

Maryland Historical Trust

Maryland Inventory of Historic Properties number: WA-II-1116.

Name: W-2184/Appleton Rd (MD 858) over
unnamed Trib. of Dog's 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.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <input checked="" type="checkbox"/>	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-1116

SHA Bridge No. W-2184 Bridge name Appletown Road (MD 858) over Unnamed
Tributary of Dog Creek

LOCATION:

Street/Road name and number [facility carried] Appletown Road

City/town South of Boonsboro and west of Clevelandtown 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-2184 carries Appletown Road (MD 858) over an unnamed tributary of Dog Creek in Washington County. The bridge is located south of Boonsboro and west of Clevelandtown. Appletown Road runs north-south, and the tributary flows west-east.

Directly around the bridge, the east side of Appletown Road is lined with single family houses. The land directly west is covered with brush and trees.

Describe Superstructure and Substructure:

This structure matches the Maryland SHA Design Standards from August 1922 for a 20' concrete slab bridge. Bridge No. W-2184 is a single span two-lane concrete slab bridge. It is 25' in length, 27' wide, and has a span length of 24'. It has a 45 degree skew. The superstructure consists of a concrete slab with solid concrete parapets. The parapets have a simple cap and decorative molded panelling. The substructure consists of concrete abutments and wingwalls. The eastern wingwalls are straight, and the western wingwalls are flared. There are no guardrails at the approaches.

According to the most recent inspection of this structure, large pieces of parging are falling off the bridge. The northwest wingwall has its back face exposed due to erosion from roadway runoff. There is a 4' to 5' long pool of water under the bridge in the center of the abutments. It is 1' to 2' deep and is slightly undermining both abutments. The concrete parapets have experienced very minor damage at their ends. There is a vertical crack with efflorescence leakage in the north abutment. Cracks in the asphalt wearing surface have appeared along the backwall of each abutment.

Discuss Major Alterations:

The 1987 inspection report and all available reports filed subsequently state, "The cracked and deteriorated concrete identified in the previous report has been patched. A crack in the northeast wingwall, which was patched, has reappeared and light efflorescence is visible.

The delaminated concrete exposing the reinforcing steel near the inlet end identified in the previous report has been removed to sound concrete. The reinforcing steel has been cleaned and painted but is still exposed." It is not apparent when the repairs took place.

Washington County bridge files do not contain further information pertaining to repairs made the structure, the extent thereof, or when they took place.

HISTORY:

WHEN was the bridge built (actual date or date range) circa 1922

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?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?

Extent of alterations/repairs unknown

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

Yes. This bridge was constructed as a part of post World War I improvements to secondary roads in Maryland.

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, 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 way 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).

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. Bridge No. W-2184 is one of many concrete slab bridges built after the first World War in Maryland, and due to its condition, it is an undistinguished example of its type.

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

This bridge appears to have its character-defining elements intact. However, inspection reports indicate the condition of Bridge No. W-2184 is deteriorating.

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

This is not a significant example of the work of the State Roads Commission.

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. Although it reflects the state's post World War I expansion of secondary road systems, it is an undistinguished example of its type. 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.

