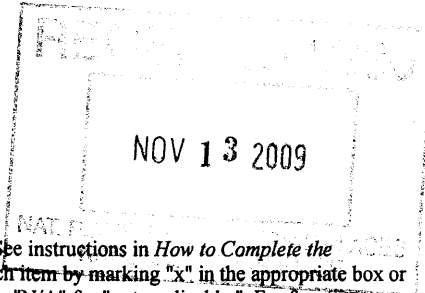


United States Department of the Interior  
National Park Service

National Register of Historic Places  
Registration Form

1132



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 Straber Ford Bridge  
other names/site number Ripley County Bridge #173 137-484-15006

2. Location

street & number CR 500N over Otter Creek N/A  not for publication  
city or town Osgood  vicinity  
state Indiana code IN county Ripley code 137 zip code 47023

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.)

James E. Hester 11/4/2009  
Signature of certifying official/Title deputy SHPO Date

Indiana Department of Natural Resources  
State or 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

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): \_\_\_\_\_

Signature of the Keeper

Edson H. Beall

Date of Action

12.24.09

**5. Classification**

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

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

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

- |  |   |
|--|---|
| <input type="checkbox"/> private                 | <input type="checkbox"/> building(s)          |
| <input checked="" type="checkbox"/> public-local | <input type="checkbox"/> district             |
| <input type="checkbox"/> public-state            | <input type="checkbox"/> site                 |
| <input type="checkbox"/> public-Federal          | <input checked="" type="checkbox"/> structure |
|  | <input type="checkbox"/> object               |

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.)

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

N/A

**6. Function or Use**

**Historic Functions**  
 (Enter categories from instructions)

**Current Functions**  
 (Enter categories from instructions)

TRANSPORTATION: road-related  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TRANSPORTATION: road-related  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**7. Description**

**Architectural Classification**  
 (Enter categories from instructions)

**Materials**  
 (Enter categories from instructions)

OTHER: stone arch bridge  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

foundation STONE: limestone  
 walls STONE: limestone  
 \_\_\_\_\_  
 roof \_\_\_\_\_  
 other \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Straber Ford 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 the 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, 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 significant within the past 50 years.

**Narrative Statement of Significance**

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

**Areas of significance**

(Enter categories from instructions)

ENGINEERING

TRANSPORTATION

**Period of Significance**

1908-1958

**Significant Dates**

1908

**Significant Person**

(Complete if Criterion B is marked above)

N/A

**Cultural Affiliation**

N/A

**Architect/Builder**

Degolyer and Stegner

**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 if 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

Name of repository:

\_\_\_\_\_

Straber Ford Bridge  
Name of Property

Ripley County, IN  
County and State

**10. Geographical Data**

**Acreage of Property** Less than one acre

**UTM References**

(Place additional UTM references on a continuation sheet.)

1 

1	6	6	4	1	5	0	0	4	3	3	4	2	7	0
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Zone Easting Northing

3 

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Zone Easting Northing

2 

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4 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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 Shawn Edward Niemi, Graduate Assistant

organization Ball State University Center for Historic Preservation date October, 2008

street & number 650 W. Minnetrista Blvd. telephone 765/213-3540 Ext. 228

city or town Muncie state IN zip code 47303

**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 Ripley County Commissioners

street & number 2710 N. Hasmer Hill Road telephone 812/689-4720

city or town Versailles state IN zip code 47023

**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 listings. Response to this request is required to obtain a benefit in accordance to the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.)

**Estimated Burden Statement:** Public reporting burden for this 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 the 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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Section 7 Page 1

Straber Ford Bridge, Ripley County, Indiana

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**Section 7 – Narrative Description**

The Straber Ford Bridge is located in Ripley County, approximately 4 miles west-northwest of Osgood, Indiana and approximately 1.3 miles west of the Michigan Road. The Straber Ford Bridge is now recorded as Bridge #73 by the Ripley County Commissioners. It spans Otter Creek along CR 500N in a northeast-southwest alignment. The bridge was built in 1908 to handle local traffic and stands just downstream of the fork of two branches of the Otter Creek. The creek and bridge sit in a small, low-lying clearing with a few scattered farms nestled among the neighboring rolling hills.

