Maryland Historical Trust

Maryland Inventory of Historic Properties number: F-6-115

Name: MD 77 over Owens 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 ___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.** F-6-115
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. 10053 **Bridge name** MD 77 (Rocky Ridge Road) over Owens Creek

LOCATION:
Street/Road name and number [facility carried] MD 77 (Rocky Ridge Road)

City/town Rocky Ridge **Vicinity** X

County Frederick

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 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** _____

DESCRIPTION:

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

Describe Setting:

Bridge No. 10053 carries MD 77 (Rocky Ridge Road) over Owens Creek in Frederick County. MD 77 runs east-west and Owens Creek flows north-south. The bridge is located in the vicinity of Rocky Ridge, and is surrounded by farmland.

Describe Superstructure and Substructure:

Bridge No. 10053 is a 2-span, 2-lane, metal girder bridge. The bridge was originally built in 1932, and it has not been significantly altered. The structure is 123 feet, 4½ inches long and has a clear roadway width of 30 feet; there are no sidewalks. The out-to-out width is 32 feet, 7 inches, and the bridge has a 40° skew. The superstructure consists of nine (9) plate girders which support a concrete deck and concrete parapets. The girders are 12" x 36" and are spaced 3 feet, 11 inches apart. The girders have two (2) sets of metal stiffeners perpendicular to the girders, approximately 40 feet from the abutments. The roadway is carried on the girders. The concrete deck is 10 inches thick and it has a bituminous wearing surface. The structure has pierced concrete parapets and the roadway approaches have narrow shoulders and steel guardrails. The substructure consists of two (2) concrete abutments, an intermediate concrete pier at mid-length, and there are flared concrete wing walls. The bridge is not posted, and has a sufficiency rating of 66.5.

According to the 1996 inspection report, this structure was in good condition with some areas of spalling. The asphalt wearing surface is patched in places. The concrete of the abutments and pier have some areas of spalling; the concrete of the superstructure is in good condition with some scaling and cracking. Also, the concrete parapet has some areas of scaling. The girders have areas of spot rusting.

Discuss Major Alterations:

There have been no major alterations to this structure. Inspection reports from 1990 and 1996 record that the bridge has received routine maintenance, including patching of cracks, scaled areas, and spalled areas.

HISTORY:

WHEN was the bridge built: 1932
This date is: Actual X **Estimated** _____
Source of date: Plaque X **Design plans** __ **County bridge files/inspection form** __
Other (specify): State bridge files/inspection form

WHY was the bridge built?

The bridge was constructed when MD 77 (Rocky Ridge Road) was realigned and widened.

WHO was the designer?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?

N/A

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 X

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of metal girder construction. The structure has a high degree of integrity and retains such character-defining elements of the type as the original metal girders, abutments and wing walls, and parapets. The bridge is a representative example of a twentieth century metal girder bridge that has not been altered.

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?

The bridge is a potentially significant example of a metal girder bridge, possessing a high degree of integrity.

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

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including the original metal girders, abutments and wing walls, and parapets.

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

This bridge is a significant example of the work of the State Roads Commission in the 1930s.

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.

