

**MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM**

NR Eligible: yes _____
no

Property Name: SHA Bridge No. 1901201 Inventory Number: S-513
 Address: US 13 Northbound over Manokin River Historic district: yes no
 City: Princess Anne, MD Zip Code: _____ County: Somerset
 USGS Quadrangle(s): Princess Anne
 Property Owner: MD SHA Tax Account ID Number: _____
 Tax Map Parcel Number(s): _____ Tax Map Number: _____
 Project: Mid-20th Century Highway Bridges of Maryland (1948-1960) Agency: MD SHA
 Agency Prepared By: _____
 Preparer's Name: Marvin Brown URS Corporation Date Prepared: 10/15/2004
 Documentation is presented in: Project Review and Compliance files
 Preparer's Eligibility Recommendation: _____ Eligibility recommended Eligibility not recommended
 Criteria: A B C D Considerations: A B C D E F G
 Complete if the property is a contributing or non-contributing resource to a NR district/property:
 Name of the District/Property: _____
 Inventory Number: _____ Eligible: yes Listed: yes
 Site visit by MHT Staff yes no Name: _____ Date: _____

Description of Property and Justification: *(Please attach map and photo)*

Description

The US 13 Northbound Bridge over the Manokin River (MIHP # S-513, Bridge 1901201) was erected in 1958 over the Manokin River at what is now the northern edge of Princess Anne in Somerset County. Built as part of the development of US 13 on Maryland's Eastern Shore, the highway was dualized and, in places, rerouted in order to address rapidly increasing traffic demands in the 1950s. The rerouting included the construction of a bypass around Princess Anne that included this bridge. The bridge is a steel girder structure, as were most of the other bridges built by the state during the decade. In 1980 its superstructure, as well as deck and parapets were replaced.

Determination of Eligibility

The US 13 Northbound Bridge over the Manokin River is not eligible for listing in the National Register under Criterion A. While the bridge is associated with post-World War II roadway improvements to US 13, the principal north-south route on the Delmarva Peninsula and the post-World War II dualization of this roadway, it does not retain sufficient integrity to convey its period of

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ Eligibility not recommended
 Criteria: A B C D Considerations: A B C D E F G

MHT Comments:

Jim Teahum ✓
 Reviewer, Office of Preservation Services

6/2/2011
 Date

Plenty
 Reviewer, National Register Program

6/3/11
 Date

significance. The bridge has lost its integrity of design, materials, workmanship, and feeling due to the 1980 alterations which included the construction of a new steel superstructure and the replacement of the upper portions of the concrete abutments. At this time, the bridge deck and railing were replaced with designs that met the 1980 state highway standards. These alterations have significantly altered the bridge's appearance and compromised its ability to convey its period of significance.

The US 13 Northbound Bridge over the Manokin River is not National Register-eligible under Criterion B, as it is not associated with an individual significant on the local, state, or national level.

The US 13 Northbound Bridge over the Manokin River is not National Register-eligible under Criterion C. The bridge is not a rare or significant example of its type, design, or construction on the local, state, or national level, nor was it designed by a significant engineer, bridge company, or contractor. Additionally, the bridge has lost its integrity of design, materials, workmanship, and feeling due to the 1980 alterations which included the construction of a new steel superstructure and the replacement of the upper portions of the concrete abutments. These alterations have significantly altered the bridge's appearance and compromised its ability to convey its period of significance.

National Register-eligibility under Criterion D was not investigated as part of this study.

SHA concurs with the consultant's eligibility recommendation for SHA Bridge No. 1901201. Its loss of historic fabric resulted in lost integrity of design, materials, workmanship, feeling and association. It is not eligible for the NRHP under any of the Criteria.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ Eligibility not recommended _____

Criteria: A B C D Considerations: A B C D E F G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

S-513
US 13 Northbound Bridge over the Manokin River
Princess Anne vic.
1958; 1980

Bridge No. 1901201 is a steel beam bridge, constructed in 1958, that carries US 13 Northbound over the Manokin River in Somerset County. The bridge runs northwest-southeast and carries two lanes of vehicular traffic. The bridge is approximately 43 feet wide and has two 40-foot spans. The substructure of the bridge is composed of one large, centrally located pier. The pier is a Monotube pile bent consisting of 11 concrete-filled steel, fluted columns atop a concrete base. Eleven steel beams run the length of the bridge to support the concrete deck. The lower portions of the abutments at each end of the structure appear to be composed of older concrete. The upper portion of each abutment is composed of new concrete. According to a 2001 inspection report, the superstructure of the bridge was built in 1980. The bridge's concrete deck appears to date to this era. Metal joint plates are located at each end of the bridge. The parapet appears to date to 1980. The parapet is composed of a concrete base topped by a modern two-bar metal rail. The dates "1958" and "1980" are inscribed in the concrete parapet at the southeast corner of the bridge.