The bridge is constructed of Indiana Laurel limestone in a four-arch, semicircular design (photograph 1, 2, 3, 4, 5 and 6). The semicircular-ring arches are formed of individual rough-face limestone blocks. The ring arch springs to support rough-face limestone spandrels and parapet walls laid in ashlar coursing (photograph 7), which contain the infill and contemporary bituminous deck.

An engraving is present on the northwest arch on the downstream side. The partial inscription has what appear to be three sets of initials (D B., E.T., and C.T or C.J) and a fragment of the year built– 1908 (photograph 8).

The bridge is 105.75 feet in length and 15.7 feet wide. The parapet walls each are 2 feet wide, making the total width nearly 20 feet.<sup>1</sup> Additionally, both approaches required the use of coursed ashlar limestone wing walls, because the topography is so varied. As a result, the east wing wall is some 20 feet long, while the southern is only 6 feet. The north and west are 7.5 feet and 12 feet, respectively.

The span rests on two abutments and three piers. The three piers support the convergent ring arch system and spring from a limestone footing. The base of intersection of the arches is 4 feet wide.

The flat spandrel sits atop the ring stone arch. The spandrel rises forming a parapet wall, which is capped by large thick limestone slabs. The cap or coping is no wider than the wall but is slightly offset producing an overhanging lip facing the stream side (photograph 9). As a result, when viewed from below, a shadow line is created from the reveal (photograph 10) adding dimension to the otherwise flat surface of the spandrel.

The bridge has a high degree of integrity and is in good condition. The original craftsmanship is readily apparent and dominates the bridge visually. Recent stabilization efforts to the two most southeastern piers are not so overwhelming as to overshadow the structure as a whole (photograph 11, 12, and 13). These efforts are visible with the lower section of the arch bases and the entire exposed area of the pier encased in concrete. The modern bituminous paving is a necessity of vehicular use,

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<sup>1</sup> “Structure Inventory and Appraisal Report, Ripley County, Bridge #73,” County Commissioner’s contracted Howard J. Barth & Associates to conduct survey, 2007 (accessed at Ripley County Highway Garage).

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Section 7 Page 2

Straber Ford Bridge, Ripley County, Indiana

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although not original to the structure. The northeast and northwest corners have damage, consisting of sections of the parapets and spandrel walls dislodged along bedding joints (photograph 14). Although some limestone blocks have weathered with age and repointing is needed, the bridge is in overall good condition.

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Straber Ford Bridge, Ripley County, Indiana

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**Section 8 - Statement of Significance**

The Straber Ford Bridge, built in 1908, is eligible for the National Register of Historic Places under Criterion A. The bridge's association with transportation is substantial, as it once supported traffic to a township school, a mill, the Michigan Road, and the important trade center of Osgood, Indiana. The Straber Ford Bridge is also eligible for listing under Criterion C as a representative example of stone arch bridge construction from the turn of the 20<sup>th</sup> century in Indiana. It embodies masonry design and construction methodology indicative of the time. The period of significance is 1908 to 1958.

**Indiana Roads**

Following statehood in 1816 and the relocation of the state capitol from Corydon to Indianapolis in 1821, it became evident that Indiana needed a system of roads connecting the interior.<sup>2</sup> In 1821, state legislation defined a program for funding and construction of a series of state roads to meet this need.<sup>3</sup> Among these, an old Indian trail leading to Indianapolis and passing through Middletown, Indiana, was developed and became the Lawrenceburg State Road.<sup>4</sup> Several years later, the road became part of the more extensive Michigan Road.

Planning for the Michigan Road began in 1828, with a vision of connecting the Ohio River and the Great Lakes.<sup>5</sup> It was defined as three sections: 1) connecting Madison, Indiana, on the Ohio River to the centrally-located Indianapolis, 2) joining Indianapolis to Logansport in the north central area of the state, and 3) linking Logansport to Michigan City on Lake Michigan. Begun in 1830, construction continued into the 1840's. Upon completion, the road was over 260 miles in length.<sup>6</sup>

After its completion, the Michigan Road proved regionally significant as a means of transportation. Acting as a conduit for settlement, emigrants entered from the southern entryway, traveled north along the road, and disseminated east and west.<sup>7</sup> Once settlement had occurred, the Michigan Road then proved an important avenue for moving grain, cattle and other wares. It was used by interior settlers to move agricultural products and merchandise to northern or southern

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<sup>2</sup> Marsha Poucher Beal, *History of Road Development Knox County, Indiana, from 1840 to 1860*, dissertation (Ball State University: 1994), 8.

