

Maryland Historical Trust

Maryland Inventory of Historic Properties Number: F-6-118

Name: USISB over Joms Creek

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 bridged received the following determination of eligibly.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u> X </u>	Eligibility Not Recommended <u> </u>
Criteria: <u> A </u> <u> B </u> <u> C </u> <u> D </u>	Considerations: <u> A </u> <u> B </u> <u> C </u> <u> D </u> <u> E </u> <u> F </u> <u> G </u> <u>None</u>
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>

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

MHT No. F-6-118

SHA Bridge No. 10002 Bridge name U.S. 15B over Toms Creek (Toms Creek Bridge)

LOCATION:

Street/Road name and number [facility carried] U.S. 15 Business (Seton Avenue South)

City/town Emmitsburg Vicinity X

County Frederick

This bridge projects over: Road Railway Water X Land

Ownership: State X County Municipal Other

HISTORIC STATUS:

Is the 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 X:
Concrete Arch X Concrete Slab Concrete Beam Rigid Frame
Other Type Name

DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X _____

Describe Setting:

Bridge 10002 carries U.S. 15 Business (Seton Avenue South) over Toms Creek in Frederick County. U.S. 15 Business runs north-south and Toms Creek flows west to east. The bridge is located approximately 0.8 kilometers (0.5 miles) south of Emmitsburg and just southwest of the National Emergency Training Center.

Describe Superstructure and Substructure:

Bridge 10002 is a 1-span, 2-lane, concrete filled spandrel arch bridge. The bridge, built in 1923, is 25.3 meters (83 feet) long and has a clear roadway width of 7.3 meters (24 feet); there are no sidewalks. The out-to-out width is 8.3 meters (27.3 feet). The superstructure consists of one arch which spans 24.4 meters (80 feet) and supports a cast-in-place concrete deck and solid incised concrete parapets. A date plaque on the parapet states that the "Toms Creek Bridge" was constructed in 1923 by the State Roads Commission. The substructure consists of two concrete abutments and four concrete wingwalls. The bridge has a sufficiency rating of 80.3.

According to the 1997 inspection report, this structure was in satisfactory condition. The bituminous wearing surface has a few fine transverse cracks. The parapets have moderate to heavy scaling with hollow sounding areas, heavy spalling and exposed reinforcement bars. The southwest parapet has a large repaired area. Both arch spandrel walls have been repaired and have fine cracking with efflorescence. Tie rods have been placed through the walls as part of the repair. The wingwalls have some minor spalling with efflorescence.

Discuss Major Alterations:

The bridge was repaired by patching and placing tie bars through the spandrel walls. The repairs were made at an unknown date. No major alterations have been made to Bridge 10002.

HISTORY:

WHEN was the bridge built: 1923

This date is: Actual X Estimated _____

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

Other (specify): State Highway Administration Inspection Report/Bridge File

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?

State Roads Commission

WHO was the builder?

State Roads Commission

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?

Unknown

SURVEYOR/HISTORIAN ANALYSIS:**This bridge may have National Register significance for its association with:**

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

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of concrete arch construction. The structure has a high degree of integrity and retains such character-defining elements of the type as barrel, arch rings, spandrel walls, parapets, abutments and wingwalls.

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

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of \$3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930.

By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

U.S. 15 was part of a larger, inter-colony road established in the late eighteenth century to connect central Virginia with Pennsylvania through the city of Frederick, Maryland.

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?

Unknown

Is the bridge a significant example of its type?

The bridge is a good example of the State Roads Commission standard 1920s bridge plan.

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

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including solid panel parapets, spandrel walls, barrel, arch ring, abutments, and wingwalls, however some deterioration is evident.

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

This bridge is a significant example of the work of the State Roads Commission in the 1920s.

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 _____ SHA inspection/bridge files X
Other (list): _____

