

Maryland Historical Trust

Maryland Inventory of Historic Properties number: HA-1970

Name: Old Pylesville Rd. over Broad 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.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <input checked="" type="checkbox"/> X	Eligibility Not Recommended _____
Criteria: <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" 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. HA-1970

SHA Bridge No. H-137 Bridge name Broad Creek Bridge(Old Pylesville Rd. over Broad Creek)

LOCATION:

Street/Road name and number [facility carried] Old Pylesville Road

City/town Pylesville Vicinity X

County Harford

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

Movable Bridge :

Swing Bascule Single Leaf Bascule Multiple Leaf

Vertical Lift Retractable Pontoon

Metal Girder X:

Rolled Girder X 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:

Setting: Urban _____ Small town _____ Rural X

Describe Setting:

Bridge No. H-137 carries Old Pylesville Road over Broad Creek in Harford County. Old Pylesville Road runs north-south and Broad Creek flows east-west. The bridge is located in the vicinity of Pylesville, and is surrounded by a wooded area and some residential development.

Describe Superstructure and Substructure:

Bridge No. H-137 is a 2-span, 2-lane, metal girder bridge. The bridge was originally built in 1928. The structure is 101 feet long and has a clear roadway width of 24 feet, 2 inches. The out-to-out width is 27 feet. The superstructure consists of seven (7) rolled girders which support a concrete deck and concrete parapets. The girders are spaced approximately 4 feet apart. The roadway is carried on the girders. The concrete deck is 8 inches thick and it has a bituminous wearing surface. The structure has pierced concrete parapets and the roadway approaches have steel guard rails. A plaque on the west parapet reads as follows:

Broad Creek Bridge
Built - 1928
State Roads Commission
John N. Macwall - Commissioner and Chief Engineer
R. Bennett Darnall W.W. Brown
L.H. Steuart - Secretary
W.C. Hopkins - Bridge Engineer

The substructure consists of two (2) concrete abutments, and one (1) concrete intermediate pier at mid-length. There are flared, concrete wing walls. The bridge is posted for 11 tons, and the sufficiency rating of the structure is 49.2.

According to the 1995 inspection report, this structure was in good condition. The approach roadway and the bridge deck have transverse cracks in the paving and some areas on the underside of the deck have spalled concrete with exposed reinforcing steel. The metal girders are in good condition with light to moderate corrosion. The abutments, wing walls and pier have numerous hairline cracks and minor scale. The concrete parapet is generally sound with several spalled areas and cracks.

Discuss Major Alterations:

Bridge H-137 has no major alterations. In the Fall of 1992, the beams and bearing devices were cleaned and painted.

HISTORY:

WHEN was the bridge built: 1928
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?

State Roads Commission

WHO was the builder?

Unknown

WHY was the bridge altered?

N/A

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 X

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of metal girder construction. The structure has a high degree of integrity and retains such character-defining elements of the type as the rolled girders, concrete abutments and pier, and an identifying plaque. In addition, it retains such distinctive features as the pierced parapet.

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

Metal girder bridges were most likely introduced and first popularized in Maryland by the state's major railroads of the nineteenth century including the Baltimore and Susquehanna, its successor the Northern Central, and the Baltimore and Ohio Railroad. Bridge engineering historians have documented the fact that James Milholland (or Mulholland) erected the earliest plate girder span in the United States on the Baltimore and Susquehanna Railroad in 1846 at Bolton Station, near present-day Mount Royal Station. The sides (web) and bottom flange of Milholland's 54-foot-long span were wholly of wrought iron and included a top flange reinforced with a 12x12-inch timber. Plates employed in the bridge were 6 feet deep and 38 inches wide, giving the entire bridge a total weight of some 14 tons. Milholland's pioneering plate girder cost \$2,200 (Tyrrell 1911:195). By December 31, 1861, the Northern Central Railroad, which succeeded the Baltimore and Susquehanna, maintained an operating inventory in Maryland of 50 or more bridges described simply as "girder" spans, in addition to a number of Howe trusses. Most of these were probably iron girder bridges; the longest were the 117-foot double-span bridge over Jones Falls and the 106-foot double-span girder bridge at Pierce's Mill (Gunnarson 1990:179-180).

As in the nation, girder bridge technology in Maryland was quickly adapted to cope with the increasingly heavy traffic demands of the twentieth century caused by automobile and truck traffic.

The 1899 Maryland Geological Survey report on highways noted that "there are comparatively few I-beam bridges, one of the cheapest and best forms for spans less than 25 or 30 feet" (Johnson 1899:206). Interestingly, the report also urged construction of a composite metal, brick, and concrete bridge, noting that "no method of construction is more durable than the combination of masonry and I-beams, between which are transverse arches of brick, the whole covered with concrete, over which is laid the roadway" (Johnson 1899:206). Whether any such bridges (transitional structures between I-beams and reinforced concrete spans) were built is unknown.

