MARYLAND INVENTORY OF HISTORIC BRIDGES MHT No. F 4-4
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. F16-15 **Bridge name** East Church Hill Road over Middle Creek

LOCATION:
Street/Road name and number [facility carried] East Church Hill Road

City/town Myersville **Vicinity** X

County Frederick

This bridge projects over: Road____ **Railway**_____ **Water** X **Land** ____

Ownership: State __ **County** X **Municipal** ___ **Other** _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ **No** X
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 X

Movable Bridge ____:
Swing _____ **Bascule Single Leaf** __ **Bascule Multiple Leaf** _____
Vertical Lift _____ **Retractile**_____ **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** _____

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DESCRIPTION:

Setting: Urban _____ **Small town** _____ **Rural** X

Describe Setting:

Bridge F16-15 carries East Church Hill Road over Middle Creek in the vicinity of Myersville, Frederick County. East Church Hill Road runs generally in an east-west direction in the area while Middle Creek flows north-south. The bridge is situated in a rural area near an intersection with a state highway. The area is relatively undeveloped with farmland and woods around the bridge.

Describe Superstructure and Substructure:

Bridge F16-15, constructed in 1908, is a single-span, Warren pony truss measuring 19.7 meters (64.67 feet) in total length. It has four panels with diagonal endposts. The top chord is a built-up section of two steel channels with a cover plate connected by rivets. The bottom chord is a built-up section of two steel angles and cross bars connected with rivets. The floor system has three steel stringers and steel floorbeams. All verticals and diagonals are paired angles with cross bars. All original connections are riveted. The width of the roadway is 3.44 meters (11.29 feet) and the distance between the centerline of the trusses is 4.06 meters (13.33 feet). There is no sidewalk and no railings on the bridge. The bridge, which is aligned 90° to the streambed, is posted for 2.7 tonnes (3 tons) and has a sufficiency rating of 21.4. The abutments are stone with flared stone wing walls. There are three plaques on the bridge. One plaque on the east diagonal endpost identifies that the bridge was constructed by the York Bridge Company in 1908. The second plaque is on the east diagonal endpost and identifies the county commissioners, while the third plaque is located on the northwest diagonal endpost and also identifies the county commissioners. The names of the commissioners are not legible.

Discuss Major Alterations:

According to the county engineer of Frederick County, the bridge was originally built with riveted connections. The bridge was repaired in 1994. Each diagonal endpost received a new section of channel and cover plate, and new stringers and floorbeams were installed. According to the 1996 inspection report, the bridge is in good condition and requires only cleaning and painting of the floorbeams, spot painting elsewhere, and repairing a section of broken abutment.

HISTORY:

WHEN was the bridge built 1908
This date is: Actual X **Estimated** _____
Source of date: Plaque X **Design plans** ___ **County bridge files/inspection form** X
Other (specify): ___

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

York Bridge Company

WHO was the builder?

York Bridge Company

WHY was the bridge altered?

The bridge was altered to ensure its structural integrity.

Was this bridge built as part of an organized bridge-building campaign?

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

The bridge was previously surveyed by the Frederick County Office of Historic Preservation in 1978; however, no determination of eligibility was made by the Maryland Historical Trust. The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

This bridge was one of a large number of metal truss bridges built in Maryland in the late nineteenth and early twentieth centuries. Metal trusses built in the late nineteenth century were frequently of wrought iron construction and featured pinned connections. By the turn of the century, steel was the material of choice and connections were sometimes pinned and sometimes rivetted. By 1920, the truss type exhibited more heavily configured members and rivetted connections.

General Truss Bridge Trends

The first metal truss bridges in the United States were built to carry rail and canal traffic. A rapidly expanding railroad network, with needs for long spans, heavy load capacity and rapid construction, served as the impetus for advances in metal truss technology from the mid-nineteenth century to its close. The earliest metal truss forms of the United States were patented and introduced between 1830 and the Civil War, including the popular Pratt (1844) and Warren (1848) types.

