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 National Register Bulletin, How to Complete the National Register of Historic Places Registration Form. 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.

1. Name of Property
   Historic name: Otter Creek Covered Bridge
   Other names/site number: Holton Covered Bridge
   Name of related multiple property listing:
   ____________________________________________________________
   (Enter "N/A" if property is not part of a multiple property listing)

2. Location
   Street & number: N County Road 850 W at Otter Creek
   City or town: Holton State: IN County: Ripley
   Not For Publication:   Vicinity: [x]

3. State/Federal Agency Certification
   As the designated authority under the National Historic Preservation Act, 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 [x] meets ___ does not meet the National Register Criteria. I
recommend that this property be considered significant at the following
level(s) of significance:
   ___national   ___statewide   x local
   Applicable National Register Criteria:
   X A   ___B   x C   ___D

   ____________________________________________   ______________________
   Signature of certifying official/Title:               Date
   Indiana DNR-Division of Historic Preservation and Archaeology
   State or Federal agency/bureau or Tribal Government

   ____________________________________________   ______________________
   Signature of commenting official:                  Date
   Title: ____________________________ State or Federal agency/bureau
   or Tribal Government

   In my opinion, the property ___ meets ___ does not meet the National Register criteria.
4. National Park Service Certification
I hereby certify that this property is:

___ entered in the National Register
___ determined eligible for the National Register
___ determined not eligible for the National Register
___ removed from the National Register
___ other (explain:) ____________________

Signature of the Keeper   Date of Action

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
Otter Creek Covered Bridge  
Name of Property

Ripley County, IN  
County and State

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

<table>
<thead>
<tr>
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<th>Contributing</th>
<th>Noncontributing</th>
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<tr>
<td>Total</td>
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</tbody>
</table>

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: road-related

________________________
________________________
________________________
________________________

Sections 1-6 page 3
7. Description

Architectural Classification
(Enter categories from instructions.)
OTHER: Howe Truss

Materials: (enter categories from instructions.)
foundation: STONE: Limestone
           CONCRETE
walls: WOOD: Weatherboard
roof: METAL: Steel
other: 

Narrative Description
(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a summary paragraph that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The Otter Creek Covered Bridge has a clear span of about 113 feet over Otter Creek. The single span Howe Truss was constructed atop cut-stone abutments in 1884 by Thomas Hardman. The bridge has vertical plank siding and a metal roof. Traffic was rerouted from the bridge to a new alignment of North County Road 850 W that crosses a new bridge north of the old bridge in 1996 (seen from the window of the bridge in photo 0007), however, the bridge is still accessible to pedestrians.
Narrative Description

The Otter Creek Covered Bridge connected areas of rural northwestern Ripley County to the small village of Holton by way of an old diagonal road extending southeast from the bridge. The bridge spans Otter Creek approximately one-and-a-half miles northwest of Holton. The single-span bridge has a 113 foot free span Howe truss that rests on cut limestone abutments. The bridge is approximately twenty feet wide and is positioned slightly askew to the northwest over the creek that flows southwesterly. The general terrain around the bridge is flat bottomland, in the valley through which the creek flows, and hills flank the creek’s path. The creek bank is largely wooded. The approaches to the bridge were gravel and have overgrown with grasses. Heavy wood posts, about two feet tall, are placed in the ground on each end of the approach to deter vehicular traffic (photos 0001 and 0003). A concrete curb is against the bridge deck at grade with the lawn.

The ten foot tall abutments that support the bridge are of cut rusticated limestone (left side of photo 0002), however, the east abutment had an early, c. 1930, facing of concrete formed against it (the impression of the wood plank form is visible in the concrete, photo 0008). The abutments are three-sided with a twenty foot front wall and eleven foot end walls that flare outward to act as retaining walls for the approaches. The east abutment’s end walls have a stepped concrete top added c. 1930 (seen in photo 0001).