Official state and county highway reports—issued between 1900 and the early 1920s through the Highway Division of the Maryland Geological Survey and its successor, the State Roads Commission—generally do not reference or describe girder construction. An analysis of the current statewide listing of county and municipal bridges (a listing maintained by the State Highway Administration) reveals that 48 county bridges, out of the total of 141 approximately dated to "1900" by county engineers, were listed as steel girder, steel stringer, or variants of such terms. (It should be noted that the "1900" date is often given when no exact date is pinpointed for a bridge that is clearly old). A grand total of 200 bridges (including "steel culverts"), out of 550 bridges dated on the county list between 1901 and 1930, were described as steel beam, steel girder, or steel stringer and girder varieties. The total suggests that among the various highway bridge types built in the early twentieth century metal girder bridges in Maryland between 1900 and 1930 were second in popularity only to reinforced concrete bridges. However, these numbers must be interpreted with caution, as they do not necessarily include all county and municipal bridges.

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 is a potentially significant example of a metal girder bridge, possessing a high degree of integrity.

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 longitudinal rolled girders, concrete abutments and a concrete pier, and an identifying plaque.

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

This 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.



1. HA-1970
2. Old Pylesville Rd. over Broad Creek
3. Harford Co, MD
4. Caroline Hall
5. 3/97
6. MD SHPD
7. east parapet
8. 5 of 6

BRAU OCEK SIRCE

BUILT - 1926

STATE ROADS COMMISSION

JOHN W. MCKALL - Chairman

R. BENNETT BARRALL - Secretary

L. ROYCE - Treasurer

ED. J. ...

1. HA-1970

2

2. Old Pylesville Rd. over Broad Creek

3. Harford Co, MD

3

4. Caroline Hall

5. 3/97

6. MD SHPO

7. date plaque

8. 6 of 6



1. HA-1970
2. Old Pylesville Rd. over Branch Creek
3. Harford Co., MD
4. Caroline Hall
5. 3/97
6. MD SHPD
7. east side
8. 1 of 6



1. HA-1970
2. Old Pylesville Rd over Broad Creek
3. Harford Co, MD
4. Caroline Hall
5. 3/97
6. MD SHPO
7. roadway approach
8. 2 of 6



1. HA-1970
2. Old Pylesville Rd. over Broad Creek
3. Harford Co, MD
4. Caroline Hall
5. 3/97
6. MD SHPO
7. west side
8. 3 of 6

A black and white photograph of a road, possibly a bridge or a narrow road, with a weight limit sign on the right side. The sign is diamond-shaped and reads "WEIGHT LIMIT 11 TONS". The road is paved and has a concrete curb on the right. There are trees and utility poles in the background. The sky is overcast.

WEIGHT
LIMIT
11
TONS

1. HA - 1970

2. Old Pylesville Rd. over Broad Creek

3. Harford Co, MD

4. Caroline Hall

5. 3/97

6. MD SHPO

7. roadway approach

8. 4 of 6

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

Property/District Name: Old Pylesville Road over Broad Creek, Bridge #H-137,

Survey Number: #HA-1970

Project: Bridge Repairs Agency: HA Cnty. DPW

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)

Old Pylesville Road over Broad Creek, Bridge #H-137, (Broad Creek Bridge) in Harford County, is a 2-span rolled metal girder bridge with concrete abutments, wingwalls and a pier, and was constructed in 1928, according to the attached plaque by the State Roads Commission. It retains its original pigeon-hole parapets and identifying plaque. The Bridge is eligible for the National Register under criterion C because it retains its character defining elements (CDEs) which demonstrate the construction methods: rolled girders, concrete abutments and pier, an identifying plaque and a distinctive pierced parapet. While the bridge is clearly seventy years old, it retains a high degree of integrity.

Documentation on the property/district is presented in: Review and Compliance Files

Prepared by: Dan Svrjeck, P.E., HA Cnty DPW

Anne E. Bruder 2/25/98
Reviewer, Office of Preservation Services Date

NR program concurrence: yes no not applicable

Peter S. Kerity 3/2/98
Reviewer, NR program Date

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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 Adaptation

