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 ___X____ Eligibility Not Recommended _____

Criteria: ____A ____B ___X___C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments:_____

Reviewer, OPS: Anne E. Bruder_____ Date: 3 April 2001____

Reviewer, NR Program: Peter E. Kurtze_____ Date: 3 April 2001____

gmg

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No.** HA-1970
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

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 _____ **Retractile**_____ **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** _____

HA-1970

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 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 identifing 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.

HA-978

BIBLIOGRAPHY:

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

Gunnarson, Robert
1990 *The Story of the Northern Central Railway, From Baltimore to Lake Ontario.* Greenberg Publishing Co., Sykesville, Maryland.

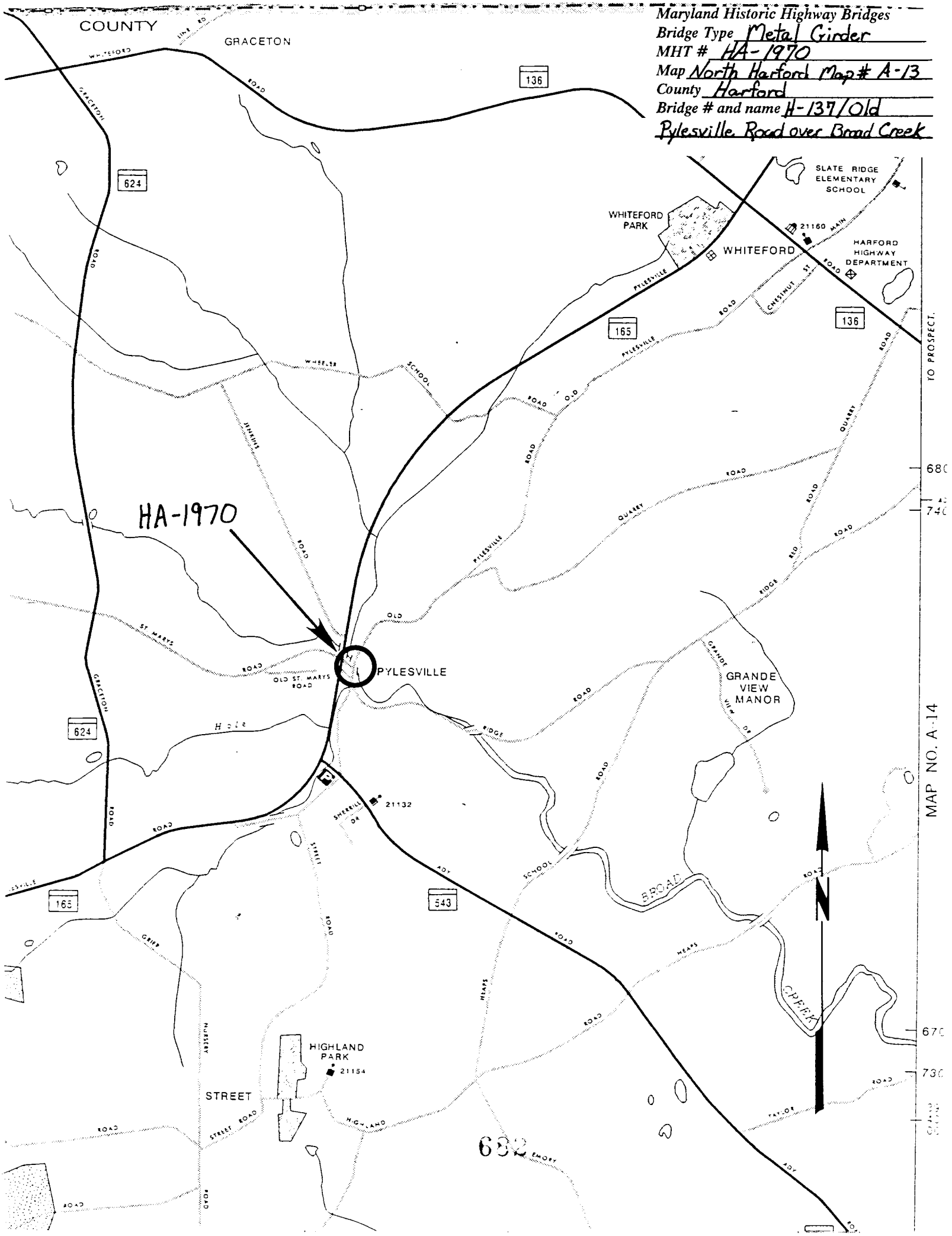
Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