The US 13 Northbound Bridge over the Manokin River (MIHP # S-513, Bridge 1901201) was erected in 1958 over the Manokin River at what is now the northern edge of Princess Anne in Somerset County. Built as part of the development of US 13 on Maryland's Eastern Shore, the highway was dualized and, in places, rerouted in order to address rapidly increasing traffic demands in the 1950s. The rerouting included the construction of a bypass around Princess Anne that included this bridge. The bridge is a steel girder structure, as were most of the other bridges built by the state during the decade. In 1980 its superstructure, as well as its deck and parapets were replaced.

Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. S-513

1. Name of Property (indicate preferred name)

historic US 13 Northbound Bridge over the Manokin Rver
other Bridge No. 1901201

2. Location

street and number US 13 Northbound at Manokin River N/A not for publication
city, town Princess Anne N/A vicinity
county Somerset

3. Owner of Property (give names and mailing addresses of all owners)

name Maryland State Highway Administration
street and number 707 N. Calvert Street telephone 410-545-0300
city, town Baltimore state MD zip code 21202

4. Location of Legal Description

courthouse, registry of deeds, etc. liber folio
city, town tax map tax parcel tax ID number

5. Primary Location of Additional Data

- Contributing Resource in National Register District
 Contributing Resource in Local Historic District
 Determined Eligible for the National Register/Maryland Register
 Determined Ineligible for the National Register/Maryland Register
 Recorded by HABS/HAER
 Historic Structure Report or Research Report at MHT
 Other: Statewide Inventory by SHA

6. Classification

Category	Ownership	Current Function	Resource Count
<input type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input type="checkbox"/> agriculture	Contributing
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> landscape	Noncontributing
<input checked="" type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> commerce/trade	<input type="checkbox"/> buildings
<input type="checkbox"/> site		<input type="checkbox"/> defense	<input type="checkbox"/> sites
<input type="checkbox"/> object		<input type="checkbox"/> domestic	<input type="checkbox"/> structures
		<input type="checkbox"/> education	<input type="checkbox"/> objects
		<input checked="" type="checkbox"/> transportation	<input type="checkbox"/> Total
		<input type="checkbox"/> funerary	
		<input type="checkbox"/> government	
		<input type="checkbox"/> health care	
		<input type="checkbox"/> industry	
		<input type="checkbox"/> recreation/culture	
		<input type="checkbox"/> religion	
		<input type="checkbox"/> social	
		<input type="checkbox"/> work in progress	
		<input type="checkbox"/> unknown	
		<input type="checkbox"/> vacant/not in use	
		<input type="checkbox"/> other:	
			Number of Contributing Resources previously listed in the Inventory
			<u>0</u>

7. Description

Inventory No. S-513

Condition

excellent deteriorated
 good ruins
 fair altered

Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

Bridge No. 1901201 is a steel beam bridge, constructed in 1958, that carries US 13 Northbound over the Manokin River in Somerset County. The bridge is located west of the town of Princess Anne. While the area surrounding the bridge is not highly developed, brisk vehicular traffic is present on US 13. The banks of the river located east of the bridge are grassy with some trees. The banks of the river located west of the bridge are grassy.

The bridge runs northwest-southeast and carries two lanes of vehicular traffic. The bridge does not carry pedestrian traffic, but a narrow shoulder is present on each side of the structure. The bridge is approximately 43 feet wide and has two 40-foot spans. The substructure of the bridge is composed of one large, centrally located pier. The pier is a Monotube pile bent consisting of 11 concrete-filled steel, fluted columns resting atop a concrete base. The four outermost columns are skewed inward toward the middle of the bridge. Eleven steel beams run the length of the bridge to support the concrete deck. The lower portions of the abutments at each end of the structure appear to be composed of older concrete. The upper portion of each abutment is composed of new concrete. Much of the concrete on the middle pier also looks recent. Wood beams and posts line the water channel under this bridge and the southbound US 13 bridge, as well as the area between both bridges.

