

Maryland Historical Trust

Maryland Inventory of Historic Properties number: HA-1870

Name: 17046/WD 165 over Branch of West Branch

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 _____	Eligibility Not Recommended <u>X</u>
Criteria: <u> </u> A <u> </u> B <u> </u> C <u> </u> D	Considerations: <u> </u> A <u> </u> B <u> </u> C <u> </u> D <u> </u> E <u> </u> F <u> </u> G <u> </u> 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>

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

MHT No. HA-1870

SHA Bridge No. 12046 Bridge name MD 165 over Branch of West Branch

LOCATION:

Street/Road name [facility carried] MD 165

City/town Putnam 1 mi N of intersection of MD165 & MD152 Vicinity X

County Harford

This bridge projects over: Road Railway Water X Land

Ownership: State X County Municipal Other

HISTORIC STATUS:

Is 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 :

Rolled Girder Rolled Girder Concrete Encased

Plate Girder Plate Girder Concrete Encased

Metal Suspension

Metal Arch

Metal Cantilever

Concrete X:

Concrete Arch Concrete Slab X Concrete Beam Rigid Frame

Other Type Name

DESCRIPTION:

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

Describe Setting: Bridge 12046 carries MD 165 in a north-south direction over a branch of West Branch which flows in an easterly direction. The bridge is in an area of farmland with some residential encroachment.

Describe Superstructure and Substructure:

Bridge 12046 is a single span concrete slab bridge built to the SHA 1930 standard design, with a span of 20.0 feet, an overall length of 26.5 feet, and a clear roadway width is 27.3 feet. The deck is reinforced concrete, the abutment and wingwalls are concrete, and the parapets are open concrete and integral to the deck. The SW and NE wingwalls flare at approximately 20 degrees to the centerline of the bridge whereas the NW and SE wingwalls parallel the face of the abutments. The crossing has a skew of 60 degrees. The bridge is not posted.

Discuss Major Alterations:

The bridge underwent major repairs in 1994. The wingwalls, the underside of the deck, and the abutments were all repaired with pneumatically applied mortar. The parapets have guardrails fixed to the front of them.

WHEN was bridge built (actual date or date range) _____ 1931 _____

This date is: Actual **X** Estimated _____

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

Other (specify) S.H.A. INSPECTION REPORT.

WHY was the bridge built?

The need for a more efficient transportation network and increased load capacity in the decades following World War I.

WHO was the designer?

State Highway Administration

WHO was the builder?

State Highway Administration

WHY was the bridge altered?

The bridge was altered due to structural needs and safety considerations.

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

As part of an effort by the State to increase load capacity on secondary roads during the 1930s.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events _____ B- Person _____

C- Engineering/architectural character _____

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

Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S.

attempt to standardize concrete design specifications came in 1903-04 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's road and bridge improvement programs mirrored economic cycles. The first road improvement program 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 to 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 become inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930s. Most improvements to local roads waited until the years after World War II.

With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer stated in 1906, "The general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do away with the further expense of the maintenance of expensive and dangerous wooden structures". Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

The creation of standard plans and a description of their use was first announced in the 1912-15 Reports of the State Roads Commission whereby bridges spanning up to 36 feet were to use standardized designs.

Published on a single sheet, the 1912 Standard Plans included those structures that were amenable to such an approach: slab spans, (deck) girder spans, box culverts, box bridges, abutments, and piers (State Roads Commission 1912). Slab spans, with lengths of 6 to 16 feet in two foot increments, featured a solid parapet that was integrated into the slab, with a roadway of 22 feet.

In the Report for the years 1916-1919, a revision of the standard plans was noted:

During the four years covered by this report, it has been found necessary to revise our standard plans for culverts and bridges, to take care of the increased tonnage which they have been forced to carry. Army cantonments...increased their operations several hundred per cent, and the brunt of the enormous truck traffic resulting therefrom, was borne by the State Roads of Maryland. In addition to these war activities, freight motor lines from Baltimore to Washington, Philadelphia, New York, and various points throughout Maryland, and the weight of many of these trucks when loaded, was in excess of the loads for which our early bridges were designed (State Roads Commission 1920:56).

Published on separate sheets, the new standard plans (State Roads Commission 1919) for slab bridges reveal that the major changes was an increase in roadway width from 22 feet to 24 feet and a redesign of the reinforcement. The slab spans continued to feature solid parapets integrated into the span. The range of span lengths remained 6 to 16 feet, but the next year (1920) witnessed the issue of a supplemental plan for a 20 foot long slab span (State Roads Commission 1920).

