

Maryland Historical Trust

Maryland Inventory of Historic Properties number: B-4536

Name: BC-3402/ECHODALE AVE. OVER HERRING 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.

<b>MARYLAND HISTORICAL TRUST</b>	
Eligibility Recommended <u>  X  </u>	Eligibility Not Recommended <u>      </u>
Criteria: <u>  A  </u> <u>  B  </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, OPS: <u>Anne E. Bruder</u>	Date: <u>  3  </u> April 2001 <u>      </u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>  3  </u> April 2001 <u>      </u>

*Ans*

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

MHT No. B-4536

SHA Bridge No. BC-3402 Bridge name Echodale Avenue over Herring Run

**LOCATION:**

Street/Road name and number [facility carried] Echodale Avenue

City/town Baltimore Vicinity \_\_\_\_\_

County \_\_\_\_\_

This bridge projects over: Road \_\_\_\_\_ Railway \_\_\_\_\_ Water X Land \_\_\_\_\_

Ownership: State \_\_\_\_\_ County \_\_\_\_\_ Municipal X 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 \_\_\_\_\_ Concrete Beam \_\_\_\_\_ Rigid Frame X \_\_\_\_\_

Other \_\_\_\_\_ Type Name \_\_\_\_\_

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**DESCRIPTION:**

**Describe Setting:**

Bridge BC-3402 carries four lanes of traffic on Echodale Avenue over Herring Run in the city of Baltimore. Echodale Avenue runs in a west-east direction and Herring Run flows north-to-south at this location. There are two baseball fields near the southwest side of the bridge. On the east side of the stream there is a residential neighborhood. There is also a small office building in the area. The stream is surrounded by woods. There are storm drain pipes that outfall on both the east and west sides near the bridge wingwalls.

**Describe Superstructure and Substructure:**

Bridge BC-3402 is a single span concrete rigid frame with a length of 56'-0". The deck is reinforced concrete with a bituminous wearing surface, which provides approximately 32'-0" of clear roadway width between curbs. There are 5'-0" wide sidewalks along each side of the bridge. The bridge railing consists of an ornamental reinforced concrete balustrade. The substructure consists of two reinforced concrete abutments and flared wingwalls. Along the east embankment there is concrete slope protection against a stone retaining wall parallel to the stream. Along the west side there is a walkway along the west abutment with a pierced balustrade similar to that of the deck.

**Discuss Major Alterations:**

Portions of the sidewalk have been replaced, but no major alterations have been made to the bridge.

**HISTORY:**

**WHEN** was bridge built (actual date or date range) 1940

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

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

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

**WHY** was bridge built? local transportation needs

**WHO** was the designer [Baltimore City] Bureau of Highways

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

**WHY** was bridge altered? [check N/A  if not applicable]

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

This bridge was built by Baltimore City 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

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Was bridge constructed in response to significant events in Maryland or local history? No  Yes   
If yes, what event?

This bridge was built during the 1930s as part of the Good Roads Movement during the period.

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

By providing a reliable crossing, as all concrete bridges did, this bridge promoted small-scale residential and commercial development along Echodale Avenue and other thoroughfares that fed into it.

Is the bridge located in an area which may be eligible for historic designation? No  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

Concrete bridges are the largest component of Maryland's historic bridges. Their numbers reflect how quickly they became popular after their introduction to the state and the country at the opening of the twentieth century. Many in Maryland are purely functional structures, but their plastic nature made them amenable to graceful curves and ornamental parapets that reflected the influence of the City Beautiful movement during the first part of the twentieth century. The versatility and strength of reinforced concrete bridges, along with their plasticity, made them the preferred choice for bridges by state and county highway departments in Maryland and throughout the country in the 1910s. The standard plans of the State Roads Commission of the teens, twenties, and thirties made their use almost universal during that period.

