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NATIONAL REGISTER

United States Department of the Interior  
National Park Service

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 an 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 Starke County Bridge #39

other names/site number \_\_\_\_\_

2. Location

street & number Corner of Main and Water Streets, across the former  not for publication

Pennsylvania Railroad cut

city or town Knox  vicinity

state Indiana code IN county Starke code 149 zip code 46534

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, 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. I recommend that this property be considered significant  nationally  statewide  locally. ( See continuation sheet for additional comments.)

*Fatih R. Kalk*

11/2/93

Signature of certifying official/Title

Date

Indiana Department of Natural Resources  
State of Federal agency and bureau

In my opinion, the property  meets  does not meet the National Register criteria. ( See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

Entered in the National Register Date of Action

I hereby certify that the 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:)

*for* Signature of the Keeper Braym. Lapsley

12/10/93

**5. Classification**

**Ownership of Property**  
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

**Category of Property**  
(Check only one box)

- building(s) -
- district
- site
- structure
- object

**Number of Resources within Property**  
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

**Name of related multiple property listing**  
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

**Number of contributing resources previously listed in the National Register**

0

**6. Function or Use**

**Historic Functions**

(Enter categories from instructions)

TRANSPORTATION: road-related

**Current Functions**

(Enter categories from instructions)

TRANSPORTATION: pedestrian-related

**7. Description**

**Architectural Classification**

(Enter categories from instructions)

OTHER: Warren Pony Truss

**Materials**

(Enter categories from instructions)

foundation CONCRETE

walls N/A

N/A

roof N/A

other METAL: Steel

ASPHALT

**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.
- 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.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or 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.

**Narrative Statement of Significance**

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

**9. Major Bibliographical References**

**Bibliography**

(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 # \_\_\_\_\_

**Areas of Significance**

(Enter categories from instructions)

ENGINEERING

**Period of Significance**

1915

**Significant Dates**

1915

**Significant Person**

(Complete if Criterion B is marked above)

N/A

**Cultural Affiliation**

N/A

**Architect/Builder**

Rochester Bridge Company

**Primary location of additional data:**

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: Indiana Historic Sites and Structures Inventory

Starke County Bridge #39  
Name of Property

Starke County, Indiana  
County and State

### 10. Geographical Data

**Acreeage of Property** Less than one acre.

#### UTM References

(Place additional UTM references on a continuation sheet.)

1 

1	6
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5	3	1	5	1	0
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4	5	7	1	9	4	0
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Zone Easting Northing

3 

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Zone Easting Northing

4 

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 See continuation sheet

#### 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 James Hardesty, President

organization Starke County Historical Society date January 7, 1993

street & number 401 S. Main St. telephone 219-772-5393

city or town Knox state IN zip code 46534

#### 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 SHPO or FPO.)

name City of Knox

street & number 101 W. Washington St. telephone 219-772-4553

city or town Knox state IN zip code 46534

**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 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 Projects (1024-0018), Washington, DC 20503.

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Continuation Sheet**

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Starke County Bridge #39  
Starke County, Indiana

Starke County Bridge #39 is a single span Warren Pony Truss structure. The bridge is located on the northern outskirts of the small town of Knox, Indiana, where Main and Water Streets terminate at the former Penn Central Railroad cut. The bridge spans the rail cut in a northwest-southeast direction, allowing access to Wythougan Park.

When built in 1915, #39 stood about six and one-half miles east of Knox, on County Road 1100 East, spanning the Yellow River (The site is located just off of the east edge of the submitted USGS map, spanning Yellow River, at UTM point 16/543060/4569000, Donaldson Quadrangle). The bridge was moved in 1992 to its present site.

Originally, metal cassion abutments and concrete wingwalls supported Bridge #39. On its present site, concrete abutments were poured to support the structure. The steel bridge is 103' long and has a 13'6" wide roadway.

Each side of the bridge consists of six Warren Truss panels. Its all-interior verticals were manufactured from pairs of laced angles, diagonals were made from pairs of angles, with the heaviest being located in the outer panels. Verticals and diagonal members have riveted stay plates. Upper and lower chords are composed of I beams. At points where upper or lower chords and verticals and diagonals meet, the structure is joined by gussets which are bolted to all various members.

The 13'6" roadbed is formed by heavy wooden decking overlaid with asphalt. The original guardrail of angled upper and lower rails joined by narrow lattice pieces remains intact.

On the south end of the span, fixed onto the face of the right endpost, is a plaque which reads "Starke County/Commissioners /Peter Mosher/Fred Kingman/Lee Wolfe/Auditor/C.W. Weninger /Engineer/Chas.A.Good/Built By The/Rochester Bridge Co./Rochester Ind./1915".

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Starke County Bridge #39  
Starke County, Indiana

In 1992, the Indiana Department of Transportation declared the bridge unsafe for present traffic and proposed to use federal funding to replace the structure. Under the terms of a Memorandum of Agreement with the Indiana Division of Historic Preservation and Archaeology, INDOT offered the bridge to local preservation groups, provided that the structure would be moved from the site and rehabilitated. The Starke County Historical Society acquired the bridge and hired Dillbaugh, Inc. of Crown Point, IN to move the structure to its present site in May of 1992.

