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OMB No. 10024-0018

United States Department of the Interior
National Park Service

MAY 13 1994

INTERAGENCY RESOURCES DIVISION
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 Eugene Covered Bridge

other names/site number County Bridge No. 75

2. Location

street & number Former County Road 00 over Big Vermillion River N/A not for publication

city or town Eugene N/A vicinity

state Indiana code IN county Vermillion code 165 zip code 47928

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.)

Patrick R. Kelly

4-25-94

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

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): _____

Edson H. Beall

Signature of the Keeper

Entered in the _____ Date of Action
National Register

6-10-94

Eugene Covered Bridge
Name of Property

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Vermillion Co., IN
County and State

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
OTHER: scenic attraction

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: Burr Arch Truss

Materials
(Enter categories from instructions)

foundation STONE: sandstone
walls WOOD: weatherboard
roof METAL: steel
other CONCRETE

Narrative Description

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

Eugene Covered Bridge
Name of Property

Vermillion Co., 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.
- 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)

TRANSPORTATION

ENGINEERING

Period of Significance

1873-1944

Significant Dates

1873

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Daniels, Joseph J.

Primary location of additional data:

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

Name of repository: Vermillion County Auditor's Office

Eugene Covered Bridge
Name of Property

Vermillion Co., 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	4	5	9	5	9	0	4	4	2	4	2	2	0
Zone	Easting				Northing									

3

Zone	Easting				Northing									

2

Zone	Easting				Northing									

4

Zone	Easting				Northing									

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 Arthur Bonwell, Member

organization Vermillion County Improvement Association date Feb. 10, 1994

street & number 175 W. Redwood telephone (317) 665-3753

city or town Dana state IN zip code 47847

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 Vermillion County Commissioners

street & number _____ telephone _____

city or town _____ state _____ zip code _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including 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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National Park Service**

**National Register of Historic Places
Continuation Sheet**

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The Eugene Covered Bridge was built in 1873, replacing an existing bridge over the Big Vermillion River for County Road 00 at the north edge of the small town of Eugene. It is one of four remaining covered bridges in Vermillion County. It is County Bridge No. 75, and it remained in service 101 years, until a parallel concrete span was installed in 1974.

As with all four existing covered bridges in Vermillion County, Eugene Bridge is a Burr Arch timber structure built by Joseph J. Daniels. It is 180 feet long plus 15 feet overhang at each end to protect the wood floor from rain, for "length of roof and siding of two hundred ten feet". It was specified: "The width of roadway in clear of posts of the bridge must be 16 feet and the height of Truss frames must be Eighteen feet." Actually, there is 16' between the guard rails at the height of a wagon axle, but there is only 14'3" between the arches at floor level.

The vertical posts and the diagonals between them are spaced evenly along the truss length, making 16 panels each 11'3 1/2" wide. The Burr Arch ring segments are 6" X 16", each portion is two panels (20') long, "wrought to a true segment of a circle." One arch was installed on the face side of the truss, and one on the back side, and then the segments were fastened through the vertical posts with 1" diameter iron bolts. Half of the arch segments were spliced at each post, and the inner splices were alternated from the outer splices. The siding was of 1" X 12" pine. Wood shingles were used for roofing in 1873, but the present roof is sheet metal. Daniels specified that "All timber in the bridge except the flooring will be of Southern Pine or Yellow Pine from the north. The flooring must be of sound white oak." The lower chord members are 9" X 12", four panels (40') long. The posts are 9" X 12", 19' long. The main diagonal braces are 6" X 6".

The bottom chords, as the main tension members, were spliced in a most careful manner. They were notched as to fit together in contact, and then a heavy steel strap was bolted across the splice.

The arch rings are bolted to the 9" dimension of the vertical posts, and are thus 9" apart along most of the bridge's length. As

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Eugene Covered Bridge
Vermillion County, Indiana

the arches near the ends of the bridge, they splay out and are 30" apart where they bear against the stone abutments.