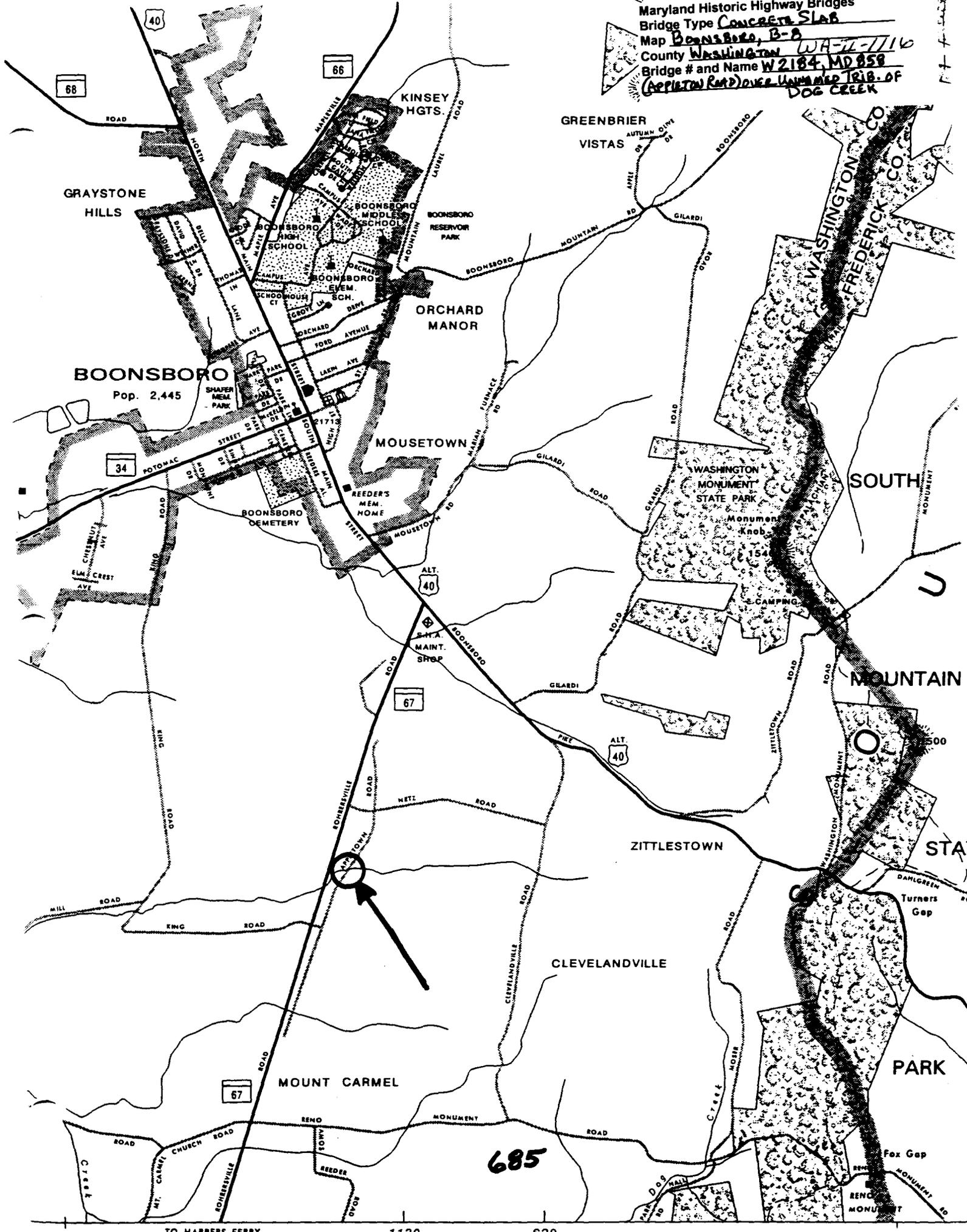
BIBLIOGRAPHY:

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-7-1116
 Bridge # and Name W 2184, MD 858
 (Appleton Road) over unnamed trib. of Dog Creek



77°40'00"

TO HARPERS FERRY

1130

620

685



BR #20W218410

WA-II-1116

OVER DOG CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/23/95

S. H. A.

SOUTH APPROACH

1 OF 4



BR #20W218410 WA-II-1116

OVER DOG CREEK

WASHINGTON CO, MD

CHARLES ZIEGLER

2/23/95

S.H.A

NORTH APPROACH

2 OF 4



BR # 20W218410 WA-II-1116
OVER DOG CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/23/95

S.H.A

WEST ELEVATION (UPSTREAM)

3 OF 4



BR #20W218410 WA-II-1116
OVER DOG CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/23/95

S. H. A.

EAST ELEVATION (DOWNSTREAM)

4 OF 4