

FINAL

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Richland-Plummer Creek Covered Bridge

other names/site number County Bridge #86

2. Location

street & number Baseline Road over Plummer Creek not for publication

city or town Bloomfield vicinity

state Indiana code IN county Greene code 055 zip code 47424

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.)

Paul L. Kohl 4-19-93
Signature of certifying official/Title Date

Indiana Department of Natural Resources
State of Federal agency and bureau

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

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:	Signature of the Keeper	Date of Action
<input type="checkbox"/> entered in the National Register. <input type="checkbox"/> See continuation sheet.	_____	_____
<input type="checkbox"/> determined eligible for the National Register <input type="checkbox"/> See continuation sheet.	_____	_____
<input type="checkbox"/> determined not eligible for the National Register.	_____	_____
<input type="checkbox"/> removed from the National Register.	_____	_____
<input type="checkbox"/> other, (explain): _____ _____ _____	_____	_____

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.)

na

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

Italianate

Materials

(Enter categories from instructions)

foundation STONE: sandstone

walls WOOD: weatherboard

roof METAL: tin

other CONCRETE

Narrative Description

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

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

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

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Areas of Significance

(Enter categories from instructions)

ENGINEERING

TRANSPORTATION

Period of Significance

1883-1945

Significant Dates

1883

Significant Person

(Complete if Criterion B is marked above)

na

Cultural Affiliation

na

Architect/Builder

Kennedy, Archibald McMichael; Kennedy, Emmett Loren; and Kennedy, Charles Freeman (A.M. Kennedy and Sons)

Primary location of additional data:

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

Name of repository:

Indiana Covered Bridge Society

Richland-Plummer Creek Covered Bridge
Name of Property

Greene County, Indiana
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	5 0 5 3 8 0	4 3 1 5 7 8 0
	Zone	Easting	Northing
2			

3			
	Zone	Easting	Northing
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 James E. Roach, President

organization Greene County Landmarks Foundation date November 30, 1992

street & number Rt. 4, Box 216 telephone 812-825-9542

city or town Bloomfield state IN zip code 47424

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 Board of County Commissioners, Greene County, Indiana

street & number Greene County Courthouse telephone 812-384-8658

city or town Bloomfield state IN zip code 47424

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.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

The Richland-Plummer Creek Covered Bridge, built in 1883, also known as County Bridge #86, is located 2 1/2 miles south of Bloomfield in Greene County, Indiana. Although historically known as the Richland Bridge, the bridge actually crosses Plummer Creek; the name presented here is used to avoid confusion with another wooden span (since demolished) which crossed Richland Creek within several miles of the site. The bridge spans Plummer Creek in an east-west direction. The site is a scenic wooded area about 1/2 mile west of the point where Plummer Creek joins Richland Creek and about 1/2 mile south of the point where Plummer Creek joins the West Fork of the White River (refer to U.S.G.S. map).

The bridge is a Burr Arch truss structure having overall dimensions of 102' in length, 14' in width, and 17' in height (to the apex of the gable). The clear height in the portals from the road bed from the X-braces tying the top chords together is 14'8". The structure rests on native sandstone abutments and pole pilings (photo 4). The stone was quarried 1/2 mile west of the site. Exterior walls are clad in board-and-batten siding.

The deck consists of 3" oak planking which runs from portal to portal. These planks rest on 3" planks placed perpendicularly to the first layer. 4" by 4" sleepers support the planking. 8" by 14" joists and 6" by 6" X-braces span between the lower chords, the X-braces are notched into the joists and secured with wooden pegs (photo 6). Typical of many Burr Arch bridges, the Richland-Plummer Creek Covered Bridge has lower chords consisting of four 5" by 12" members joined by iron bolts with spacing blocks. The upper chords are similar, consisting of four 5" by 12" members joined by iron bolts with spacing blocks. Bracing of the upper chords is similar to that of the lower chords, however, the joists are 8" by 10". The X-braces are 6" by 6". All truss members appear to be of Michigan Pine, a typical species selection for a covered bridge of this era.

The bridge is built on a single arch span, employing the Burr Arch truss. The members of the outer arch rings are 7" by 12" and consist of five sections spliced together and held by iron bolts. The inner arch rings are 6" by 12" and are sectioned identical to the outer arch rings (photo 7). Both inner and outer arch rings rest independently on the stone abutments (photo 8). Linking the upper and lower chords is a lattice truss of vertical and diagonal members. Both vertical and diagonal timbers are sandwiched between both the inner and outer arch rings and members of the upper and

The first part of the document discusses the importance of maintaining accurate records. It emphasizes that proper documentation is essential for ensuring the integrity and reliability of the data collected. This section also touches upon the various methods used to collect and analyze the information, highlighting the need for consistency and precision throughout the process.

