NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

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 Marble Creek Bridge

other names/site number Bridge #25

2. Location

street & number U.S. Army Jefferson Proving Ground N/A ☐ not for publication

city or town San Jacinto ☒ vicinity

state IN code IN county Ripley code 137 zip code _____

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.)

Raymond J. Fatz — 6/13/96
Signature of certifying official/Title — Date

Raymond J. Fatz Acting Deputy Assistant Secretary of the Army (ESOH)
State of Federal agency and bureau Federal Preservation Officer

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

Patrick R. Robbins — January 13, 1995
Signature of certifying official/Title — Date

Indiana Department of Natural Resources
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 — Date of Action

Patrick Andrus — 7/30/96

Marble Creek Bridge
Name of Property

Ripley County, 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/road-related

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER/Stone-Arch Bridge

Materials
(Enter categories from instructions)

foundation STONE/limestone

walls STONE/limestone

roof

other

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.)

- [X] **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.
- [X] **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.

Areas of Significance
(Enter categories from instructions)

ENGINEERING
TRANSPORTATION

Period of Significance

c.1905

Significant Dates

c.1905

Significant Person
(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Unknown

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 # _____

Primary location of additional data:

- [ ] State Historic Preservation Office
- [ ] Other State agency
- [X] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Name of repository:

National Park Service

Marble Creek 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.)

	Zone	Easting	Northing
1	16	635050	4309680
2			
3			
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 Laura Thayer, Historic Preservation Consultant, for

organization U.S. Army Jefferson Proving Ground date 9/23/94

street & number 422 1/2 Fifth Street telephone 812/378/0800

city or town Columbus state IN zip code 47201

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 U.S. Army

street & number U.S.A. Jefferson Proving Ground telephone 812/273-7211

city or town Madison state IN zip code 47250

Marble Creek Bridge is located in U.S. Army, Jefferson Proving Ground. It was constructed about 1905 to carry a public highway over Marble Creek in Shelby Township, Ripley County, west of the village of Marble Corner. The road is now known as G Road.

The bridge was built in a rural area, surrounded by farms. The Army acquired this part of Ripley County in 1941 for a proving ground. The farm buildings which were located in the area have been removed and the surrounding land is now wooded. The Army continues to use the bridge and road.

The bridge is a one-span, round-arch bridge, constructed of rough-face, native limestone. The stone is laid in horizontal courses. Mortar joints are raised. The bridge extends across the creek in an east-west direction. The length is 36 feet. In addition, there are stepped wing walls at both ends. The roadway is 17 feet wide. Two-foot wide parapet walls on both sides of the road make the total width of the bridge 21 feet. The arch is approximately 32 feet wide, and springs from stone footings.

The concrete roadway was built, and the bridge tuckpointed in 1986. The structure has a high degree of integrity and is in excellent condition.

Marble Creek Bridge is significant under Criterion C in the area of engineering, and under Criterion A in the area of transportation. It is an example of a single-span, stone-arch bridge. Constructed about 1905 to carry a public highway over Graham Creek, it is representative of a movement to improve road conditions in rural Indiana in the late 19th and early 20th centuries.

Stone Arch Bridges in Indiana

Historically, stone arch bridges have never been common in Indiana. During the early 19th century, most bridges were constructed of wood. During the late 19th century, the preferred bridge type was the iron truss. Concrete became a popular material for bridges in the early 20th century.

The few stone arch bridges which were built in the state include some early-to-mid-19th century road and railroad bridges; late 19th century railroad bridges; late 19th and early 20th century county road bridges; and early 20th century road bridges in parks.

For most of the 19th century, the majority of Indiana roads were in poor condition, and there were a limited number of bridges. Most of the early bridges were wood. Stone-arch bridges were built to carry major roads. For example, many of the bridges built to carry the National Road, constructed from Richmond to Terre Haute in the 1820s and 30s, were stone-arch bridges. In the 20th century, the National Road was improved and widened several times. None of these early bridges is known to remain.

The State of Indiana constructed and improved several roads and canals under the massive 1836 Internal Improvements Act. Some stone-arch bridges were associated with these projects. One of these is the stone-arch bridge which carries the National Road over the Whitewater Canal in Wayne County. Built in 1843, the bridge is listed on the National Register of Historic Places as part of the Cambridge City Historic District.

Most of the early railroad bridges were wood. As heavier and faster locomotives were put into service, some of the wood bridges were replaced with stone-arch bridges. According to James L. Cooper, History Professor at DePauw University, and the leading expert on historic bridges in Indiana, the railroads did not construct a large number of stone-arch bridges in Indiana. An example of one which still exists is is the Vernon Overpass of the Madison and Indianapolis Railroad, built in 1837.

By about 1870, iron bridges were being used by the railroads. Most of the bridges constructed for use in the late 19th century era of railroad expansion were of this material. Toward the end of the 19th century, there was a brief period in which the railroads constructed some stone-arch bridges. One of these which survives is a Pennsylvania Railroad Bridge over Pleasant Run in

Marion County, built about 1900. In the early 20th century, concrete-arch bridges became the preferred type of the railroads.

