new political maneuver. They tried a claim that the bridge and road were unnecessary for public travel and did not meet the interests of La Crosse County residents, serving only to burden individuals with an unreasonable tax.²⁷

The bridge and road continued to deteriorate, making travel increasingly hazardous. Representatives of the town of Holland, worried that a traveler would sustain a serious injury and sue the town or county for damages, held a special meeting on January 4, 1919. Town residents voted to hire an attorney to compel the county to repair and maintain the road. Section 1310 of the Wisconsin statutes, however, raised some doubt as to whether the county or township was ultimately responsible. Township residents reminded the county supervisors that 75 freeholders originally had petitioned against the new road and that the county had agreed to lay and maintain it. In the meantime, 53 merchants petitioned the board to repair the McGilvray bridge and road. The supervisors refused to act on the petition, claiming the road was a town responsibility and seldom traveled by the public. They chose, instead, to exploit the ambiguity of the Wisconsin statutes. As in 1914, they passed a resolution reverting sole control of the McGilvray Road to the town of Holland, effective September 5, 1919.²⁸

McGilvray Road Abandonment Hearings

To resolve the dispute, the town of Holland initiated a law suit against La Crosse County. On July 21, 1919, a circuit court judge determined that the McGilvray Road was indeed a county road and the county needed to put it in proper repair. A writ of mandamus required the board to take immediate action. In accordance with the judicial decision, a supervisor raised a resolution to appropriate \$10,000 for the repair of the road, its embankment, culverts, and bridges. On the same day, the county board received a petition from thirty-four La Crosse County residents (one-half from the town of Holland), requesting that the board discontinue the McGilvray Road. The County Board decided to hold an abandonment hearing on the McGilvray road and bridges, scheduled for October 2, 1919.²⁹

If the abandonment hearing was intended to discontinue the use of McGilvray Road, it failed. Instead, it seemed to reinforce public desire to keep the road open. Residents who owned property which was accessible only by the McGilvray Road objected to the closing for several reasons. First, it would depreciate the value of their land. The town of Holland had kept the old McGilvray Road to the ferry in passable condition. Frequently out of repair, the new McGilvray Road had caused these landowners large expense and much inconvenience. Second, they argued, the cost of damages in discontinuing the road would exceed the expense of repairing the embankment and approaches. Seventy residents from the town of Holland also raised objections to giving up McGilvray Road. First, they agreed that the cost of damages would exceed the cost of putting the road in passable condition. Second, they feared that payment of damages would be imposed on the Holland taxpayers alone. Third, the highway was a main traveled road long before the county constructed the new McGilvray road. If the road were repaired, it would become once again the main transportation route between Trempealeau County and the city of La Crosse. Fourth, travel between Winona, Minnesota, and La Crosse was increasing, due to the growing use of automobiles and trucks. Motorists would travel the McGilvray Road because it was the most convenient location. The closest alternative crossing, Hunter's Bridge, was seven miles away. Last, they questioned whether legal obstacles would prevent the closing of the road. Discontinuing it would cause damage and inconvenience, but it was not a solely a county decision, since the highly-traveled road extended into other towns and counties. The board concluded it was inadvisable to close the McGilvray Road. By a narrow majority, the supervisors denied the original petition to close the road. They voted to spend \$10,000 on repairs, as outlined in a set of plans and specification that engineer Walter S. Woods had prepared.³⁰

After a spring flood in 1920 further damaged the road, supervisors introduced a resolution for the county to appropriate a sum, not to exceed \$1,000, to repair the damage done to the road. At the same session, the board approved the \$10,000 sum to Eugene Whitbeck, contractor, for completing the repair work on the road, including painting the bridges, grading, and riprapping. While the road was under repair, the road and bridge committee had made several minor changes in the plans. All fill, whether replaced or new, had to be 18 feet in width when completed. Bridge No. 5 would remain in its original location. The contractor also substituted a pile bridge in place of filling at one location (a division engineer prepared the specifications for the bridge). Except for the necessity of a spill bridge or fill next to Bridge No. 5, all the repair work was completed.³¹

