Maryland Historical Trust

Maryland Inventory of Historic Properties number: BA-2781

Name: US 1 (Southwestern Blvd.) over CSX RR

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 _____ Eligibility Not Recommended __X___

Criteria: ___A ___B X 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
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. BA-2781

SHA Bridge No. 3008 **Bridge name** US 1 over CSX Transport Railroad

LOCATION:
Street/Road name and number [facility carried] US 1 (Southwestern Boulevard)

City/town Halethorpe **Vicinity** X

County Baltimore

This bridge projects over: Road ____ **Railway** X **Water** ____ **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 X:
Rolled Girder ____ **Rolled Girder Concrete Encased** ____
Plate Girder X **Plate Girder Concrete Encased** ____

Metal Suspension ____

Metal Arch ____

Metal Cantilever ____

Concrete ____:
Concrete Arch ____ **Concrete Slab** ____ **Concrete Beam** ____ **Rigid Frame** ____
Other ____ **Type Name** ____

BA-2787

DESCRIPTION:

Setting: Urban ___X___ **Small town** _____ **Rural** _____

Describe Setting:

Bridge No. 3008 carries US 1 (Southwestern Boulevard) over CSX Transport Railroad in Baltimore County. US 1 runs north-south and CSX Transport runs east-west. The bridge is located in the vicinity of Halethorpe and is surrounded by commercial development and a wooded area.

Describe Superstructure and Substructure:

Bridge No. 3008 is a 1-span, 2-lane, metal girder bridge. The bridge was originally built in 1930. The structure is 109 feet long and has a clear roadway width of 40 feet; there is one sidewalk on the south side of the bridge measuring 5.5 feet wide. The out-to-out width is 46.5 feet. The superstructure consists of two (2) plate girders which support a concrete deck. The girders have a total height of approximately 9 feet, with 4 feet extending above the roadway and are spaced 42 feet apart. The cross girders consist of concrete encased beams and twenty-one (21) stringers spaced approximately 8 feet apart. The roadway is carried through the plate girders. The concrete deck is 12 inches thick, and it has a bituminous wearing surface. The roadway approaches at a slight angle from the south and is straight to the north. The substructure consists of two (2), concrete abutments. There are two (2) flared and two (2) straight wing walls. The bridge has a sufficiency rating of 57.6.

According to the 1996 inspection report, this structure is in poor condition with deterioration of the concrete deck, frozen and rusted bearings, cracks in the concrete encased floor beams, severe deterioration of utility pipes along the bridge, and deterioration of the soffit. The asphalt wearing surface has many patches, particularly at the approaches along the joints. The concrete has spalling, scaling, and cracking in the abutments. The concrete deck also is deteriorating with evidence of spalling. The concrete encased floorbeams contain small cracks. The west girder has a rusted section approximately 20 feet from the south abutment. On the top of the roadway, several stiffeners which are riveted to the girders have traffic damage. There are two (2) utility pipes underneath the west side of the bridge that have heavy deterioration with broken supporting brackets. The circular pipes inside the square duct are broken and sagging, and the large circular duct is severely rusted. Because of the poor condition of the superstructure and substructure, the bridge is scheduled for replacement.

Discuss Major Alterations:

The sidewalk was added to the structure at an unknown date. Inspection reports from 1996 mention repairs to the floorbeams, but do not specify the nature of the repairs.

HISTORY:

WHEN was the bridge built: 1930

This date is: Actual ___X___ **Estimated** _____

Source of date: Plaque ____ **Design plans** ___ **County bridge files/inspection form** ___

Other (specify): State Highway Administration bridge files/inspection form

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

The bridge was altered to correct functional or structural deficiencies.

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

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

Metal girder bridges were most likely introduced and first popularized in Maryland by the state's major railroads of the nineteenth century including the Baltimore and Susquehanna, its successor the Northern Central, and the Baltimore and Ohio Railroad. Bridge engineering historians have documented the fact that James Milholland (or Mulholland) erected the earliest plate girder span in the United States on the Baltimore and Susquehanna Railroad in 1846 at Bolton Station, near present-day Mount Royal Station. The sides (web) and bottom flange of Milholland's 54-foot-long span were wholly of wrought iron and included a top flange reinforced with a 12x12-inch timber. Plates employed in the bridge were 6 feet deep and 38 inches wide, giving the entire bridge a total weight of some 14 tons. Milholland's pioneering plate girder cost $2,200 (Tyrrell 1911:195). By December 31, 1861, the Northern Central Railroad, which succeeded the Baltimore and Susquehanna, maintained an operating inventory in Maryland of 50 or more bridges described simply as "girder" spans, in addition to a number of Howe trusses. Most of these were probably iron girder bridges; the longest were the 117-foot double-span bridge over Jones Falls and the 106-foot double-span girder bridge at Pierce's Mill (Gunnarson 1990:179-180).

