Maryland Historical Trust

Maryland Inventory of Historic Properties number: F-2-94

Name: 10178/ MD180 over unnamed trib of Potomac River.

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 PROPERTIES **MHT NO. F-2-94**
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST

NAME AND SHA NO.: 10178

LOCATION

Road Name and Number: MD 180 over unnamed tributary of Potomac River
City/Town: Knoxville _ vicinity
County: Frederick

Ownership: X State _ County _ Municipal _ Other

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

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

Located near the border of Maryland's Piedmont and Appalachian physiographic regions, Bridge #10178 carries MD 180 over an unnamed tributary of the Potomac River in the town of Knoxville, within a historic district that has been determined eligible for the National Register of Historic Places. This mid-nineteenth to early twentieth-century village remains largely intact with a small commercial core and surrounding residential areas located on a bluff overlooking the Potomac. Several nineteenth-century dwellings are located in the immediate vicinity of the bridge; those on the south side of Route 180 are about 5 to 10 feet below the grade of the existing macadam, suggesting that the road was rebuilt at a higher elevation. MD 180 generally runs in an east-west direction at this location. On the north side of Route 180, the direction of the stream shifts sharply eastward and parallels MD 180, which is elevated above the stream and ground level by a retaining wall. The bridge is also located near the C & O Canal National Historical Park bordering the Potomac River.

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

Bridge #10178 is a single-span concrete beam bridge with a span length of approximately 21'-0" and a clear roadway width of approximately 27'-0". The bridge is composed of a combination of steel beams and spirally deformed reinforcing bars encased in concrete girders. Retaining walls constructed of stone, concrete, and concrete block run along the sides of the stream. Solid panelled concrete parapets flank the sides of the bridge, and modern metal guardrails line both approaches as well as the interior face of the western parapet.

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:

The bridge shows signs of repeated repairs with extensions to the abutments, and the concrete girders, abutments and wing walls were repaired in 1989 with pneumatically applied mortar.

HISTORY

When Built: ca. 1920
Why Built: Statewide road improvement programs and local transportation needs
Who Built: Presumed State Roads Commission; no contract on file
Who Designed: Unknown
Why Altered: Alterations were instituted to repair deteriorated sections of abutments, girders, and wingwalls.
Was this bridge built as part of an organized bridge building campaign?: No

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?

Road improvements in Frederick County were fueled by several events occurring during the early twentieth century. First, the Good Roads Movement, which began in the last decade of the nineteenth century, aimed to improve primary roads throughout the state as well as multiple connecting roads between counties. As the movement progressed, numerous existing roads were widened, straightened, or graded, and many new bridges were built to carry the rebuilt roads. Second, rapidly increasing automobile, truck, and bus traffic also fueled the replacement of existing narrow and weak bridges with wider and stronger concrete structures, many of which were built according to standardized specifications and plans developed by the State Roads Commission (SRC). Third, the State Roads Commission established district engineering offices during the 1910s to aid in intrastate road development, and established a separate bridge department in 1920. This fostered construction of many concrete bridges throughout the state. In the 1920s, the SRC emphasized improving the safety and comfort of primary routes while developing secondary networks and feeder roads. By the 1930s, bridges that were originally deemed adequate had become unacceptable for carrying modern traffic loads and many new structures were built as a result.

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?

Bridge #10178 participated in the general trend toward upgrading state roads and bridges and improving intrastate access.

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?

Yes, this bridge is located within the Knoxville Historic District, which has been determined eligible for the National Register of Historic Places. Although the bridge does not appear to meet the National Register Criteria for individual listing, the Maryland Historical Trust has determined that it is a contributing resource within the district based on criteria of location, design, setting, and association.

Is the bridge a significant example of its type?

No, this bridge is not a significant example of its type. It is one of at least 40 like structures extant on Maryland's state and county highways constructed in or before 1920.

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

No, this bridge does not retain integrity of its character-defining elements. The character-defining elements for the superstructures of concrete beam bridges are the slab, the longitudinal beams, and the parapet or railing when integral. For the substructure, the character-defining elements are the abutments, piers, and wing walls. The bridge has undergone extensive gunite repairs throughout. The girders have also been repaired with pneumatically applied concrete.

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

No, this structure is not a significant example of the work of the State Roads Commission.

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

No further study should be necessary. The Maryland Historical Trust has already identified this bridge as a contributing resource to the Knoxville Historic District.

BIBLIOGRAPHY

Spero, P.A. C. & Company and Louis Berger & Associates
1994 *Historic Bridges in Maryland: Historic Context Report.* Maryland State Highway Administration, Baltimore.

State Highway Administration
Bridge Inspection Reports. On file 707 North Calvert Street, Baltimore.