In the second section, the focus shifts to the challenges faced during the data collection phase. The document notes that environmental factors, such as weather conditions and equipment malfunctions, can significantly impact the quality of the data. It provides several strategies to mitigate these risks, including regular equipment checks and the implementation of backup procedures to prevent data loss.

The third part of the document addresses the issue of data analysis. It discusses the various statistical methods used to interpret the collected data, from basic descriptive statistics to more complex inferential techniques. The author stresses the importance of understanding the limitations of these methods and the need for careful interpretation of the results to avoid drawing incorrect conclusions.

Finally, the document concludes with a discussion on the future of data collection and analysis. It highlights emerging technologies, such as artificial intelligence and machine learning, which have the potential to revolutionize the way data is processed and analyzed. The author expresses optimism about the future of the field and encourages continued research and innovation to further advance the discipline.

The document also includes a detailed appendix containing a list of references and a glossary of key terms. The references cite a variety of academic sources, including books, journal articles, and technical reports, providing a solid foundation for the research presented. The glossary defines important concepts and terminology used throughout the text, ensuring that readers have a clear understanding of the subject matter.

Overall, this document provides a comprehensive overview of the data collection and analysis process. It covers the entire cycle, from the initial planning and data collection to the final analysis and interpretation of results. The author's clear and concise writing style makes the information accessible to a wide range of readers, from students to professionals in the field.

The document is well-organized and easy to navigate, with clear headings and subheadings that guide the reader through the different sections. The use of bullet points and numbered lists helps to break down complex information into more manageable pieces, making it easier to understand and apply the concepts discussed. The overall structure is logical and follows a natural progression of ideas, from the general to the specific.

In addition to the main text, the document includes several figures and tables that illustrate key points and provide visual representations of the data. These visual aids are clearly labeled and easy to interpret, helping to reinforce the information presented in the text. The use of color and different line styles makes the figures stand out and adds to the overall clarity of the document.

The document is a valuable resource for anyone interested in data collection and analysis. It provides a wealth of information and practical advice that can be applied to a wide range of projects and situations. The author's expertise and attention to detail are evident throughout the text, making it a reliable and authoritative source of information. I highly recommend this document to anyone looking to improve their data collection and analysis skills.

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section number 7 Page 2

Richland-Plummer Creek Covered Bridge
Greene County, Indiana

lower chords (photo 9). Verticals are 8" by 10", diagonals are 7" by 8". Diagonals slant towards the center of the truss with the king post receiving two diagonal posts slanting to either side. The bridge has 30 vertical posts and 24 diagonals in total.

The portals of the Richland-Plummer Creek Covered Bridge differ. The west portal (photo 10) is plain, with the gable end infilled by vertical siding. The right or south jamb is cantilevered, but the north or left jamb is flush. It is believed that the right jamb was altered by cutting away some siding to produce the cantilever as part of a 1967 rehabilitation. The east portal bears the hallmark of a Kennedy & Sons-built covered bridge, having a segmental-arched portal surmounted by a handsome Italianate raking entablature complete with paired heavy scroll brackets (photo 1). Most known Kennedy bridges had matching ornate portals; it is therefore believed that the arched opening and bracketed entablature of the west portal were removed as part of the 1967 work. Since the west approach includes a drastic southward turn, the portal alteration may have been undertaken to allow more clearance for vehicles.

Wood rafters form the gable roof of the bridge and support a layer of corrugated metal roofing. The original roofing was likely wood shingles.

Throughout its 109 years, the Richland-Plummer Creek Covered Bridge has required several repairs and one major rehabilitation. The bridge was closed in 1957, but through local contributions it was rehabilitated and reopened in 1967. Pilings have been added to support the ends of the span, and the roof has been replaced with corrugated metal. More recently, the bridge was closed by the County Commissioners on March 16, 1990 and remains so today.

Another rehabilitation is required to place the bridge back in service. A feasibility study by an Indiana engineering firm conducted in November 1992 indicated that the bridge could be repaired to accommodate vehicular traffic. Although somewhat deteriorated, the Richland-Plummer Creek Covered Bridge retains much integrity. In particular, its truss configuration and distinctive Italianate portal remain intact.

