GREEN = Eligible

MINNESOTA HISTORIC BRIDGE INVENTORY

Bridge No : 006544
County Name : Saint Louis
City/Township : Duluth
Township : 048 **Range :** 15W **Section :** N 12 S W - S W - N W
UTM Coordinates : 15:561081:5167321
561080 5167130
USGS Quadrangle : West Duluth

Inventory Number : SL-DUL-2417
National Register Eligible : Yes
Critieria : A
Context : Iron Range Mining
Period of Significance :
Retains Integrity : No, Criterion C; Yes, Criterion A

Structural Data

Main Span Type : 318
number main spans : 01
number appr spans : 30
structure length : 1,888.70
deck width : 25.00

Superstructure : steel, rigid-connected, Warren, through/deck-truss swing span with 27 deck, plate-girder approach spans on west and 3 deck, plate-girder approach spans on east; bottom deck carries highway traffic; upper deck carries railroad traffic
Substructure : concrete abutments; concrete piers for swing span; built-up steel piers on concrete pedestals for approach spans
Floor/Decking : timber decking
Other Features :

Historical Data

Year built : 1917
Contractor/Builder : Interstate Transfer Railway; Spirit Lake Transfer Railway
Designer :

Statement of significance :

Spanning the St. Louis River, the Oliver Bridge links the small community of Oliver, Wisconsin on the east with the city of Duluth on the west. Owned by the Duluth Missabe and Iron Range Railway, the crossing is a "double-decker" structure that carries railroad traffic on the upper level and highway traffic on the lower level. On the Minnesota side, its roadway is designated as State Trunk Highway 39; on the Wisconsin side, as State Trunk Highway 105. The Minnesota Department of Transportation identifies the crossing as Bridge No. 6544; the Wisconsin Department of Transportation, as Bridge No. B-16-755. Measured between its two concrete abutments, the Oliver Bridge is approximately 1,900 feet. The greater portion of the structure is on the Minnesota side, where 27 deck, plate-girder spans straddle an extended marshy area adjoining the shore. In contrast, the Wisconsin approach consists of only three deck, plate-girder spans. All of these approach spans rest on built-up steel piers with concrete pedestals. For the main channel crossing, the bridge relies on a 300-foot, rigid-connected, Warren-truss, swing span on concrete piers. Conventionally detailed with built-up, steel members, the span functions as a through truss for the lower highway level and as a deck truss for the upper railroad level. The decking of both levels is of wood. Originally, the swing span was capable of opening two 125-foot navigational channels, but the turning mechanism has been deactivated. Although this alteration has compromised the bridge's historical integrity in terms of its engineering significance as a swing span under Criterion C, it has not affected the bridge's integrity in terms of its historical significance as an important railroad crossing under Criterion A. Over the years, the bridge has experienced other alterations as well. Its abutments have been re-concreted, steel members in both its superstructure and substructure have been replaced, and its upper and lower levels have been re-decked. These repairs, however, have not affected its overall design.

The Oliver Bridge owes its name to Pittsburgh steel magnate Henry W. Oliver, who in 1892 established the Oliver Mining Company to exploit Mesabi Range iron ore. In 1901, the Oliver mining properties became part of a gigantic, newly incorporated, amalgamation known as the United States Steel Corporation, which, among its many Minnesota holdings, controlled the region's main carrier of iron ore, the Duluth, Missabe and Northern Railway (later reorganized as the Duluth Missabe and Iron Range Railway). In 1907, U.S. Steel, acting through its subsidiary, the Minnesota Steel Company, acquired 1,500 acres of land at the extreme west end of Duluth in order to construct a major steel works near the St. Louis River. To supply the new plant with rail connections, the Duluth, Missabe and Northern organized two subsidiaries of its own -- the Spirit Lake Transfer Railway on the Minnesota side of the river, and the Interstate Transfer Railway on the Wisconsin side. The two lines were to meet on a new bridge in the middle of the St. Louis River. In honor of Henry W. Oliver, this new crossing would be known as the Oliver Bridge.

Since the proposed bridge was to span an interstate navigable river, its construction required the approval of both the U.S. War Department and the U.S. Congress. Both parties imposed stipulations on the design. The War Department mandated the construction of a suitable swing span that would not obstruct navigation, while Congress required that "said bridge shall be constructed with two through decks, one of which shall provide for the passage of wagons and vehicles, for all kinds of street railway and motor cars, and road travel." In 1910, Minnesota Steel commenced construction of its new plant, and the Spirit Lake and Interstate Transfer railways began work on the Oliver Bridge. Despite the provisions of the federal enabling legislation, the railroad companies initially refused to make the Oliver Bridge accessible for highway traffic, affirming that such work was more properly the responsibility of the City of Duluth and Douglas County, Wisconsin. The railroads built the structure with two levels, as required, but did not deck the lower highway level or build approaches for highway traffic. In 1913, the Wisconsin State Legislature attempted to compel the Interstate Transfer Railway (a Wisconsin corporation) to complete the structure by making non-compliance in such matters grounds for revoking a railroad company's charter to do business in the state. The issue was still at an impasse in 1915, when the Minnesota Steel Company's new plant began operation. In 1916, however, the War Department added its weight to the State of Wisconsin's position, and the railroad company finally complied. The necessary construction was completed in 1917, and the bridge opened to highway traffic.