The horizontal braces at the top and bottom of the trusses sit on iron shoes in notches in the vertical posts. They are held in place by horizontal 1" diameter iron tie rods spanning the bridge's width. The end pieces of the arch rings are tapered up to 8" X 16" where they rest upon the stone work on iron shoes, to prevent moisture from deteriorating the wood.

The siding is of vertical board and batten type. On the Eugene Bridge, there is a horizontal open window on the east side only, with a wooden awning. The walls are open on top, under the eaves, by 1 1/2', to provide light (according to Daniels), and to lessen the wind loading (some believe). The gable ends are flat and undecorated, with only chamfered corners. They were to be "painted white and lettered as the Board of Commissioners may order."

In building the Eugene Covered Bridge, Daniels used the existing abutments. He specified the the bridge was to be "anchored to its abutments near the Chord by a stay rod at each point of 1 1/2 inch iron attached to an anchor iron of two inch square and three feet long built into the wall not less than seven feet below the bridge seat" to diminish the possibility of the bridge being swept away by high water. As the bridge was to be built upon existing foundations, it is not clear how this feature was installed by Daniels.

Since construction in 1873, the Eugene Bridge has needed no major repairs nor modifications. The oak decking has been renewed occasionally. The bridge is in good shape generally and speaks well of Daniels' work. The siding needs attention in several locations. Graffiti exists inside, but there has been no significant vandalism. In the 1930s a round concrete structure was placed around the southeast corner abutment (only) to minimize scouring by the river at high water. This shows prominently in the enclosed photos. The Burr Arch truss, siding and other historic features of the Eugene Covered Bridge remain basically unaltered.

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**Eugene Covered Bridge
Vermillion County, Indiana**

Statement of Significance-Section 8

Eugene Covered Bridge meets National Register Criteria A and C. Under Criterion C, the bridge has statewide importance. It is one of 57 remaining Burr Arch truss timber spans left in Indiana. At 180' in length, only one other Burr Arch bridge in the state is longer. It is one of four remaining covered bridges left in Vermillion County, all built by master carpenter J.J. Daniels. The Eugene Bridge has local significance under Criterion A. From 1873 until 1974, the bridge served a main road in agricultural northern Vermillion County.

The Eugene Covered Bridge was built in 1873 to replace an unknown type of bridge at that location. The site was an important crossing, as three county roads merge nearby, then cross the Big Vermillion River. The bridge connected the largest town in Eugene Township, Eugene, to agricultural areas to the north. Later, the same crossing served as access to Cayuga, an adjoining town south of Eugene. Cayuga developed later than Eugene and, enjoying rail access, became a commercial center in its own right.

The Eugene Bridge was commissioned to be built on the foundations of the previous structure. At that time in Indiana, wooden bridges were considered appropriate to span 100'-plus distances, as lumber was still plentiful, the technology was current, and skilled builders were available.

J.J. Daniels, the successful bidder on this bridge, was one of the best known builders in Indiana. He resided in Rockville, in adjacent Parke County. Wayne Weber, architect and author of Covered Bridges in Indiana, suggests that Daniels was sufficiently free in contract specifications to build covered bridges expressing his personal architectural style. Daniels preferred the conservative Burr Arch truss, which introduces redundancy by having two independent systems-the kingpost truss and the added strength of the arch. Daniels' rivals, the Kennedy family and J.A. Britton, also used the Burr Arch, but Daniels experimented with the design by adding iron reinforcing. The extensive iron fittings

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**Eugene Covered Bridge
Vermillion County, Indiana**

of the Eugene Bridge shows Daniels ability to adapt the Burr Arch truss.

Weber notes that Theodore Burr of Connecticut was issued patents for bridge trusses in 1806 and 1817. Burr was a noted bridge builder in the East even before the patents. The Burr truss became more popular in Pennsylvania and Indiana than in any other states, and more of that bridge type remain in Indiana than any other kind. All but a few of the spans Daniels built used the Burr Arch truss.