McGilvray Road Reverts to State Highway System

Almost immediately after making the repairs, the board voted to try again to turn control of the road over to the town of Holland. For justification, they again cited section 1310, this time from the revised Wisconsin statutes for 1919. In May 1919, the resolution lost to a tie vote. However, the following November, the supervisor unanimously agreed to revert the road to the sole

control of the town of Holland, to be effective December 20, 1920. For the first time in 28 years, the county successfully removed their obligation to maintain the McGilvray Road. Except for \$1,103.72, allocated the following year for labor and material on the McGilvray approach, all mention of the McGilvray Road dropped from the county records.³²

Reaction to the transition from the town of Holland is unclear but, in 1927, Wisconsin incorporated the McGilvray Road into the state trunk highway system. On June 4, 1926, the Wisconsin Highway Commission held a hearing in Holmen, Wisconsin, to consider adopting changes in the state trunk highway system. La Crosse County residents attended, including a large delegation from the villages of Galesville and Trempealeau in Trempealeau County. Among other changes, the commission decided to alter State Trunk Highway No. 162. Since 1923, this highway had extended through the village of New Amsterdam, across the Black River bottoms, and into the village of Trempealeau. The commission removed this portion of the highway and replaced it with the McGilvray Road. The commission apparently changed the route to accommodate a new layout to the Hunter Bridge. The new highway extended via the McGilvray Road to U. S. Highway 53 about four miles north of Holmen.³³

In 1933, the state highway commission virtually reestablished the original 1923 layout, excluding the McGilvray Road. The McGilvray Road continued in service, however, as the State maintained it as a detour route. In the early 1940s, the highway commission determined that the existing bridges were unsafe for state trunk highway traffic and rerouted the detour north of McGilvray Road. As a maintained detour, the road had been eligible for maintenance, but not eligible for reconstruction or improvement.³⁴ Control of the road apparently reverted back to La Crosse County.

In 1949, the State Highway Commission proposed once again to change the highway, now called Highway 93, in Trempealeau and La Crosse counties, a proposal that excluded McGilvray Road. The La Crosse District Attorney advised the La Crosse County Board members to approve the new location. He anticipated community action to resist the proposed change because it did not include the McGilvray Road. Such action, he claimed, would be futile. Although earlier suits for opening the road had been won, they had not considered the provision that a new location would be substituted. Despite his argument, the board refused to approve the new highway location. Three months later, the board unanimously refused to consider their earlier decision. In November, a supervisor proposed reopening the McGilvray Road across the Black River for light or limited traffic. Trempealeau County and La Crosse County highway committees had jointly closed the McGilvray Road to traffic, also called County Trunk Highway "XA"; therefore, he claimed, they had the power to reopen the road. Closing the road had created a hardship for residents in the southern part of Trempealeau County in gaining access to the city of La Crosse. In addition, Trempealeau County residents owning land in the Black River bottoms for agricultural purposes had considerable difficulty in reaching their property. Since it was unlikely that a new highway would be

constructed in the near future, he encouraged committees from Trempealeau and La Crosse counties to reopen the McGilvray Road across the Black River bottoms, imposing restrictions, such as weight, speed, etc., as necessary. Apparently, the board failed apparently to take action on the recommendation.³⁵

The following summer, another supervisor made a similar proposal to reopen the road. This time, the board agreed to reconstruct the highway, appropriating \$75,000 to the project. The allocation was conditional, stipulating that 1) Trempealeau County pay for part of the new bridge across the main channel of the Black River and the entire cost of the west approach, and 2) the town of Holland appropriate \$10,000 toward the cost of reconstructing the highway and bridges. On April 3, 1951, the town of Holland supervisors agreed to use \$10,000 to repair the McGilvray Road. Trempealeau County supervisors also agreed to contribute to the new bridge. For the first time in 70 years, the three local governments were willing to work together to maintain the McGilvray Road. At this point, the State Highway Commission intervened and discouraged their plans. In January 1951, the commission decided on the location for the new highway, including the bridge crossing. After careful deliberation, the members selected a route 1.5 miles south of McGilvray Road, from the village of Trempealeau directly east to the U. S. Highway 53, approximately two miles north of the village of Holmen. This special bridge project, including the approach roadways, was approximately 5.5 miles in length and would cost \$900,000. The commission asked Trempealeau and La Crosse counties to each make a \$100,000 contribution toward the project. The commission selected the new location because it would provide the most convenient traffic route for residents of the village of Trempealeau. Their needs, according to the commission, formed the primary justification for the improvement and held priority over access to the bottomland along the river. Layout out the highway along McGilvray Road would have added three extra miles of travel distance for Trempealeau village residents. The commission found no economic justification for the State to maintain two crossings over the Black River and bottomlands.³⁶