<sup>3</sup> *Ibid.*, 10-12.

<sup>4</sup> *Ibid.*, 12.

<sup>5</sup> *Ibid.*, 17.

<sup>6</sup> *Ibid.*, 18.

<sup>7</sup> Geneal Prather, "The Building of the Michigan Road" (master's Thesis, Indiana University, 1941), 133.

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Straber Ford Bridge, Ripley County, Indiana

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waterways.<sup>8</sup> St. Joseph County local historian, Judge Timothy E. Howard, remarked that the road was “one of the most important public improvements known in the history of Indiana.”<sup>9</sup>

In general prior to 1850, most roads throughout the state were simple dirt roads. The construction and maintenance of these roads was left largely to locals within immediate proximity to the roads. It had been assumed by local governments, that since the local farmers’ and mill operators’ livelihood depended upon the quality of the adjacent roads, they would be more apt to ensure their proper upkeep.<sup>10</sup> However, the quality of local roads varied greatly, even with local officials requiring “a certain number of days of labor or a cash equivalent on road and bridge upkeep each year.”<sup>11</sup>

Following the pattern of other states, the Indiana General Assembly of 1849 passed legislation leading to a time of rapid expansion for Indiana roads. The legislation permitted road construction through private undertakings, thus removing some of the burden from the public sphere.<sup>12</sup> Consequently, private companies charged a toll for travel over their roads in order to offset maintenance costs.<sup>13</sup>

Early examples of privately maintained roads tended to be planked. The planking offered some consistency versus the often rutted earthen roads, but it was likely susceptible to freeze-thaw cycles creating constant upkeep. As a result, planking was rather short lived and supplanted by other less costly and more consistent paving methods.

Beginning in the 1860’s, gravel, then macadam, came to dominate road construction.<sup>14</sup> Early occurrences undoubtedly were restricted to toll roads or the streets in the more prosperous urban towns and cities.<sup>15</sup> As time went on, however, these paving systems would extend to even remote rural communities.

Paralleling rapid expansion of Indiana roads in the 1850’s, two acts of legislation were passed in 1852 framing the context for bridge construction and repair. The first occurred in March, stating that “a company could build a structure wherever and charge whatever

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<sup>8</sup> Ron Hamilton, “Michigan Road Was Important Link,” *Over the Years: A Collection of Historical Articles Volume I* (Shelbyville, IN: R.K. Hamilton, 2004), 7.

<sup>9</sup> Prather, 133.

<sup>10</sup> Wayne E. Fuller, *RFD: The Changing Face of Rural America* (Bloomington, IN: Indiana University Press, 1964), 177-179.

<sup>11</sup> James Cooper, *Iron Monuments to Distant Prosperity: Indiana’s Metal Bridges, 1870-1930* (Greencastle, IN: DePauw University, 1987), 1.

<sup>12</sup> *History of Shelby County, Indiana* (1887: repr., Knightstown, IN: Eastern Indiana Publishing Co., 1968), 285.

<sup>13</sup> Beal, 204-208.

<sup>14</sup> *Ibid.*, 50.

<sup>15</sup> *Ibid.*, 276.



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Straber Ford Bridge, Ripley County, Indiana

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toll...county commissioners approved.”<sup>16</sup> Following in May of 1852, a second act of legislation allowed township trustees provisions for constructing and repairing bridges. The trustees then were permitted to use treasury funds and even impose taxation as a means to bridge construction and maintenance. Other than an amendment in 1855, which shifted power from the township trustees to the county commissioners, the 1852 legislation guided bridge construction for the next half-century.<sup>17</sup>

However, it was not until the late 1870s similar legislation was adopted for road development. Until that time, the construction of roads resulted largely from requests made to the township trustees by local property owners. Recognizing certain inherent limitations within this provision, the Indiana General Assembly sought to streamline the process. As a result, they passed legislation which stated that the responsibility to build and maintain roads could be left to county commissioners.<sup>18</sup>

Coupled with the earlier legislation, several movements greatly impacted both road and bridge construction in Indiana and culminated in the closing days of the nineteenth century. They effectively reversed a trend which had begun in the mid 1850s, whereby road improvements had a diminishing role in the wake of rapid railroad expansion in Indiana.