According to a 2001 inspection report, the superstructure of the bridge was built in 1980. The bridge's concrete deck appears to date to this era. The approaches of the bridge have been freshly paved with blacktop. Metal joint plates are located at each end of the bridge. The parapet appears to date to 1980. The parapet is composed of a concrete base topped by a modern two-bar metal rail. The bridge lacks a dedication plaque. The dates "1958" and "1980" are inscribed in the concrete parapet at the southeast corner of the bridge.

8. Significance

Inventory No. S-513

Period	Areas of Significance	Check and justify below		
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> health/medicine	<input type="checkbox"/> performing arts
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> archeology	<input type="checkbox"/> education	<input type="checkbox"/> industry	<input type="checkbox"/> philosophy
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> architecture	<input checked="" type="checkbox"/> engineering	<input type="checkbox"/> invention	<input type="checkbox"/> politics/government
<input checked="" type="checkbox"/> 1900-1999	<input type="checkbox"/> art	<input type="checkbox"/> entertainment/ recreation	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 2000-	<input type="checkbox"/> commerce	<input type="checkbox"/> ethnic heritage	<input type="checkbox"/> law	<input type="checkbox"/> science
	<input type="checkbox"/> communications	<input type="checkbox"/> exploration/ settlement	<input type="checkbox"/> literature	<input type="checkbox"/> social history
	<input type="checkbox"/> community planning		<input type="checkbox"/> maritime history	<input checked="" type="checkbox"/> transportation
	<input type="checkbox"/> conservation		<input type="checkbox"/> military	<input type="checkbox"/> other: _____

Specific dates 1958; 1980-rehabilitation **Architect/Builder** Green Associates, Inc.

Construction dates 1958; 1980

Evaluation for:
 National Register Maryland Register not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Statement of Significance

The US 13 Northbound Bridge over the Manokin River (MIHP # S-513, Bridge 1901201) was erected in 1958 over the Manokin River at what is now the northern edge of Princess Anne in Somerset County. Built as part of the development of US 13 on Maryland's Eastern Shore, the highway was dualized and, in places, rerouted in order to address rapidly increasing traffic demands in the 1950s. The rerouting included the construction of a bypass around Princess Anne that included this bridge. The bridge is a steel girder structure, as were most of the other bridges built by the state during the decade. In 1980 its deck and parapets were replaced.

Historic Background and Support

In the early twentieth century, US 13 became an important north-south route through the Delmarva Peninsula. It connected the agricultural areas of the Eastern Shore of Virginia and Maryland, as well as those of southern Delaware, with the urban markets of Wilmington and Philadelphia. Historically, it has been one of the principal routes through Delaware, where it is known as the Dupont Highway or Parkway. One historian noted that US 13 in Delaware is the longest signed highway in the state and summarized its twentieth-century history:

The origins of the Dupont Highway predate the U.S. Highway system. T. Coleman du Pont, an engineer of the Delaware famous du Pont family, envisioned a paved route traveling statewide from south to north. Coleman du Pont proposed the project to the citizens of Delaware in 1908. His concept entailed the creation of separate north and southbound lanes, trolley lines, and pathways for horse-drawn vehicles. By 1924 a two-lane version of the highway opened to traffic between the southern agricultural areas and the urbanized center of Wilmington. The road was a huge success and by 1933 the State Highway Department expanded the highway, making it the world's first divided highway.¹

In Maryland, the route was so busy that by the early 1930s the state was compelled to construct a bypass around Salisbury. This new roadway was in turn engulfed by traffic and new commercial development, requiring "a bypass of the original bypass" in the 1950s.² US 13 was improved during the decade at the smaller communities of Princess Anne and Pocomoke City as well.

The first crossing of US 13 over the Manokin River was erected prior to, and altered in 1950. In its report of that year, the State Roads Commission noted that it was funding the reconstruction of the existing bridge that carried the road over the river. The reconstruction consisted of widening that bridge from 20 feet to 36 feet.³

¹ <http://www.aaroads.com/delaware/us-013.htm>
² <http://www.mdroads.com/routes/us013.html>
³ State Roads Commission, *Report of the State Roads Commission of Maryland*, 1950, page 77.