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

State Roads Commission of Maryland
1958 *A History of Road Building in Maryland.* Baltimore.

SURVEYOR INFORMATION

Name: Gabrielle M. Lanier/Stephen Linhart
Organization: KCI Technologies, Inc.
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Date: 13 May 1996
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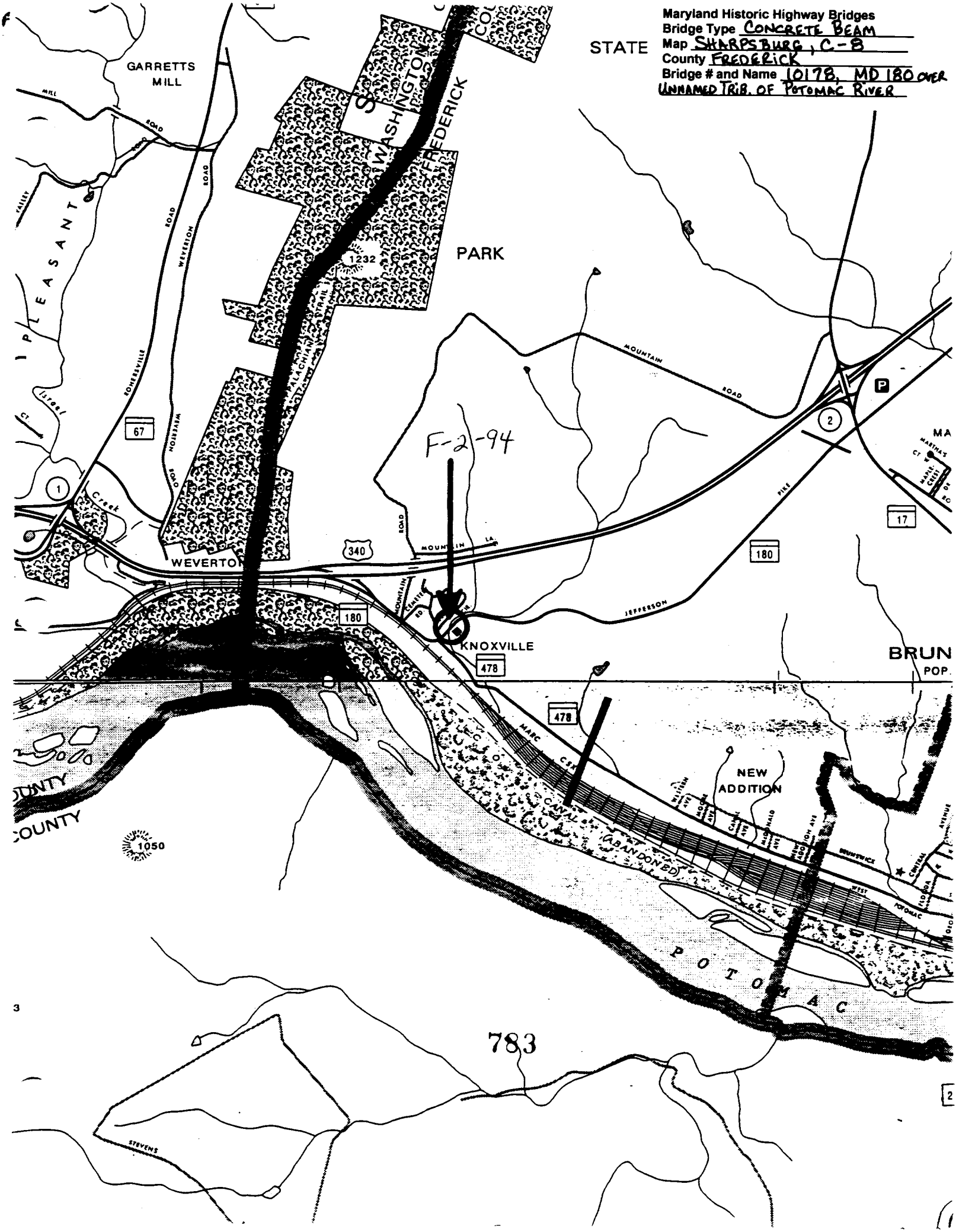
Maryland Historic Highway Bridges
Bridge Type CONCRETE BEAM
STATE Map SHARPSBURG, C-8
County FREDERICK
Bridge # and Name 10178, MD 180 OVER UNNAMED TRIB. OF POTOMAC RIVER



