

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: 89002181

Date Listed: 1/4/90

Four Mile Creek Lattice
Property Name

Morris
County

KS
State

Metal Truss Bridges in Kansas 1861--1939 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.

Beth Boland
Signature of the Keeper

1/4/90
Date of Action

=====

Amended Items in Nomination:

Item #7, Description: Materials include 10 Metal: wrought iron or steel; and 2) Stone.

Item #8, Significance: The applicable area of significance is engineering only.

DISTRIBUTION:

- National Register property file
- Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

NOV 28 1989

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Four Mile Creek Lattice

other names/site number Four Mile Creek Lattice

2. Location 2 miles west & 1 mile north of intersection of F.A.S. 93 and F.A.S. 820

street & number Unmarked county road

not for publication

city, town Wilsey

vicinity

state Kansas

code KS

county Norris

code 47

zip code 66873

3. Classification

Ownership of Property

- private
 public-local
 public-State
 public-Federal

Category of Property

- building(s)
 district
 site
 structure
 object

Number of Resources within Property

| Contributing | Noncontributing |
|--------------|------------------|
| _____ | _____ buildings |
| _____ | _____ sites |
| <u>1</u> | _____ structures |
| _____ | _____ objects |
| <u>1</u> | _____ Total |

Name of related multiple property listing:
Metal Truss Bridges in Kansas

Number of contributing resources previously listed in the National Register _____

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this 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 meets does not meet the National Register criteria. See continuation sheet.

Signature of certifying official *Ramon Powers*

Date Nov. 16, 1989

State or Federal agency and bureau _____

In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of commenting or other official _____

Date _____

State or Federal agency and bureau _____

5. National Park Service Certification

I, hereby, certify that this property is:

- entered in the National Register.
 See continuation sheet.
 determined eligible for the National Register. See continuation sheet.
 determined not eligible for the National Register.
 removed from the National Register.
 other, (explain:) _____

Beth Boland

1/4/90

Signature of Keeper

Date of Action

| | |
|---|--|
| Historic Functions (enter categories from instructions) Transportation: Road Related (Vehicular): Bridge | Current Functions (enter categories from instructions) Transportation: Road Related (Vehicular): Bridge |
| | |
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7. Description

| | |
|--|--|
| Architectural Classification (enter categories from instructions) | Materials (enter categories from instructions) |
| Other: Lattice Pony Truss | foundation _____ |
| | walls _____ |
| | roof _____ |
| | other Metal: Wrought Iron or Steel |

Describe present and historic physical appearance.

The Four Mile Creek bridge, erected Ca. 1890, is a pin connected lattice pony truss. The single span is 35 feet long and 16 feet wide. The deck rises 10 feet above the creek bed. It is located on a county road southeast of Wilsey. The bridge is located on a slight bend of the road and sits on a slight northeast-southwest alignment. This is often true with early bridges as this misalignment allowed a right angle approach to the river and a saving of money in both bridge and amount of fill required.

The members of a truss bridge are designated either as chord members or web members. Chord members are those mainly defining the outlines of the structure and they are termed lower or upper chord members depending on whether they are found at the bottom or the top of the structure. Members between the chords are web members. They are called posts or ties if they sustain compression or tension respectively. In the instance of the Four Mile Creek bridge, the chords and endposts are fabricated from angle stock rivited to a top cover plate. A bar lattice is used to form the two respective panels, which become a strong and stiff web. No external sway bracing is used in this particular design. Iron eye bars are wrapped around and over the top chord and attached to the bottom chord by the use of a pin. This consists of metal I beams suspended below the bottom chord at these pin connection points. Cast iron sunflowers form a decorative element on both panels. The bridge has not been modified and retains a high degree of its structural integrity.

Per filing official I have considered the significance of this property in relation to other properties:

nationally statewide locally

Applicable National Register Criteria A B C D

Criteria Considerations (Exceptions) A B C D E F G

Areas of Significance (enter categories from instructions)

Engineering
Transportation

Period of Significance

Ca. 1890
Ca. 1890

Significant Dates

Ca. 1890
ca. 1890

Cultural Affiliation

N/A

Significant Person

n/a

Architect/Builder

[Canton Bridge Company]

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Town lattice truss was patented by Ithel Town in 1820. The closely spaced diagonal members created a stiff web that was quite strong. The early examples were constructed of wood, but by the late 19th century a few were constructed of metal, generally wrought iron.