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section number 8 Page 3

Richland-Plummer Creek Covered Bridge
Greene County, Indiana

The Richland-Plummer Creek Covered Bridge meets National Register Criteria A and C. Under Criterion C, the bridge has statewide significance. A fine example of the work of master bridge builders A.M. Kennedy and Sons, it is one of only ten remaining examples of their work in Indiana. The bridge is also a fine example of a Burr Arch truss timber span. It is the only covered bridge still standing in Greene County. Under Criterion A, the bridge provided an locally important transportation link for southern Greene County, allowing access to the county seat of Bloomfield. In particular, during World War II and prior to the construction of U.S. 231 in 1949, the Bloomfield-Scotland Road was a valuable link to Crane Naval Ammunition Depot, located about 5 miles to the south, near Scotland, Indiana. Because of the importance of this road to the operation of Crane Naval Ammunition Depot, the period of significance for the Richland-Plummer Creek Covered Bridge meets Criterion Exception G.

The Burr Arch truss utilized in the Richland-Plummer Creek Covered Bridge was the most widely used timber truss type in Indiana. This truss type is named for Theodore Burr, who erected a bridge of this type over the Hudson River in Waterford, New York in 1803-4. Burr later patented his invention in 1817. Burr's design ultimately derives from a truss planned by 16th century Venetian architect Andrea Palladio, which combined the strength of the arch with the kingpost truss, all of timber. Palladio's invention was never tested until 1792, when Timothy Palmer erected a span over the Merrimac River in Massachusetts. Characteristic elements of the Burr Arch truss include paired arch rings which rest independently on the abutments and a kingpost system of verticals and diagonals sandwiched between the arches. Three Indiana bridge builders were known for their Burr Arch truss spans: J.J. Daniels (primarily worked in Parke County), the Brittons (also primarily Parke County), and A.M. Kennedy and Sons.

Archibald McMichael Kennedy moved to Indiana from North Carolina with his parents at age 7 in 1825. The family first settled in Fayette County but moved to Rush County in 1834. Archibald Kennedy began his career as a carpenter in 1841 in Fayette County, during this year he also married Henrietta Langston. In 1853, the Archibald Kennedy family moved to Wabash County. Kennedy began to build small bridges as a secondary business to his carpentry

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 8 Page 4

Richland-Plummer Creek Covered Bridge
Greene County, Indiana

trade. In 1857, the Kennedys returned to Fayette County, but seven years later, Archibald purchased 247 acres of prime farmland in Rush County and erected a farmstead and brick home. (A.M. Kennedy House, listed 2-2-83)

A.M. Kennedy received his first major bridge commission in 1870 for a covered span over the Whitewater River in Union County. In 1872, Archibald constructed a forty-two inch scale model of a Burr Arch truss bridge which became a useful sales tool. During presentations to county commissioners, he placed the span between chairs and then sat on the structure. As Mr. Kennedy weighed about 250 lbs., the demonstration convinced many board of county commissioners of the strength of a Kennedy bridge.

Two of his six children, Emmett Loren and Charles Freeman, were employed by Archibald. At the company's Rushville construction yard, where large members were pre-cut and shaped before hauling them to building sites, Emmett was the general manager. In 1883, Archibald turned the day to day operations of the firm over to his sons. Emmett's sons Karl and Charles continued the firm's tradition of covered bridge construction up to 1918, when the last Kennedy covered bridge was erected. A.M. Kennedy and Sons erected fifty-eight known bridges in Indiana, making them the most prolific covered bridge builders in the state. Only ten survive today, including the subject of this nomination, the Richland-Plummer Creek Covered Bridge in Greene County. All five of Greene County's covered bridges were built by A.M. Kennedy and Sons; Richland-Plummer Creek is the only span left. The Richland-Plummer Creek span was among the last bridges erected by Archibald before he turned most of the operation over to his sons in 1883.

Hallmarks of a Kennedy-built covered bridge include Burr Arch trusses and distinctive portals. Rarely, the Kennedys employed the Howe Truss configuration. Richly ornamental portals were a Kennedy trademark. Typically, portals featured an arched opening and low gable roof with a raking Italianate entablature complete with scroll brackets. Upper jambs often had applied cut-out scroll work. In spite of the unfortunate (apparent) removal of detail from the west portal, the Richland-Plummer Creek Covered Bridge has most of these characteristics and is a good example of the firm's engineering skill.

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section number 8 Page 5

Richland-Plummer Creek Covered Bridge
Greene County, Indiana

On June 9, 1883, a contract was let for the Richland-Plummer Creek Bridge to A.M. Kennedy and Sons, and the final payment was made by the county commissioners on October 1, 1883. The commissioners were Moses Crocket, John Miller, and R.T. McKee. John Miller was superintendent of construction.

