

Maryland Historical Trust

Maryland Inventory of Historic Properties number: WA-II-1117

Name: W-5372/OLD ROXBURY RD OVER BEAVER CREEK

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 <input checked="" type="checkbox"/> X	Eligibility Not Recommended <input type="checkbox"/>
Criteria: <input type="checkbox"/> A <input type="checkbox"/> B <input 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>

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

MHT No. WA-II-1117

SHA Bridge No. W-5372 Bridge name Old Roxbury Road over Beaver Creek

**LOCATION:**

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

City/town West of Kline Mill and northwest of Benevola Vicinity \_\_\_\_\_

County Washington

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 \_\_\_\_\_:

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  X  Rural \_\_\_\_\_

**Describe Setting:** Bridge No. W-5372 carries Old Roxbury Road over Beaver Creek in Washington County. Old Roxbury Road runs generally east-west, and Beaver Creek flows in a southerly direction under the bridge. The area surrounding the bridge is largely rural in feeling, and a short distance east, at the intersection of Old Roxbury and Alt 40 is the small town of Kline Mill. Another small town, Benevola, is southeast of the bridge.

**Describe Superstructure and Substructure:**

Built circa 1920, Bridge No. W-5372 is a two span continuous concrete slab bridge with solid parapets. The parapets have six panels and no cap. The substructure is composed of concrete abutments, flared wingwalls, and a pier. The bridge has a bituminous concrete overlay on top of the slab. The structure is posted as a one-lane bridge with a weight restriction of 10 tons. The structure length is 66', the width is 14', and the span length is 33'. It has a 64 degree skew.

According to the most recent bridge inspection report, the concrete slab on the east side of the bridge has a structural crack that runs from parapet to parapet right along the face of the abutment underneath. The northeast wingwall has a very large crack that runs from top to bottom about one foot out from the east abutment. Water is seeping from this crack and the concrete is continuing to spall and deteriorate in this area. The retaining wall at the end of the northeast wingwall and the wingwall itself are heavily scoured. The retaining wall is heavily undermined and is tilting toward the creek approximately 15 degrees. The upstream portion of the pier has spalled near the water line and has extensive cracking and efflorescence extending from this area along the water line underneath the bridge. The stream is misaligned with the bridge and has caused scour problems in the past. There is evidence of scour under the west abutment and the pier, but there are no signs of undermining. The underside of the slab at the base of the northeast wingwall and pier have efflorescence leakage and sound hollow, in these areas, when struck with a hammer. Finally, the inside face of the parapets have numerous scrapes and several spalls indicating that the structure may be too narrow for the traffic currently using it.

**Discuss Major Alterations:**

Inspection reports for this bridge are available from 1977 to 1993. In 1977 the bridge was described as in a rapidly deteriorating condition, and the report for 1981 states the bridge was "recently restored." Inspection reports do not detail the work completed in 1980. Bridge repair plans, however, indicate the southwest wingwall was removed and replaced. Additional work included: bituminous paving for bridge approaches, a concrete deck overlay, epoxy coating on inside face of parapet, repair of the concrete deck, repairs to substructure and subfoundation concrete. The plans also proposed 24 linear feet of gabions at the northwest wingwall, and there is some indication repairs were made to some or all of the footers. Finally, the approaches were adjusted to meet the top of the new bridge wearing surface.

**HISTORY:**

**WHEN** was the bridge built (actual date or date range)  circa 1920

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

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

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

**WHY was the bridge built?**

Unknown

**WHO was the designer?**

Unknown

**WHO was the builder?**

Unknown

**WHY was the bridge altered?**

Extension of the bridge's life

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

Unknown

**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. Most improvements to local roads waited until the years after World War II.

With a diverse topographical domain encompassing numerous small and large crossings, engineers quickly recognized the need for expedient design and construction. Bridge No. W-5372 is a variation on the standardized concrete slab bridges built throughout Maryland between 1920

to 1940. This closed parapet structure is similar to SHA Standard Detail Sheets from 1919 for concrete slab bridges, but it does not conform exactly to the specifications. Like many variations of concrete slab bridges from that time period, however, it appears to differ from other slabs only its ornamentation and dimensions.

**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?**

Unknown.

**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?**

No. This bridge is not located in an area which may be eligible for historic designation.

**Is the bridge a significant example of its type?**

No. This bridge is not a significant example of a concrete slab. The structure does not retain the integrity of its original design. In addition, many of the character defining elements of the substructure are in a deteriorated state or have been replaced.

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

No. This bridge does not retain the integrity of its original design due to alterations and repairs made in 1980, and it lacks material integrity due to its deteriorated condition.

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

There are no county records which indicate this is a significant example of the work of a manufacturer, designer, or engineer.

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

No further evaluation is necessary to determine National Register significance. However, additional research concerning the history of this bridge and its relationship to the surrounding landscape may be useful in providing a more complete picture of the bridge's background.

