Maryland Historical Trust

Maryland Inventory of Historic Properties number: BA 2666

Name: #3037/US40 over Whitemarsh Run

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 ____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

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MARYLAND INVENTORY OF HISTORIC PROPERTIES **MHT NO. BA-2666**
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST

NAME AND SHA NO.: 3037

LOCATION
Road Name and Number: US 40 over Whitemarsh Run
City/Town: Whitemarsh X vicinity
County: Baltimore

Ownership: X State _ County _ Municipal _ Other

Bridge projects over: _ Road _ Railway X Water _ Land

Is bridge located within designated district?: _ yes X no
___ NR listed district _ NR determined eligible district
___ locally designated _ other
Name of District _

BRIDGE TYPE

__ Timber Bridge
__ Beam Bridge __ Truss-Covered __ Trestle __ Timber-and-Concrete

__ Stone Arch Bridge

__ Metal Truss Bridge

__ Moveable Bridge
__ Swing __ Bascule Single Leaf __ Bascule Multiple Leaf
__ Vertical Lift __ Retractile __ Pontoon

__ Metal Girder
__ Rolled Girder __ Rolled Girder Concrete Encased
__ Plate Girder __ Plate Girder Concrete Encased

__ Metal Suspension

__ Metal Arch

__ Metal Cantilever

X Concrete
_ Concrete Arch _ Concrete Slab X Concrete Beam _ Rigid Frame
_ Other Type Name __

DESCRIPTION

Describe the Setting:

Situated in part of Maryland's Tidewater physiographic zone, Bridge 3037 carries US 40 over Whitemarsh Run in southeastern Baltimore County. The road traverses the relatively level topography in a northeast-southwest fashion while Whitemarsh Run generally flows southerly. Although properties immediately surrounding the bridge feature woodland, nearby sections adjacent to US 40 possess mixed residential and commercial development primarily dating from the twentieth century.

Describe the Superstructure and Substructure:
(Discuss points identified in Context Addendum, Section C)

Bridge 3037 consists of a single, concrete-beam span measuring 34-feet in total length and providing a roughly 28-feet long clear span. The bridge carries approximately 80 feet of clear roadway composed of two northbound and two southbound traffic lanes on a bituminous concrete wearing surface atop a concrete deck. A concrete Jersey barrier separates the opposing traffic lanes while w-beam guard rails protect the approaches. Concrete balustrades enframe the roadway. Concrete abutments and wing walls support the span.

Cracking surfaces, spalled concrete and exposed reinforcing members characterize the bridge's current condition according to recent inspection reports. Girders exhibit longitudinal and random cracks as well as severe spalling extending back to and behind rebars. Spalling on girder G6 is especially severe with a 15-foot section of rebar exposed along its south and bottom faces. G6's north face also displays a six-foot long by eight-inch high spalled area with exposed rebar. The bridge's balustrades possess fine random cracks, surface erosion and scaling. A diagonal crack and spall extends along the entire height of the southwest wing wall. The east abutment has an open one-inch diagonal crack.

A survey of historic concrete beam bridges undertaken by the Maryland State Highway Administration in the Fall of 1995 identified 113 bridges of that type located throughout the state. Slightly more than two-thirds (76) of that total were single-span bridges.

Discuss major alterations:

Scouring actions created by Whitemarsh Run resulted in the construction of a concrete floor under the south side of the span during the 1940s. The floor was later undermined in 1979 but underpinned by the application of grontite mortar and bagpipe grontainers anchored by steel dowels. Rip-rap also was placed to help reduce scouring. Recent photographs indicate a fish ladder has been constructed along the east abutment and wing walls.

HISTORY

When Built: 1935
Why Built: Initial construction of New Philadelphia Road, now US 40.
Who Built: State Roads Commission
Who Designed: Unknown.
Why Altered: Undermining of the southern abutments and wing walls by scouring action of Whitemarsh Run.
Was this bridge built as part of an organized bridge building campaign?: Yes.

