

Maryland Historical Trust

Maryland Inventory of Historic Properties number: F-6-106

Name: GRIMES RD. OVER TOWN CRK

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.

<b>MARYLAND HISTORICAL TRUST</b>	
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>

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

MHT No. F-6-106

SHA Bridge No. F-510 Bridge name Grimes Road over Toms Creek

**LOCATION:**

Street/Road name and number [facility carried] Grimes 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-510 carries Grimes Road over Tom's Creek in Frederick County just southeast of Emmitsburg. The bridge is surrounded by open rolling farmland with a farmhouse and two silos within walking distance. The orientation of the bridge is in the east-west direction, while Tom's Creek flows from north to south.

**Describe Superstructure and Substructure:**

This structure is a single-lane, single-span Pratt through-truss. There are seven panels at 16'-0" giving the bridge a total span length of 112'-0" centerline of bearing to centerline of bearing. The clear roadway width is 12'-10". The top chord is built up of back to back channels with a riveted cover plate on top and batten plates on the bottom. The bottom chords are made up of dual rectangular bars. All of the verticals consist of back to back channels connected on the outside faces with lattice bars. The diagonals are all dual metal bars except at the center panel where single rod cross bracing is used. The portal bracing is made of T-shapes and angles. The top lateral struts are I-shaped and the lateral cross bracing members are metal rods. The deck consists of timber planking placed across I-shaped interior and channel shaped exterior stringers. The stringers are supported by I-shaped floorbeams which are suspended from the vertical members.

**Discuss Major Alterations:**

In 1992 there was stringer, bearing, and wind bracing replacement. Modern guardrails of the W-shape with I-shaped posts have been retrofitted to the deck. In 1994 both abutments were reconstructed with reinforced concrete.

**HISTORY:**

**WHEN was bridge built (actual date or date range)** 1914 \_\_\_\_\_

**This date is:** Actual \_\_\_\_\_ Estimated  \_\_\_\_\_

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

**Other (specify)** \_\_\_\_\_

**WHY was bridge built?** To provide a reliable crossing of Grimes Road over Toms Creek, to meet local transportation needs.

**WHO was the designer** \_\_\_\_\_

**WHO was the builder** \_\_\_\_\_

**WHY was bridge altered?** [check N/A \_\_\_\_\_ if not applicable] Safety/structural needs \_\_\_\_\_

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

This bridge was built by Frederick County as part of the Good Roads Movement.

**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  \_\_\_\_\_

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 Grimes 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 Grimes 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.

Numerous Pratt truss bridges were erected throughout the country between 1844, when the type was patented by Thomas and Caleb Pratt, and the early twentieth century. 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. The large majority of Maryland's surviving metal truss bridges are Pratts, built as through or pony trusses either riveted or pin-connected.

This bridge was erected during one of the three key periods (1840-1860, 1860-1900, and 1900-1960) of bridge construction in Maryland. Built in 1914, it falls within the period 1900-1960. During this era, metal truss highway bridges became increasingly standardized. Also during this period, smaller and moderate length trusses were gradually replaced by reinforced concrete structures, and the modern metal girder bridge, which could easily be widened, replaced the metal truss bridge at all but the largest approaches and crossings. Built early in the century, it is characterized by relatively delicate members, rather the heavy solid members that characterize its successors.

Does bridge retain integrity [in terms of National Register] of important elements described in Context Addendum? No \_\_\_ Yes X

Is bridge a significant example of work of manufacturer, designer and/or engineer? No \_\_\_ Yes \_\_\_  
Neither manufacturer, designer, nor engineer could be identified.

Should bridge be given further study before significance analysis is made? No X Yes \_\_\_

It is believed that no further evaluation is necessary to determine the eligibility of this bridge for listing in the National Register. However, additional research, which could be conducted as part of any future National Register nomination prepared for the bridge, might provide further information about its history and environs.

**BIBLIOGRAPHY:**

Bridge inspection reports and files of the Frederick County engineer's office.

County survey files of the Maryland Historical Trust.

Jackson, Donald H. *Great American Bridges and Dams*. Washington, D.C.: The Preservation Press, 1968

P.A.C. Spero & Company and Louis Berger & Associates, Inc. *Historic Bridges in Maryland: Historic Context Report*. Prepared for the Maryland State Highway Administration, September, 1994.

Pennsylvania Historical and Museum Commission and Pennsylvania Department of Transportation. *Historic Highway Bridges in Pennsylvania*. Commonwealth of Pennsylvania, 1986.

**SURVEYOR/SURVEY INFORMATION:**

Date bridge recorded 2/8/95

Name of surveyor Frank Juliano/Marvin Brown

Organization/Address GREINER, INC., 2219 York Road, Suite 200, Timonium, Maryland 21093-3111

Phone number 410-561-0100 FAX number 410-561-1150

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

Property/District Name: Grimes Road Bridge Survey Number: F-6-106  
Project: Rehabilitation of Grimes Road Bridge Agency: COE

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)

The Grimes Road Bridge was built in 1904, according to the Wilson T. Ballard Company, or 1915, according to information previously provided to the Maryland Historical Trust by Frederick County Department of Public Works. It is a single span steel through truss carrying Grimes Road over Tons Creek. Under Criteria A, the Grimes Road Bridge derives its significance from its association with the development of transportation in Frederick County. Metal truss bridges represent an important step in engineering design and a uniquely American achievement, the result of intensive experimentation in the 19th century. Relatively cheap and easy to build, these bridges were the most popular form of bridge construction in Frederick County between the 1870s and the 1930s. Large numbers were built to span small crossings, greatly facilitating vehicular movement and communication throughout the developing County. Frederick County once had scores of such bridges; however, as technology and use requirements have changed, they have been replaced at an increasing rate. According to information provided to the Maryland Historical Trust by Frederick County Department of Public Works, only 27 metal truss bridges remain on County roads. A number of these are currently slated for replacement. The Grimes Road Bridge is thus an increasingly rare example of the sort of modest structure once common throughout rural Maryland.

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

Prepared by: \_\_\_\_\_

Elizabeth Wannold January 22, 1993  
Reviewer, Office of Preservation Services Date

NR program concurrence:  yes  no  not applicable  
[Signature] 1-23-93  
Reviewer, NR program Date

*[Handwritten mark]*



Survey No. F-6-106

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