As in the nation, girder bridge technology in Maryland was quickly adapted to cope with the increasingly heavy traffic demands of the twentieth century caused by automobile and truck traffic. The 1899 Maryland Geological Survey report on highways noted that "there are comparatively few I-beam bridges, one of the cheapest and best forms for spans less than 25 or 30 feet" (Johnson 1899:206). Interestingly, the report also urged construction of a composite metal, brick, and concrete

bridge, noting that "no method of construction is more durable than the combination of masonry and I-beams, between which are transverse arches of brick, the whole covered with concrete, over which is laid the roadway" (Johnson 1899:206). Whether any such bridges (transitional structures between I-beams and reinforced concrete spans) were built is unknown.

Official state and county highway reports—issued between 1900 and the early 1920s through the Highway Division of the Maryland Geological Survey and its successor, the State Roads Commission—generally do not reference or describe girder construction. An analysis of the current statewide listing of county and municipal bridges (a listing maintained by the State Highway Administration) reveals that 48 county bridges, out of the total of 141 approximately dated to "1900" by county engineers, were listed as steel girder, steel stringer, or variants of such terms. (It should be noted that the "1900" date is often given when no exact date is pinpointed for a bridge that is clearly old). A grand total of 200 bridges (including "steel culverts"), out of 550 bridges dated on the county list between 1901 and 1930, were described as steel beam, steel girder, or steel stringer and girder varieties. The total suggests that among the various highway bridge types built in the early twentieth century metal girder bridges in Maryland between 1900 and 1930 were second in popularity only to reinforced concrete bridges. However, these numbers must be interpreted with caution, as they do not necessarily include all county and municipal bridges.

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?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of 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 located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

A significant example of a metal girder bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge does retain its distinctive features visible from the roadway approach. However, the structure is in poor condition and has severe deterioration. There are cracks in the concrete abutments, deck, and encased floorbeams, and the metal components in the superstructure are corroded. This deterioration compromises the integrity of the character-defining elements of the structure and makes it an undistinguished example of a metal girder bridge.

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

The bridge retains much of the character-defining elements of its type, including the plate girders and abutments of concrete. However, the integrity of these elements has been compromised by severe deterioration of the major components of the superstructure and substructure.

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

This bridge is not a significant work or any manufacturer, designer, and/or engineer.

BA-2781

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

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

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

Gunnarson, Robert
1990 *The Story of the Northern Central Railway, From Baltimore to Lake Ontario.* Greenberg Publishing Co., Sykesville, Maryland.

Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

Tyrrell, Henry G.
1911 *History of Bridge Engineering.* Published by author, Chicago.

SURVEYOR:

Date bridge recorded 2/28/97
Name of surveyor Caroline Hall/Eric F. Griffitts
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1685 **FAX number** (410) 296-1670