The Highway Commission arguments persuaded the Trempealeau and La Crosse county supervisors. That same month, the La Crosse supervisors abandoned the McGilvray Road improvement project and appropriated \$100,000 toward the construction of the new road and bridge across the Black River bottom. Once the town board of Holland agreed to take over the old McGilvray Road, the county officially removed it from the county trunk highway system--Highway XA-- in September 1952. The new highway--Highway 93, also called the new McGilvray Road--officially opened on November 17, 1953. During this period, the main McGilvray Bridge was removed.³⁷

Van Loon Wildlife Area

Since 1947, the Wisconsin Department of Natural Resources (DNR) had been leasing the McGilvray bottoms as a public wildlife area for hunting and fishing. In 1957, the DNR started to purchase the property, acquiring 758

acres across the William Van Loon estate. Eventually, it acquired the name Van Loon Wildlife Area. By 1986, the Department accumulated 3,800 acres. The wildlife area encompasses property from near Huntsr's Bridge in the north to New Amsterdam in the south. A severe flood in 1970 damaged McGilvray Road, washing out a culvert and damaging ths six bridges. Unable to afford to pay for the road and bridge repair, the town of Holland quit-claimed the road and bridges to the Wisconsin DNR in 1975. The DNR agreed to accept the road because it bisected the wildlife arsa. Officials also considered the steelgirdsrs structurally sound, although ths planks and approaches needed maintenance. Fivs years later, the Wisconsin State Historic Preservation Office submitted a successful nomination to have the six bridges listed on the National Rsgister of Historic Places.

The bridges continued to fall into disrepair and were limited to psdsstrian traffic in recent years. In 1985, the DNR hired an Eau Clair enginsering firm, Ayres and Associates, to inspsct the bridges, determine their safe load carrying capacity, and estimate the cost of repairs or new structures. The inspection report recommendsd immediate repairs. Concerned about public safety, the DNR officially closed the roadway and bridges to psdestrian traffic in October 1985. In March 1986, DNR personnel removed Bridge No. 5, the wooden kingpost that had deteriorated beyond repair. Since 1982, the DNR has rsplanked several bridges and repaired the approaches. Some DNR officials have recommended removing the remaining bridges to avoid potential liability problems.³⁸

Patented Bridge Design

While working as a manufactursr's agent in Duluth, Minnesota, Charles M. Horton applied for a patent on an improvement in trusses and bridges. Ths patent, issued in 1897, related to bridge trusses, trussed beams, and supporting columns or posts that virtually eliminatsd the use of rivets. According to Horton, rivets needlessly weakened bridge connections by perforating the mstal. Instead, devices such as sleeves, hangers, hook-clips, socket-supports, could secure the various members. In addition, he suggested that designing the bridge parts as simple as possible would allow workers to quickly assemble the structure without expensive machinery, tools and labor. Horton claimed that his design produced a strong, durable and light structure at a rslatively small cost. He illustrated his patent with an arch truss bridge. The La Crosse Brdgs & Steel Company employed his patent design in ths McGilvray Road Bridges.³⁹

The following year, Horton movsd to Superior, Wisconsin, whsre he submitted three more patent applications. Two of the patents, issued in 1898, related to metal beams that eliminated rivets or bolts. Patent No. 608,861 consisted of a metal box-beam in which ths flanges extended from the plates, forming a channel that ssured the beams. Patent No. 611,202 followed the sams principle, using a metal I-beam. In 1899, Horton receivsd his sscond patent for a bridge design