During the early 1930s, the State Roads Commission built a 30-mile, dual-lane divided highway linking Baltimore and Aberdeen. Designed to alleviate traffic congestion along the much-traveled Philadelphia Road (current MD 7) tracing much of the original, Colonial era road between Baltimore and Philadelphia, the New Philadelphia Road became Maryland's principal new construction effort of the 1930s. Erected on an entirely new alignment bypassing established towns and railroad crossings, the New Philadelphia Road became known as the Pulaski Highway and now forms part of current US 40. Bridge 3037 formed part of the Baltimore-Aberdeen section of the New Philadelphia Road.

SURVEYOR ANALYSIS

This bridge may have NR significance for association with:

X A (Events) _ B (Person) _ C (Engineering/ Architectural Character)

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

Erected in 1935, Bridge 3037 formed part of the New Philadelphia Road built in response to increased automobile use on state roads and the growing inadequacy of the original road system improved by the State Roads Commission (SRC) to handle larger traffic volumes. The SRC's major building effort during the 1930s, and one of the first on a new alignment designed to bypass towns and railroads slowing traffic movement, construction of the road marked a transition from the improvement of earlier roads and turnpikes characterizing the SRC's operations during the early twentieth century to an organization of highway and transportation planners.

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?

Construction of the New Philadelphia Road provided entry to previously less-accessible areas of southeastern Baltimore and Harford counties and had a significant impact on the area's subsequent development. Bridge 3037 participated in this general trend.

Is the bridge located in an area which may be eligible for historic designation, and would the bridge add or detract from the historic and visual character of the possible district?

Bridge 3037 may contribute to a potential historic district encompassing resources related to development along US 40 after construction of the New Philadelphia Road.

Is the bridge a significant example of its type?

Although probably an elaboration of 1933 standard specifications for concrete girder bridges, this bridge is not a good example of its type.

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

This bridge possesses fair integrity of its character defining elements. Sections of many of the bridge's girders and balusters possess deep spalling with exposed reinforcing members, surface erosion and scaling. In addition, the abutments and wing walls display cracking and surface erosion.

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

Patterned after one the State Roads Commission's 1933 standard specifications, Bridge 3037 documents a somewhat common bridge type and is not a significant example of the organization's bridge building.

Should this bridge be given further study before significance analysis is made, and why?

Yes. Further study may indicate whether a linear historic district encompassing resources associated with the original construction of the New Philadelphia Road during the early 1930s and the surrounding area's subsequent development exists. Bridge 3037 may contribute to this potential historic district.

BIBLIOGRAPHY

Maryland State Highway Administration

As-Built Drawings. On file at 707 North Calvert Street, Baltimore.

Bridge Contract Files. On file at 707 North Calvert Street, Baltimore.

Bridge Inspection Reports. On file at 707 North Calvert Street, Baltimore.

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

1994 *Historic Bridges in Maryland: Historic Context Report*. Maryland State Highway Administration, Baltimore.

State Roads Commission of Maryland

1934 *Report of the State Roads Commission of Maryland. Operating Report for the Years 1933 - 1934*. Baltimore.

1958 *A History of Road Building in Maryland*. Baltimore.