At the heart of the Burr Arch truss is the kingpost that sits at the center of the bridge in each side truss. The use of diagonals forming triangles transfers stresses from one member to the next, and out to the abutments. Upper chords work in compression, while lower chords receive tension. Verticals are in tension and diagonals are in compression. The arch rings add balance and provide support in compression.

The bids for repairing or replacing the bridge at Eugene "on abutments now standing" were:

J.J. Daniels-new bridge-	\$4300
J.J. Daniels-repair old bridge-	3800
J.B. Tussellman-new bridge	5300
J.B. Tussellman-repair old bridge-	3390
Smith Bridge Co.-new bridge-	4608

Daniels' method of construction was to install the stone abutments, with appropriate sloped surfaces or pockets to bear up at an angle against the arches, and then to build a temporary platform on wood poles in to the river bed between abutments. The truss structure of the bridge was erected upon this platform with block and tackle, and then pinned or bolted in place. This was installed with a slight arch. Daniels would then remove the platform and allow the truss to settle to a flat form and then install the Burr style arches to give added strength. It has been stated that four skilled carpenters, aided by one or two helpers, could erect such a bridge in three months after abutments were

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**Eugene Covered Bridge
Vermillion County, Indiana**

complete.

Per the specifications by Daniels, "The upper chord will be a Single Stick, 9 X 12 inches and will receive the Posts at the proper places in Mortices 4 X 12 inches and 6 inches deep. Said Cord must also be boxed three inches deep for each Post. The upper Chords will join each other square and be held in place by a two inch dowel 8 inches long of the same wood as themselves. All chords above and below must be four panels long except those at the end which vary to suit the others."

"The posts must be 9 X 12 inches and nineteen feet long-the upper will connect with the top Chord by means of tennon three inches thick and six inches long held in place by two dowel pins 1 1/2 inches wood below the (sic) will be notched into the chords by a gain on each side 1 1/2 inches deep, and be held in place by the lateral rods. They will be cut to receive the main braces as shown on the drawing. The main braces will be 9 X 9 inches and will be held in place in the steps of the posts by means of a spike of 1/2 by 7 inches. The floor beams and joice (sic) of the old Bridge will answer for the new Bridge." Lastly, "... (the roof) shall be covered with the best quality of pine shingles laid not over 5 inches to the weather, and the roof shall have a projection of two feet."

The Eugene Covered Bridge was bypassed in 1974 by a parallel concrete bridge. It remains open to pedestrian traffic and is admired locally for its scenic and historic significance. A nearby commercial establishment is called the "Covered Bridge Restaurant".

Section 9-Bibliography

Biographical and Historical Record of Vermillion County, Indiana.
Chicago: Lewis Publishing Co., 1888.

Gatewood, Arthur Jr. Indiana Covered Bridge Location Guide.
Fortville, IN: Indiana Covered Bridge Society, 1988.

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**Eugene Covered Bridge
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Gould, George E. Indiana Covered Bridges Thru the Years.
Indianapolis: Indiana Covered Bridge Society, 1977.

Harvey, Max. Covered Bridges of Parke, Putnam, Vermillion,
Fountain, Montgomery, and Vigo Counties, Indiana.
Wabash Valley Printing, 1964.

Ketcham, Bryan E. Covered Bridges on the Byways of Indiana.
Oxford, OH: Oxford Printing, 1949.

Vermillion County Commissioners' Record, 1873, pp. 402, 414-417.
Vermillion County Courthouse, Newport, IN

Weber, Wayne. Covered Bridges in Indiana. Midland, MI: Northwood
Institute, 1977.

Section 10-Geographical Data-Verbal Boundary Description

An area of Eugene Township, Vermillion County, Indiana, located at the included UTM point, including the right of way of the Eugene Covered Bridge, its superstructure, abutments, wing walls, including 15 feet of the approaches on the north and south banks of the Big Vermillion River.

Boundary Justification

The boundary includes the Burr Arch truss bridge and its stone abutments and wing walls.