Maryland Historical Trust

Maryland Inventory of Historic Properties Form

Inventory No. S-513

Name Bridge No. 1901201, US 13 Northbound Bridge over the Manokin River
Continuation Sheet

Number 8 Page 1

In 1952, as part of a proposed twelve-year road construction program, the Commission noted that “traffic demands make it mandatory that new roads be developed in locations such as the Pocomoke By-Pass” on US 13.⁴ The Commission report of 1957 depicts thumbnail “before” and “after” photographs of construction work on US 13 in District 1, including photographs of the Pocomoke bypass bridge. The caption notes: “Included in the dualization of US 13 are the by-passing of both Princess Anne and Pocomoke. The first leg of the Pocomoke By-Pass is a grade-crossing elimination just west of the town, in Somerset County. Shown here is the dangerous crossing at grade and in the background the new railway overpass.”⁵ The Commission reported in 1958 that it advertised the Princess Anne By-Pass, which included a “Dual Highway, Bridge over Manokin River, at a construction cost just in excess of \$1,000,000.”⁶ In 1960 it reported that it had received just over \$542,000 from the federal government for the construction of the Princess Anne By-Pass.⁷

Metal girder bridges were first constructed out of iron in the mid-nineteenth century. The technology was improved during the first third of the twentieth century by the introduction and spread of concrete-encased, steel, rolled-I-beam structures and of deep-steel-beamed structures supporting decks of reinforced concrete. Following the lull in most bridge construction during World War II, metal girder bridges, particularly those with deep steel beams, “were readily built by county and municipal officials across the United States.” Between 1920 and 1965 in Maryland, and particularly after the War, “the State Roads Commission utilized metal I-beams and metal plate girders (many concrete encased) heavily in construction for grade crossing elimination structures, as well as ordinary highway bridges.”⁸ Of the 586 bridges erected by the State Roads Commission between 1948 and 1960, 448—more than 75 percent—were metal rolled girder bridges. This bridge is one of 49 of its type built during its year of construction. Metal girder bridges were clearly the bridge of choice during the period.

The bridge’s original drawings state that it was built under State Roads Commission specifications for materials and construction. According to Maryland SHA files, American Association of State Highway Officials standard specifications for the design of highway bridges, dated 1953, were utilized in its design as well.

Monotube pile bents support the bridge. Monotube is a proprietary pile that has been available since the early 1920s.⁹ A cold-rolled steel tube filled with concrete, it was popular in Maryland bridges from the 1950s through the 1970s. The distinctive fluted appearance of the Monotube is functional, it makes the column more rigid and stronger than a round column. However, the Maryland State Highway Administration discontinued the use of monotubes during the last decade of the twentieth century due to the belief that its thin shell was subject to failure.¹⁰ The pile continues to be produced by the Monotube Pile Corporation and is utilized elsewhere for bridges and other structures.

⁴ State Roads Commission, *Proposed Twelve-Year Program for Road Construction and Reconstruction, 1954-1965*, 1952, page 11.

⁵ State Roads Commission, *On Our Way*, 1957, no page number.

⁶ State Roads Commission, *Report as of December 31, 1958 Relating to the First Four Years of the Twelve-Year Road Construction Program*, 1958, no page number.

⁷ State Roads Commission, *Tomorrow’s Roads Today*, 1960, page 98.

⁸ Spero, P.A.C., & Company, *Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report*, 1995, pages 105-112.

⁹ http://www.engineering.manhattan.edu/civil/CGT/pubs/CaseHist5_2004%20Tapertube.pdf; <http://www.monotube.com>.

¹⁰ Letter of April 6, 2004, from Richard Ervin of the Maryland State Highway Administration to Stephen W. Tull of URS Corporation.

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Name Bridge No. 1901201, US 13 Northbound Bridge over the Manokin River
Continuation Sheet

Number 8 Page 2

In 1980 the state replaced the bridge's concrete deck. It replaced the parapets at that time as well with the current concrete jersey barriers with two strand aluminum railings. In reference to these changes, an inspection report for the bridge completed on August 1, 2001, on file at Maryland SHA, stated that the "superstructure was built in 1980." In 2002, according to additional materials on file at SHA, further work items were planned for the structure. These items included the placement of protective pile jackets on all piles above the strut and repairing the nose of the strut with concrete.

9. Major Bibliographical References

Inventory No. S-513

See Continuation Sheet

10. Geographical Data

Acreage of surveyed property _____

Acreage of historical setting _____

Quadrangle name Princess Anne, MD

Quadrangle scale: 1:24,000

Verbal boundary description and justification

The US 13 Northbound Bridge carries US 13 Northbound over the Manokin River in Somerset County on the western outskirts of the city of Princess Anne. The bridge has been associated with this site since its construction.