SURVEYOR INFORMATION

Name: Stuart Paul Dixon
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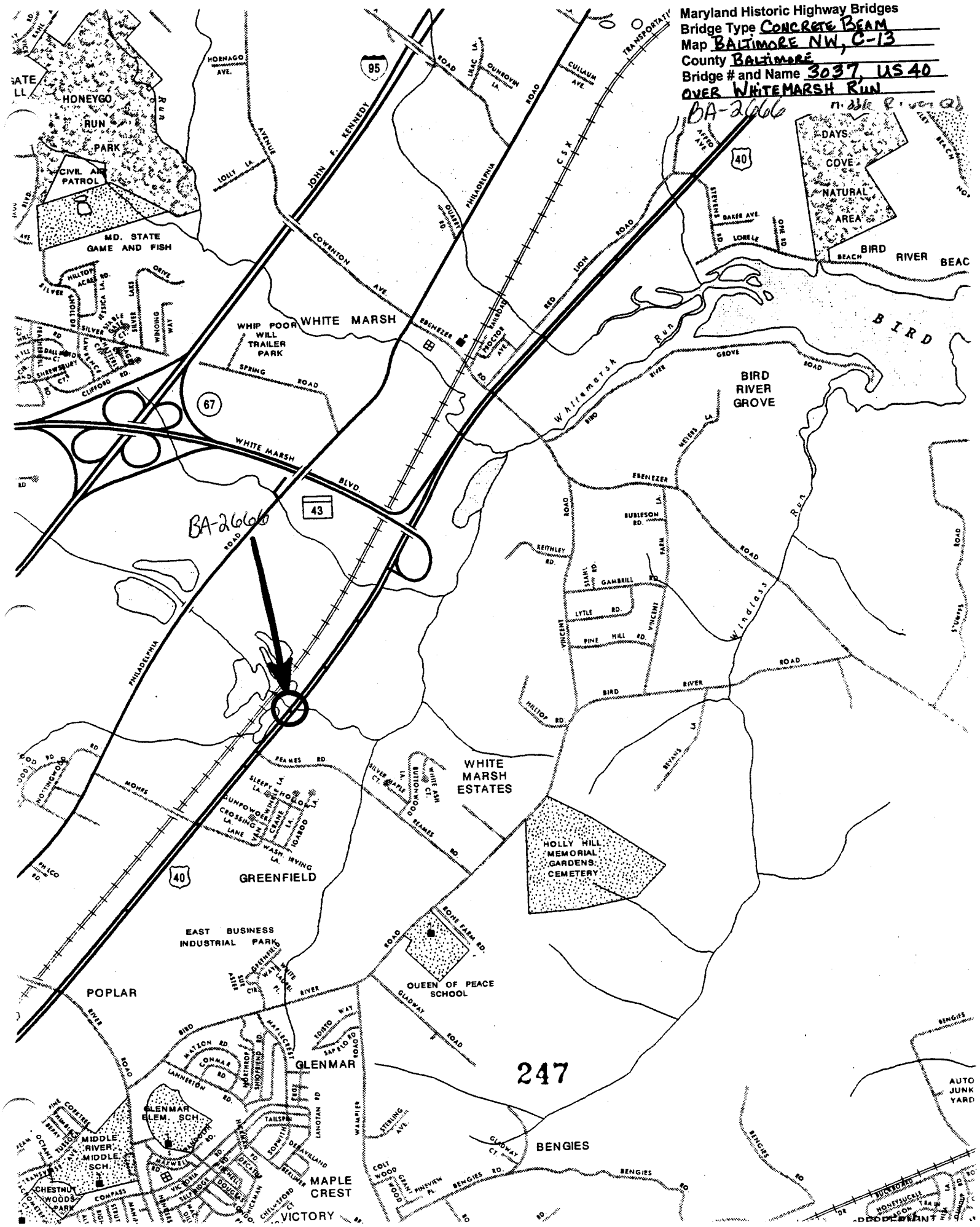
Maryland Historic Highway Bridges
Bridge Type CONCRETE BEAM
Map BALTIMORE NW, C-13
County BALTIMORE
Bridge # and Name 3037, US 40
OVER WHITEMARSH RUN

BA-2666



Inventory # BA-2666

Name 3037-4540 OVER WHITEMARSH RUN

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description WEST APPROACH LOOKING EAST

Number 1 of 4

Inventory # BA-2666

Name 3037 - US40 OVER WHITEMARSH RUN

County/State BALTIMORE COUNTY / MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description NORTH ELEVATION LOOKING SOUTH

Number ~~10~~ 2 of ~~39~~ 4

Inventory # BA-2666

Name 3037- US 40 OVER WHITEMARSH RUN

County/State BALTIMORE COUNTY / MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description SOUTH ELEVATION LOOKING NORTHWEST

Number ~~11~~ 3 of ~~37~~ 4

Inventory # BA-2666

Name 3037-US 40 OVER WHITEMARSH RUN

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description EAST APPROACH LOOKING WEST

Number ~~12~~ 4 of ~~39~~ 4