(No. 621,672), a Pratt through truss. This patent, as in his previous inventions, limited the number of joints that punctured the metal. The top chord incorporated his idea for securing the parts of a box-beam without rivets or bolts, instead using flange or rib extensions. This design used similar devices, such as clips, as found in his first bridge patent. It is uncertain whether the La Crosse Bridge & Steel Company ever erected a bridge using this design.⁴⁰

La Crosse Bridge and Steel Company

In 1899, Charles M. Horton moved to La Crosse where he established a business and began erecting bridges on a small scale. Perhaps he was attracted to the area because a severe flood in the spring of that year forced the replacement of many bridges. Presumably, his business held potential because the following year, the firm incorporated. On March 30, 1900, Charles M. Horton, J. F. McDonough and John A. Elliott entered into an agreement to form the Horton Bridge & Steel Company, capital stock valued at \$25,000. The company was organized to manufacture and sell iron, steel and other bridges or bridge material, as well as manufacture, erect and construct all iron or steel buildings. Stockholders included William Torrance, partner in a local steel foundry, and the W. J. Solberg & Son, a local boiler manufacturing firm. By using Horton's patented designs, the company supposedly could build bridges lighter, cheaper and stronger than other companies.⁴¹ The boiler-making firm, W. J. Solberg & Son, agreed to furnish the new company with a building on its company property. By the end of June, the plant was nearly finished and the machinery about to be installed. The arrival of a large punch, being manufactured in the east, was delayed because of a strike. By mid-August, the building was almost ready for occupancy. In the meantime, the company continued to fulfill bridge contracts.⁴²

One year after the company incorporated, it reorganized. Charles M. Horton left the company, selling his manufacturing rights and agreeing to receive royalty payments from the firm. On April 16, 1901, the company stockholders met and changed the name of the firm to the La Crosse Bridge and Steel Company. William Torrance became company president and manager. The company showed a profit for the previous year, and the stockholders contemplated building a new factory. Soon after William Torrance became mayor of La Crosse in 1903, J. F. McDonough assumed the position of president and director. Early on, the company acquired a license to transact business in Minnesota as well as Wisconsin. The capital stock remained at \$25,000, until the company ceased operations in 1915.⁴³

Description

The top chord of the McGilvray Road bridges consists of polygonal arched I-beams. In an unusual pattern, the end curve inward (Horton's patent makes no mention of this curve). In several cases, large steel angles are welded to

the inside of the curve. The post is actually riveted to a punched plate. the hook-clips are numbered, each one designed for a specific location because they are slightly wider toward the ends of the span. The posts are not vertical; instead, they lean off-center, radiating outward. Angle irons provide sway bracing. The diagonals have loop-welded ends, an unusual feature, considering the late construction date. Most of the diagonals consist of square eyebars, as do the bottom chords. The round diagonals contain turnbuckles. U-bolts tie the cross beam to a bolt extending through the stringers. Stiffening the panels, double or triple rows of angle irons form railings that run the length of the spans. Bottom lateral bracing adds additional support to several bridges. The structures rest on cylindrical steel-encased piers.

The five bridges that line McGilvray Road are numbered consecutively one through six, including the demolished Bridge No. 5, from the east to the west end:

- Bridge No. 1: Two-span bowstring with a wooden deck. The truss measure 134 feet long and 17 feet wide.
- Bridge No. 2: Two-span bowstring with concrete jack arch deck. It is 141 feet in length and 17 feet in width. A timber ramp was added to the east abutment to bridge a washout.
- Bridge No. 3: Single-span bowstring with timber deck. Steel girder approach extends from each end. It is 100 feet long and 17 feet wide.
- Bridge No. 4: Two-span bowstring with concrete jack arch deck. The truss measures 131 feet long and 17 feet wide.
- Bridge No. 5: Demolished in March 1986. It was a single-span wooden kingpost, 65 feet in length and 17 feet in width.
- Bridge No. 6: Single-span bowstring with timber deck. It is 50 feet long and 17 feet wide. The west abutment has failed, causing the west end of the bridge to drop about four feet.