The first of these resulted from steadily increasing agricultural and industrial production throughout the last half of the century and the recognition that well-maintained roads and bridges were vital to moving goods. This was demonstrated as early as 1876 when scientific experiments were conducted to determine the extra force required on various types of roads, ranging from earthen to stone to macadam. Subsequently, the information was promoted as a means to improve roads, thus facilitating the trafficking of goods. Jeremiah Jenks, a political scientist in support of road improvements, wrote in 1889, “...the character of a nation’s roads is a good test of its civilization.”<sup>19</sup>

During the early 1890’s, another important step for road development resulted from the “good road movement.” Surprisingly, a bicycling organization called the American League of Wheelman was instrumental, along with railroad officials, in lobbying for increased federal legislation designated toward better roads.<sup>20</sup> Though their combined efforts were somewhat limited, in 1896, an unrelated program forever changed road history in the United States.

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<sup>16</sup> Cooper, *Iron Monuments to Distant Prosperity: Indiana’s Metal Bridges, 1870-1930*, 2.

<sup>17</sup> Ibid.

<sup>18</sup> Laura Thayer, “Collin’s Ford Bridge,” National Register of Historic Places Registration Form, 23 October 1994, 3 (accessed at Ripley County Historical Society, Versailles, Indiana).

<sup>19</sup> Jeremiah W. Jenks, “Road Legislation of the American State,” *Publications of the American Economic Association* Vol. 4, No.3 (May, 1889), <http://www.jstor.org> (accessed 31 March 2008).

<sup>20</sup> Francis Parker, e-mail message to author, March 31, 2008; Fuller, 182.

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Straber Ford Bridge, Ripley County, Indiana

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After 1896, as the result of the federally created rural free delivery (RFD) program, road construction was never the same, not just in the Indiana, but across the entire United States. Prior to the RFD program anyone living in the rural community and wishing to receive their mail had to visit the local post office which may have been located miles away. Moreover, it may require arduous travel over poorly maintained dirt roads. Therefore, it was not uncommon for some to delay the trek depending upon weather and other unfavorable circumstances.<sup>21</sup>

Consequently, between the fall of 1896 and the spring of 1897, 82 pioneer routes were selected in 28 states and the Arizona territory.<sup>22</sup> Early routes were at least twenty-five miles long and serviced at least 100 families.<sup>23</sup> Popularity for the program rapidly grew amongst farmers, and other test routes quickly followed. One example was described in 1897 by the *New York Times*, which highlighted test routes from four post offices in Delaware County, Indiana.<sup>24</sup> Later, tests were conducted that designated county-wide delivery. By the early months of 1903, Indiana had 14 counties with complete rural mail service.<sup>25</sup> It was later written, "...that RFD was the best thing the government had ever done for the farmers."<sup>26</sup>

In 1899, looking to expand the program, the Post Office Department stipulated that unless a route was passable year round, it would not be considered for rural mail delivery.<sup>27</sup> As a result, "farmers were out in force...building new bridges and culverts in order to secure new routes and maintain old ones."<sup>28</sup> So, by 1908, the program was linked to an estimated \$72,000,000.00 of improvements to roads, culverts, and bridges nationwide through local, state, and federal endeavors.<sup>29</sup>

### **Indiana Stone Arch Bridges**

Stone arch bridge construction has never dominated in Indiana. Instead, that distinction is shared between wood, steel and concrete. Wood construction largely occurred early in the 19<sup>th</sup> century.<sup>30</sup> This was then followed by the rise of iron and then steel truss systems in the late

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<sup>21</sup> Fuller, 67-68.

<sup>22</sup> Ibid., 37.

<sup>23</sup> Ibid., 44.

<sup>24</sup> "Rural Free Delivery: A Post Office Experiment to be Tried in Indiana," *The New York Times*, 6 November 1897, <http://www.nytimes.com/> (accessed 31 March 2008).

<sup>25</sup> Fuller, 69-71.

<sup>26</sup> Ibid., 17.

<sup>27</sup> Ibid., 182.

<sup>28</sup> Ibid., 71.

<sup>29</sup> Ibid., 184.