Tyrrell, Henry G.
1911 *History of Bridge Engineering.* Published by author, Chicago.

SURVEYOR:

Date bridge recorded 2/25/97
Name of surveyor Caroline Hall
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1685 **FAX number** (410) 296-1670

Maryland 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



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

DC

1. HA-1978

2. Old Pylesville Rd. over Broad Creek

3. Harford Co., MD

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. MDSHPD
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-1470
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

WEIGHT
LIMIT
11
TONS

1. HA - 1970

2. Old Rylesville 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: X no ___ yes Name _____ Date _____

Eligibility recommended X Eligibility **not** recommended ____

Criteria: ___A ___B X 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 Naitonal 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: X yes ___ no ___ not applicable

Peter E. Kurtze — 3/2/98
Reviewer, NR program — Date

Survey No. HA-1970 ~~HA-1720~~

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)
__X__ 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
__X__ Industrial/Urban Dominance	A.D. 1870-1930
__X__ Modern Period	A.D. 1930-Present
_____ Unknown Period (___ prehistoric ___ historic)	

III. Prehistoric Period Themes:

_____ Subsistence
_____ Settlement
_____ Political
_____ Demographic
_____ Religion
_____ Technology
_____ Environmental Adaptation

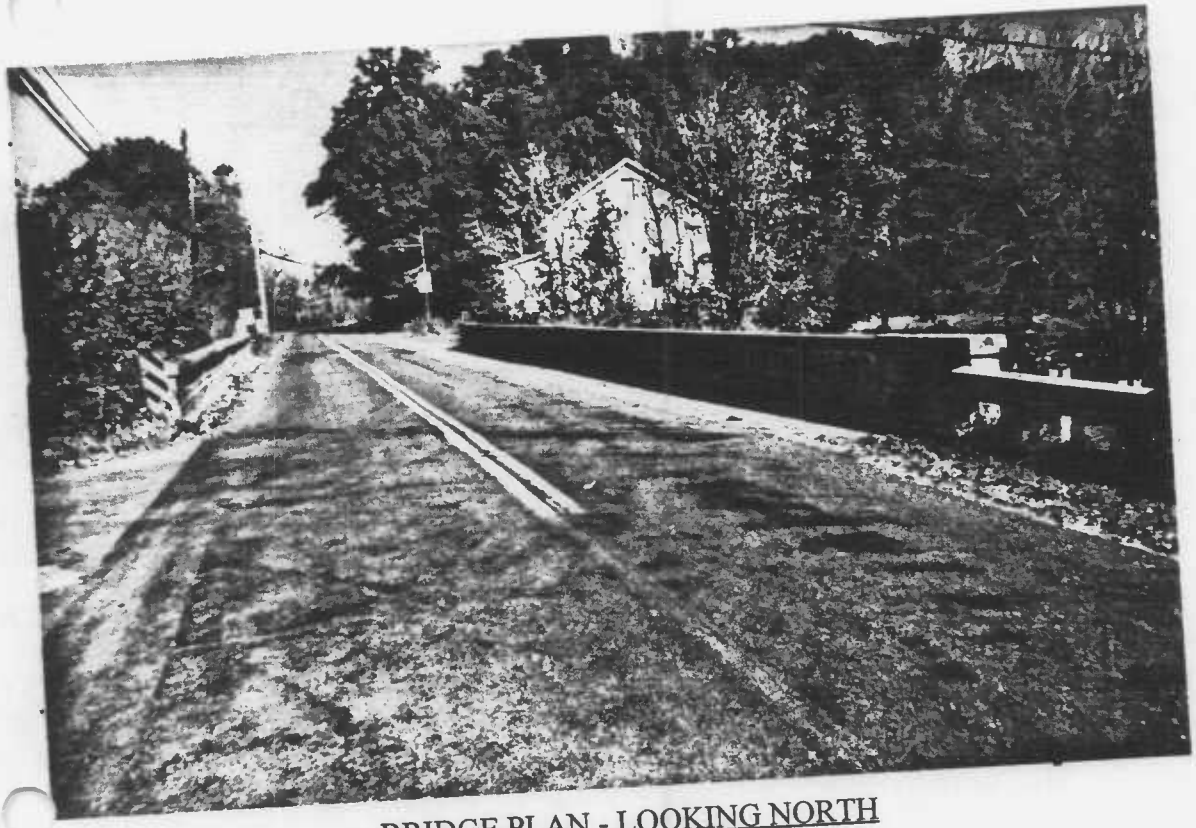
IV. Historic Period Themes:

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

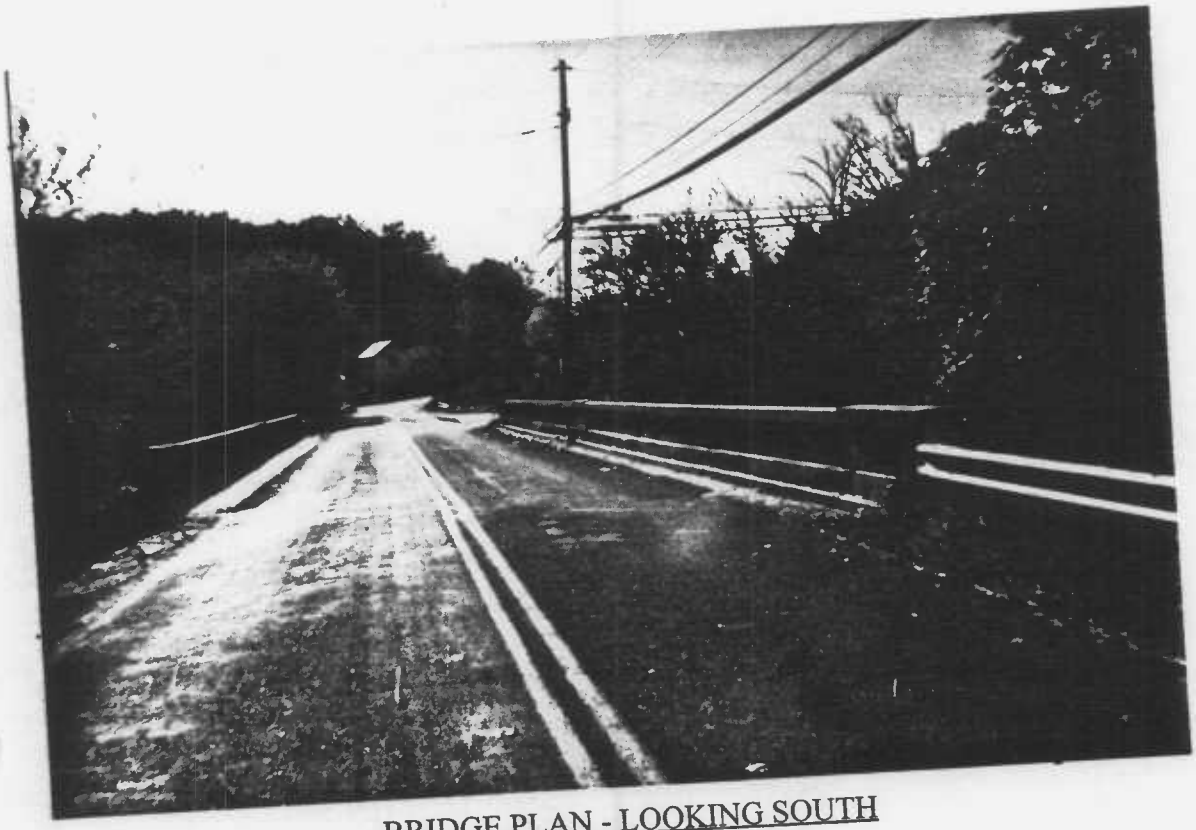
V. Resource Type:

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



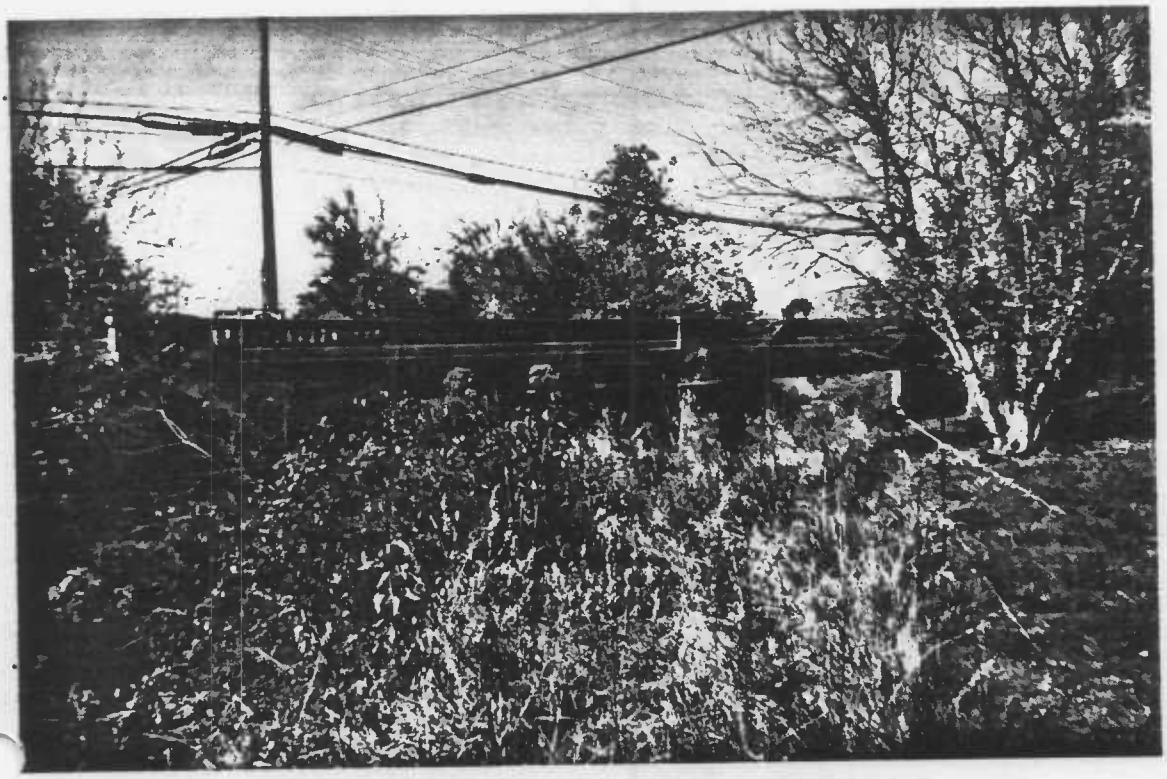
BRIDGE PLAN - LOOKING SOUTH

Bridge #

Bridge #

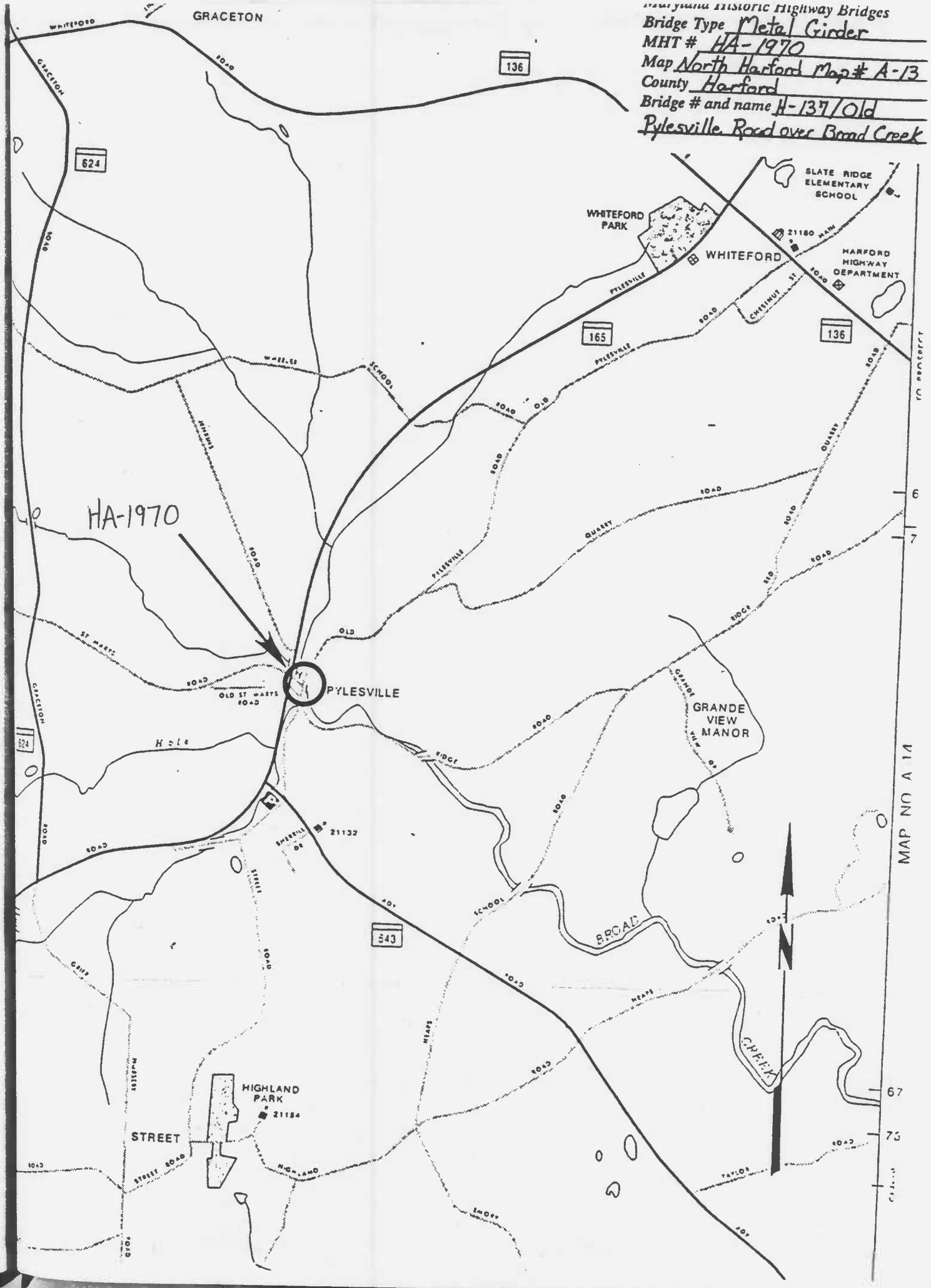
HA-1970

BRIDGE #137 - OLD PYLESVILLE ROAD OVER BROAD CREEK



BRIDGE ELEVATION - LOOKING UPSTREAM

Bridge #137

HA-1970

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