The 1924 standard plans remained in effect until 1930, when the roadway width for all standard plan bridges was increased to 27 feet in order to accommodate the increasing demands of automobile and truck traffic (State Roads Commission 1930). The range of span lengths remained the same, but there were some changes designed to increase load bearing capacities. The reinforcing bars were increased in thickness. Visually, the 1930 design can be distinguished from its predecessors by the pierced concrete railing that was introduced at this time.

Three years later, in 1933, a new set of standard plans was introduced (State Roads Commission 1933). This time, their preparation was not announced in the Report; new standard plans were by this time nothing special - they had indeed become standard. Once again accommodating the ever-increasing demands of traffic, the roadway width was increased, this time to 30 feet. The slab span's reinforcing bars remained the same diameter but were placed closer together to achieve still more load bearing capacity.

A system of standard nomenclature for plans was introduced at this time: span type was indicated by a two-letter designator followed by span length and the year of the plan. Thus, CS-18-33 indicates an 18 foot concrete slab of the 1933 standard plan design; CG-36-33 was a 36 foot concrete girder (T-beam) of the same year. The inclusion of the year designator gave ready access to design details for each bridge and indicates that the State Roads Commission anticipated revisions to standard plans.

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?

No, the construction of this bridge had no known impact on the growth and development of the 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?

This area is not eligible for historic designation.

Is the bridge a significant example of its type?

No, this bridge is an undistinguished example of its type.

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

Yes, this bridge retains integrity of its character defining elements.

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

No, this bridge is not a significant example.

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

No, further evaluation of this bridge is not necessary.

14A-1870

BIBLIOGRAPHY:

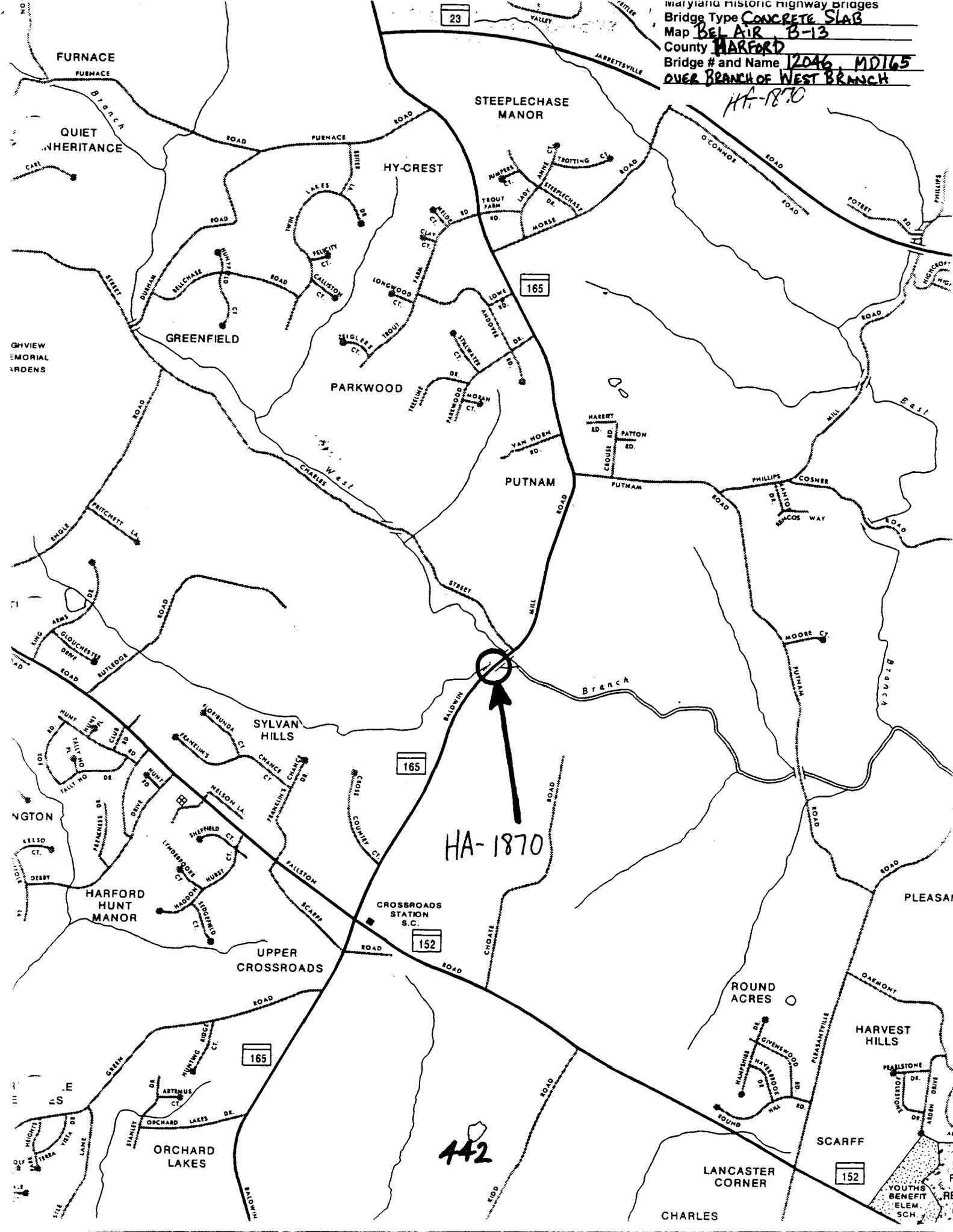
County inspection/bridge files _____ SHA inspection/bridge files X
Other (list):