<sup>30</sup> Cooper, *Iron Monuments to Distant Prosperity: Indiana's Metal Bridges, 1870-1930*, 1. Some timber bridge builders were active into the early 1900s.

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Straber Ford Bridge, Ripley County, Indiana

stages of the 19<sup>th</sup> century which carried well into the 20<sup>th</sup> century. Ultimately, they all gave way to the use of concrete, beginning in the early 20<sup>th</sup> century.<sup>31</sup>

Nonetheless, stone arch bridges were used locally in several areas of Indiana throughout the 19<sup>th</sup> and early 20<sup>th</sup> centuries. Dating back to the 1820's and 1830's, they were seen along such major highways as the National Road.<sup>32</sup> Here, they were likely used "to carry only...loads represented by horse drawn wagons and pedestrians."<sup>33</sup> In the 1870's, their role shifted when their true prowess was recognized as a means to support the newer, heavier trains associated with railroad expansion. While in a narrow thirty year window, between 1885 and 1915, they were effectively employed along roads mostly in counties where limestone was easily accessible.<sup>34</sup> However, by the mid 20<sup>th</sup> century, concrete bridge construction was so dominant that stone arch bridge construction was increasingly limited to ornamental structures in a park setting.<sup>35</sup>

Today, approximately 100 stone arch bridges have been identified across the state. Most of these occur in southeastern Indiana where the Blue or Laurel limestone formations are easily accessible. For example, Decatur and Ripley Counties respectively have forty-two and thirteen stone arch bridges. And, of these, even fewer have four or more arches, with Decatur having five and Ripley only two.<sup>36</sup> Their survival today is a testament to the craftsmen who "buildded [sic] better than they knew."<sup>37</sup> This is ever apparent with what bridge historian James Cooper terms the "neglect to destruction" approach often with only "modest maintenance and repair" following World War II.<sup>38</sup> Regardless, in some instances the employed techniques of the masons have endured.

Indiana stone bridge builders used the same principles and techniques developed and mastered by the Romans two millenia ago.<sup>39</sup> Once the site was chosen, local craftsman tried to place the substructure of the bridge upon bedrock. If, however, this was not possible, a system of pilings or wooden rafts was used. This method was followed by the construction of timber falsework to support the overbearing load before the arch system was fully in place and able to support its own load.

Once completed, the arch system transfers the vertical force of the deck laterally from the crown through the haunch and ultimately distributes it to the piers or abutments. Indiana bridge historian James Cooper points out, "You always need the line of pressure to go through the

<sup>31</sup> Thayer, 2.

<sup>32</sup> Ibid., 1.

<sup>33</sup> Archibald Black, *The Story of Bridges* (New York: McGraw-Hill Book Company, Inc., 1936), 52.

<sup>34</sup> James Cooper, e-mail message to author, 2 April 2008.

<sup>35</sup> Thayer, 2.

<sup>36</sup> James Cooper, e-mail message to author, 24 March 24 2008.

<sup>37</sup> Black, 54.

<sup>38</sup> James Cooper, e-mail message to author, 2 April 2008.

<sup>39</sup> Thayer, 1.

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Straber Ford Bridge, Ripley County, Indiana

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center portion of the ring stones.”<sup>40</sup> Thus, this allows for maximum dispersion of compression forces. Similarly, Archibald Black wrote:

For stone arch construction requires sufficient depth and curvature to provide a “wedging” effect when all of the arch stones are in place. Indeed, if the arch stones are carefully fitted, a well designed stone arch would support itself and carry its load without the necessity of cement to fasten the stones together.<sup>41</sup>

Adding to this, James Cooper notes that construction is “easiest to guarantee and manage in the semicircle (form).”<sup>42</sup> He goes on to suggest that although the local stone masons were adept at their trade, it was more empirically based rather than scientific. He also proposes, “that segmental and elliptical rings come later than semi-circular ones - that there are special design/construction issues here, especially for the artisanal masons ubiquitous before the age of professionalization.”<sup>43</sup> In support, he adds, “Segmental and elliptical rings require more figuring and stronger substructures, given the direction of thrust at the springing.”<sup>44</sup> As a result, it is understandable for the greater occurrence of the semicircular design.