The heavy oak timber frame is composed of sawn lumber. Ten panels of heavy timber X-bracing connect the trusses below the bridge deck and overhead (photos 0006-0008). Iron rods that allow for tightening are placed between each bay for tension (photo 0007). Floor boards composing the bridge deck run parallel with the flow of traffic, though some deterioration has occurred at the west end. A wood curb is at the outside edge of the bridge deck. A wide sideboard is fixed to the truss on each interior side of the bridge to protect the truss from vehicles (photo 0006). Rows of thin wood boards act as purlins and form a lattice-like frame on which the metal roof and siding are fastened (photo 0006). The bridge is sided with vertical planks, painted red (photos 0004-0005). The roof is gabled and is covered with new metal. A thin piece of metal fascia wraps the edge of the roof on the eave and gable.

Each end that forms the portal for the bridge has its gabled wall jettied out from the portal (photos 0001 and 0003). The bottom edge of the jettied gabled wall is shaped with a corbel-like form on its outside corners and steps up in its center to frame the top of the portal. Painted in each gable are the words: OTTER CREEK BRIDGE 1884. The actual portal itself is rectangular with plank siding wrapping around the inside corners of the portal approximately three feet (left side of photo 0003). A small rectangular window-like opening is centered in the side walls of the bridge (photo 0007). They have shed roofs covered with rolled metal and enclosed on the ends with wood planks (photo 0002).
Otter Creek Covered Bridge
Name of Property

Ripley County, IN
County and State

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.
- 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 grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years
Otter Creek Covered Bridge
Name of Property

Ripley County, IN
County and State

Areas of Significance
(Enter categories from instructions.)
ENGINEERING
TRANSPORTATION

Period of Significance
1884-1968

Significant Dates

Significant Person (last name, first name)
(Complete only if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder (last name, first name)
Hardman, Thomas

Section 8 page 7
Period of Significance (justification)

The period of significance begins when the covered bridge was constructed in 1884. The period of significance ends in 1968 (mandatory extent of eligibility), though it continued to carry vehicular traffic until 1996 when an alternate bridge and road segment were constructed north of the bridge, bypassing the original route. The bridge remains open to pedestrian traffic.

Criteria Considerations (explanation, if necessary)

Not applicable

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

The Otter Creek Covered Bridge, 1884, is an intact example of Howe Truss bridge technology that served local transportation needs. It is eligible for the National Register of Historic Places based on two criteria. Criterion A is applicable under transportation as an area of significance. The bridge embodies the importance bridges served to the early development of transportation networks in rural areas for the transport of goods with trade and shipping centers. Criterion C is applicable under engineering as an area of significance. The bridge represents the development of the Howe Truss in wood form, with metal tensioning components, prior to the use of steel or concrete for bridge construction. The relative rarity of surviving examples of covered bridges further establishes the significance of the Otter Creek Bridge.

Narrative Statement of Significance (Provide at least one paragraph for each area of significance.)

ENGINEERING & TRANSPORTATION

The Otter Creek Covered Bridge’s superstructure is an example of the Howe Truss, a series of vertical and cross-members that function together and partially held in tension by metal rods. The Howe Truss was invented by William H. Howe, born in 1803, who was a millwright by occupation and patented the truss in 1840. The incorporation of iron bars and turnbuckles allowed tension to be regulated in the bridge and hold the top and bottom cords together. Other all-wood bridges encountered separation from the main cords, but the introduction of the iron assemblies resolved this problem. Howe patented a second truss system in 1846 as he continued...
to fine-tune his trademark invention. Howe’s truss went on to be a popular choice for all-steel bridge construction for railroads that carried a great deal more weight than the forerunning wood bridges. Thomas Hardman modified the Howe Truss incorporated into the Otter Creek Covered Bridge by making the 10 panels irregular in size with varying sizes of the members composing the truss. The wood X-brace members are in compression and the iron tie rods form the equalizing tension (photos 0006-0007). The free span of the bridge is 112 feet.