The Richland-Plummer Creek Covered Bridge provided an important transportation link in Greene County. The Bloomfield-Scotland Road, which the bridge carries across Plummer Creek, connected farmers and residents of southern Greene County to the county seat of Bloomfield. With the designation of state routes in the early 1900s, the road became State Route 157. With the formation of Crane Naval Ammunition Depot (covering parts of Greene, Martin, and Lawrence Counties) in 1940, the Bloomfield-Scotland Road became a significant route for civilian employees and U.S. Navy personnel to and from the depot.

Federal involvement in the area actually began in 1935, when about 30,000 acres of land was secured for a conservation park as part of the Southern Indiana Demonstration Project. By 1939, the WPA had constructed shelters, a ranger's house, and a reservoir (Lake Greenwood). Just prior to the opening of the park, however, the Navy acquired the land through eminent domain for use as a munitions plant. Crane Naval Ammunition Depot was established as a secure inland site at which Navy personnel could manufacture and test munitions which were to be used by the U.S. Navy. During World War II, Crane became a major manufacture and test site for the Navy as well as a major employer in south central Indiana. Crane was the primary supplier for all east coast U.S. Navy operations.

At this time, Bloomfield-Scotland Road was the primary route from Bloomfield to Scotland and hence to Crane. A rail spur provided access for heavy shipments, but vehicular travel came across the Richland-Plummer Creek Covered Bridge. In 1949, the section of U.S. 231 between Bloomfield and Crane was completed, shifting traffic away from the old road.

In 1957, the Richland-Plummer Creek Covered Bridge was closed to traffic. J.L. Wilson and G.W. Hayes, both well-known bridge engineers of Greene County, donated time and funding to

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 8,9 Page 6

Richland-Plummer Creek Covered Bridge
Greene County, Indiana

rehabilitate the bridge in 1967. Dale Workman was the superintendent of construction. The bridge was closed once again in 1990, although it still receives many visitors each year. Greene County Landmarks Foundation has made the rehabilitation of the Richland-Plummer Creek Covered Bridge its primary goal; its listing on the National Register is felt to be imperative.

Section 9-Bibliography

Allen, Richard Sanders. Covered Bridges of the Middle West.
Brattleboro, Vermont: The Stephen Greene Press, 1970.

Benson, Mildred McMillian. "The Bridge Building Kennedys,"
Rush County Sesquicentennial History. Rushville, Indiana:
Rush County Historical Society, 1972.

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

Gould, George E. Indiana Covered Bridges Through the Years.
Indianapolis: Indiana Covered Bridge Society, 1977.

History of Greene and Sullivan Counties. Chicago: Goodspeed, 1884.

Ketcham, Byran E. Covered Bridges on the Byways of Indiana.
Oxford, Ohio: Oxford Printing Company, 1949.

McMullan, Phil. "A.M. Kennedy House and Covered Bridges of Rush
County," National Register of Historic Places Inventory-
Nomination Form, 2-2-83.

State Highway Commission. "General Highway and Transportation Map
of Greene County, Indiana." 1937, state roads revised to
January 1949. Collection of Indiana State Library.

Telephone Interviews with author:

Dale Workman, Superintendent of construction for J.L. Wilson
Co., Bloomfield, Indiana. October, 1992.

Arthur Gatewood, author of Indiana Covered Bridge Location

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section number 9,10 Page 7

Richland-Plummer Creek Covered Bridge
Greene County, Indiana

Guide, Noblesville, Indiana. September, 1992.

U.S. Navy, Northern Division Naval Facilities Engineering Command,
"Cultural Resources Survey, Crane Division, Naval Surface
Warfare Center" June 1992, on file at DHPA.

Section 10-Geographical Data

Verbal Boundary Description

The boundary includes the right of way of the Richland-Plummer
Creek Covered Bridge, also known as County Bridge #86, its
superstructure, abutments, wing walls, and any support pilings.
Extending from the abutments on either side, the boundary includes
20' of the approaching roadway and/or land.

Boundary Justification

The boundary includes the nominated timber bridge and structural
accessories along with sufficient land to convey its setting.

STATE OF INDIANA
DEPARTMENT OF INDIANAPOLIS

3662 (BLOCK)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

3562 II SE
(SWITZ CITY)



T 7 N
4316000m N
T 6 N
RICHLAND -
PLUMMER CREEK
OVERLED BRIDGE
KEENE CO., IN
TM:
505380 4315780

4315

0.9 MI. TO IND. 57