As historian Frank A. King has noted in *The Missabe Road*, the Oliver Bridge, and the two railroads that built it, played a vital role in the transportation of both Iron Range ore and the finished products of the Minnesota Steel Company's Duluth plant, which became one of the country's major manufacturers of wire, wire products, and nails. King writes: "The Spirit Lake provided a means of moving iron ore from the DM & N's sorting yard at Proctor to the Minnesota Steel Company's new mill, and Interstate Transfer provided connections with the line-haul railroads radiating out of Superior." As a historically significant link in region's railroad network, the Oliver Bridge is eligible for the National Register, in the area of transportation, under Criterion A, within the historic context of Iron Range Mining.

References :

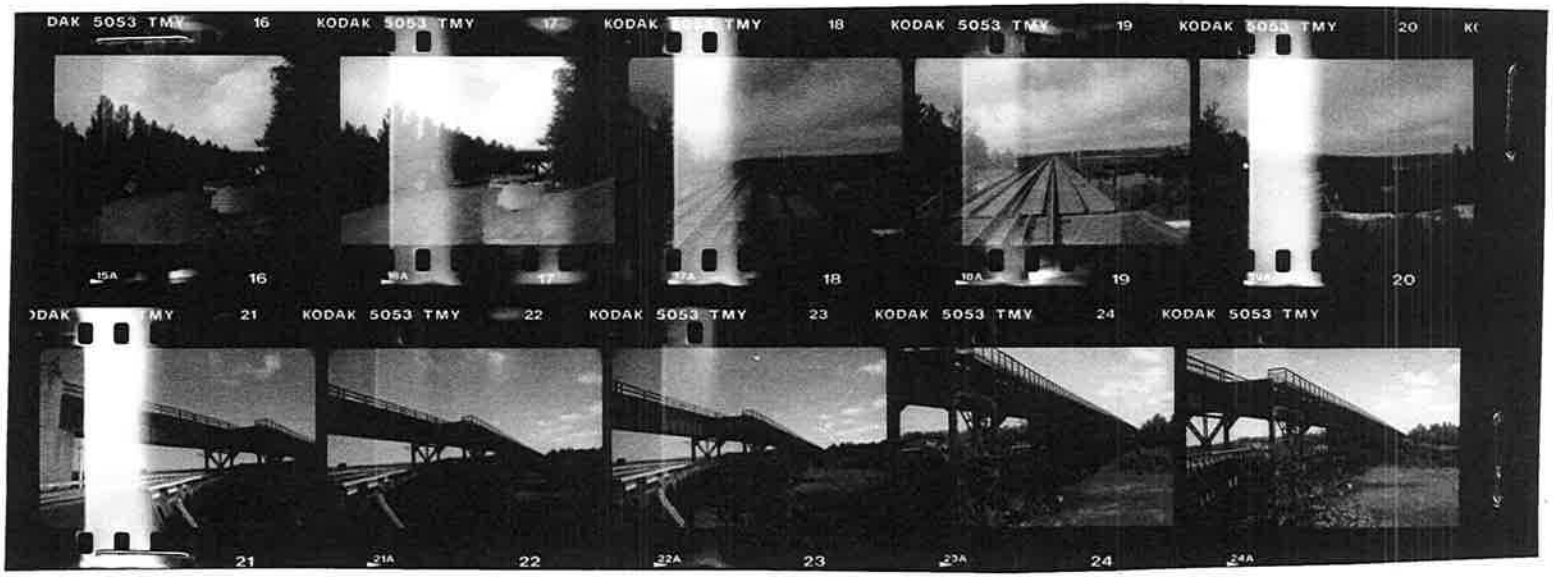
Minnesota Department of Transportation Computerized Bridge Database; Bridge No. 6544 File, in Minnesota Department of Transportation, Waters Edge Building, St. Paul; Bridge No. 6544 Storage File (plans, correspondence), in Minnesota Department of Transportation, Records Storage Center, St. Paul; Bridge No. 6544 File, in Minnesota Department of Transportation District 1 Office, Duluth, Minnesota; Frank A. King, *The Missabe Road* (San Marino, CA: Golden West Books, 1972), 90-92; William Watts Folwell, *A History of Minnesota*, vol 4 (St. Paul: Minnesota Historical Society, 1969), 27-32; "Historic Context: The Iron Range," *Minnesota History in Sites and Structures, A Comprehensive Preservation Planning Process* (St. Paul: State Historic Preservation Office, Minnesota Historical Society, 1985); field inspection by Shawn P. Rounds, 18 September 1996.

Form Prepared By : Jeffrey A. Hess

MINNESOTA HISTORIC BRIDGE INVENTORY

Bridge No : 006544 **Photo Number :** 013072, 013073

Source: *Minnesota County Maps* (Rockford, IL: Rockford Map Publishers, 1984).



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