SURVEYOR:

Date bridge recorded 08/09/95
Name of surveyor Colin Farr
Organization/Address P.A.C. Spero & Company, Suite 412, 40 West Chesapeake Ave., Baltimore, MD 21204
Phone number (410) 296-1635 FAX number (410) 296-1670

Maryland historic highway bridges
Bridge Type CONCRETE SLAB
Map BEL AIR B-13
County HARFORD
Bridge # and Name 12046 MD165
OVER BRANCH OF WEST BRANCH

HA-1870



HA-1870

442



HA-1870

HARFORD COUNTY, MD

JOHN TARQUINIO

25 JAN 1995

~~MARYLAND SHPO SITE~~

- STATE BRIDGE NO. 12046 OVER
WEST BRANCH
- VIEW LOOKING NORTH ON
MD ROUTE 165

1/4



HA 1870
HARFORD COUNTY, MD

JOHN TARQUINIO

25 JAN 1995

~~MARYLAND SHPD~~ SHA

- STATE BRIDGE NO 12096 OVER
WEST BRANCH
- VIEW LOOKING SOUTH ON
MD ROUTE 165

2/4



HA-1870

HARFORD COUNTY, MD

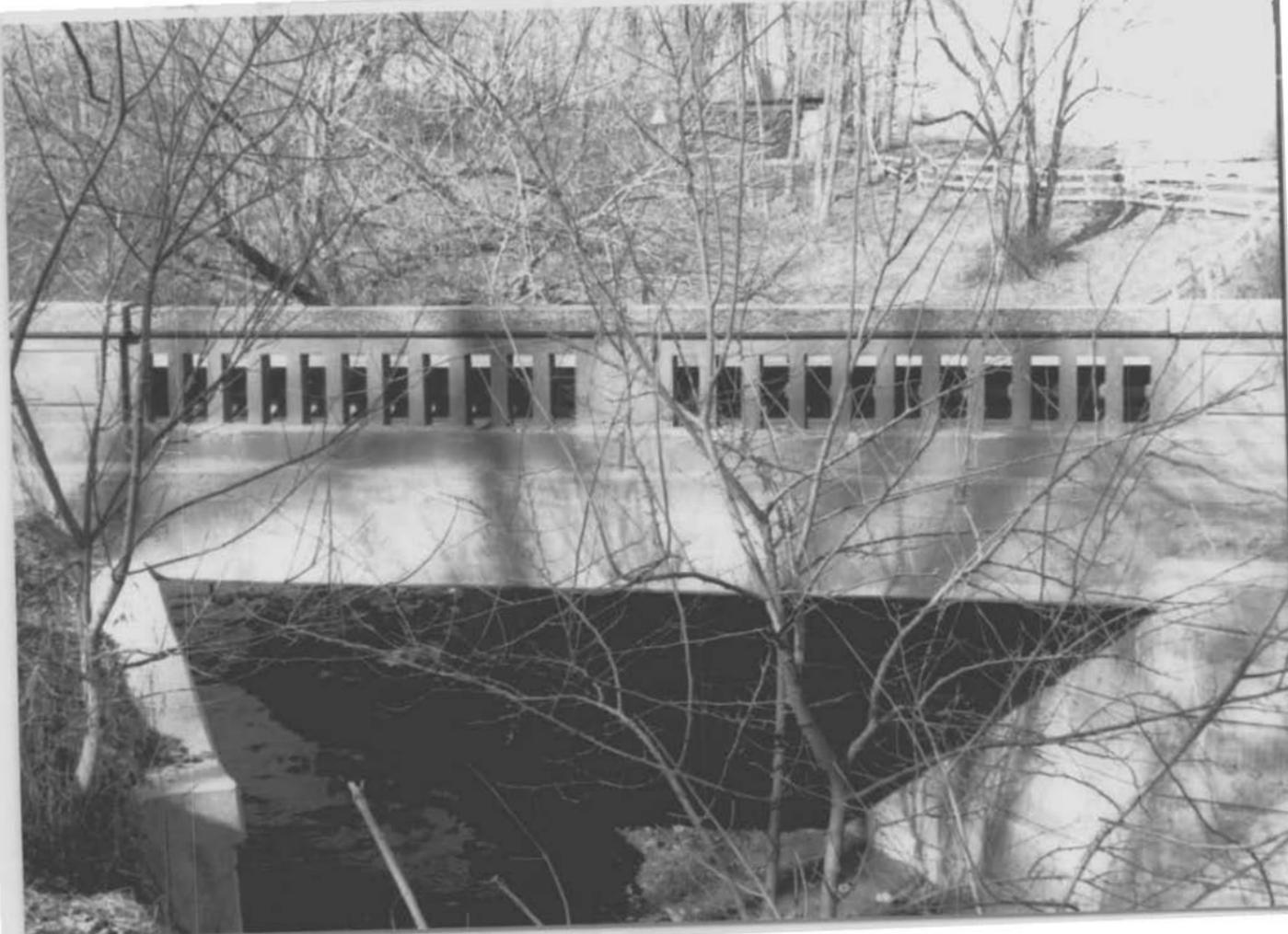
JOHN TARQUINIO

25 JAN 1995

~~MARYLAND SHPO SHA~~

- STATE BRIDGE NO. 12046 OVER
WEST BRANCH
- VIEW LOOKING EAST

3/4



HA-1870

HARFORD COUNTY, MD

JOHN TARQUINIO

25 JAN 1995

~~MARYLAND SHPO SHA~~

- STATE BRIDGE NO. 12046 OVER
WEST BRANCH
- VIEW LOOKING WEST

4/4

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

HA-1870

Property Name: Bridge 12046

Address: MD 165 over Branch of West Branch, Harford County, Maryland

Owner: SHA

Tax Parcel Number: N/A

Tax Map Number: N/A

Project: No. HA 178A21 and HA 179A21

Agency: SHA

Site visit by SHA Staff: no yes Name _____

Date N/A

Eligibility recommended No

Eligibility not recommended X

Criteria: A B C D

Considerations: A B C D E F G None

Is property located within a historic district? X no ___ yes Name of district:

Is district listed? N/A no ___ yes Documentation on the property/district is presented in: Historic Bridge Inventory

Description of Property and Eligibility Determination

This structure is not eligible for listing in the National Register individually as a bridge due to lack of integrity. This structure underwent major repairs in 1994. The wingwalls, the underside of the deck, and the abutments were all repaired with pneumatically applied concrete. The parapets have guardrails fixed to the front of them. It is a single span concrete slab bridge built to the SHA 1930 standard for concrete slab construction.