FOOTNOTES

- 1 Benjamin F. Bryant, ed., Memoirs of La Crosse County (Madison: Western Historical Association, 1907), pp. 17-18, 186.
- 2 Franklin Curtiss-Wedge, comp., and Ebsm Douglas Piercs, ed., History of Trempealeau County, Wisconsin (Chicago: H. C. Cooper, Jr., & Co., 1917), pp. 165, 181.
- 3 State of Wisconsin, Laws, 1857, Chapter 239, p. 545.
- 4 La Crosse County, Board of Supervisors, Proceedings, 1882 (March), pp. 69-70; Ibid., 1882 (April), pp. 82-83.
- 5 La Crosse County, Board of Supervisors, Petitions, 1886, 1887 (State Historical Society of Wisconsin-La Crosse Area Research Center); La Crosse County, Proceedings, 1887; Ibid., 1888, p. 66.
- 6 La Crosse County, Proceedings, 1890, p. 74; Ibid., 1891, pp. 77-79; La Crosse County Record, March 12, 1891, p. 3, col. 4.
- 7 La Crosse, Common Council, Proceedings, vol. 11, 1890-1891, pp. 451, 533, 536-538; La Crosse Times-Banner, November 17, 1891.
- 8 La Crosse County Record, April 16, 1891, p. 3, col. 4; La Crosse County, Proceedings, 1891, p. 13.
- 9 State of Wisconsin, Laws, 1891, Chapter 210; La Crosse County Record, August 6, 1891, p. 3, col. 3; La Crosse County, Proceedings, 1891, p. 39.
- 10 La Crosse County, Proceedings, 1891, pp. 70-71; La Crosse County Record, January 28, 1892, p. 3, col. 4; Ibid., February 11, 1892, p. 3, col. 4. The newspaper article noted that the injured worker was experienced with bridge construction, whereas most of the men were not familiar with bridge work.
- 11 La Crosse County, Proceedings, 1892, pp. 84-85; La Crosse County Record, February 25, 1892, p. 3, col. 5.
- 12 La Crosse Times-Banner, November 17, 1892; La Crosse County, Proceedings, 1895, pp. 17-19, 25-26.
- 13 La Crosse County, Proceedings, 1895, pp. 26-27; Trempealeau County, Board of Supervisors, Proceedings, 1896-1897, p. 16; La Crosse County, Proceedings, 1898, pp. 90-91.

- 14 La Crosse County, Proceedings, 1903, p. 16.
- 15 Ibid., 1903, pp. 77, 87.
- 16 Ibid., 1904, pp. 103-104; "To Inspect Bridge Approaches," La Crosse County Record, March 3, 1904, p. 3, col. 5; "Road Inspected," La Crosse County Record, March 10, 1904, p. 2, col. 4.
- 17 La Crosse County, Proceedings, 1904-1905, pp. 76, 109-110, 117; La Crosse Leader-Press, December 8, 1904, p. 8, col. 3; Ibid., December 3, 1904, p. 7, col. 2; Ibid., December 15, 1904, p. 7, col. 1.
- 18 La Crosse County, Proceedings, 1905-1906, pp. 92, 100, 112.
- 19 Ibid., 1906-1907, p. 102; Ibid., 1907-1908, p. 102; Ibid., 1908-1909, pp. 104-105.
- 20 Ibid., 1905-1907, p. 102; Ibid., 1907-1908, p. 102; Ibid., 1908-1909, pp. 104-105.
- 21 Ibid., 1910-1911, pp. 168-169, 186-187; Ibid., 1911-1912, pp. 48-49; State of Wisconsin, Laws, 1911, Chapter 499, p. 612.
- 22 La Crosse County, Proceedings, 1911, pp. 206, 109-210, 214; Ibid., 1919 (January), p. 221.
- 23 Ibid., 1911 (November), pp. 69, 150; Ibid., 1912 (March), p. 240; Ibid., 1912 (May), pp. 38-39; Ibid., 1911 (November), pp. 187, 189-190, 223-228; Ibid., 1913 (September), p. 82.
- 24 Ibid., 1911 (December), pp. 223-224; Ibid., 1914 (August), pp. 58-59.
- 25 Ibid., 1914 (August), p. 68; Ibid., 1914 (November), pp. 198-199; Ibid., 1914 (December), pp. 222-223; Town of Holland, Board of Supervisors, Proceedings, December 28, 1914, p. 11.
- 26 State of Wisconsin, Laws, 1915, Chapter 565, p. 763; La Crosse County, Proceedings, 1915 (August), pp. 41-42; Trempealeau County, Board of Supervisors, Proceedings, 1915 (September), p. 24; Ibid., 1915 (November), pp. 29, 33; Ibid., 1915 (December), pp. 26-27.
- 27 La Crosse County, Proceedings, 1917 (February), pp. 241-242.
- 28 Ibid., 1918 (August), pp. 28-29, 36; Ibid., 1919 (January), pp. 220-222; Town of Holland, Proceedings, December 13, 1918; La Crosse County, Proceedings, 1919 (March), p. 244; Ibid., 1919 (August), pp. 24-44.