The largest number of stone-arch bridges were built by county commissioners from about 1895 to about 1915. During this period, most road bridges built in Indiana were iron trusses, and comparatively few stone-arch bridges were constructed. Iron truss bridges were generally preferred because the cost of construction was usually lower than the cost for a stone bridge.

In the cases where stone bridges were chosen, the county government may have been considering long-term maintenance costs, lower with stone. Another issue may have been jobs. In many Indiana counties, there were no iron bridge manufacturers. If stone and experienced masons were available, however, stone bridges could provide jobs to local people.

One last category of stone-arch bridges is those built in early 20th century parks for their decorative appeal. The stone arch bridge in McCormick's Creek State Park, built in 1934 by the Civilian Conservation Corps, and listed on the National Register of Historic Places, is one of these. There are few bridges in this category, as most bridges using stone for aesthetic reasons are actually concrete-arch bridges faced in stone.

It is believed that most of the stone-arch bridges in the state have been identified. It should be stated, however, that bridges of this type are often difficult to locate. They are sometimes contained completely beneath roadways, and are less visible than other bridge types. Some of the bridges are in isolated areas, and on unmapped, abandoned or private roads. A statewide, stone-arch bridge survey conducted by James L. Cooper in 1988 identified 50 bridges. A few additional bridges have been identified in county surveys, done as part of the Indiana Historic Sites and Structures Inventory, and other inventories. Some of the bridges identified in the Cooper survey and county surveys are known to have been removed, though a complete, current count of these bridges has not been done.

The greatest concentration of stone-arch bridges is in southeastern Indiana. In this part of the state, where native limestone was available, there was a long tradition of building in stone. The largest number of stone-arch bridges was found in Decatur County, which has 20. Nine were identified in Ripley County, nine in Jennings County, three in Jefferson County, three in Bartholomew County, two in Franklin County, and one in Fayette County. The remaining bridges, outside of southeastern Indiana, were located in Owen, Blackford, Boone, Carroll, and Henry Counties.

A limited amount of research on stone-arch bridges in Indiana has been done. In most cases, the year of construction has been obtained from county records, but little is known about the bridges' designers and builders. Most of the bridges appear to have been constructed by local builders who used native materials.

The stone-arch bridges of Indiana follow the traditions of stone-arch building perfected by Roman builders hundreds of years ago. Stone bridges in Indiana are generally round- or segmental-arched. Most are built of limestone, either dressed or rough-faced. A few are of field stone. The majority have one or two spans. A few bridges have three or four spans. The arches of the bridges were constructed over wood forms. In some cases, the stone was laid without mortar. Stone-arch bridges were nearly always constructed to be perpendicular to the waterway, in order that the materials required would be fewer, and construction would be easier. Because of this, the road oftens turns as the creek or river is approached.

Several stone-arch bridges in the state have been widened with concrete construction, or are poorly maintained. Many of the bridges are threatened because they do not meet current standards.

Road Improvement in Indiana

In the late 19th and early 20th centuries, there was a major movement to improve road conditions in Indiana. Hoosiers realized at an early date that good roads would be important to the development of the state. The ambitious Internal Improvement Act of 1836 called for the construction of a number of roads, as well as railroads and canals. Many of the roads were completed, including the Michigan Road, and the New Albany and Vincennes Turnpike. Unfortunately, the state went bankrupt trying to complete the work it had laid out. A subsequent economic depression slowed development of transportation routes for several years.

In the 1850s, legislation was passed by the Indiana General Assembly which affected bridge construction in the state. Township trustees were granted the authority to construct and maintain bridges. They had the power to tax for this purpose when a majority of township residents consented. The trustees were also permitted to give private companies the right to construct toll bridges. Later, the authority given to the township trustees was transferred to the county commissioners. At this time, most roads and bridges were, in fact, constructed and maintained by private companies, which charged a toll for their use.

In the late 1870s, the General Assembly passed the first laws allowing county commissioners to build and repair free roads. At this time, county-built roads were financed by assessments on adjacent property owners who petitioned for improvements. Roads were repaired using a system where all able-bodied men between the ages of 21 to 50 were required to work a certain number of days each year.

In 1889, the General Assembly authorized counties to levy taxes and issue bonds for the purchase of private roads. This law was passed in response to public demand for better roads. The resultant government purchase of roads progressed quickly.

A 1893 law authorized tax-supported roads and improvements petitioned for by 50 freeholders, and approved by a majority of voters in the township in which the road was to be located. This legislation gave commissioners improved authority to tax for road improvements.

These laws were passed at a time of prosperity in agriculture. Farmers were producing larger amounts of surplus goods, as agriculture technologies improved. They needed reliable routes to transport grain to mills and farm goods to market. Rural families were also weary of the isolation of their lives. They were sometimes prevented from traveling to the store, the post office, the school, or a neighbor's home because of the condition of a road or the lack of a bridge.