While concrete bridges as a whole are very common in Maryland, reinforced concrete rigid frame bridges make up one of the smallest groups of historic bridge types in the state. There are probably only about a dozen such structures standing in the state under county or state control that were erected prior to 1945. The rigid frame bridge, unlike other reinforced concrete spans, is monolithic. It is characterized by a superstructure and substructure, including abutments, designed as a continuous unit. (Concrete balustrades, cast afterwards, are not part of the monolithic design.) The rigid frame was an important engineering advance for reinforced concrete bridges. It was developed by German engineers and Brazilian Emilio Baumgart around 1920, and introduced to the United States primarily through the efforts of New York engineer Arthur G. Hayden in 1922-1923.

Concrete rigid frame bridges became increasingly popular in the 1930s and 1940s. It was during this period that Maryland's few examples of the type were erected. These include bridges 1030 (1937, 1992) in Allegany County; BC-1406 (1938) and BC-3402 (1940) in Baltimore City; 5013 (1936) in Caroline County (1936); 6031 (1934) in Carroll County; 10058 (1941) in Frederick County; 11018 (1937) in Garrett County; 13032 (1939) in Howard County; 21013 (1941), 21015 (1936), and 21016 (1936) in Washington County; and WO-801 (c.1930) in Worcester County. These bridges generally have one or two spans of between 30 and 60 feet; the longest, BC-1406, measures 68 feet. With the exception of WO-801, the history of which remains clouded, they were built by the state or the city of Baltimore.

This bridge falls within the 1910-1940 period of significance for concrete bridges, during which reinforced concrete bridge construction was increasingly standardized in the state and particular subtypes, including the rigid frame, were introduced to the state road network.

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

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Is bridge a significant example of work of manufacturer, designer and/or engineer? No X Yes     

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

It is believed that no further research is necessary to determine the eligibility of this bridge for listing in the National Register. It should be compared with the other concrete rigid frame bridges listed above and a determination should be made whether all of them (excluding 1030 in Allegany County, 13032 in Howard County, and WO-081 in Worcester County, which have lost their integrity) are eligible to the Register because of their rarity and/or good representation of the type, or just the best examples. Additional research, however, 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 Maryland State Highway Administration.

Condit, Carl. *American Building*. Chicago: University of Chicago Press, 1968.

County survey files of the Maryland Historical Trust.

Greiner Inspection Reports

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.