- 29 La Crosse County, Proceedings, 1917 (February), pp. 241-242.
- 30 Ibid., 1919 (October), pp. 56-63.
- 31 Ibid., 1920 (May), p. j, m.
- 32 Ibid., p. j. m, n, 32, 35-36; La Crosse County, State Road and Bridge Committee, Annual Report, 1921, p. 28.
- 33 La Crosse County, Highway Commission, Annual Report, 1926, p. 3; Town of Holland, Proceedings, May 1, 1926, May 5, 1926, May 15, 1926.
- 34 La Crosse County, Proceedings, 1949-1950, p. 124; La Crosse County, Highway Commission, Annual Report, 1926, p. 3.
- 35 La Crosse County, Proceedings, 1949-1950, pp. 124-125; Ibid., 1949 (October), p. 159; Ibid., 1949 (November), p. 234.
- 36 Ibid., 1950-1951, p. 38; Ibid., 1950 (November), pp. 117-118; Town of Holland, Proceedings, April 3, 1951, p. 20; La Crosse County, Proceedings, 1950-1951, pp. 164-166, 168-169.
- 37 La Crosse County, Proceedings, 1951 (January), pp. 164-169; Ibid., 1953 (November), p. 82.
- 38 Raymond Kyro, correspondence with author, July 16, 1987; Ayres Associates, Bridge Inspection Report; Van Loon Wildlife Area, October 4, 1985, Project #8505-18, Contract No. 9003; "History Has a Place in Wildlife Area," La Crosse Tribune, March 2, 1980; 1980 National Registration Nomination Papers (Wisconsin State Historic Preservation Office, Madison, Wisconsin). The National Register Nomination contains the incorrect manufacturer (Clinton Bridge Company) and construction date (1892).
- 39 Duluth City Directory, 1894-1897, listings under Charles M. Horton. In 1894, Horton worked as a general agent for the Cary Safe Company and managed the Pauly Jil Building and Manufacturing Company; United States Patent Office, Patent No. 595,629.
- 40 United States Patent Office, Patent Nos. 608,861, 611,202, and 621,672.