Prepared by: SHA Architectural and Bridge Historian Rita M. Suffness,

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended _____	Eligibility not recommended <u>X</u>
Criteria: <u>A</u> <u>B</u> <u>X</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, Office of Preservation Services	<i>[Signature]</i>
Date	<i>[Signature]</i>
_____ Reviewer, NR program	<i>[Signature]</i>
Date	8/23/00

**PRESERVATION VISION 2000; THE MARYLAND PLAN
STATEWIDE HISTORIC CONTEXTS**

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:

- 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. Historic Period Themes:

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

IV. Resource Type:

Category: Structure

Historic Environment: Rural

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

Known Design Source: SHA

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MHT No. HA-1870

SHA Bridge No. 12046 Bridge name MD 165 over Branch of West Branch

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Street/Road name [facility carried] MD 165

City/town Putnam 1 mi N of intersection of MD165 & MD152 Vicinity X

County Harford

This bridge projects over: Road Railway Water X Land

Ownership: State X County Municipal Other

HISTORIC STATUS:

Is 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

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DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X

Describe Setting: Bridge 12046 carries MD 165 in a north-south direction over a branch of West Branch which flows in an easterly direction. The bridge is in an area of farmland with some residential encroachment.

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This date is: Actual X Estimated _____

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

Other (specify) S.H.A. INSPECTION REPORT.

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Is the bridge a significant example of its type?

No, this bridge is an undistinguished example of its type.

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

Yes, this bridge retains integrity of its character defining elements.