The Otter Creek Covered Bridge connected areas of rural northwestern Ripley County and a crossroads named Hopewell to the railroad town of Holton by way of an old diagonal road that extended southeast from the bridge. The bridge spans Otter Creek approximately one-and-a-half miles northwest of Holton which was platted with the construction of the Ohio & Mississippi Railroad in 1854. The town experienced moderate growth due to the railroad, which also permitted shipments to and from the surrounding farms. Ripley County contracted with Thomas Hardman in 1884 to construct the Otter Creek Bridge on land then owned by John Lloyd. This was the second of four covered bridges he constructed in the county. The county contracted with John Greer & Co. for excavating and stone work in the amount of $1556.00. Hardman was contracted for the superstructure at a cost of $19.00 per lineal foot. That bridge is about 112 feet long, so the cost would have been about $2128.00. Phillip Ensminger was the inspector on the bridge and was paid $42.00. Two local men, Henry Murdock and Jake Fulton, hauled timbers from the sawmill located in Holton to be used for its construction.

During the auto era, CR 850 W (which the nominated bridge carries) connected motorists to State Route #4, running east-west through Holton. Route #4, designated in 1917 with the founding of the state highway system, became U.S. 50 in 1926. Thus, the Otter Creek Bridge continued its role of channeling travelers to important routes. The bridge was put out of service, though it is still owned by the county, when a new bridge and road alignment were built north of this in 1996 (see photos 0005 and 0007). The covered bridge is closed to vehicular traffic.

The first covered bridge in Ripley County was constructed by Hardman in 1879 near Ballstown, south of Batesville. The construction cost of that bridge was $12.80 per lineal foot plus the cost of the approaches. The bridge was 80 feet long and cost a total of $1326.00 plus inspection costs by Samuel H. McCoy at $1.75 per day. It was put into operation on June 6, 1880 and remained until it was replaced in 1948. The Busching Covered Bridge followed the Otter Creek Bridge in 1885. Hardman constructed the Busching Bridge for $2,200.00. His bid for the project was $20.80 per lineal foot and included the stone work abutments. The bridge was received by Ripley County on October 3, 1885. With the development of Versailles State Park and a new Highway 50 constructed into Versailles in 1930, the bridge no longer was a primary artery of the county’s transportation network, but remains part of the county’s network of roadways. About 1884-1885, Hardman also built the Skeen-Watson Covered Bridge (or High Bridge) two miles east of Osgood for $19.00 per lineal foot. That bridge was removed in 1963 after a damaging flood.

Ripley County had at least four other covered bridges, one constructed by Philip Ensminger, the inspector on the Otter Creek Covered Bridge, in 1889. That bridge, named the Pipe Stem Bridge because it originally sat on iron pipes, spanned Ripley Creek near Prattsburg. Ensminger was a
By the 1890s, it seemed Ripley County had moved to building iron bridges for their longer spans. The FJP Bracket Bridge Company of Cincinnati, Ohio was contracted to furnish all of the materials and to build the superstructure of two bridges, over Ripley Creek and Laughery Creek, on or before the 15th of June, 1894. These were 90 and 80 feet long, including abutments, with a 16 foot roadway. The loading capacity required was to hold 100 pounds per square foot. In 1899, specifications for three more iron bridges were let to Republic Iron & Steel Company of Covington, Kentucky. These were 40, 60, and 30 foot spans. Ripley County also built several stone arch bridges from about 1875 through 1910, including one of the largest over Raccoon Creek near Friendship in 1909. Made of Blue Limestone, which is plentiful in the county, the bridge has four large arches and is of similar construction to at least ten other stone bridges in the county. Many of these are smaller, one-arch spans that were more economical than covered bridges.

Bridge building in the county had evolved considerably since its early days. Commissioners’ records of 1818 indicate that John Richey, the county agent, was ordered to make a bridge across Spring Branch/Kentucky Creek should he desire to relocate a public road. This permitted Richey to plant the former road segment to crops under the conditions assessed by the commissioners and permitted a new 30 foot wide public road. As the county continued to develop its system of roadways and bridges, more revenue was required so in 1820 taxes were increased, including the doubling of licenses for taverns, in order to promote better infrastructure. An early bridge across Cedar Creek was added in 1821, no doubt through the collection of these new funds. There’s no indication what these earlier bridges were constructed of, but probably either wood or stone, or a combination of both in more of a folk tradition or engineered form. Prior to the Civil War, it is estimated that Ripley County may have had three covered bridges: a railroad bridge at Laughery Switch, one nearby over Laughery Creek, and a third east of Osgood.

