

# MINNESOTA ARCHITECTURE - HISTORY INVENTORY FORM

## Project: Local Historic Bridge Study - Phase II Minneapolis, Hennepin County, Minnesota

Identification	
<b>Historic Name</b>	Nicollet Avenue Bridge
<b>Current Name</b>	Nicollet Avenue Bridge
<b>Field #</b>	
<b>Address</b>	Nicollet Avenue over Minnehaha Creek
<b>City/Twp</b>	Minneapolis
<b>County</b>	Hennepin
<b>Legal Desc.</b>	Twp 28N Range 24W Sec 15 QQ SESW & SWSE
<b>USGS Quad</b>	Minneapolis South
<b>UTM Zone</b>	15
<b>Datum</b>	27
<b>Easting</b>	1568417
<b>Northing</b>	16314675
<b>Property ID (PIN)</b>	

**SHPO Inventory Number** HE-MPC-6529

**Review and Compliance Number**

**Form (New or Updated)** Updated

Description	
<b>Linear Feature?</b>	No
<b>HPC Status</b>	Unknown
<b>Resource Type</b>	Structure
<b>Architect/Engineer</b>	Kristoffer Olsen Oustad
<b>Style</b>	Classical Revival
<b>Construction Date</b>	1923
<b>Original Use</b>	Transportation
<b>Current Use</b>	Transportation

### Description

Bridge 90591, also known as the Nicollet Avenue Bridge, was built in 1923. It carries Nicollet Avenue over Minnehaha Creek and Minnehaha Parkway East and West. It is located in the Washburn Park Historic District of Minneapolis. Walking paths run along either side of the creek. Medium to large deciduous trees line the Parkway and the bridge. A culvert empties into Minnehaha Creek under the bridge. There are residential homes north, east, and west of the bridge, and a commercial area south of the bridge.

Bridge 90591 is an open-spandrel reinforced-concrete continuous arch bridge that is 820 feet long and has an overall width of approximately 62 feet. Sidewalks line both sides of the bridge, expanded to the current width in 2002, and two-way traffic travels over the bridge with a single lane each direction. Two concrete and brick square pylons were constructed at the north and south ends of the bridge in 2002. A concrete parapet with metal tube railing lines both sides of the deck; the railing and Classical Revival-inspired metal light standards replaced the original concrete handrail in 1973. There is a stairway leading to the parkway at the northeast corner of the bridge. The stairway railing matches the rest of the bridge. A plaque reading "Hennepin County/ Minnesota/ Bridge 734/ 1973" is located on the concrete parapet at the southeast corner of the bridge.

The substructure consists of concrete abutments; nine open-spandrel, rib arch spans with a maximum span of 75 feet; and seven slab approach spans. The approach spans are supported by concrete piers consisting of three arches with flared caps, which replaced the original curved caps in 1973, spanning the deck width. The open-spandrel arch spans are supported by spandrel bents with flared caps. The spans are constructed using the patented Melan reinforcing system. The rectangular piers between arch spans feature art deco detailing and a shallow triangular top. Drainage pipes periodically pierce the substructure.

# ***MINNESOTA ARCHITECTURE - HISTORY INVENTORY FORM***

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### **EVALUATION AND ANALYSIS**

#### **Historical Context**

Reinforced-Concrete Highway Bridges in Minnesota, 1900-1945

#### **Historical Narrative**

Original bridge plans for Bridge 90591 are dated 1922, and the bridge was constructed in 1923 as part of the Minnehaha Parkway system, replacing an 1896 bridge. The 1988 survey of Bridge 90591 revealed a Melan form reinforcing system, which was confirmed by bridge plans, exposed by bridge deterioration. The Melan system, patented in the early 1890s by Viennese engineer Joseph Melan, involves embedding steel in concrete arches. The system was first used in the United States in 1893, and was a popular system for highway and pedestrian bridges. Bridge 90591 was designed by Kristoffer Olsen Oustad, a significant, innovative, and influential Norwegian-American engineer involved in the design of several great bridges in the Twin Cities. Educated at Trondhjem's Technical College in 1882, Oustad joined the Minneapolis city engineer's office in 1883, becoming municipal bridge engineer in 1893. Oustad retired in 1929, 46 years after he began working with for the city.

Bridge 90591 crosses Minnehaha Creek and Minnehaha Parkway within the Washburn Park Historic District. The District was platted by H.W.S. Cleveland in 1886 as a suburban community for industrialists and tradesmen. Cleveland designed Washburn Park with one-fourth- to three-acre lots and curvilinear streets, connecting the neighborhood to Minnehaha Parkway. He designed the lots to blend with the landscape by incorporating the hilly terrain into the plat, platting lots on hillsides, and including berms and trees. In the early 1900s sections of the neighborhood were re-platted for higher density housing, but the curvilinear neighborhood design was retained. More recently, Interstate 35W cut through the neighborhood, destroying the sections between Stevens and 2<sup>nd</sup> Avenue. The neighborhood contains good examples of Victorian homes and remains an intact representation of landscape architecture from the turn of the century.