The bridge was moved intact by building cribbing underneath the span. It was then transferred to the crib supports from the original abutments, and pulled across to one side of the Yellow River. Once across, wheels were attached to the structure and it was hauled to the present site.

Although Bridge #39 no longer spans a natural body of water, the depth of the rail cut which it does span gives the viewer a proper impression of its function. Most importantly, the element which makes the bridge significant-its Warren Pony Truss design-remains unchanged by the move.

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Starke County Bridge #39  
Starke County, Indiana

Starke County Bridge #39 is significant under Criterion C, in the area of engineering, as an unusual variant of the Warren Pony Truss, and as an important example of the work of the Rochester Bridge Company. The bridge was erected in 1915 over the Yellow River with Charles A. Good, County Engineer, supervising the project. It was moved in 1992 to its current site, yet, it meets Criteria Consideration B because it retains its significant truss configuration.

Bridge #39 employs the Warren Pony Truss, an often used truss type in the early 20th century. The Warren Truss is one of several variants on the basic kingpost structural system, and it was patented in England by James Warren and Willoughby Monzani in 1848 and by Squire Whipple (inventor of the Whipple Truss) in 1849. The Warren consists of a series of kingposts set within parallel upper and lower chords. Because of the high stress points where panels meet, pins joining the members encountered undue wear which could cause failure. Until bolted gusset plates and riveting technology replaced the pinning technique at the turn of the century, Warren Trusses remained rare. By the early 1900s, the Warren was commonly used for highway and railroad bridges. Engineers improved the efficiency of the Warren by adding verticals or by changing the dimensions of members. By the 1920s, other metal truss types, such as the Parker, overtook the use of the Warren.

Of those which survive, Starke County #39 merits special attention for its unusual design. The engineers of the Rochester Bridge Company used a standard Warren Pony Truss design for the structure, but heavier than normal members were used to allow for its great span (103'). It is the longest bolted Warren Pony Truss bridge in Indiana. In the Indiana Division of Historic Preservation and Archaeology's inventory of metal bridges, Starke #39 received a recommendation for National Register listing. The bridge was also considered by DHPA staff to be eligible for listing as part of a Section 106 review, as explained earlier.

Starke County Bridge #39 is significant for its association to the Rochester Bridge Company. One of about eleven Hoosier firms Starke

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County Bridge #39  
Starke County, Indiana

which specialized in metal bridge construction at various times from the late 19th to early 20th centuries, Rochester Bridge Company specialized in standard designs and did much work in northern Indiana. Formed in 1896, the firm was controlled from 1908-c.1920 by the Deniston family of Rochester. The firm's practical works were influenced by the Purdue University education of several of its leaders, as James Cooper explains in Iron Monuments to Distant Posterity (pp. 26-27):

The extensive Purdue connection may explain the company's considerable experimentation with the fabrication of members with traditional truss forms. The company rightly thought of itself as making "standard design bridges." Although it specialized in shorter spans where beams and standard trusses served well, it also built several kinds of longer and higher trusses. Within fairly standard forms, however, the Rochester Bridge Company's designers explored ways to rationalize manufacture by reducing the number of structural shapes used in truss members. They were especially interested in angles and experimented with their use in every possible part of a truss, and they omitted decoration.

Starke County Bridge #39 certainly embodies the most significant aspects of the Rochester Bridge Company's engineering talents, as explained by the above quotation. Of the about 33 Rochester Bridge Company spans known to exist in Indiana, Starke County #39 merits recognition as an especially good example of the firm's ability to adapt standard forms.

In 1992, Starke County Bridge #39 was moved from its original site spanning the Yellow River at CR 1100 East to the corner of Water and Main Streets in Knox, Indiana, where it crosses a railroad cut to provide pedestrian access to a local park.



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Starke County Bridge #39  
Starke County, Indiana

**BIBLIOGRAPHY**

Comp, T. Allan and Donald C. Jackson. "Bridge Truss Types: A Guide to Dating and Identifying," American Association of State and Local History Technical Leaflet 95, Nashville, TN, 1977.

Condit, Carl. American Building. Chicago: University of Chicago Press, 1968.

Cooper, James L. Iron Monuments to Distant Posterity: Indiana's Metal Bridges, 1870-1930. Indianapolis: Indiana Division of Historic Preservation and Archaeology, 1987.

Groppe, Maureen. "Old Knox Bridge to Get New Use," South Bend Tribune, May 10, 1992, section C, p. 1.

Indiana Division of Historic Preservation and Archaeology, Indiana Historic Bridge Inventory.

**GEOGRAPHICAL DATA-VERBAL BOUNDARY DESCRIPITON**

The boundary includes Starke County Bridge #39, its superstructure, abutments, trusses and right of way. On either side of the railroad cut which it now transverses, include 10' of the approaches.

**BOUNDARY JUSTIFICATION**

The bridge has been moved. The boundary includes the bridge and its significant trusswork, and enough property to convey the immediate setting of the structure.