Indiana has the third highest number of covered bridges in the nation. Between 1820 and 1922, it was estimated that 600 covered bridges were constructed of various truss patterns. By 1977, 102 were extant, which dwindled to 98 extant covered bridges by the early 1990s. Prior to 1855, most bridges were either privately built by landowners or were constructed by private companies who may have required the payment of tolls. The state legislature authorized county governments to construct or financially assist with the construction of bridges in 1855. By 1870, county governments had the sole responsibility for constructing bridges, which is essentially still in place today. Crossing waterways up to this point was done either by fords or ferries. Eventually, open wood structures were built, then later, placed on stone abutments. Stone arched bridges were being introduced at the same time. The first covered bridge in Indiana was...
Otter Creek Covered Bridge
Ripley County, IN

constructed around 1820 at Mooresville (now Floyd’s Knob); several more followed through the
late 1830s. Several covered bridges were constructed during this early time across the National
Road (Richmond to Terre Haute) and then the Michigan Road (Madison to Michigan City via
Ripley County). A litany of internal infrastructure improvements during the 1830s was brought
to a halt during financial woes the state faced in the 1840s. The oldest extant covered bridge in
Indiana is thought to be the one that crosses Raccoon Creek at the entrance to Brown County
State Park. The bridge was built between 1836 and 1838.

Ripley County’s early settlement was tied to pioneers from Jefferson County who had traveled
on or across the Ohio River to the port town of Madison, then eventually found their way north
into Ripley County. The first county survey was made in 1807 and the first settlements occurred
in 1814. The first roads were constructed by the county’s early residents who were required by
state legislation in 1814 to work five days on roads, except in payment of land taxes, which
required ten days. One of Ripley County’s first roads constructed under this method was Berry’s
Trace which followed the Millhousen road to the county line. These roads were little more than
paths or clearings and barely passable during certain seasons of the year. During the 1840s,
plank roads were constructed of sawn timber. Two of Ripley County’s earliest roads had been
plank roads including a route between Napoleon and Aurora and the Michigan Road that went
north/south the length of the state from Michigan City to Madison through Ripley County
between 1828 and 1832. Some of these plank roads were either built or maintained by the use of
tolls. Between about 1830 and 1880, Ripley County was like most other Indiana counties where
landowners petitioned county commissioners for the establishment of roads. After review of
conditions and feasibility, the road would be established (typically 40 feet in width) and
constructed by local residents. Eventually macadamized, then paved roads became the standard
for the county’s transportation network, just as bridge building evolved from wood covered
bridges to steel or stone arches, to concrete.

Developmental History/Additional historic context information

Thomas A. Hardman, who constructed both of Ripley County’s extant covered bridges, was born
near Manchester, England in 1847 and immigrated with is aunt to Mt. Carmel in Franklin County
in 1855. Hardman’s younger years were spent in farm labor until about age 20 when he began a
4-5 year period of teaching in local schoolhouses. Between 1871 and 1872, Hardman attended
the Presbyterian Academy in Lebanon where he graduated after enrolling in an engineering
course. He returned to Franklin County with an occupation as a civil engineer. Hardman was
elected county surveyor in 1874 but resigned in 1876 to become Assistant Chief Engineer with
the Smith Bridge Company, a position he held for only one year. The Smith Bridge Company
was started by Robert W. Smith in Ohio. Smith had patented several truss designs, mostly based
off the Howe Truss. The company constructed about 21 bridges in Indiana through at least four
agents including Hardman. After his time with the Smith Bridge Company, Hardman returned to
Brookville and began contracting to construct bridges himself. He continued building bridges in
the region until about 1890 when he and his family moved to Olney, Illinois.
9. Major Bibliographical References

**Bibliography** (Cite the books, articles, and other sources used in preparing this form.)


Ripley County Commissioners Meeting Minutes: 1818-1821


United States Patents 1840 (#1,685) & 1846 (#4,726). William Howe Truss Frames for Bridges.