In the vicinity of Bridge 90591, Minnehaha Parkway is divided into one-way pair roadways and runs parallel to Minnehaha Creek to provide a connection between Lake Harriet and Minnehaha Falls. After the Minneapolis Park Board purchased the park at Minnehaha Falls in 1889, connecting the new park and the chain of lakes to the west became a priority. The board's 1889 annual report state "the most natural route is undoubtedly along the beautiful valley of Minnehaha Creek." In the same year, the park board began receiving land donations from property owners along the creek. By 1891 the board had prepared a plat of the proposed parkway, a corridor from 200 to 800 feet in width, and had obtained over 80 percent of the land. By 1923 the entire corridor from Lake Harriet to Minnehaha Falls was under municipal ownership. Minnehaha Parkway saw significant improvements after delays caused by World War I, and in 1922 the park board embarked on an extensive improvement program for the parkway that had been funded by the sale of city bonds. The city expanded roadways, realigned routes, and added electric lights, footpaths, and ornamental bridges. As Theodore Wirth, superintendent of Minneapolis Parks during the Minnehaha improvements, explained, "operations were carried on simultaneously in practically all sections of the six miles of the parkway, involving installation or rebuilding of six bridges of permanent construction." Bridge 90591 was built during this time of improvement.

#### **Significance**

Bridge 90591 is significant as a typological example of its type, within the historic context of the "Reinforced-Concrete Highway Bridges in Minnesota, 1900-1945" Multiple Property Documentation Form (Reinforced-Concrete Highway Bridges

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### **Minneapolis, Hennepin County, Minnesota**

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MPDF). This MPDF states, in Registration Requirement 2, that a concrete bridge may be eligible under National Register of Historic Places (National Register) *Criterion C* if it is constructed with a patented system. The Registration Requirement specifically cites the Melan reinforcing plan as one of these patented systems. The patented system must be in tact in order to maintain significance. Bridge 90591 retains its Melan construction, and therefore fulfills this criterion.

Additionally, Bridge 90591 is located within of the Washburn Park Historic District in southwest Minneapolis. In 1981 the district was listed on the National Register. It is significant under National Register *Criterion A* in the area of community planning, and under *Criterion C* in the areas of engineering and landscape architecture. The period of significance for the district is 1886. The Washburn Park Historic District is a 220-acre residential neighborhood bounded to the east by Interstate 35W, to the south by Minnehaha Creek Parkway, to the west by Lyndale Avenue, and to the north by West 50<sup>th</sup> Street and 48<sup>th</sup> Avenue. Since the period of significance for the Washburn Park Historic District predates the construction of Bridge 90591, it is a noncontributing feature of the District.

Bridge 90591 is also located in the Grand Rounds park system in Minneapolis. In 2012 the entire Grand Rounds was determined eligible for the National Register as a linear historic district. The Grand Rounds Historic District is significant under National Register *Criterion A* in the area of community planning and development, and under *Criterion C* in the area of landscape architecture. The period of significance for the district is 1884-1942. Bridge 90591 is located within the boundaries of the Minnehaha Segment of the Grand Rounds, which extends along Minnehaha Creek from Lake Harriet to Minnehaha Park. However, Bridge 90591 is not a contributing feature of the Minnehaha Segment.

The bridge has a period of significance of 1923, which corresponds to the year the bridge was built.

#### **Integrity**

Bridge 90591 remains in its original location and continues to carry Nicollet Avenue over Minnehaha Creek in Minneapolis. Residential neighborhoods still surround the bridge along Minnehaha Creek and Nicollet Avenue north of the crossing. Minnehaha Parkway also retains its park setting. As such, the bridge retains integrity of location and setting. To meet the requirements of the Reinforced-Concrete Highway Bridges MPDF, the bridge must retain its significant elements in the superstructure. Research did not reveal any substantial alterations to the Melan arches. However, alterations in 1973 included deck widening to accommodate a sidewalk, replacement of the historic railing with a metal railing, replacement lampposts, and replacement of curved spandrel bent caps with square caps. In 2002 alterations included reducing the roadway to single lanes in both directions to accommodate expanded sidewalks and the addition of gateway pylons at both entrances of the bridge. Since none of these modifications affect the Melan form of the bridge, they do not adversely affect the integrity of design. With the 1973 and 2002 alterations, there has been a minor impact to the bridge's integrity of materials and workmanship. Despite the minor impact to integrity, Bridge 90591 retains sufficient overall integrity to continue conveying its historic significance as a typological example of a Melan form open spandrel bridge.

#### **Recommendation**

Bridge 90591 is significant within the historic context of the Reinforced-Concrete Highway Bridges MPDF under Registration Requirement 2 as an example of a Melan form open spandrel bridge. Despite alterations to the deck, railing, and spandrel bent caps, the bridge retains integrity of the Melan system. Therefore, The Nicolette Avenue Bridge is still recommended as individually eligible for the National Register under *Criterion C: Engineering* as an important type.

Bridge 90591 is recommended as a noncontributing structure to the National Register-listed Washburn Park Historic District. In addition, the bridge was previously determined as noncontributing to the National Register-eligible Grand Rounds Historic District.

