### United States Department of the Interior National Park Service

# National Register of Historic Places Continuation Sheet

Section number \_\_\_\_\_ Page \_\_\_\_\_

#### SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 98000717

Date Listed: 7/13/98

Bridge No. 5721 Property Name Koochiching County MN State

Iron and Steel Bridges in Minnesota MPS Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Toland Aeth

Signature of the Keeper

Date of Action

Amended Items in Nomination:

One of the Significant Dates falls outside the Period of Significance. The Period of Significance should include both the original construction date and the "reconstruction" date. Therefore, the Period of Significance = 1890; 1937.

This information was verified with Susan Roth of the MN SHPO.

DISTRIBUTION: National Register property file Nominating Authority (without nomination attachment) NPS Form 10-900 (Rev. 10-90)

United States Department of the Interior National Park Service

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## NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register* of *Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

#### 1. Name of Property

historic name <u>Bridge No. 5721</u> other names/site number <u>N/A</u>

2. Location

street & number Mn. Hwy. 65 over Little Fork Rivernot for publication N/Acity or town Unorganized TerritorySilverdalevicinity Xstate Minnesotacode MNcode 55772

#### 3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this x nomination \_\_\_\_\_ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property V meets \_\_\_\_\_ does not meet the National Register Criterra. I recommend that this property be considered significant nationally statewide x locally, ( See continuation sheet for additional comments.) Signature of certifying official Date Ian R. Stewart, Deputy State Historic Preservation Officer State or Federal agency and bureau Minnesota Historical Society In my opinion, the property \_\_\_\_ meets \_\_\_\_ does not meet the National Register criteria. ( \_\_\_\_ See continuation sheet for additional comments.) Signature of commenting or other official Date State or Federal agency and bureau

## 

#### 5. Classification

Ownership of Property (Check as many boxes as apply)

\_\_\_\_ public-local \_\_\_\_ public-State \_\_\_\_ public-Federal

Category of Property (Check only one box) \_\_\_\_\_ building(s) \_\_\_\_\_ district \_\_\_\_\_ site \_\_\_\_\_ structure \_\_\_\_\_ object

Number of Resources within Property

Contributing	Noncontributing					
0	<u>    0      buildings</u>					
0	<u>    0    </u> sites					
	<u>    0     structures</u>					
0	<u>    0   </u> objects					
	<u>    0    </u> Total					

Number of contributing resources previously listed in the National Register  $N/A_{-}$ 

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.) Historic Iron and Steel Bridges in Minnesota

6. Function or Use Historic Functions (Enter categories from instructions) Cat: TRANSPORTATION Sub: road-related (vehicular) \_\_\_\_\_ \_\_\_\_ Current Functions (Enter categories from instructions) Cat: TRANSPORTATION Sub: road-related (vehicular) 7. Description Architectural Classification (Enter categories from instructions) OTHER: Camelback through truss Materials (Enter categories from instructions) foundation (Substructure) WOOD roof \_\_\_\_\_ walls other (Superstructure) METAL: Iron

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

#### 8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- X C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- \_\_\_\_ D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

- \_\_\_\_ A owned by a religious institution or used for religious purposes.
- \_\_\_\_\_ B removed from its original location.
- \_\_\_\_ C a birthplace or a grave.
- \_\_\_\_ D a cemetery.
- \_\_\_\_\_E a reconstructed building, object, or structure.
- \_\_\_\_ F a commemorative property.
- \_\_\_\_ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions) ENGINEERING

Period of Significance <u>ca. 1890</u>

Significant Dates ca. 1890, 1937

USDI / NPS Registration Form Bridge No. 5721 Koochiching County, Minnesota

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation

Architect/Builder Contractor/Builder: E.W. Coons, Inc. Designer: Minnesota Highway Department

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

#### 9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)

- \_\_\_\_ preliminary determination of individual listing (36 CFR 67) has been requested.
- \_\_\_\_ previously listed in the National Register

\_\_\_\_ previously determined eligible by the National Register

\_\_\_\_\_ designated a National Historic Landmark

recorded by Historic American Buildings Survey #\_\_\_\_\_

\_\_\_\_ recorded by Historic American Engineering Record # \_\_\_\_\_

Primary Location of Additional Data

State Historic Preservation Office

- X Other State agency
- \_\_\_\_ Federal agency
- \_\_\_\_ Local government
- \_\_\_\_ University
- Other

Name of repository: Minnesota Department of Transportation

10. Geographical Data

Acreage of Property less than one acre

UTM References (Place additional UTM references on a continuation sheet)

> Zone Easting Northing Zone Easting Northing 1 <u>15 489290 5313450</u> 3 2 4 See continuation sheet.

Rauch, Minn., 1970

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

#### 11. Form Prepared By

name/title Jeffrey A. Hess, Historian organization <u>Hess, Roise and Company</u> street & number <u>The Foster House, 100 North First Street</u> city or town <u>Minneapolis</u> state <u>MN</u> zip code <u>55401</u> telephone <u>(612) 338-1987</u> date <u>September 1997</u>

#### Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A USGS map (7.5 or 15 minute series) indicating the property's location.
  - A sketch map for historic districts and properties having large acreage or numerous resources.

#### Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner (Complete this item at the request of the SHPO or FPO.)

name		 		
street & number		 		
telephone				
city or town	state	 zip	code	

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.). Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 1

Bridge No. 5721

name of property

Koochiching County, Minnesota county and state

#### Description

Located in rural southeastern Koochiching County, Bridge No. 5721 carries Minnesota Trunk Highway 65 over the Little Fork River, about two miles southwest of the small community of Silverdale. Aligned on a north-south axis, the crossing consists of a 160-foot, wrought-iron, eight-panel, pin-connected, Camelback through truss with three steel-stringer approach spans on the north, and three on The superstructure rests on H-piling abutments and the south. wood-trestle piers. In the main span, the two truss webs are identically detailed. Two channel sections with V-lacing form the upper chord, while two punched eyebars comprise the lower chord. All vertical members are four angle sections with V-lacing. Diagonal members are paired punched eyebars, while counters are looped eyerods with turnbuckles. The counters are paired in the two center panels, single in the outer panels. The truss webs are stiffened in the four center panels by intermediate horizontal struts consisting of paired channel sections with battens. Portal bracing is a lattice of angle sections, while overhead sway bracing consists of four angles with X-lacing and knee braces. The sway bracing also contains ornamental plates punched with four circles and a cross. Top-lateral and bottom-lateral bracing both utilize crossed eyerods, with the former containing turnbuckles. In the truss's flooring system, built-up wrought-iron floor beams support 10 rolled steel stringers (eight I-beams and two outer channel sections), which, in turn, carry a bituminous-surfaced wood deck that accommodates a 17-foot-wide roadway between channel-section On the bridge's southernmost approach span, a metal railings. plaque bears the following inscription: "Minnesota Highway Dept Bridge No 5721 1937."

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### NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section <u>8</u> Page <u>1</u>

Bridge No. 5721 name of property

Koochiching County, Minnesota county and state

#### Summary of Significance

In December 1936, the Improvement Bulletin reported that the Minnesota Highway Department had recently awarded a low-bid contract, in the amount of \$35,089, to E. W. Coons, Inc., of Hibbing, Minnesota, to construct Bridge No. 5721 in Koochiching County. According to the trade journal, the project involved the reconstruction of an "old 160-foot truss span with new stringers and 6 new 36-foot approach spans, total length 380 feet." As noted on drawings prepared by the highway department in November 1936, the contractor was responsible for furnishing structural steel for the new approach spans and for the new joists in the floor system of the old truss. On its part, the state agreed to "deliver to the bridge contractor, without cost to him, at some Twin City fabricating plant, the old material for the . . . truss span complete & ready for erection." Apart from indicating that the old truss was being held in a "storage yard" in Sauk Centre, Minnesota, the drawings provided no information on the span's One notation, however, did shed some light on the history. truss's vintage: "All old material is wrot. iron." As historian Fredric L. Quivik has explained in his study of Minnesota metal trusses, wrought iron "remained the principal bridge building material into the late 19th century." With the emergence of open-hearth steel in the early 1890s, steel became the preferred material, and "wrought iron disappeared from bridge work by the mid-1890s."

In 1937, E. W. Coons, Inc. completed its work on Bridge No. 5721, securing the old truss span from the highway department and new structural steel from the Lakeside Bridge and Steel Company of Milwaukee, Wisconsin. Upon its re-erection, the 160-foot main span retained not only much of its original material, but also much of its original pin-connected, Camelback, through-truss design. Its late nineteenth-century fabrication was evident in the detailing of its top chord (which used lacing instead of a cover plate), in the construction of its floor beams (which were built- up girders rather than rolled beams), and in the

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Bridge No. 5721 name of property

Koochiching County, Minnesota county and state

ornamentation of its overhead sway bracing (which displayed metal plates punched with circles and crosses). Neither the new I-beam flooring system nor the new wood-trestle substructure markedly affected the truss's original appearance. Indeed, it was not until the mid-1960s that the truss superstructure experienced noticeable remodeling. At that time, the state highway department raised the portal bracing by about two feet to provide a 16-foot minimum vertical clearance. But, overall, in its design, workmanship, and materials, Bridge No. 5721 retained its historical integrity as a late nineteenth-century, pin-connected, wrought-iron, Camelback through truss.

Bridge No. 5721 is a rare Minnesota example of both a wroughtiron truss and a truss with ornamental detailing. It is eligible for the National Register under Criterion C in the area of engineering, within the historic context of "Historic Iron and Steel Bridges in Minnesota." The Multiple Property Documentation Form (MPDF) associated with this context recognizes that wroughtiron bridges are highly significant "in light of their small number." The MPDF also recognizes that truss bridges may be eligible for "special decorative features."

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Bridge No. 5721 name of property

Koochiching County, Minnesota county and state

Bibliography

Published Sources

Improvement Bulletin 83 (18 December 1936): 24.

International Falls Press, 1936-1937 (no mention of project).

Unpublished Sources

Quivik, Fredric L. "Iron and Steel Bridges in Minnesota." Multiple Property Documentation Form, 1988. State Historic Preservation Office, St. Paul.

Archival Sources

- Bridge Database. Minnesota Department of Transportation, St. Paul.
- Bridge No. 5721 File (contract, correspondence). Minnesota Department of Transportation, Record Storage Center, St. Paul.
- Bridge No. 5721 File (plans). Minnesota Department of Transportation, District 1 Office, Duluth.
- Bridge No. 5721 File. Minnesota Department of Transportation, Bridge Division, St. Paul.

OMB No. 1024-0018

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Bridge No. 5721 name of property

Koochiching County, Minnesota county and state

#### Verbal Boundary Description

The general area of the nominated property is a rectangle 18 feet wide, whose long center axis parallels the centerline of the bridge. The property is bounded at each end by the outer edges of the abutments.

#### Boundary Justification

Based on measurements provided by the Minnesota Department of Transportation, the boundaries enclose the entire historic resource.