



Historic Bridge Park: Guide To The Bridges



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133rd Avenue Bridge



Bridge Type: Four panel half-hip Pratt pony truss with pinned connections.

Construction Date: 1897

Builder: Michigan Bridge Company of Portland, Michigan

Length: 64 Feet (19.5 Meters) Roadway Width: 14 Feet (4.3 Meters)

Original Crossing: Rabbit River in Allegan County, MI

Significance: First bridge to be erected in the park. An excellent representative example of a once-common truss type that is gradually becoming rare. A rare documented example of the Michigan-based bridge company's work. Half-hip pony truss bridges do not have a hip vertical running from the top chord / end post to the bottom chord and were common for short pony truss spans (under 80 feet).
Restoration Notes: Erected here in 1999, this was the first bridge placed in the park. Since the in-kind restoration processes being used at the park were essentially the first in the nation, this small, manageable truss was selected as the first bridge. The successful restoration of this bridge opened the doorway to this new and better form of historic metal bridge restoration.

20 Mile Road Bridge



Bridge Type: Five panel full-slope Pratt pony truss with riveted connections.

Construction Date: 1907

Builder: Unknown

Length: 70 Feet (21 Meters) Roadway Width: 15.4 Feet (4.69 Meters)

Original Crossing: St. Joseph River in Calhoun County, MI

Significance: Second bridge placed in the park. Riveted connections on a Pratt truss are uncommon in Michigan but common in other states. Only bridge in the park with riveted connections. Rumored to have originally been a railroad bridge, but this is not backed up by any substantial facts/research.

Restoration Notes: This bridge was in very poor shape prior to restoration. Numerous parts on the bridge had to be removed and replicated. However because replaced parts were replicated as dictated in an in-kind restoration, these replacements are not readily visible to the casual visitor.

Gale Road Bridge



Bridge Type: Seven panel Pratt through truss with pinned connections.

Construction Date: 1897

Builder: Unknown

Length: 122 Feet (37 Meters) Roadway Width: 14 Feet (4.3 Meters)

Original Crossing: Grand River in Ingham County, MI

Significance: This is the last remaining Pratt through truss highway bridge in Michigan that is skewed. Skewed pin-connected truss bridges are uncommon anywhere.

Restoration Notes: Third bridge placed in the park. Engineering analysis of this bridge found that the original portal bracing lacked appropriate strength. New portal bracing was created for the bridge which replicates the original design with the exception that the lattice is composed of angles instead of bars which increased the strength of the bracing.

Bauer Road Bridge



Bridge Type: Six panel Pratt through truss with pinned connections.

Construction Date: 1880

Builder: Penn Bridge Company of Beaver Falls, Pennsylvania

Length: 90 Feet (27 Meters) Roadway Width: 16 Feet (4.88 Meters)

Original Crossing: Looking Glass River in Clinton County, MI

Significance: Fourth bridge placed in the park. Contains the distinctive and unusual details of its builder including a continuous eyebar on the first two panels at each end of the bridge, two pins at the top chord and end post intersection on the bridge. The overhanging endpost is also an uncommon feature that appears on older Penn Bridge Company Bridges. Lightweight members are a testimony to the bridge's age. This is one of the oldest truss bridges in Michigan and the only example of this builder's work in Michigan.

Restoration Notes: Parts from another nearly identical and badly deteriorated bridge on Tallman Road were used to replace deteriorated parts on this Bauer Road Bridge. Oversize lattice railings were placed on this bridge for safety reasons. Now located away from the corrosive effects of deicing salt, this bridge was not painted because it is wrought iron and will not deteriorate like steel would. Leaving paint off the bridge allows park visitors to view this bridge in the form it has been for decades and also reduced costs.

Charlotte Highway Bridge



Bridge Type: Eleven panel Whipple through truss with pinned connections.

Construction Date: 1886

Length: 173 Feet (52.7 Meters). Roadway Width: 14.4 Feet (4.4 Meters)

Builder: Buckeye Bridge Works of Cleveland, Ohio: H.P. Hepburn Engineer and Contractor

Significance: One of only three Whipple truss bridges in Michigan. Rare example of a bridge built by Buckeye Bridge Works. One of the longest pin-connected trapezoidal truss spans in Michigan. Punched match marks for testing the tensile strength of forge welds at the center of the longest eyebars on the bridge remain in place: Look for the two dimples about two feet

apart from each other on the side of the eyebars.

Restoration Notes: Fifth bridge placed in the park. Because the original floorbeams had severe section loss, exact replicas of the attractive and noteworthy built-up fishtail/fishbelly style floorbeams were created. Modern railings on bridge were placed for safety reasons, but an attractive and low visibility design was selected to minimize any adverse visual impact.

Dixon's Bridge



Bridge Type: Semicircular stone arch bridge widened on one side with concrete.

Construction Date: 1891

Builder: Michigan Central Railroad

Significance: This unique two-span arch bridge sits in its original location, crossing Dickinson Creek with a small arch span and the trail, which was once F Drive North, with a larger stone arch span. The bridge is unusual for Michigan because it crosses both the creek and the roadway in a single bridge, and also for the arch spans of differing size.

Restoration Notes: This bridge is in its original location and no work has been done on the bridge as part of park operations aside from paving the trail that runs under the bridge. The bridge continues to carry Amtrak and Norfolk Southern trains.

Other Bridges Around the Park Area

I-94 Kalamazoo River Bridges



It is hard not to notice the close proximity of I-94 to the park. The I-94 bridges over Kalamazoo River visible from the park's picnic area are curved t-beams constructed in 1960. Curved t-beams were an attractive design used in the 1950s and 1960s in a number of states. In Michigan, the curved t-beams were particularly attractive because in addition to their graceful curves, they were complimented with Michigan's unique R4 type railings which were used from approximately 1932 through the 1960s. Although the original railings have been lost, the attractive arch-shaped beams remain below. While on the subject of I-94, the F Drive North over I-94 and the railroad overpass next to it are both somewhat old examples of expressway bridge construction. A fair number of examples of Michigan's curved t-beam overpasses that still have original railings on them can be found, particularly on I-94 between Marshall and Jackson and I-94 between Kalamazoo and New Buffalo. None of these bridges are currently considered officially historic, however those examples which retain original railings do offer a unique look at a period in history where expressway overpasses were made to look attractive.