# ***MINNESOTA ARCHITECTURE - HISTORY INVENTORY FORM***

## **Project: Local Historic Bridge Study - Phase II**

**Minneapolis, Hennepin County, Minnesota**

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### **Sources**

Field inspection by LHB and Mead & Hunt, Inc., 18 September 2013

Frame, Robert M. "Bridge 90591." Statewide Bridge Survey Inventory Form. 1988.

Frame, Robert M. *The Cedar Avenue Bridge*. Washington, DC: National Register of Historic Places, National Park Service, 1989.

Parsons Brinckerhoff and Engineering and Industrial Heritage. *A Context for Common Historic Bridge Types*. Prepared for the National Cooperative Highway Research Program, Transportation Research Council, National Research Council, October 2005.

Roise, Charlene K. "Minnehaha Parkway: An Assessment of Significance." Prepared by Hess, Roise and Company for Minneapolis Park and Recreation Board, 1999.

Roise, Charlene and Denis P. Gardner. *Making the City Itself a Work of Art: An Historical Context for the Grand Rounds, Minneapolis*. Hess, Rosie, and Company, Minneapolis: 2000

Schrooten, Paul L. *Washburn Park*. Washington, DC: National Register of Historic Places, National Park Service, 6 December 1881

### **Consultant's Recommendation of Eligibility**

Eligible - Individual

### **Prepared By**

Mead & Hunt, Inc.

### **Date Surveyed**

09/18/2013

# ***MINNESOTA ARCHITECTURE - HISTORY INVENTORY FORM***

## **Project: Local Historic Bridge Study - Phase II**

**Minneapolis, Hennepin County, Minnesota**

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### **Property Photographs**



View facing northeast



View facing west

***MINNESOTA ARCHITECTURE - HISTORY INVENTORY FORM***

**Project: Local Historic Bridge Study - Phase II**

**Minneapolis, Hennepin County, Minnesota**

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View facing south



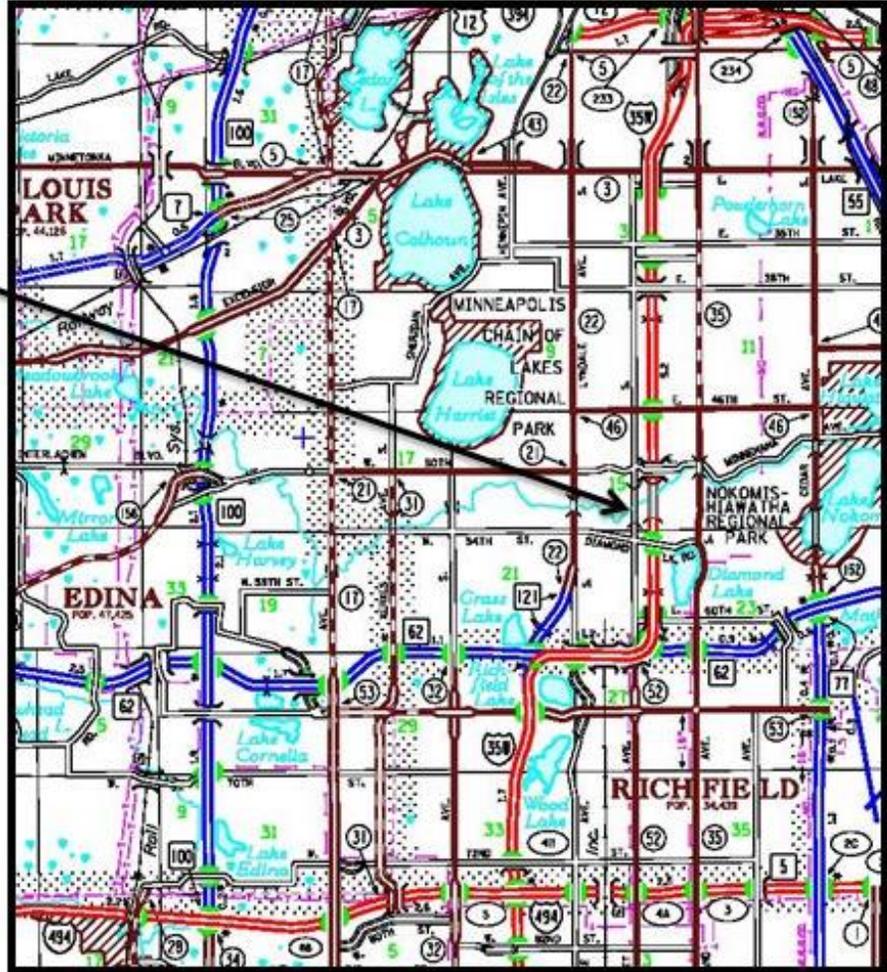
View facing southwest

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BR. NO. 90591



**Bridge 90591 – NICOLLET AVE S over MINNEHAHA PKWY & CREEK**



PROJECT LOCATION

HENNEPIN COUNTY

SEC. 15, TO 028NN, R 24W

UTM ZONE: 15      NAD: 27

USGS QUAD NAME: MINNEAPOLIS SOUTH

EASTING: 1568417 ft.

NORTHING: 16314675 ft.