Despite their endurance, some stone arch bridges possess an innate weakness only later realized. Stemming from a cost saving measure, whereby, an orientation perpendicular to the stream required fewer materials, it is not uncommon to encounter a curve leading to or a T-intersection terminating the approach of a bridge. Seemingly, this was of little concern when horse and buggy were commonplace. However, as time went on and the automobile came to dominate, many of the bridges were lost over the years, not only to neglect, but because contemporary standards called for wider decks and safer approaches.<sup>45</sup>

### **Straber Ford Stone Arch Bridge**

The Straber Ford Bridge was built in 1908 four miles west-northwest of Osgood, Indiana in Center Township, Ripley County. Lying in a rural setting surrounded by a scattering of neighboring farms, the bridge served to connect important adjacent properties: the Straber School and a local mill,<sup>46</sup> with

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<sup>40</sup> James Cooper, e-mail message to author, 2 April 2008.

<sup>41</sup> Black, 57.

<sup>42</sup> James Cooper, e-mail message to author, 22 March 2008.

<sup>43</sup> James Cooper, e-mail message to author, 21 March 2008.

<sup>44</sup> Ibid.

<sup>45</sup> James Cooper, e-mail message to author, 2 April 2008.

<sup>46</sup> *An Atlas of Ripley County, Indiana* (Philadelphia, D.J. Lake & Co., 1883), 25.

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Straber Ford Bridge, Ripley County, Indiana

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the more regionally-significant Michigan Road and town of Osgood. The bridge was the result of a county commissioner project but little is known concerning the specific details of the project.<sup>47</sup>

Osgood, the largest town in Center Township, was platted in 1852. It quickly grew as result of its strategic location at the intersection of the Ohio & Mississippi Railroads (later incorporated into the Baltimore & Ohio Railroad) and a plank road connecting the county seat of Versailles (the oldest town in the county) and the county's second oldest town, Napoleon.<sup>48</sup> Additionally, Indiana's Michigan Road, an important north-south thoroughfare was located approximately two and one-half miles west of Osgood and one and one-quarter miles east of the Straber Ford Bridge.<sup>49</sup> Together, these avenues played a vital role in Osgood's growth.

By far, the most important industry in Osgood resulted from several nearby limestone deposits. The limestone in this area was highly praised and "especially good for its curbing and building purposes."<sup>50</sup> In 1905, there were three local quarries – the Cox Quarry, Wagner Quarry, later known as the Row Quarry, and the Ashman Quarry. As an indication of how important the industry was to the area, the Ripley County Construction Company operated until 1988 before finally closing its doors and bringing an end to limestone quarrying in the area.<sup>51</sup>

Though no direct evidence was found linking the stone used for the Straber Ford Bridge to one of these quarries, it seems likely that one or more of the three operating quarries provided the stone. However, it is known that as early as April 15, 1908, a letting was posted in the *Ripley Journal* for "construction of bridge consisting of four stone arches over Otter Creek in Center Township at the ford near the Straber School house."<sup>52</sup> Bids were received on May 5, 1908 with the contract awarded to DeGolyer and Stegner for the sum of \$2595. As per the contract, the construction was to be completed before December 1, 1908.<sup>53</sup>

Newspapers and county records address the two individuals only by their last names, so conclusive evidence of their identities is difficult. Nonetheless, a brief history of the DeGolyer family in *Ripley County History* states, "Carl DeGolyer (Oct. 16, 1883-1956), was a farmer, blacksmith, and

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<sup>47</sup> Despite a seemingly exhaustive search of primary and secondary sources, the author was unable to find further documentation concerning the Straber Ford Bridge construction. Depositories include: Ripley County Courthouse, Ripley County Courthouse Annex, Ripley County Library, and the Ripley County Historical Society.

<sup>48</sup> The People of Ripley County, *Ripley County History 1818-1988, Ripley County, Indiana* (Osgood, IN: Ripley County History Book Committee, 1989), 40.

<sup>49</sup> U.S. Geological Survey, *Osgood quadrangle, Indiana* [map], 1:24,000, 7.5 Minute Series, Washington D.C.: USGS, 1993.

<sup>50</sup> The People of Ripley County, 46.

<sup>51</sup> Ibid.

<sup>52</sup> "Notice," *Ripley Journal*, April 15, 1908, 6.