- 41 La Crosse City Directory, 1900-1915, listing under La Crosse Bridge & Steel Company; La Crosse Bridge & Steel, Articles of Incorporation, March 30, 1900, Office of the Secretary of State, Corporation Division, Incorporation Papers of Defunct Domestic Corporations, 1848-1974 (State Historical Society of Wisconsin-Archives), Series 356, Folder L1170; "New Corporation," La Crosse Daily Republican and Leader, April 5, 1900, p. 5, col. 6; Population Census, 1900, listing under Charles M. Horton, La Crosse, vol. 33, E.D. 73, sheet 9, line 84. Horton was born in New York in August 1850.
- 42 "New Corporation," La Crosse Daily Republican and Leader, April 3, 1900, p. 8, col. 3; "Horton Company's Building," La Crosse Daily Republican and Leader, May 18, 1900, p. 6, col. 3; "Horton Bridge Works," La Crosse Daily Republican and Leader, June 20, 1900, p. 8, col. 3; La Crosse Daily Republican and Leader, August 15, 1900, p. 5, col. 4.
- 43 "Company is Re-organized," La Crosse Daily Republican and Leader, April 17, 1901, p. 2, col. 4; La Crosse Bridge & Steel Company, Amendment to the Articles of Incorporation, Series 356, Folder L1170(SHSW-Archives); La Crosse City Directories, 1900-1930, listings under William Torrance and Joseph F. McDonough; La Crosse Bridge & Steel Company, Domestic Corporation Annual Reports, 1907-1914, Incorporation Papers, Series 356, Folder L1170(SHSW-Archives). After C. M. Horton sold his rights in the company, he continued to bid on La Crosse bridge project until he apparently left La Crosse later that year. Soon afterwards, a Charles M. Horton in Portsmouth, New Hampshire, began patenting sewing machine parts for the Singer Sewing Machine Company. It is unclear whether this is the same individual (does not appear in Portsmouth City directories 1905-1920 and the 1910 Federal Census is not indexed).

BIBLIOGRAPHY

Ayres Associates. Bridge Inspection Report: Van Loon Wildlife Area (unpublished report). October 4, 1985. Project #8505-18, Contract No. 9003 (Department of Natural Resources, La Crosse, Wisconsin).

Bryant, Benjamin F., ed. Memoirs of La Crosse County. Madison: Western Historical Association, 1907.

City Directories. Duluth, 1894-1897.

City Directories. La Crosse. 1899-1930.

City Directories. 1897-1900.

Curtis-Wedge, Franklin, comp., and Eben Douglas Pierce, ed. History of Trempealeau County, Wisconsin. Chicago: H. C. Cooper, Jr., & Co., 1917.

Kyro, Raymond, Van Loon Wildlife Manager, correspondence with author, July 16, 1987.

La Crosss County, Board of Supervisors. Proceedings. 1881-1953.

La Crosss. Common Council. Proceedings. 1891.

La Crosse County Record. 1904 (February) - 1905 (April).

La Crosse Daily Republican and Leader. 1900-1901, 1904-1905.

La Crosse County. State Road and Bridge committee. Annual Reports. 1920-1942.

La Crosse Leader-Press. 1904 (December) to 1905 (March).

La Crosse Times-Banner. 1891 (November).

National Register of Historic Places. Van Loon Wildlife Area Bridges. 1980 Nomination Form.

Ogle, George A. Ogle & Co. Standard Atlas of La Crosse County. 1906.

_____. Standard Atlas of Trempealeau County. 1901.

Photographs of the main McGilvray Bridge, built in 1892 (Clinton Bridges Company). Undated. (State Historical Society of Wisconsin-Eau Claire Area Research Center, Eau Claire, Wisconsin).

Plans (maintenance). La Crosse County Highway Department. La Crosse County Courthouse. Plan No. 161 (August 19, 1942) and Plan No. 147 (March 22, 1952).

Population Census. Wisconsin. 1900. Listing under Charlss M. Horton.

State of Wisconsin. Laws. 1857, 1911.

State of Wisconsin. Offices of the Secretary of State, Corporation Division. Incorporation Papers of Defunct Domestic Corporations, 1848-1974. Series 356. Folder L1170 (State Historical Society of Wisconsin-Archives, Madison, Wisconsin).

Town of Holland. Board of Supervisors. Proceedings. 1880-1954.

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Trempealeau County. Board of Supervisors. Proceedings. 1891-1900.

United States Patent Office. Patent Nos. 595,629 (1897), 608,861 (1898),
611,202 (1898), 621,672 (1899).

Wendt, George.

Wisconsin Gazateer and Business Directory. 1895-1920.