Inventory # F-2-94

Name 10178-MD 180 OVER SMALL STREAM

County/State FREDERICK COUNTY / MD

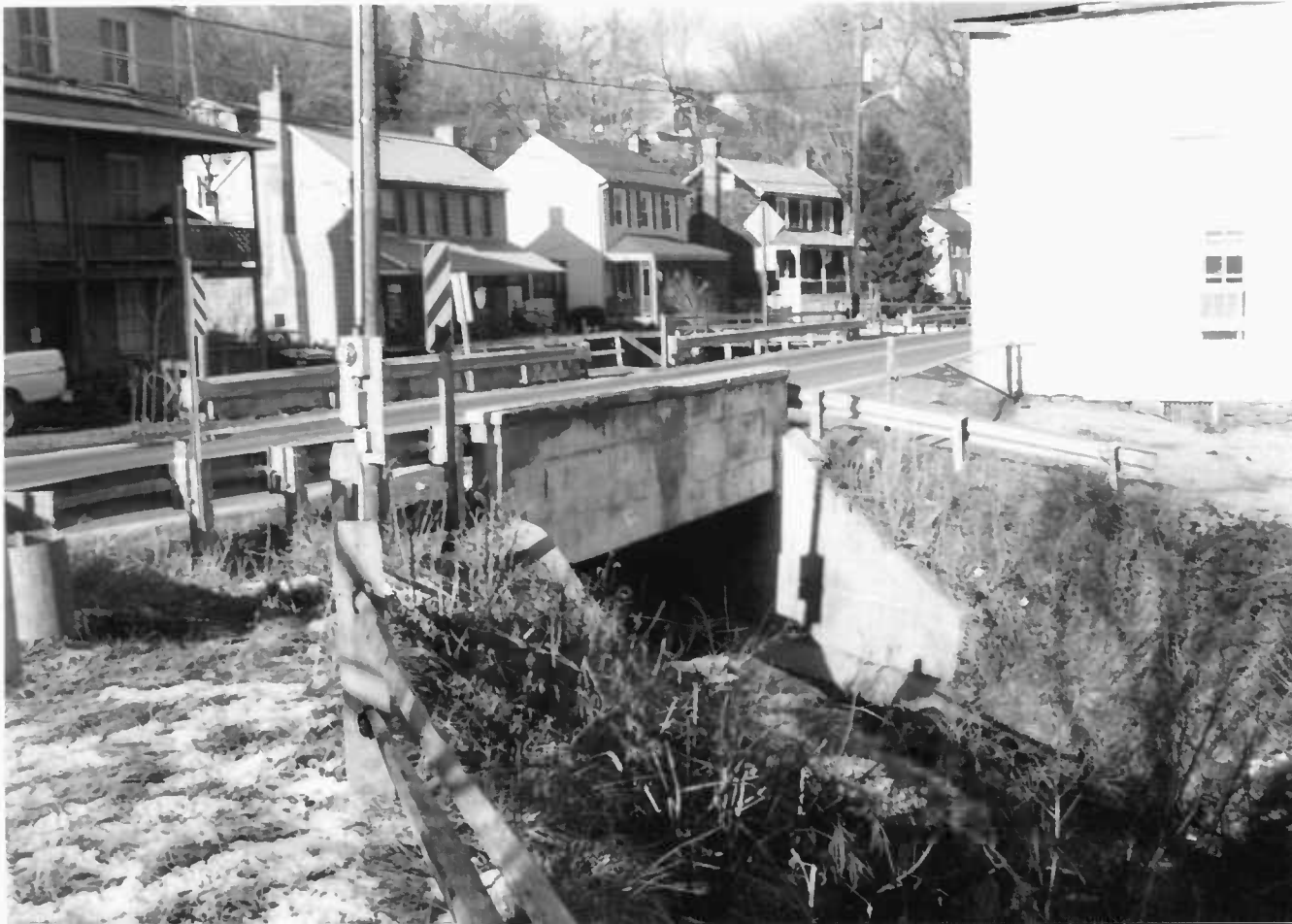
Name of Photographer FRANK JULIAND

Date 1/95

Location of Negative SHA

Description NORTH APPROACH

Number ~~11~~ 1 of ~~34~~ 4



Inventory # F-2-94

Name 10178- MD180 OVER SMALL STREAM

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 1/95

Location of Negative SHA

Description ELEVATION LOOKING WEST

Number 2 ~~12~~ of ~~34~~ 4

Inventory # F-2-94

Name 10178-MD 180 OVER SMALL STREAM

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 1/95

Location of Negative SHA

Description SOUTH APPROACH

Number ~~13~~ 3 of ~~34~~ 4

Inventory # F-2-94

Name 10178 MD 180 OVER SMALL STREAM
County/State FREDERICK COUNTY/MD
Name of Photographer FRANK JULIANO
Date 1/95

Location of Negative SHA

Description ELEVATION LOOKING EAST

Number ~~11~~ 4 of ~~34~~ 4