From the Civil War through the end of the century metal truss technology improved in response to increasing loads and speeds, and new transportation needs; steel began to replace iron; numerous "bridge works" and "iron works" were established in the eastern U.S. for fabricating and shipping the truss components to the bridge site; and expanding road networks required a low cost, expedient bridge type.

General Trends in Maryland

In Maryland, the earliest metal truss bridges carried rail lines, including the Baltimore & Ohio (B&O) and the Baltimore and Susquehanna Railroads. As early as 1849, B&O Chief Engineer Benjamin H. Latrobe recommended the construction of metal truss bridges for "large crossings"; in 1850 he reported "much satisfaction" with the future of iron bridges after constructing the metal truss bridge at Savage.

Numerous metal truss bridges were manufactured in Baltimore, the early industrial hub of bridge building activity in the state, from the 1850s through the 1880s. Among the early bridge builders in the 1850s and 1860s were former B&O employees, B.H. Latrobe and Wendell Bollman, founders of competing Baltimore bridge building companies. Historical research identified more than twenty-five bridge companies in the region that built truss bridges in Maryland between 1850 and 1920. Among these were the Wrought Iron Bridge Company, King Iron Bridge Company, Patapsco Bridge and Iron Works, Baltimore Bridge Company, Pittsburg Bridge Company, Penn Bridge Company, Smith Bridge Company, Groton Bridge and Manufacturing Company, Roanoke Iron and Bridge Company, York Bridge Company, Vincennes Bridge Company, Bethlehem Steel Company, American Bridge Company.

The location of the Baltimore & Ohio Railroad, Baltimore bridge fabricators, and the urban needs of the city and its environs resulted in the erection of numerous early truss bridges in Baltimore and the surrounding area. Initially constructed for the railroads, their use quickly came to replace the earlier timber bridges on Baltimore roads.

From Baltimore, the use of the metal truss spread to other parts of the state, with County Commissioners in the Piedmont and Appalachian Plateau counties erecting numerous metal trusses from the 1870s to the early twentieth century. Frederick County erected numerous truss spans during that time. Records indicate that in the early twentieth century the York Bridge Company built a number of metal trusses there, primarily Pratt but also Warren and Parker trusses. In the same county, King Iron Bridge Manufacturing Company erected several bowstring pony truss bridges.

The East Church Hill Road Bridge is a Warren Truss. Patented in 1846 by British engineers James Warren and Willoughby Monzoni, the Warren truss and its variants constitute a commonly built metal truss bridge type of the nineteenth and early twentieth centuries. The original form of the Warren was purely a series of equilateral triangles in which the diagonals carried both compressive and tensile loads. Later, verticals were added but served only as bracing for the entire triangular web system between parallel top and bottom chords. Like the Pratt truss, the Warren truss was widely built throughout the United States from the middle of the nineteenth century well into the twentieth century, and spawned many variants, including a double intersection, or lattice, subtype in which two triangular truss systems are superimposed with or without verticals.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge has been altered and lacks such character-defining features as the original floor system and diagonal endposts.

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Does the bridge retain integrity of important elements described in Context Addendum?

This bridge was repaired in 1994, resulting in the loss of such character-defining elements as the original floor system and diagonal endposts.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

The bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files X **SHA inspection/bridge files** ___
Other (list):

Frederick County Office of Historic Preservation, *Maryland Historical Trust Inventory Form for State Historic Sites Survey #F 4-4.* 1978.

P.A.C. Spero & Company and Louis Berger & Associates, *Historic Highway Bridges in Maryland: Historic Context Report.* Prepared for the Maryland State Highway Administration.

SURVEYOR:

Date bridge recorded July 1997

Name of surveyor Caroline Hall/Ryan McKay
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Suite 412, Baltimore, Maryland 21204
Phone number 410-296-1635 **FAX number** 410-296-1670

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Church Hill Bridge 1908
Catoctin
Public

The Church Hill Bridge is a single span pony pratt steel truss bridge which spans the West Branch near Myersville. The single lane bridge is set on random stone abutments and is approximately thirty feet in length and is fifteen feet wide. Joints of the bridge are secured with rivetted connections. A nameplate, located on a half hip of the structure, indicated that it was built by the York Bridge Company of York, Pennsylvania in 1908.