<sup>53</sup> Ripley County *Commissioner's Record* 14, 1907- 1911, Ripley County Courthouse Annex, Versailles, Indiana,

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stonemason” and resided in Holton, Indiana,<sup>54</sup> which is in neighboring Otter Creek Township. Likewise, the 1910 census records from Otter Creek, Ripley County, record Carl DeGolyer as a stone mason.<sup>55</sup> However, other county records list payments to an Omer DeGolyer,<sup>56</sup> who is the eldest son of Carl DeGolyer.<sup>57</sup> Working together or independently, the evidence suggests that this family is responsible for at least part of the work at the bridge.

With respect to the Stegner name, the records become less clear. The *Ripley County History* does list the Stegner family; however, they are referred to as farmers with no mention of stone work. However, the members of both families resided in the same town and attended the same church – the Holton United Methodist Church.<sup>58</sup> Beyond that, it is only speculation as to their connection.

Constructed in 1908, the bridge was a four arch, limestone design. It stood within sight of the Straber School to the southwest and a “S.S. Mill” (possibly a reference to a Straber Saw Mill, since the family was listed as farmers and carpenters and owned the property)<sup>59</sup> to the northwest.<sup>60</sup>

Southern Indiana was widely known for its virgin hardwood forests during the 1800’s. The state had thousands of mills operating and processing the prized oak, tulip, maple black walnut, beech, hickory, and red gum trees.<sup>61</sup> So much so, “in 1899, Indiana led the nation in lumber production.”<sup>62</sup> Therefore, a successful mill likely demanded a suitable avenue for transportation to and from the site, especially when combined with a nearby school.

Straber School was one of eight, early one-room school houses throughout Center Township. As many of the others, it was frame construction – possibly hinting to the proximity to the mill. The records also suggest that its local importance was elevated following the passage of Indiana compulsory school attendance laws in 1897 with a great increase in attendance.<sup>63</sup> However, in 1910, just two years after the bridge was completed, classes were forced to relocate to the nearby Taylor School because the Straber was lost in a fire.<sup>64</sup>

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<sup>54</sup> The People of Ripley County, 201.

<sup>55</sup> “Carl DeGolyer,” Ancestry.com, <http://www.ancestry.com/> (accessed February 27, 2008).

<sup>56</sup> Ripley County *Commissioner’s Record* 1908, Ripley County Courthouse Annex, Versailles, Indiana, 306; Ripley County *Commissioner’s Record* 1912, Ripley County Courthouse Annex, Versailles, Indiana, 356.

<sup>57</sup> The People of Ripley County, 201.

<sup>58</sup> The People of Ripley County, 124.

<sup>59</sup> The People of Ripley County, 350. It is possible that “S.S. Mill” means a “steam saw mill.”

<sup>60</sup> *An Atlas of Ripley County, Indiana* (Philadelphia, D.J. Lake & Co., 1883), 25.

<sup>61</sup> Hoosier National Forest, “History and Heritage of the Hoosier National Forest,” <http://www.fs.fed.us/r9/hoosier/docs/history/history.htm> (accessed 19 April 2008).

<sup>62</sup> Indiana Historical Society, “Carter-Lee Lumber Company,” [http://www.indianahistory.org/hbr/business\\_pdf/carter\\_lee.pdf](http://www.indianahistory.org/hbr/business_pdf/carter_lee.pdf) (accessed April 19, 2008).

<sup>63</sup> The People of Ripley County, 40.

<sup>64</sup> The People of Ripley County, 40-41.

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Even with the loss of the school, the importance of the bridge was undiminished given its proximity to both the Michigan Road and the town of Osgood; both provided access to more regional destinations – the Michigan Road to northern and southern Indiana and Osgood with the Baltimore and Ohio Railroad giving access to the eastern Cincinnati and the western East St. Louis.<sup>65</sup>

Continued importance of the Straber Ford Bridge is illustrated on a 1909 map of Ripley County. The map was produced by the United States Post Office Department and depicts the RFD routes in the county. Although it would be pure speculation as to whether the bridge was built for the route itself, it does demonstrate the bridges' continued importance along a RFD route originating in Osgood.<sup>66</sup>

In the 1920s, the newly formed Indiana State Highway Commission designated the road between Napoleon and Osgood as S.R. 29. This route overlaid the Michigan Road north of Napoleon, to Greensburg; to the south it overlapped the previously mentioned Napoleon-Versailles plank road's path. Later, federal highway planners designated much of S.R. 29 as U.S. 421. Straber Ford Bridge continued to feed truck and auto traffic from rural northwest Ripley County to this important route.