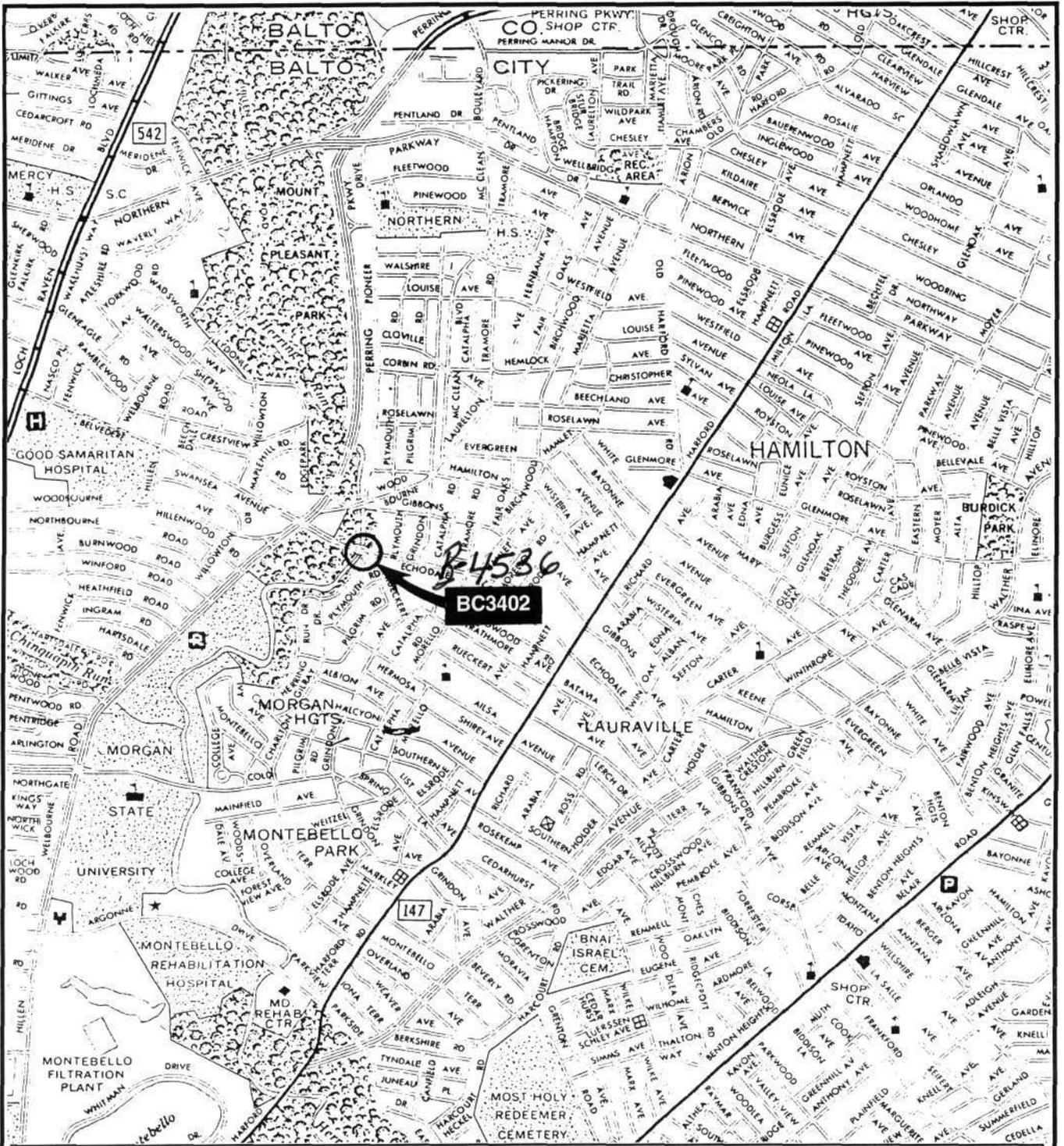
**SURVEYOR/SURVEY INFORMATION:**

Date bridge recorded 1/24/95

Name of surveyor Brandi Carr/Tim Schoen/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