Maryland Historic Highway Bridges

Bridge Type METAL GIRDER

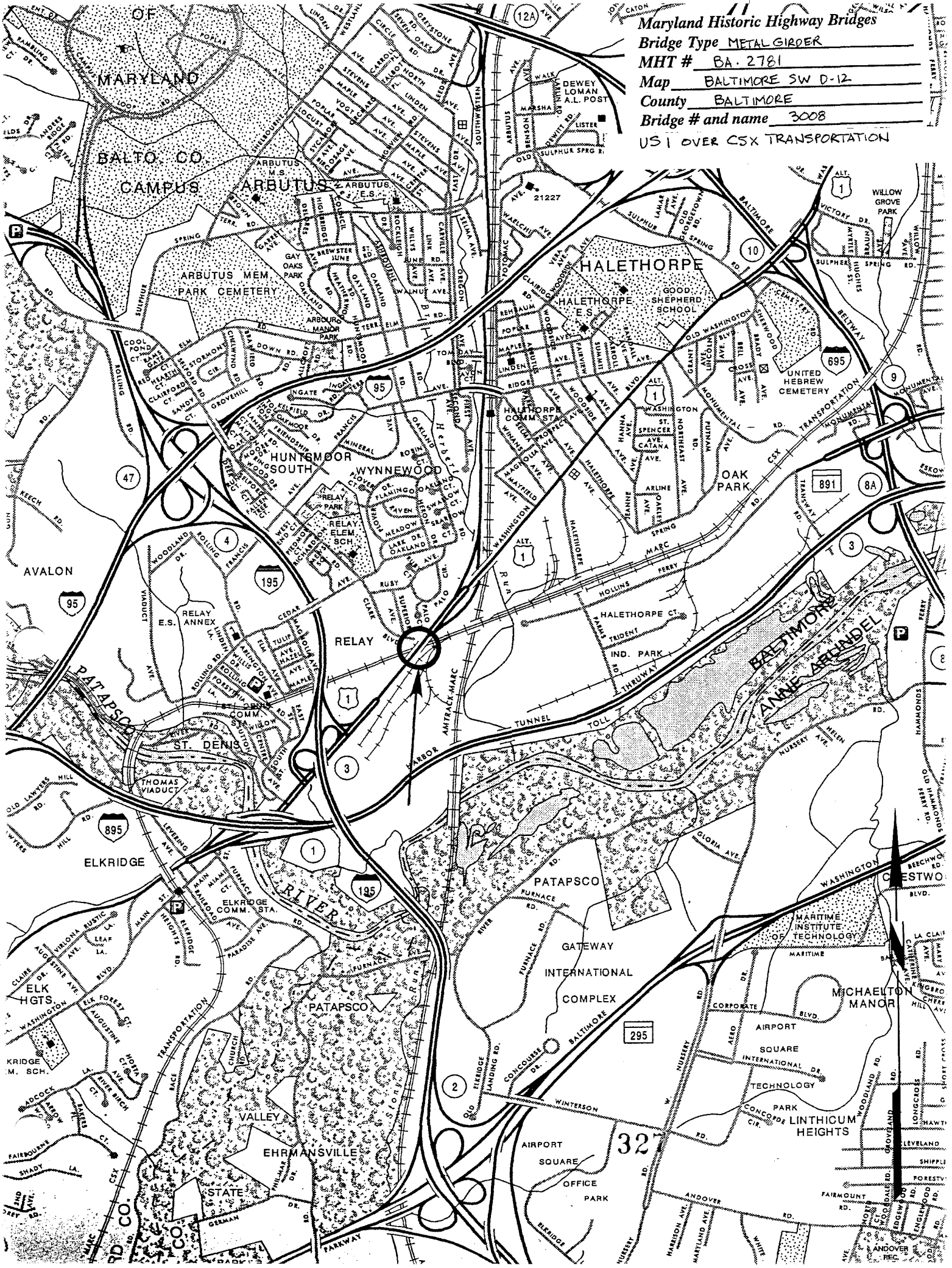
MHT # BA-2781

Map BALTIMORE SW D-12

County BALTIMORE

Bridge # and name 3008

US 1 OVER CSX TRANSPORTATION



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INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Bridge #3008, US 1 over B&O RR Survey Number: ~~na~~ BA-2781

Project: US 1 over B&O RR, Baltimore County Agency: SHA

Site visit by MHT Staff: X no ___ yes Name _____ Date _____

Eligibility recommended _____ Eligibility **not** recommended X

Criteria: ___A ___B X C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

Bridge #3008, a 109′ steel girder bridge built in 1930 does not meet the criteria for listing on the National Register. Many examples of this simple and common bridge type remain throughout the state.

Documentation on the property/district is presented in: project file

Preparedby: RitaSuffness

Elizabeth Hannold 12/30/91
Reviewer, Office of Preservation Services Date

NR program concurrence: X yes ___ no ___ not applicable

[signature] 6 Jan 92
Reviewer, NR program Date

DT

Survey No. na BA-2781

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

_____	Eastern Shore	(all Eastern Shore counties, and Cecil)
_____	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
X	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
_____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

_____	Paleo-Indian	10000-7500 B.C.
_____	Early Archaic	7500-6000 B.C.
_____	Middle Archaic	6000-4000 B.C.
_____	Late Archaic	4000-2000 B.C.
_____	Early Woodland	2000-500 B.C.
_____	Middle Woodland	500 B.C. - A.D. 900
_____	Late Woodland/Archaic	A.D. 900-1600
_____	Contact and Settlement	A.D. 1570-1750
_____	Rural Agrarian Intensification	A.D. 1680-1815
_____	Agricultural-Industrial Transition	A.D. 1815-1870
_____	Industrial/Urban Dominance	A.D. 1870-1930
X	Modern Period	A.D. 1930-Present
_____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

_____ Subsistence
_____ Settlement
_____ Political
_____ Demographic
_____ Religion
_____ Technology
_____ Environmental Adaption

IV. Historic Period Themes:

_____ Agriculture
X Architecture, Landscape Architecture, and Community Planning
_____ Economic (Commercial and Industrial)
_____ Government/Law
_____ Military
_____ Religion
_____ Social/Educational/Cultural
_____ Transportation

V. Resource Type:

Category: structure

Historic Environment: urban

Historic Function(s) and Use(s): transportation

Known Design Source: unknown

1. BA-2781
2. US 1 over CSXT, RR
3. Baltimore County
4 Eric Griffitts
5. 3/97
6. MD SHPO
7. north approach
8. 1 of 6

1. BA-2781
2. US 1 over CSXT RR
3. Baltimore County
4. Eric Griffitts
5. 3/97
6. MD SHPO
7. south approach
8. 2 of 6

1. BA-2781
2. US 1 over CSXT RR
3. Baltimore County
4. Eric Griffitts
5. 3/97
6. MD SHPO
7. east elevation
8. 3 of 6

1. BA-2781
2. US lower CSXT RR
3. Baltimore County
4. Eric Griffitts
5. 3/97
6. MD SHPO
7. west elevation
8. 4 of 6

1. BA-2781
2. US 1 over CSXT RR
3. Baltimore County
4. Eric Griffith
5. 3/97
6. MD SHPO
7. detail of girders & east abut.
8. 5 of 6

1. BA-2781
2. US 1 over CSXT RR
3. Baltimore County
4. Eric Griffitts
5. 3/97
6. MDSHPO
7. detail of added concrete sidewalk
8. 6 of 6