Maryland Historical Trust

Maryland Inventory of Historic Properties number: WO-486.

Name: 23023/US113 SB over Corkers Crk.

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____

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No.** WO-486
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. 23023 **Bridge name** US 113 Southbound over Corkers Creek

LOCATION:
Street/Road name and number [facility carried] US Rte. 113

City/town Snow Hill **Vicinity** X

County Worcester

This bridge projects over: Road____ Railway_____ Water X Land ____

Ownership: State X County _____ 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 _____ Retractile _____ 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 _____

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DESCRIPTION:

Setting: Urban__ Small town__ Rural_

Describe Setting: Bridge 23023 carries Corkers Creek over the southbound lanes of US113 approximately halfway between Snow Hill and Pocomoke City. This is densely wooded area and has no houses or clearings nearby. The stream flows from east to west.

Describe Superstructure and Substructure:

This structure is a concrete slab bridge with an 18' span and a total length of 31'. It is a modification of an earlier slab structure of unknown construction date. In 1932 the original structure was widened by 10'. It contains open concrete parapets with some decorative work. The parapets now have guardrails attached. The concrete wingwalls are flared approximately twenty degrees to the centerline of the bridge. The clear roadway width is 40'. The highway was widened in 1932 when wide shoulders were added. According to the plans, the widened portion is on a pile foundation. The original slab is on spread footings and has an unknown design load and construction date. The concrete at the wingwalls is in good condition. At the waterline, there are areas of concrete spalling that are up to 7" wide. This occurs because of the varying depth of the waterline. However, the concrete at these areas sounds solid around all the construction joints. At the south abutment, there is a 3'-3" long diagonal crack open up to 1/16" extending from the southeast construction joint to the bottom of the original slab. In addition, there is a 21' long horizontal crack between the original slab and the south abutment. This is a hairline crack for 10', and a wider crack for 11'. The concrete in this area is hollow sounding. Both the abutment faces have light concrete scaling and erosion along the entire face up 3'-6" from the groundline. However, the concrete at both abutments is in generally good condition.

Discuss Major Alterations:

The original concrete slab bridge was widened by 10' in 1932 when the shoulders on the highway were widened. According to the State Highway Administration, this widened portion rests on a pile foundation and matches 1930 standards.

HISTORY:

WHEN was bridge built: 1932(widened) Original slab construction date unknown

This date is: Actual X Estimated

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

Other (specify): SHA files X

WHY was bridge built?

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

WHO was the designer?

The bridge was modified in 1932 to conform to 1930 State standards.

WHO was the builder?

State Highway Commission

WHY was bridge altered?

In 1932 the bridge was widened by 10' when the highway was widened.

Was bridge built as part of an organized bridge-building campaign?
This cannot be determined because the State Highway Administration does not know when the original bridge was built. The widened portion was built in 1932 and matches 1930 standards. The widening of the bridge was part of a large scale effort by the State to upgrade roads and bridges after World War I.

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 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).

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.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area?
The area between Snow Hill and Pocomoke City is shown on an 1877 map as being sparsely populated. There is still virtually no development in this area. It is unlikely, therefore, that the development of US 113 in the early twentieth century made a major impact on this 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?
The bridge is not located in an area which may be eligible for historic designation.

Is the bridge a significant example of its type?
The bridge is a good example of a 1930 standardized concrete slab bridge with open parapets.

Does the bridge retain integrity of important elements described in Context Addendum?
The original construction date of the bridge is not known; the character defining elements of the 1932-widened bridge have retained their integrity.

Is the bridge a significant example of work of manufacturer, designer and/or engineer?
The designer of the original bridge is unknown; it was widened in 1932.

Should the bridge be given further study before significance analysis 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:

State Highway Administration files for bridge #23023

Lake, Griffin, and Stevenson, 1877 Atlases and other early maps of the Eastern Shore of Maryland, Philadelphia, 1877.