11. Form Prepared by

name/title	Marvin Brown / Mary E. Crowe and Stan Popovich		
organization	URS Corporation / Hardlines Design Company	date	October 2004
street & number	200 Orchard Ridge Drive / 4608 Indianola Avenue	telephone	301-258-9780 / 614-784-8733
city or town	Gaithersburg / Columbus	state	MD / OH

The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust
DHCD/DHCP
100 Community Place
Crownsville, MD 21032-2023
410-514-7600

Maryland Historical Trust

Maryland Inventory of Historic Properties Form

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Name Bridge No. 1901201, US 13 Northbound Bridge over the Manokin River
Continuation Sheet

Number 9 Page 1

“Delaware Highway Information” <<http://www.aaroads.com/delaware/us-013.htm>>

“Federal Census Figures” <<http://www.census.gov/population/cencounts/md190090.txt>>.

Letter of April 6, 2004, from Richard Ervin of the Maryland State Highway Administration to Stephen W. Tull of URS Corporation.

“Monotube technology” <http://www.engineering.manhattan.edu/civil/CGT/pubs/CaseHist5_2004%20Tapertube.pdf>

Spero, P.A.C., & Company, *Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report*, 1995.

State Roads Commission, *On Our Way*, 1957.

State Roads Commission, *Proposed Twelve-Year Program for Road Construction and Reconstruction, 1954-1965*, 1952.

State Roads Commission, *Report of the State Roads Commission of Maryland*, 1956.

“US 13 information” <<http://www.mdroads.com/routes/us013.html>>

Sources Consulted:

Maryland SHA Cultural Resource Library and Bridge Engineering Department, Baltimore - Reports published by or for the State Roads Commission, bridge files

Maryland Highway Administration, District 1 Office, 660 West road, Salisbury MD, 410-677-4000

Maryland Historical Trust Library, Crownsville - Inventory of Historic Places, National Register Nominations, Determinations of Eligibility, Cultural Resource Reports

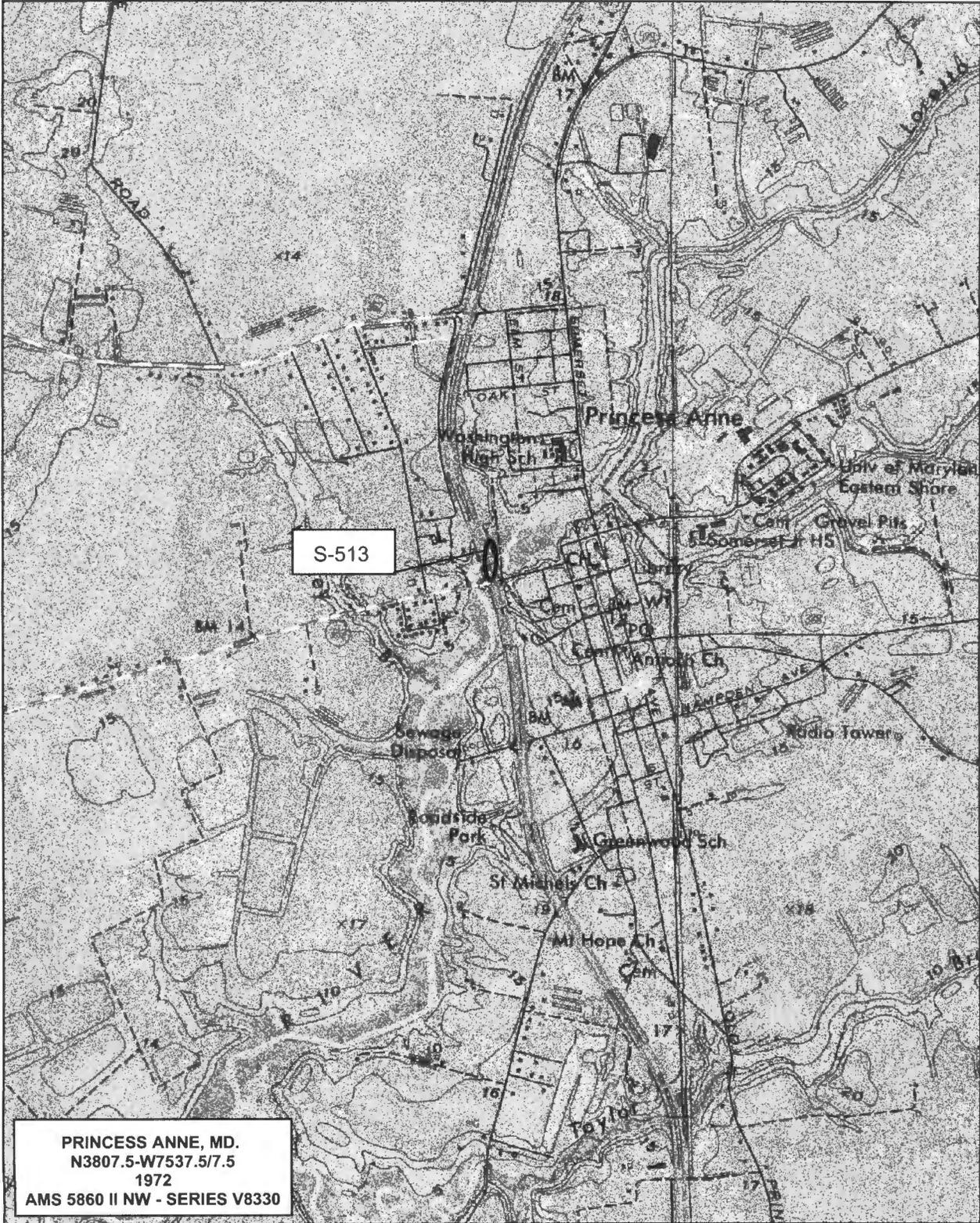
Maryland State Archives, Annapolis - photographs from the Sarikas Collection and materials published by the State Roads Commission