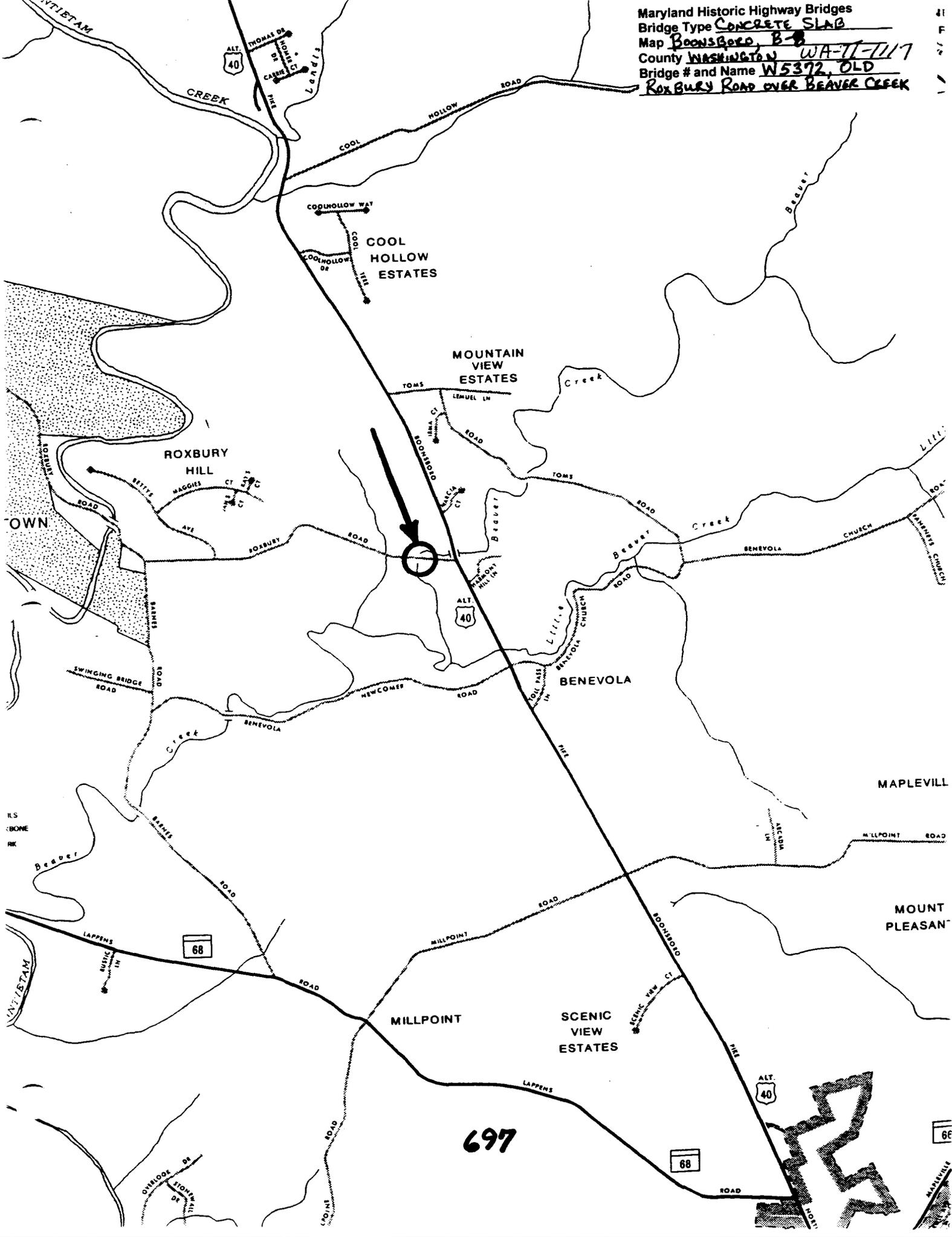
**BIBLIOGRAPHY:**

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

**SURVEYOR:**

Date bridge recorded   August 1995    
Name of surveyor   Adrienne Beaudet Cowden    
Organization/Address   P.A.C. Spero & Company; 40 West Chesapeake Avenue, Suite 412;    
  Baltimore, Maryland 21204    
Phone number   410-296-1635   FAX number   410-296-1670

Maryland Historic Highway Bridges  
Bridge Type CONCRETE SLAB  
Map BOONSBORO, B-8  
County WASHINGTON WA-11-1117  
Bridge # and Name W5372, OLD ROXBURY ROAD OVER BEAVER CREEK





BR # 20W537210

WA-II-1117

OVER BEAVER CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/23/95

S. H. A.

WEST APPROACH

1 OF 4



BR # 20WS37210

WA-II-1117

OVER BEAVER CREEK

WASHINGTON CO, MD.

CHARLES ZIEGLER

2/23/95

S. H. A.

EAST APPROACH

2 OF 4



BE #20W537210 WA-II-1117  
OVER BEAVER CREEK  
WASHINGTON CO., MD.  
CHARLES ZIEGLER  
2/23/95  
S. H. A.

SOUTH ELEVATION (DOWNSTREAM)

3 OF 4



BR # 20WS37210 WA-II-1117

OVER BEAVER CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/23/95

S. H. A.

NORTH ELEVATION (UPSTREAM)

4 OF 4