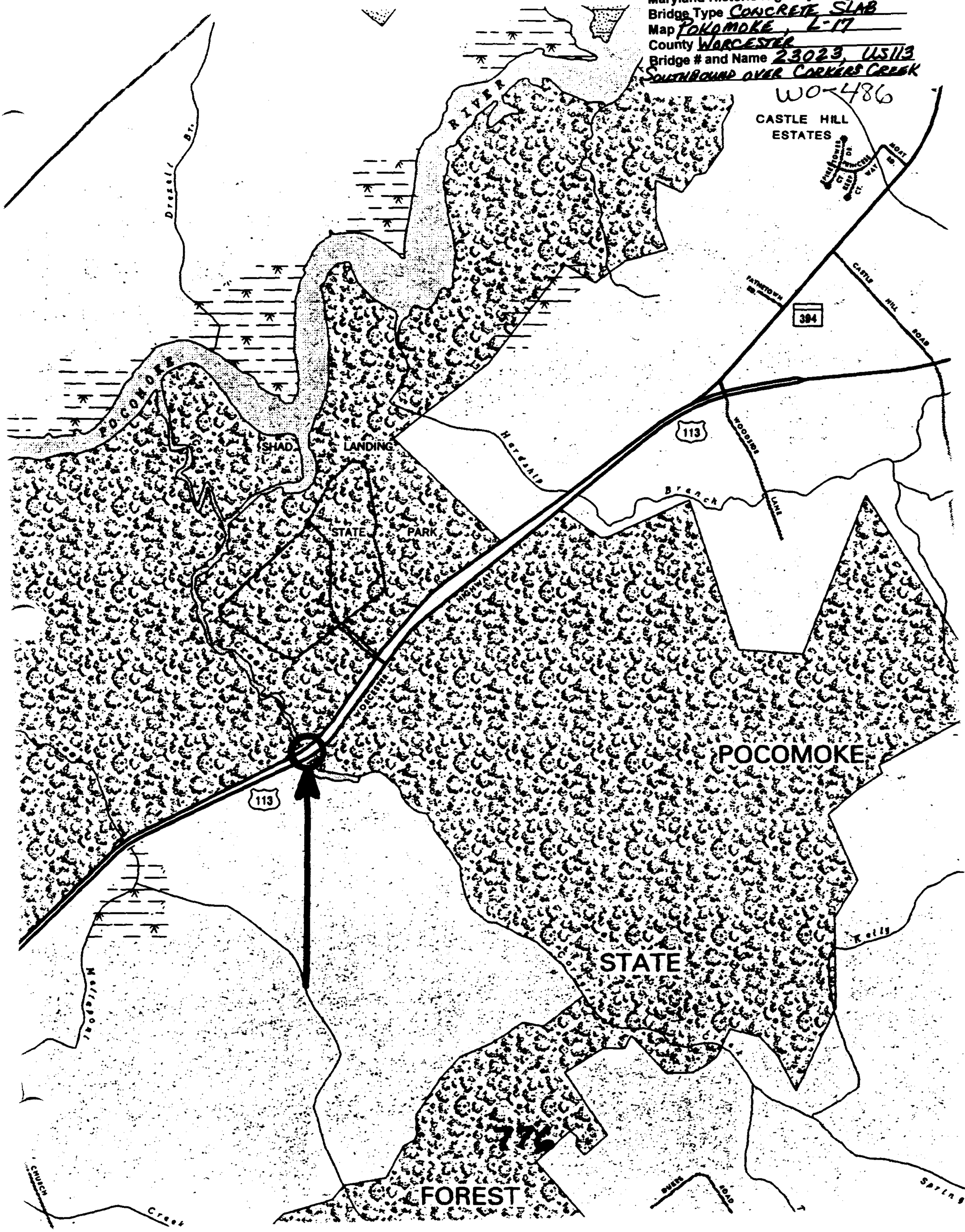
SURVEYOR/SURVEY INFORMATION:

Date bridge recorded 8/11/95

Name of surveyor Daniel Moriarty
Organization/Address: P.A.C. Spero & Co., 40 W. 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 POKOMOKE, L-17
County WORCESTER
Bridge # and Name 23023, US113
SOUTHBOUND OVER CORKERS CREEK

WO-486



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BRIDGE 23023, LOOKING SW ON U.S. 113 (SB)
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BRIDGE 23023, LOOKING NW ON US 113 (SB)
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BRIDGE 23023, LOOKING UPSTREAM (SE)
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BRIDGE 23023, LOOKING DOWNSTREAM (NW)
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