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

No, this bridge is not a significant example.

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

No, further evaluation of this bridge is not necessary.

HA-1279

BIBLIOGRAPHY:

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

SURVEYOR:

Date bridge recorded 08/09/95

Name of surveyor Colin Farr

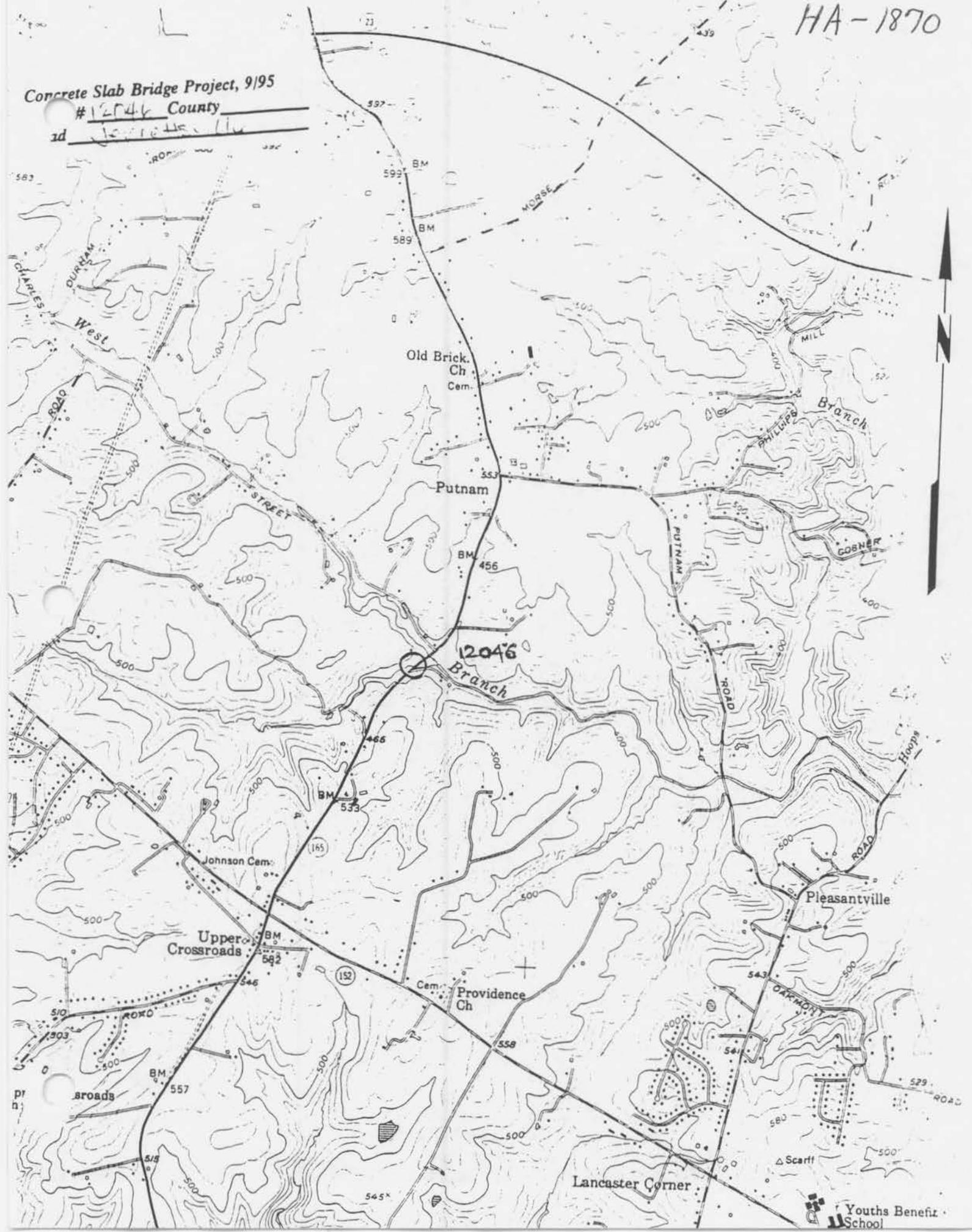
Organization/Address P.A.C. Spero & Company, Suite 412, 40 West Chesapeake Ave., Baltimore, MD 21204

Phone number (410) 296-1635

FAX number (410) 296-1670

HA-1870

Concrete Slab Bridge Project, 9195
#12046 County
rd 12046





HA-1870

Bridge # 12046

MD 165 over Branch of West Branch

1 of 2



HA-1870

Bridge #12046

MD165 over Branch of West Branch

2 of 2