Iron truss bridges were the most popular form of bridge construction in Frederick County, Maryland between the 1870's and 1930's. The Church Hill Bridge is one of at least twelve bridges built by the York Bridge Company of York, Pennsylvania for the county in the early part of the 1900's.

According to Polk's York City Directory, the York Bridge Company was most active between the years 1902 and 1817, 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.

DESTROYED

MARYLAND HISTORICAL TRUST

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INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAME

HISTORIC: Church Hill Bridge

AND/OR COMMON:

2 LOCATION

STREET & NUMBER: Church Hill Road over West Branch

CITY, TOWN: Catoctin — VICINITY OF

CONGRESSIONAL DISTRICT: E.D. 6

STATE: Maryland

COUNTY: Frederick

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
_DISTRICT	X PUBLIC	_OCCUPIED	_AGRICULTURE	_MUSEUM
_BUILDING(S)	_PRIVATE	_UNOCCUPIED	_COMMERCIAL	_PARK
X STRUCTURE	_BOTH	_WORK IN PROGRESS	_EDUCATIONAL	_PRIVATE RESIDENCE
_SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	_ENTERTAINMENT	_RELIGIOUS
_OBJECT	_IN PROCESS	X YES: RESTRICTED	_GOVERNMENT	_SCIENTIFIC
	_BEING CONSIDERED	_YES: UNRESTRICTED	_INDUSTRIAL	X TRANSPORTATION
		_NO	_MILITARY	_OTHER

4 OWNER OF PROPERTY

NAME: Frederick County Roads Dept. Telephone #:

STREET & NUMBER: Montevue Lane

CITY, TOWN: Frederick — VICINITY OF

STATE, zip code: Maryland 21701

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC

Liber #:
Folio #:

STREET & NUMBER:

CITY, TOWN:

STATE:

6 REPRESENTATION IN EXISTING SURVEYS

TITLE:

DATE:

_FEDERAL _STATE _COUNTY _LOCAL

DEPOSITORY FOR SURVEY RECORDS:

CITY, TOWN:

STATE:

7 DESCRIPTION

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CONDITION		CHECK ONE	CHECK ONE
X EXCELLENT	__DETERIORATED	__UNALTERED	__ORIGINAL SITE
__GOOD	__RUINS	__ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Church Hill bridge is a single span pony pratt steel truss bridge which spans the West Branch near Myersville. The single lane bridge is set on random stone abutments and is approximately thirty feet in length and is fifteen feet wide. Joints of the bridge are secured with rivetted connections.

A nameplate, located on a half hip of the structure, indicates that it was built by the York Bridge Company of York, Pennsylvania in 1908.

CONTINUE ON SEPARATE SHEET IF NECESSARY

8 SIGNIFICANCE

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PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION	
1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE	
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE	
_1600-1699	_ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAN	
_1700-1799	_ART	X ENGINEERING	_MUSIC	_THEATER	
_1800-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	X TRANSPORTATION	
X 1900-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	_OTHER (SPECIFY)	
		_INVENTION			

SPECIFIC DATES 1908 BUILDER/ARCHITECT York Bridge Company

STATEMENT OF SIGNIFICANCE

Iron truss bridges were the most popular form of bridge construction in Frederick County, Maryland between the 1870's and 1930's. The Church Hill Bridge is one of at least twelve bridges built by the York Bridge Company of York, Pennsylvania for the county in the early part of the 1900's.

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9 MAJOR BIBLIOGRAPHICAL REFERENCES

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

VERBAL BOUNDARY DESCRIPTION

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

STATE COUNTY

STATE COUNTY

11 FORM PREPARED BY

NAME / TITLE

Cherilyn Widell, Sites Analyst

ORGANIZATION DATE

Frederick County Office of Historic Preservation 9/26/78

STREET & NUMBER TELEPHONE

12 East Church St., Winchester Hall 694-1063

CITY OR TOWN STATE

Frederick Maryland

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature, to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 Supplement.

The Survey and Inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

RETURN TO: Maryland Historical Trust
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438