

UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE

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**NATIONAL REGISTER OF HISTORIC PLACES
 INVENTORY -- NOMINATION FORM**

 SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
 TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS
1 NAME

HISTORIC

Bullfrog Road Bridge

AND/OR COMMON

2 LOCATION

STREET & NUMBER

Bullfrog Road over the Monocacy River

NOT FOR PUBLICATION

CITY/TOWN

Taneytown

CONGRESSIONAL DISTRICT

STATE

Maryland

 VICINITY OF

Sixth

CODE

24

COUNTY

Frederick

CODE

021

3 CLASSIFICATION**CATEGORY** DISTRICT BUILDING(S) STRUCTURE SITE OBJECT**OWNERSHIP** PUBLIC PRIVATE BOTH**PUBLIC ACQUISITION** IN PROCESS BEING CONSIDERED**STATUS** OCCUPIED UNOCCUPIED WORK IN PROGRESS**ACCESSIBLE** YES RESTRICTED YES UNRESTRICTED NO**PRESENT USE** AGRICULTURE COMMERCIAL EDUCATIONAL ENTERTAINMENT GOVERNMENT INDUSTRIAL MILITARY MUSEUM PARK PRIVATE RESIDENCE RELIGIOUS SCIENTIFIC TRANSPORTATION OTHER**4 OWNER OF PROPERTY**
 NAME The Board of County Commissioners of Frederick County, Maryland
 c/o William Fout, Roads Department Engineer

STREET & NUMBER

Winchester Hall

CITY/TOWN

Frederick

STATE

Maryland 21701

VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION
 COURTHOUSE
 REGISTRY OF DEEDS, ETC.

Frederick County Roads Department (Bridge #0506)

STREET & NUMBER

Montevue Lane

CITY/TOWN

Frederick

STATE

Maryland 21701

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Historic American Engineering Record

DATE

Summer, 1977

 FEDERAL STATE COUNTY LOCALDEPOSITORY FOR
SURVEY RECORDS

National Park Service, 1100 I Street, NW

CITY/TOWN

Washington

STATE

D. C. 20240

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Bullfrog Road Bridge crosses the Monocacy River on Bullfrog Road in upper Frederick County east of Emmitsburg, Maryland. The bridge is a rare Parker iron thru truss structure in a single span of 183 feet in length and 16 feet 5 inches in width. It was built by the York Bridge Company of York, Pennsylvania in 1908, according to a nameplate on the Bridge.

The bridge is set on two random coursed stone abutments with wing walls. The east abutment is located across the Monocacy River in Carroll County, Maryland.

The bridge is a steel truss structure with riveted joints and a wood plank deck. The Parker Truss is a pratt truss bridge with polygonal top chord similar to the camelback truss, but the level of the top chord changes at every panel.¹ The patent for the Parker Truss was made in the late 19th century, and was illustrated in James A. L. Waddall's book of Bridge Engineering.

¹ Dan Deibler, Metal Truss Bridges in Virginia, 1865-1932.

8 SIGNIFICANCE

F-6-8

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION	
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE	
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE	
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN	
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER	
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION	
<input checked="" type="checkbox"/> 1900	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input checked="" type="checkbox"/> OTHER (SPECIFY)	industrial archeology
		<input type="checkbox"/> INVENTION			

SPECIFIC DATES 1908

BUILDER/ARCHITECT York Bridge Company
York Pennsylvania

STATEMENT OF SIGNIFICANCE

Iron Truss Bridges were the most popular form of bridge construction in Frederick County, Maryland between the 1870's and the 1930's. The Bullfrog Road Bridge is an example of a twentieth century bridge, built by the York Bridge Company of York, Pennsylvania, a company which built at least twenty different bridges for the county in the early 1900's. Most of the bridges remaining, however, are the small pony pratt or thru pratt trusses. The Bullfrog bridge is unusual in that it is based on the Parker design, the only example of that style truss in Frederick County. Also, this is one of only four bridges which have survived the floods which have frequented the Monocacy River Valley for more than fifty years and the new bridge construction which is planned for many of the crossings.

According to Polk's York City Directory, the York Bridge Company was most active between the years 1902 and 1917, advertising as "bridge builders, iron and steel structural work, etc." By 1917 the company had changed its name to the York Bridge and Construction Company.