Enoch Pratt Library (Maryland Room), Baltimore - vertical files dealing with Maryland bridges

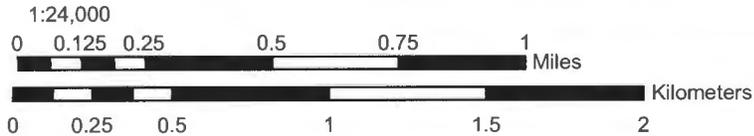
Library of Congress, Washington, DC - General information on bridges and additional Maryland bridge material

New Jersey State Library, Trenton - Engineering News-Record on microfilm

New York Public Library, (Science, Business, and Industry Library), New York - Additional SHA annual reports



PRINCESS ANNE, MD.
N3807.5-W7537.5/7.5
1972
AMS 5860 II NW - SERIES V8330



MIHP # S-513
 Bridge 1901201
 US 13 NB over Manokin River
 Princess Anne
 Somerset County
 Princess Anne, MD. Quadrangle



MHP # 5-513

Bridge # 1901201, US 13 NB over Manokin River

Somerset County, MD

Photographer: Stan Popovich, Hardlines Design Company

Date: 6/9/03

Location of Negatives: MD SHPO

looking south down deck of bridge

1/6



MIHP # 5-513

Bridge # 1901201, US 13 NB over Manokin River

Somerset County, MD

Photographer: Stan Popovich, Hardlines Design Company

Date: 6/9/03

Location of Negatives: MD SHPO

looking north down deck of bridge

2/6



MHP # 5-513

Bridge # 1901201, US 13 NB over Manokin River

Somerset County, MD

Photographer: Stan Popovich, Hardlines Design Company

Date: 6/9/03

Location of Negatives: MD SHPO

looking northwest down deck of bridge

3/6



MHP # 5-513

Bridge # 1901201, US 13 NB over Manokin River

Somerset County, MD

Photographer: Stan Popovich, Hardlines Design Company

Date: 6/9/03

Location of Negatives: MD SHPO

Looking Southeast at west elevation

4/6



MIMP # 5-513

Bridge # 1901201, US 13 NB over Manokin River

Somerset County, MD

Photographer: Stan Popovich, Hardlines Design Company

Date: 6/9/03

Location of Negative: MD SHPO

looking northeast at west elevation

5/6



MHP # 5-513
Bridge # 1901 201, US 13 NB over Manokin River
Somerset County, MD
Photographer: Stan Popovich, Hardlines Design Company
Date: 6/6/03
Location of Negative: MD SHPO
looking northeast at dates at southeast corner
6/6