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**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 #__________

Sections 9-end page 12
Otter Creek Covered Bridge
Name of Property
Ripley County, IN
County and State

_____ recorded by Historic American Landscape Survey # ___________

Primary location of additional data:
_____ State Historic Preservation Office
_____ Other State agency
_____ Federal agency
_____ Local government
_____ University
_____ Other
Name of repository: _____________________________________

Historic Resources Survey Number (if assigned): 137-282-40015

10. Geographical Data

Acreage of Property Less than one acre

Use the UTM system

UTM References
Datum (indicated on USGS map):

☐ NAD 1927 or □ NAD 1983

1. Zone: 16 Easting: 637510 Northing: 4327435
2. Zone: Easting: Northing:
3. Zone: Easting: Northing:
4. Zone: Easting: Northing:
Verbal Boundary Description (Describe the boundaries of the property.)

The boundaries include the bridge and its abutments and approaches. This overall area is approximately 130’ long by 30’ wide stretching across the banks of Otter Creek on former North County Road 850 West. From the northeast corner of the bridge, follow a line east approximately 10’, then north approximately 10’. This begins the boundary of the Otter Creek Covered Bridge. Turn slightly northwest and follow a line across Otter Creek 130’ to the west edge of the west approach to the bridge. Turn slightly southwest and follow a line 30’ to the south side of the south abutment wall of the west approach. Turn slightly southeast and follow a line across Otter Creek 130’ to the east edge of the east approach to the bridge. Turn slightly northeast and follow a line 30’ to the north side of the north abutment wall of the east approach, or the place of beginning.

Boundary Justification (Explain why the boundaries were selected.)

The boundaries include the bridge, its abutments and approaches as originally constructed in 1884 for carrying the county road across Otter Creek. It does not include the original county road outside of the approaches and its crossing of the covered bridge.

11. Form Prepared By

name/title: Kurt West Garner
organization: Indiana Landmarks/PIP, Ripley County Tourism
street & number: 12954 6th Road
city or town: Plymouth state: IN zip code: 46563
e-mail: kwgarner@kwgarner.com
telephone: 574-936-0613
date: September 11, 2017

Additional Documentation

Submit the following items with the completed form:

- Maps: A USGS map or equivalent (7.5 or 15 minute series) indicating the property's location.

- Sketch map for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
Otter Creek Covered Bridge Ripley County, IN
Name of Property County and State

- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

**Photographs**
Submit clear and descriptive photographs. The size of each image must be 3000x2000 at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn’t need to be labeled on every photograph.

**Photo Log**

Name of Property: Otter Creek Covered Bridge
City or Vicinity: Holton
County: Ripley State: Indiana
Photographer: Kurt West Garner
Date Photographed: February 28, 2017

Description of Photograph(s) and number, include description of view indicating direction of camera:

1 of 8.
- East portal, looking west from base of east approach

2 of 8.
- Looking northwest across Otter Creek from east bank toward west abutment

3 of 8.
- West portal, looking southeast through bridge

4 of 8.
- North side of bridge, looking southeast from former county road, across Otter Creek
Otter Creek Covered Bridge
Name of Property

Ripley County, IN
County and State

Description of Photograph(s) and number, include description of view indicating direction of camera: South side of bridge, looking northeast across Otter Creek

5 of 8.

Description of Photograph(s) and number, include description of view indicating direction of camera: Looking east from inside the approximate center of the bridge

6 of 8.

Description of Photograph(s) and number, include description of view indicating direction of camera: Looking out north window of bridge toward new bridge on Otter Creek

7 of 8.

Description of Photograph(s) and number, include description of view indicating direction of camera: Looking east at east abutment from the east bank of Otter Creek under the bridge

8 of 8.

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.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 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 Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.
Otter Creek Covered Bridge, Ripley County, IN Photo 0008