Because of its unique and rare design, the Bullfrog Road Bridge should be protected as an example of developing bridge engineering design.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

F-6-8

SEE CONTINUATION SHEET #1.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 233' x 50'

UTM REFERENCES

A	ZONE	EASTING	NORTHING
C	ZONE	EASTING	NORTHING

B	ZONE	EASTING	NORTHING
D	ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
Maryland	24	Carroll County	013
Maryland	24	Frederick County	021

11 FORM PREPARED BY

NAME / TITLE

Cherilyn Widell

1km

ORGANIZATION

Frederick County Historic Preservation

DATE

January 17, 1978

STREET & NUMBER

Winchester Hall; 12 East Church Street

TELEPHONE

(301) 663-8300

CITY OR TOWN

Frederick

STATE

Maryland 21701

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

TITLE

STATE HISTORIC PRESERVATION OFFICER

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

UNITED STATES DEPARTMENT OF THE INTERIOR
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INVENTORY -- NOMINATION FORM**

Bullfrog Road Bridge
Frederick County

CONTINUATION SHEET Maryland

ITEM NUMBER

9

PAGE

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MAJOR BIBLIOGRAPHICAL REFERENCES

Deibler, Dan. Metal Truss Bridges in Virginia, 1865-1932. Vol. I.
Virginia Highway and Transportation Research Council, 1975.

Jackson, Donald. "Railroads, truss bridges and the rise of the civil engineer."
Civil Engineering (October, 1977), 97-101.

Meeting minutes of the Frederick County Commissioners, 1882-1889.

The Frederick Examiner, Wednesday, September 13, 1854.

Maryland Historical Trust

Maryland Inventory of Historic Properties number: F-6-8

Name: BULLFROG RD.

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <input checked="" type="checkbox"/>	Eligibility Not Recommended <input type="checkbox"/>
Criteria: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> None
Comments: _____ _____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

Handwritten signature

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. F-6-8

SHA Bridge No. F-506 Bridge name Bullfrog Road over Monocacy River

LOCATION:

Street/Road name and number [facility carried] Bullfrog Road

City/town Emmitsburg Vicinity X

County Frederick

This bridge projects over: Road Railway Water Land

Ownership: State County Municipal Other

HISTORIC STATUS:

Is bridge located within a designated historic district? Yes No

National Register-listed district National Register-determined-eligible district

Locally-designated district Other

Name of district _____

BRIDGE TYPE:

Timber Bridge :
Beam Bridge Truss -Covered Trestle Timber-And-Concrete

Stone Arch Bridge

Metal Truss Bridge

Movable Bridge :

Swing Bascule Single Leaf Bascule Multiple Leaf
Vertical Lift Retractable Pontoon

Metal Girder :

Rolled Girder Rolled Girder Concrete Encased
Plate Girder Plate Girder Concrete Encased

Metal Suspension

Metal Arch

Metal Cantilever

Concrete :

Concrete Arch Concrete Slab Concrete Beam Rigid Frame

Other Type Name _____

DESCRIPTION:**Describe Setting:**

Bridge No. F-506 crosses Monocacy River carrying a single lane for two-way traffic on Bullfrog Road. The bridge is situated in the middle of rural farmland in northern Frederick County just east of Emmitsburg. The bridge carries traffic in the north-south direction, while the river flows from east to west at this location.

Describe Superstructure and Substructure:

The bridge is a steel Parker through-truss with a single clear span of 179'-0" in length and a 13'-2" clear roadway width. The top chord consists of back to back channels with a riveted cover plate on top and batten plates underneath. The bottom chords are composed of dual rectangular bars varying in size, except at the center panel where there is only a single rectangular bar. All of the verticals are back to back channels connected with lacing and rivets. The diagonal members consist of dual rectangular metal bars. The deck system is comprised of interior I-shaped and exterior channel shaped stringers topped with a timber plank wearing surface. The deck is supported by I-shaped floorbeams which are suspended from the truss verticals. The top and bottom lateral cross bracing are metal rods. The portal bracing and transverse struts are all constructed with angles. The main members are pin-connected at the panel points, while the portal and lateral bracing members are riveted with gusset plates. A railing consisting of three horizontal angles and vertical bars lines the edges of the deck. The abutments and wingwalls are constructed of stone with a layer of concrete parging.