No construction data has presently been located about the Four Mile Creek bridge. It was selected as a candidate in this nomination as it is a good example of late lattice truss design with good integrity. It is also of a different design than the Norton county bridges as built by the Canton Bridge Company. The inverted king post which was attached to the former does not exist in this instance. It also features a pin connection and eyebar which would date it earlier than the turn of the century. Design elements such as the cast iron sunflowers at certain points in each panel and the remains of a builder's plate with the remaining letters "ON" would suggest that it is an early version of Canton's lattice truss design. Approximately ten lattice pony trusses are known to exist in Kansas. All are approximately the same length of thirty six feet. Eight of these ten bridges remain in Norton county.

The Canton Bridge Company, Canton, Ohio, was advertising in the Engineering Record, as early as 1876, but little is known about their early history. It was incorporated in 1891 by W. E. Sherlock, President, and V. H. Hammond, Vice President, and C. E. Timkler, Chief Engineer. It is possible that V. H. Hammond was a relative of Wrought Iron Bridge Company's D. Hammond. The company operated independently until 1925, when it was purchase by Massillion Steel Joist Company of Massillion, Ohio. In 1927 the two companies were merged into the Macomber Steel Company and the Canton Bridge Company name was dropped.

The Kansas Department of Transportation (KDOT) carried out a statewide inventory of historic bridges between 1980 and 1983. The bridges to be

See continuation sheet

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included were identified through computer printouts developed by KDOT, from information supplied by the counties (since almost all of the historic bridges were located on secondary rather than the primary road system), and by direct observation by field personnel. All bridges were inspected by KDOT personnel to verify the data on file. That information was jointly evaluated by representatives of KDOT, Kansas State Historical Society, and the State Historic Preservation Officer.

Each structure was evaluated using a points rating system adapted from the points evaluation rating developed by the Ohio Department of Transportation and Ohio Historic Preservation Office. Consideration was given to areas such as age, builder, number of spans, length, special features, history, integrity, surviving numbers, and preservation potential.

In many instances there is little information about individual structures. Often bridge plaques which may have contained information have been removed, or the county's records are not complete or have been destroyed. Due to the large numbers of similar structures there is often little to choose from in differentiating among individual bridges other than condition and the likelihood of preservation.

The purpose of the KDOT study and subsequent evaluation was to identify a representative selection of bridges of each class. Through this approach KDOT and KSHS hope to preserve for posterity some examples of each type.

Victor C. Darnell, American Bridge Building Companies, Washington, DC:
Society for Industrial Archeology Occasional Publication 4, 1984.

David Weitzman, Traces of the Past: A Field Guide to Industrial Archeology,
New York: Charles Schribner's Sons, 1980.

James L. Cooper, Iron Monuments to Distant Posterity, DePauw University,
F.H.W.A., Indiana Dept. of Highways, Indiana Dept. Natural Resources,
N.P.S., 1987.

Dan G. Deibler, A Survey and Photographic Inventory of Metal Truss Bridges
in Virginia, Charlottesville: Virginia Highway & Transportation
Research Council, 1975.

See continuation sheet

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
- Other State agency
- Federal agency
- Local government
- University
- Other

Specify repository:

Kansas State Historical Society

10. Geographical Data

Acreage of property less than one acre

UTM References

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Zone Easting Northing

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See continuation sheet

Verbal Boundary Description

The nominated property is located on the NE 1/4, NW 1/4, NE 1/4, NE 1/4, section 4, township 17 south, range 7 east on a tract measuring 35' x 16' whose northeast corner is represented by the northeast corner of the bridge. Beginning at the northeast corner the boundary proceeds 35' southwest, 16' northwest, 35' northeast, and 16' southeast to the point of beginning.

See continuation sheet

Boundary Justification

The boundary includes only that area that is historically associated with the nominated property.

See continuation sheet

11. Form Prepared By

name/title Larry Jochims
organization Kansas State Historical Society date September 20, 1989
street & number 120 W. 10th telephone (913) 296-3251
city or town Topeka state KS zip code 66612