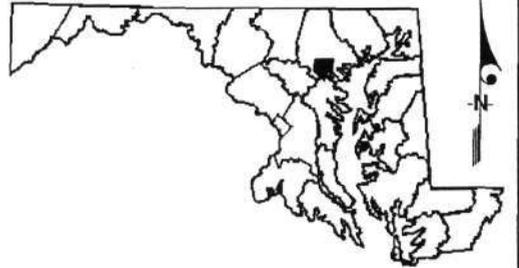


**Baltimore City - Bridge Number BC3402**

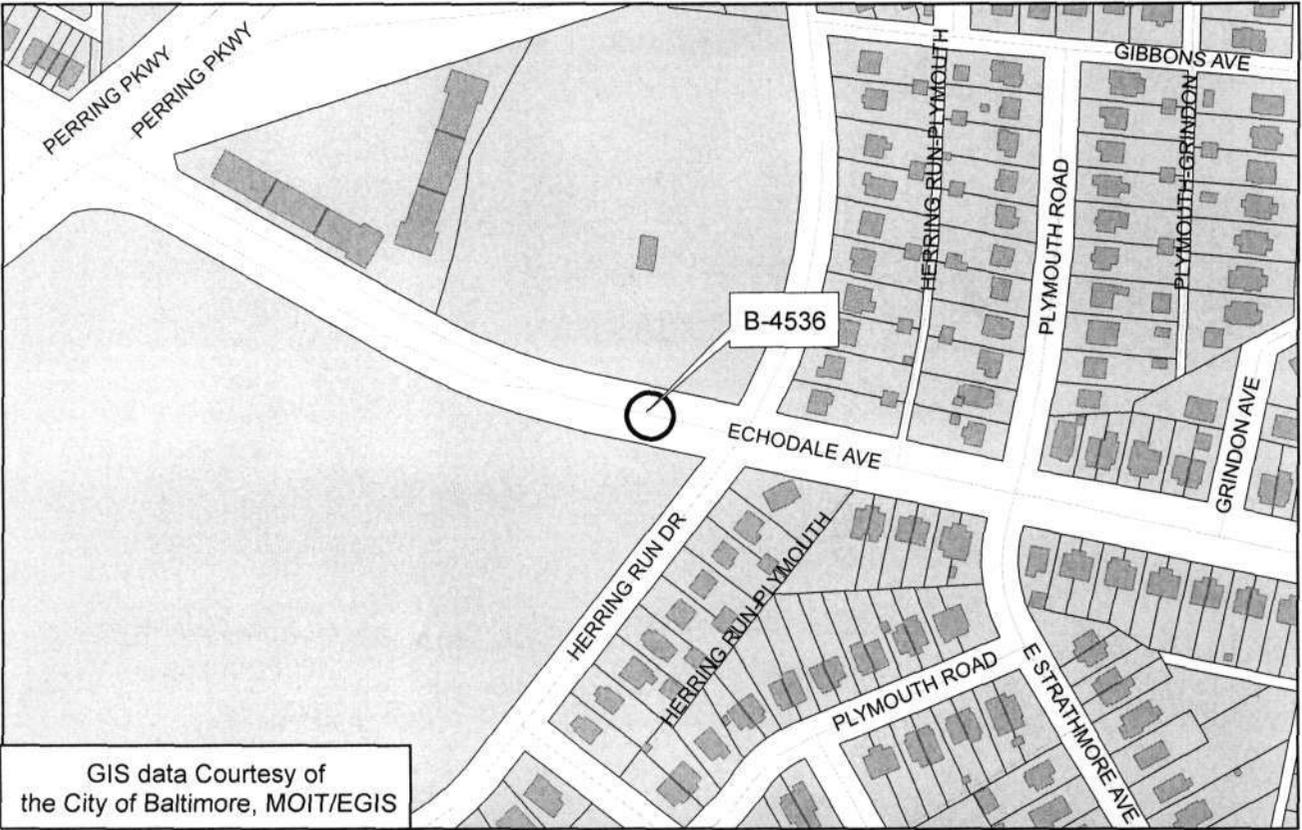
Echodale Avenue over Herring Run, 1940

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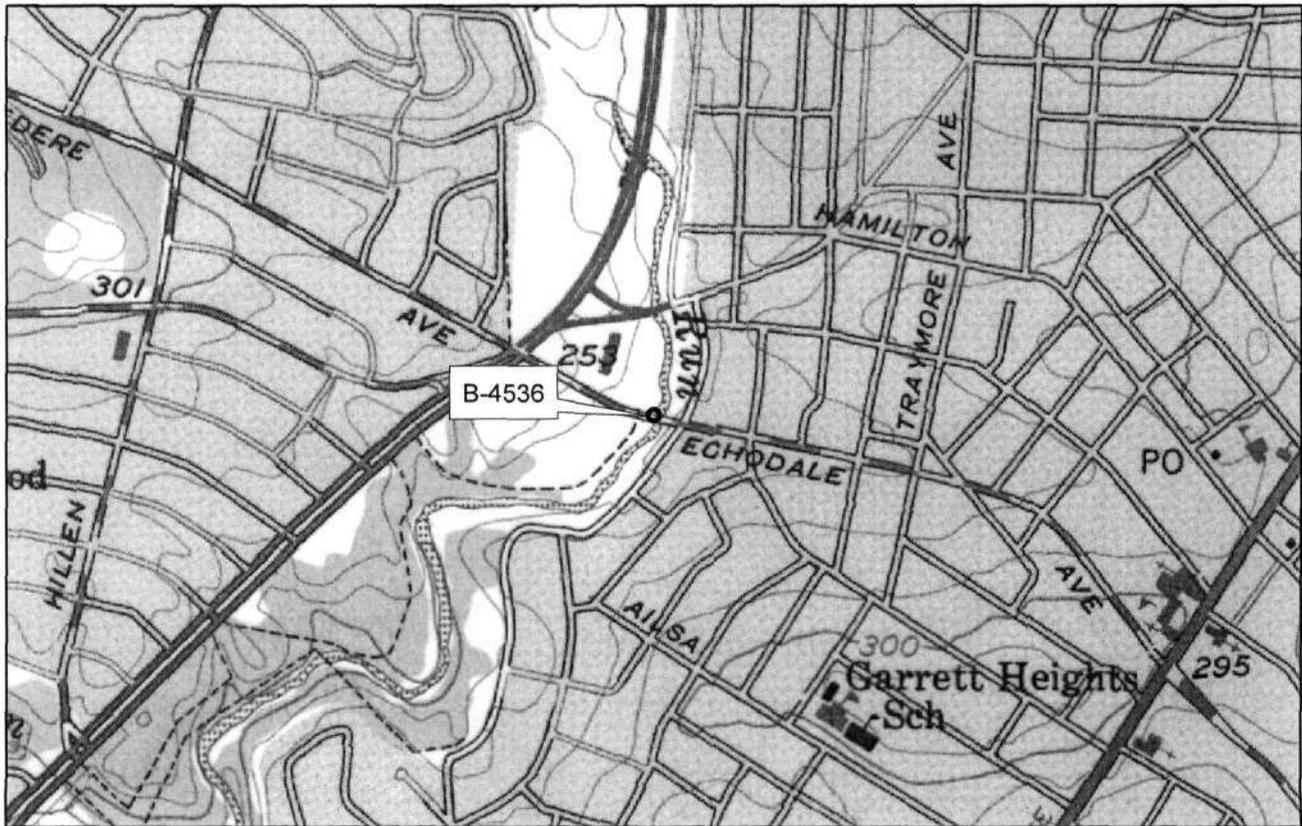
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0 0.5 kilometer



B-4536  
Echodale Avenue Bridge (BC3402)  
Echodale Avenue over Herring Run  
Baltimore City  
Baltimore East Quad



GIS data Courtesy of  
the City of Baltimore, MOIT/EGIS





Inventory # B-4536

BC-

Name 3402 - ECHODALE AVE OVER HERRING RUN

County/State BALTIMORE CITY / MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description SOUTH ELEVATION

Number 19 of 26 <sup>5</sup>



Inventory # B-4536

Name <sup>BC-</sup>3402 ECHODALE AVE OVER HERRING RUN

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHEN

Date 11/95

Location of Negative SHA

Description EAST APPROACH

Number 2 of 36<sup>5</sup>

BAR-KROM [19]553 4511 N



Inventory # B-4536

<sup>BL</sup>  
Name 3102-ECHDALE AVE OVER HERRING RUN

County/State BALTIMORE CITY / MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description WEST APPROACH

**3**  
Number 21 of 36 **5**



Inventory # B-4536

Name <sup>BC-</sup> 3402-ECHODALE AVE OVER HERRING RUN

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHDEN

Date 1/95

Location of Negative SHA

Description NORTH ELEVATION

Number <sup>4</sup> 22 of <sup>5</sup> 30

BUREAU OF HIGHWAYS

1940

Inventory # B-4536

Name <sup>BC-</sup> 3402- ECHODALE AVE OVER HERRING RUN

County/State BALTIMORE CITY / MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description IMPRINT @ WEST END OF SOUTH  
PARAPET

Number 5 ~~23~~ of 36 ~~5~~