Johnson, Arthur Newhall

1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates

1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

State Roads Commission

1958 A History of Road Building in Maryland. Published by author, Baltimore.

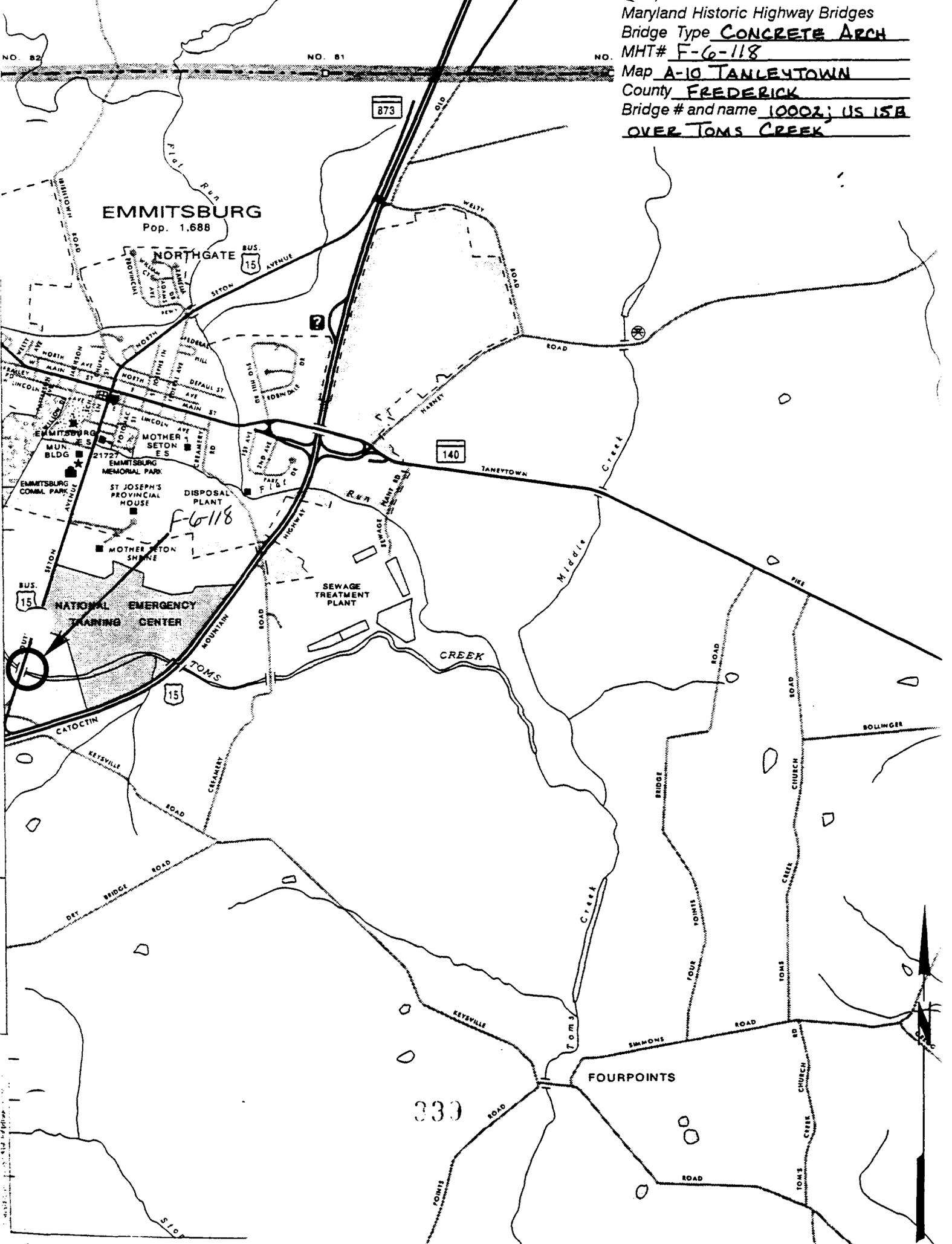
Tyrrell, H. Grattan

1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

SURVEYOR:

Date bridge recorded December 1997
Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1635 FAX number (410) 296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# F-6-118
Map A-10 TANLEYTOWN
County FREDERICK
Bridge # and name 10002; US 15B
OVER TOMS CREEK





WINDY CREEK BRIDGE

1921 - 1922

STATE ROAD COMMISSION

CONTRACT NO. 1000 - 1921 - 1922

WINDY CREEK BRIDGE

1921 - 1922

UNIVERSITY OF TEXAS - A&M

1. 12-18

2. 10002, U.S. 15 BLDG. OFF Toms Creek

3. FREDERICK COUNTY

4. MARYLAND, MONTGOMERY & ANNEX

5. 10002

6. 10002

7. 10002

8. 10002





1. F-L-118

2. 10002, U.S. 15 BR. OVER TOMS CREEK

3. FREDERICK COUNTY

4. WALLACE, MONTGOMERY & ASSOC.

5. 12/97

6. MD SH10

7. LOOKING NORTH

8. 4 OF 5



INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Bridge #10002, Survey Number: F-6-118

Project: US 15 over Toms Creek, Frederick Co. Agency: F SHA

Site visit by MHT Staff: no yes Name _____ Date _____

Eligibility recommended Eligibility not recommended

Criteria: A B C D Considerations: A B C D E F G None

Justification for decision: (Use continuation sheet if necessary and attach map)

Bridge #10002, a 1923, earth filled, single span, concrete arch bridge, does not meet any of the criteria for individual listing and is not located within any known district. There is no known contractor for the bridge and it is representative of a very common type. According to information prepared by SHA, concrete arch bridges were constructed as early as 1895 in the Mid-Atlantic region and were erected with great ease and regularity by the period 1915 to 1930, an era during which transportation needs grew rapidly and methods for concrete arch construction were perfected. After c. 1930 the concrete arch bridge was considered technologically obsolete. Many bridges similar to Bridge #10002 remain throughout the state.

Documentation on the property/district is presented in: Project Files

Prepared by: Rita Suffness

Elizabeth Hannold 02/10/92
Reviewer, Office of Preservation Services Date

NR program concurrence: yes no not applicable
[Signature] 11 Feb 92
Reviewer, NR program Date

[Handwritten initials]

Survey No. F-6-118

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

- Eastern Shore (all Eastern Shore counties, and Cecil)
- Western Shore (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
- Piedmont (Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
- Western Maryland (Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

- Paleo-Indian 10000-7500 B.C.
- Early Archaic 7500-6000 B.C.
- Middle Archaic 6000-4000 B.C.
- Late Archaic 4000-2000 B.C.
- Early Woodland 2000-500 B.C.
- Middle Woodland 500 B.C. - A.D. 900
- Late Woodland/Archaic A.D. 900-1600
- Contact and Settlement A.D. 1570-1750
- Rural Agrarian Intensification A.D. 1680-1815
- Agricultural-Industrial Transition A.D. 1815-1870
- Industrial/Urban Dominance A.D. 1870-1930
- Modern Period A.D. 1930-Present
- Unknown Period (prehistoric historic)

III. Prehistoric Period Themes:

- Subsistence
- Settlement
- Political
- Demographic
- Religion
- Technology
- Environmental Adaption

IV. Historic Period Themes:

- Agriculture
- Architecture, Landscape Architecture, and Community Planning
- Economic (Commercial and Industrial)
- Government/Law
- Military
- Religion
- Social/Educational/Cultural
- Transportation

V. Resource Type:

Category: Structure

Historic Environment: Rural

Historic Function(s) and Use(s): Transportation

Known Design Source: Unknown