Discuss Major Alterations:

In 1995 the bridge received new stringers and a new timber deck. The seats on the abutments have been replaced with reinforced concrete. No notable alterations have been made to the superstructure.

HISTORY:

WHEN was bridge built (actual date or date range) 1908

This date is: Actual Estimated

Source of date: Plaque Design plans County bridge files/inspection form

Other (specify) State inventory form

NOTE: This bridge was reportedly recorded by HAER in the summer of 1977, but Marilyn Ibach at HABS/HAER found no information for it on file.

WHY was bridge built? To provide a reliable crossing of Bullfrog Road over the Monocacy River, to meet local transportation needs.

WHO was the designer _____

WHO was the builder York Bridge Company - builder and/or designer

WHY was bridge altered? [check N/A if not applicable] Structural needs/safety

Was bridge built as part of organized bridge-building campaign? Yes No

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events B - Person
C - Engineering/architectural character

Was bridge constructed in response to significant events in Maryland or local history? No Yes X

This bridge was one of a large number of metal truss bridges erected in Maryland in the late nineteenth and early twentieth centuries. These bridges, which were stronger and more reliable than the majority of their predecessors, were part of a major advance in bridge technology in Maryland and throughout the nation in the third quarter of the nineteenth century.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area? No Yes X If yes, what impact?

Because of their solidity, metal truss bridges such as the Bullfrog Road bridge provided reliable crossings, largely free from the dangers of floods and other disasters that regularly destroyed many of their predecessors. By assuring travelers that Bullfrog Road could be safely and reliably passed throughout the year, this bridge promoted small-scale residential, commercial, agricultural, and industrial development along the road and other thoroughfares that fed into it. Though their impacts were quite localized, bridges such as this, taken *en masse*, were an important factor in the development of rural areas throughout the state.

**Is the bridge located in an area which may be eligible for historic designation? No X Yes
Would the bridge add to or detract from historic & visual character of the possible district?**

Is the bridge a significant example of its type? No Yes X If yes, why?

Between 1840 and the Civil War, under the impetus of a rapidly expanding railroad system, the majority of early American metal truss bridge forms were patented and introduced. In Maryland, the earliest metal truss bridges carried rail lines, which required their great strength and reliability. From the War through the end of the century, metal truss technology was improved, steel began to replace iron, and the use of trusses was expanded to carry roads as well as rail lines.

Numerous metal truss bridges were erected in Baltimore, the original hub of the metal truss in the state, from the 1850s through the 1880s. From Baltimore, the use of the metal truss spread out to other parts of the state, particularly the Piedmont and Appalachian Plateau. Many bridge and iron works were established in the eastern United States to design and fabricate truss members, which were then shipped to sites in Maryland and elsewhere to be erected. More than 15 different bridge companies located in Maryland, Ohio, Pennsylvania, New York, Virginia, and Indiana are known to have shipped metal truss bridges to sites throughout Maryland. Bridges were first fabricated in Maryland, and shipped to sites within the state and beyond, by the companies of seminal bridge designer Wendel Bollman.

Early in the twentieth century, concrete bridges began to compete with metal truss bridges throughout the state at small to moderate crossings. With the development of uniform standards for concrete bridges by the State Roads Commission in the 1910s, the construction of smaller metal truss bridges significantly declined throughout the state. The metal truss still remained the bridge of choice for large crossings, however. In the 1920s, heavier members began to be used at these bridges. Reflecting even heavier load requirements and increased lengths, metal truss bridges erected in the state in the 1930s and 1940s were heavy and solid, rather than light and delicate like their late-nineteenth and early-twentieth century predecessors.

The Pratt truss bridge, Maryland's most common surviving early truss type, was patented in 1844 by Thomas and Caleb Pratt. The Pratt has diagonals extended across one panel in tension and verticals in compression, except for hip verticals immediately adjacent to the inclined end posts of the bridge. Between 1868 and 1871 a subtype, the Parker truss, was developed in a series of patents filed by C.H. Parker. The Parker truss is a Pratt truss with an inclined rather than horizontal top chord. It was popular for longer span bridges well into the twentieth century. Maryland examples include bridges 2054 (1935) in Anne Arundel County, B-54 (1934) in Baltimore County, and F-506 (1908) in Frederick County. This bridge may be the earliest Parker in the state.