Still in use today, the bridge stands as a testament to its engineering and craftsmanship. It has survived in good condition and is one of thirteen stone arch bridges remaining in Ripley County. Further, it is one of only two bridges that have four or more arches.<sup>67</sup> The one lane bridge lies in the "middle of [a] reverse curve"<sup>68</sup> creating, by today's standards, an unsafe combination with a narrow deck and precarious entry/exit. Though these conditions were likely not an issue in the early years, there is evidence of more recent damage to portions of the northeast and northwest corners. Within the past five years, it has undergone concrete repairs stabilizing the effects of scour to the pier nosing and some repointing of the mortar joints.<sup>69</sup>

The Straber Ford Bridge is significant for its association with transportation development in Ripley County, Indiana as an important contributor to local traffic in the county--serving a township school, a mill, the Michigan Road, and the B&O Railroad in Osgood, Indiana. Additionally, the bridge is an exceptional and increasingly rare example of stone arch bridge construction dating from the early 20<sup>th</sup> century in Indiana.

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<sup>65</sup> Ohio Historical Society, "Ohio and Mississippi Railroad," Ohio Historical Society, <http://www.ohiohistorycentral.org/entry.php?rec=779> (accessed April 18, 2008).

<sup>66</sup> U.S. Post Office, *Map of Decatur County Showing Rural Delivery Service*, np, Washington, D.C., 1909 (accessed Indiana State Library, Indianapolis, IN).

<sup>67</sup> Cooper, e-mail message to author, 24 March 2008.

<sup>68</sup> "Structure Inventory and Appraisal Report, Ripley County, Bridge #73," County Commissioner's contracted Howard J. Barth & Associates to conduct survey, 2007 (accessed at Ripley County Highway Garage).

<sup>69</sup> Owen Heaton – Highway Superintendent, personal correspondence with author, April 11, 2008.

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**VERBAL BOUNDARY DESCRIPTION**

The boundary includes Straber Ford Bridge, its superstructure, abutments, wing walls, deck, and a line 20' away from but parallel to a line connecting the ends of the wing walls on Ripley County Road 500 North on the southeast and northwest sides. The boundary on the long sides of the bridge are defined as lines parallel to but 10' away from the northeast and southwest sides of the bridge.

**BOUNDARY JUSTIFICATION**

The boundary includes the significant resource and its immediate environment.

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The following information is the same for photographs 1 – 14:

1. Straber Ford Bridge
2. Ripley County, Indiana
3. Shawn Niemi
4. 4 September 2008
5. Division of Historic Preservation and Archaeology (DHPA), 402 West Washington Street, Room W-274, Indianapolis, Indiana 46204

Other information for individual photographs:

Photograph 1

6. View looking northwest of southeast approach.
7. 1 of 14

Photograph 2

6. View looking east of northeast elevation.
7. 2 of 14

Photograph 3

6. View looking southeast of northwest approach.
7. 3 of 14

Photograph 4

6. View looking northeast of southwest elevation.
7. 4 of 14

Photograph 5

6. View looking east of southeast elevation.
7. 5 of 14

Photograph 6

6. View looking north of southeast elevation.
7. 6 of 14

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Photograph 7

- 6. View looking north of ring arch, spandrel and parapet wall on downstream side.
- 7. 7 of 14

Photograph 8

- 6. View looking northeast of partial inscription in northwest ring arch.
- 7. 8 of 14

Photograph 9

- 6. View looking southeast of the coping offset.
- 7. 9 of 14

Photograph 10

- 6. View looking north of the shadow line created from the coping offset on the downstream side.
- 7. 10 of 14

Photograph 11

- 6. View looking southwest of the concrete reinforcing on the upstream side of the central pier.
- 7. 11 of 14

Photograph 12

- 6. View looking southwest of the concrete reinforcing on the upstream side of the southeast pier.
- 7. 12 of 14

Photograph 13

- 6. View looking west of the upstream elevation and concrete reinforcing.
- 7. 13 of 14

Photograph 14

- 6. View looking west of damage to the northwest parapet wall on the upstream side.
- 7. 14 of 14

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Sketch map

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