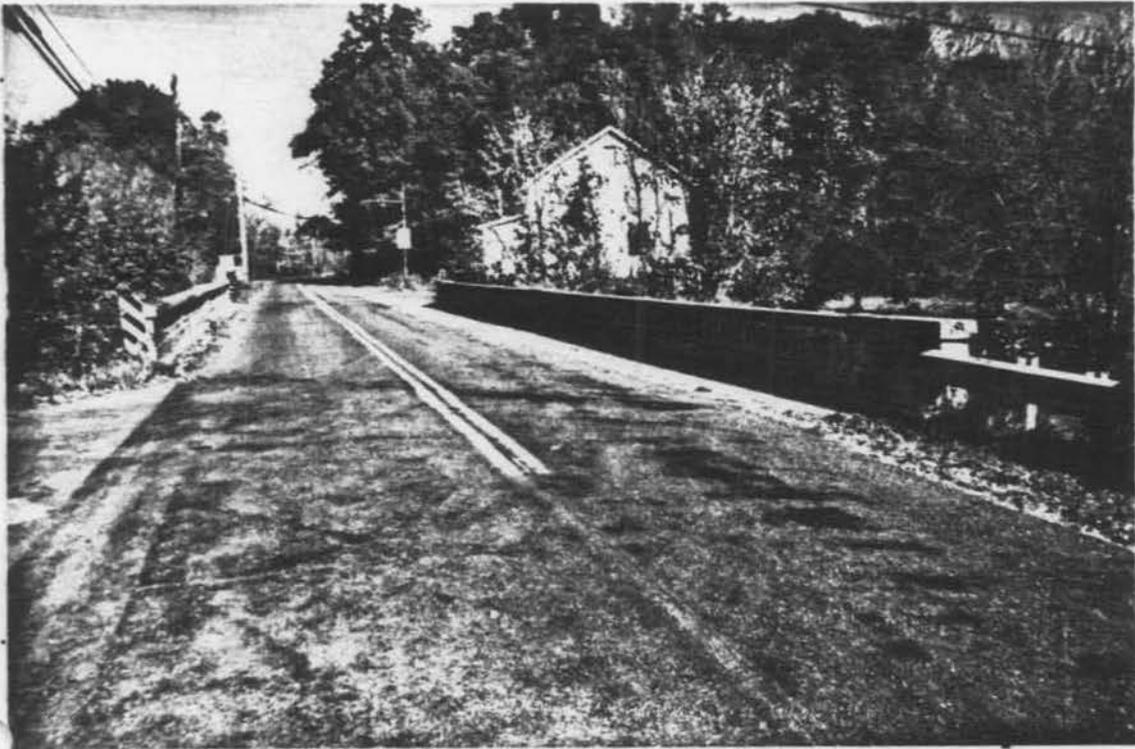
IV. Historic Period Themes:

- 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): Bridge, Transportation
Known Design Source: _____

BRIDGE #137 - OLD PYLESVILLE ROAD OVER BROAD CREEK



BRIDGE PLAN - LOOKING NORTH



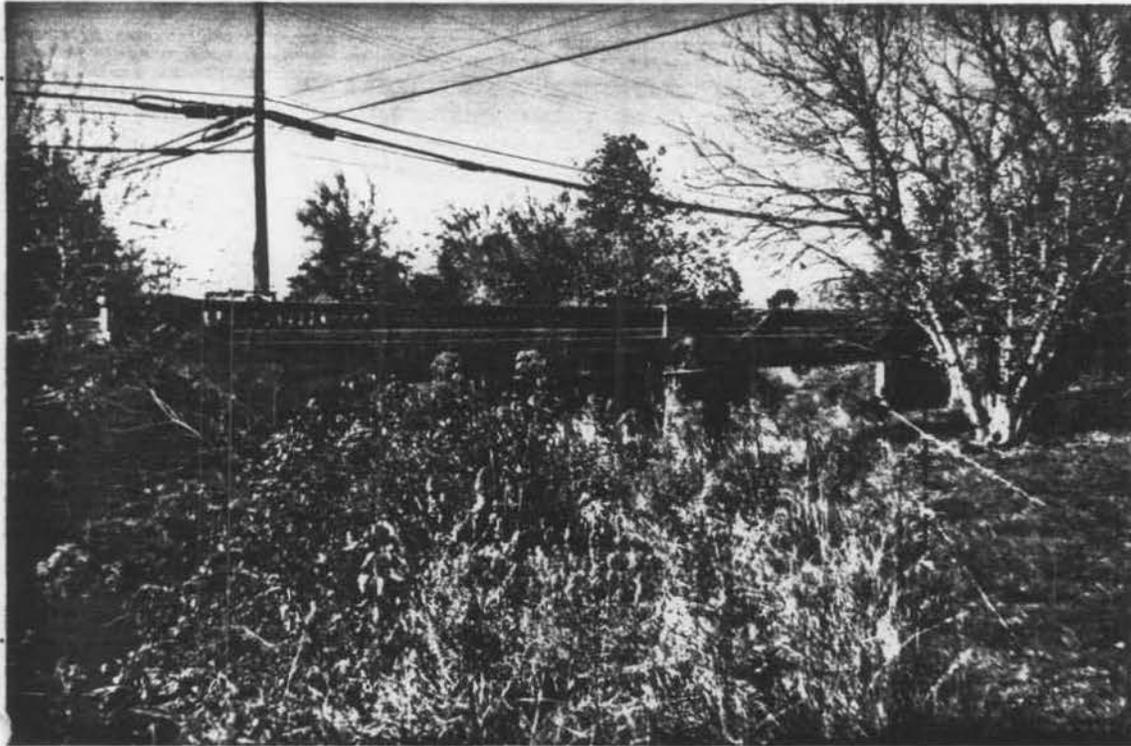
BRIDGE PLAN - LOOKING SOUTH

Bridge # 137

137

HA-1970

BRIDGE #137 - OLD PYLESVILLE ROAD OVER BROAD CREEK



BRIDGE ELEVATION - LOOKING UPSTREAM

Bridge #137

HA-1970

STATE HISTORIC Highway Bridges
 Bridge Type Metal Girder
 MHT # HA-1970
 Map North Harford Map # A-13
 County Harford
 Bridge # and name H-137/Old
Pylesville Road over Broad Creek