People were increasingly willing to pay taxes for good roads and bridges. This became even more true after Hope, Indiana, was chosen by Congress as a pilot area for rural-free delivery in the 1890s. The idea of mail delivery at home was appealing, but could only happen if roads were passable.

In the first decade of the 20th century, many farmers acquired automobiles, and the clamor for good roads and bridges began in earnest. The state and national highway systems were developed in the 1920s. A large number of road improvements were made and bridges constructed in the 1930s under federal work programs.

The period between about 1890 and 1940 was one in which road improvement was a priority in the state. Most of the stone-arch bridges in Indiana were built during the early part of this period, and represent the focus of county commissioners, state legislators, and others on road improvements.

Marble Creek Bridge

Marble Creek Bridge was built about 1905, to carry a public highway over Marble Creek. The bridge was built as a project of the county commissioners, but public records are incomplete, and little is known about the details of construction.

The bridge was located a short distance west of the village of Marble Corner. The structure improved access to the community, which had several stores, a sorgham mill, a black smith shop, a copperage, two churches, and a school. Like the bridge, Marble Corner was included in the area which became Jefferson Proving Ground in 1941. No buildings associated with the village remain.

Significance

Marble Creek Bridge is significant in the area of engineering. It is one of a relatively small number of bridges in the state which illustrates stone-arch construction. The bridge has been well maintained by the U.S. Army, and has a high degree of integrity.

Also significant in the area of transportation, it represents a late 19th and early 20th century movement in the state of Indiana to improve roads. In the 1890s, the number of bridges in Ripley County was considered inadequate. State Legislation gave counties stronger power to tax for road improvements in 1893. This may have been one of the factors which led to the construction of a number of new bridges in the following years. The seven iron bridges identified in the Indiana Historic Sites and Structure Inventory and in an inventory of iron bridges by Cooper were built between about 1900 and 1930. The known stone arch bridges in Ripley County were also built during this period.

Other than the Marble Creek Bridge, the stone arch bridges in Ripley County are:

- Collin's Ford Bridge: two-span, stone arch, East Perimeter Road (K Road) over Graham Creek, U.S. Army Jefferson Proving Ground; James E. Wright, engineer; John Rogers, contractor; 1907.
- Bridge: four-span, stone-arch, County Road 525 East over Raccoon Creek, Township, c. 1905.
- Bridge: two-span, stone-arch, County Road 575 West (Old Michigan Road) over Big Creek, c. 1915.
- Bridge: one-span, stone-arch, County Road 100 South over Big Graham Creek, c. 1905
- Bridge: one-span, stone-arch, County Road 300 North over Little Otter Creek, c. 1915
- Bridge: one-span, stone-arch, County Road 650 North over Little Otter Creek, 1921.
- Bridge: four-span, stone-arch, County Road 500 North over Otter Creek, c. 1915
- Bridge: three-span, stone-arch, County Road 850 West over Brush Creek, c. 1905.

An Atlas of Ripley County, Indiana. Philadelphia: D.J. Lake and Company, 1883.

Baker, Sue. For Defense of Our County: Echoes of Jefferson Proving Ground. Indianapolis: Guild Literary Services, 1990.

Cooper, J.L., "The Case of the Missing Arch on Lost Road: A Report on Scotland Bridge (Boone County Bridge #41)," DePauw University, 1993.

Cooper, James L., HABS/HAER Inventory Forms for Stone-Arch Bridges in Indiana (on file at Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology), 1988.

Cooper, James L. Iron Monuments to a Distant Prosperity: Indiana's Metal Bridges, 1870-1930. Indianapolis: Indiana Department of Natural Resources, 1987.

Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, Indiana Historic Sites and Structures Inventory, 1985 (Ripley County).

Ripley County Commissioner's Records, 1901-1908

Ripley County History Book Committe. Ripley County History, 1818-1988. Dallas: Taylor Publishing Company, 1989.

The Ohio Historic Bridge Inventory, Evaluation, and Preservation Plan. Columbus: Ohio Department of Transportation, 1983.

Verbal Boundary Description

Bridge #25, abutments, wing walls, and other structural elements associated with the bridge, and 10 feet of the approach on each side of the bridge.

Boundary Justification

The boundary encompasses the area necessary to include the entire resource.

The following information is the same for all photographs:

1. Marble Creek Bridge
2. Ripley County, IN
3. Zalewa Photography
4. 7/4/86
5. U.S. Army Jefferson Proving Ground
   Madison, IN

Additional information for individual photographs:

Photo 1
6. Camera facing east
7. 1 of 7

Photo 2
6. Camera facing west
7. 2 of 7

Photo 3

6. Camera facing northeast
7. 3 of 6

Photo 4
6. Camera facing northwest
7. 4 of 6

Photo 5
6. Camera facing southeast
7. 5 of 6

Photo 6
6. Camera facing southwest
7. 6 of 6