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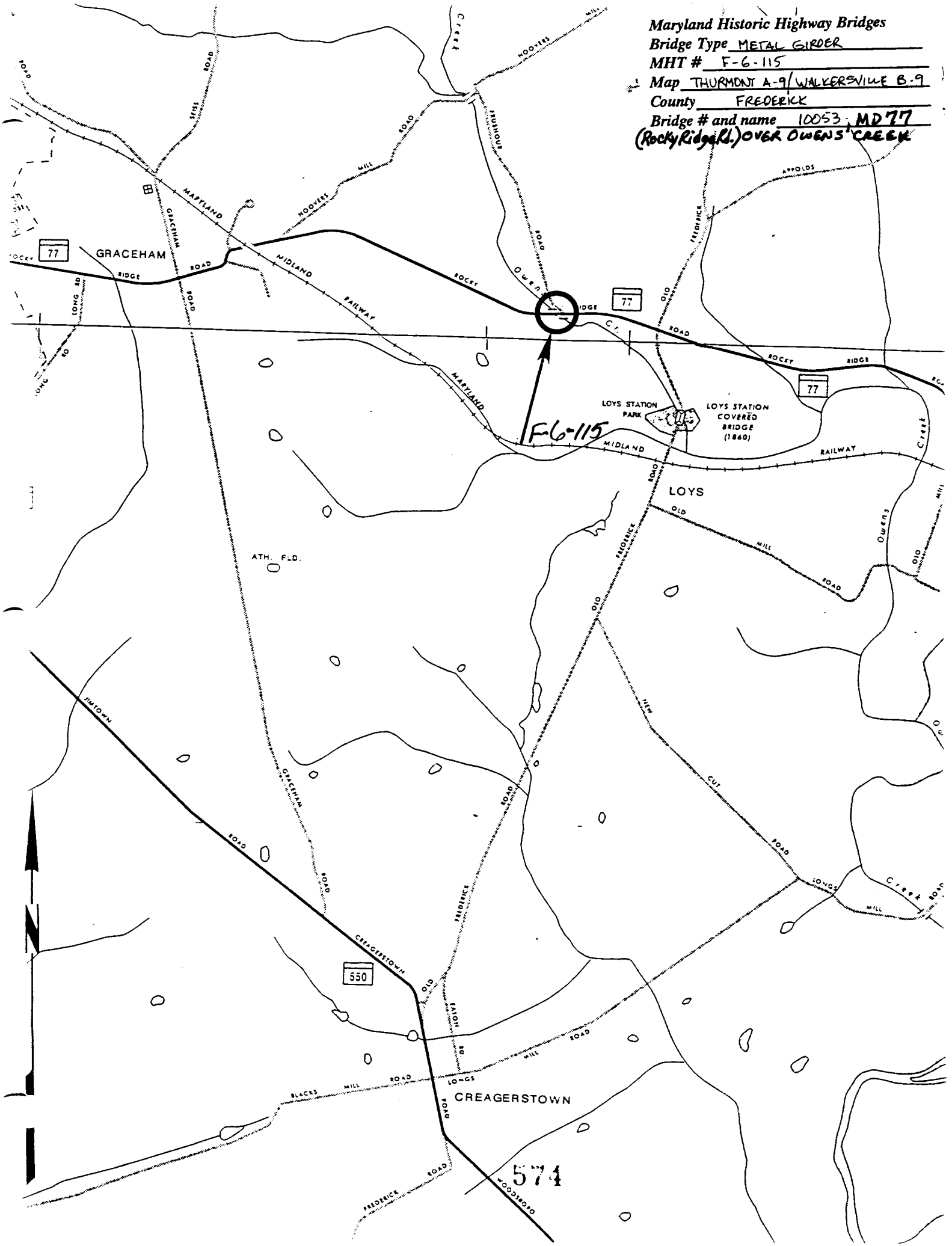
Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

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

SURVEYOR:

Date bridge recorded 2/26/97
Name of surveyor Caroline Hall/Ryan McKay
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 # F-6-115
Map THURMONT A-9/WALKERSVILLE B-9
County FREDERICK
Bridge # and name 10053 MD77
(Rocky Ridge Rd.) OVER OWENS CREEK
GRACEHAM
LOYS
CREAGERSTOWN
LOYS STATION PARK
LOYS STATION COVERED BRIDGE (1860)
F-6-115
77
550
ATH. FLD.
MARYLAND
MIDLAND
RAILWAY
ROCKY
RIDGE
ROAD
OLD
MILL
FREDERICK
NEW
CUT
LONGS
CREAGERSTOWN
BLACKS
WOODSBORO
EATON
FRUSHOUR
HOOVERS
SEISS
APPOLDS
Owens
Creek
N

1 F-6-113

MD 77 [illegible] Ridge [illegible]

3 Frederick Co., MD

Creek

(Clones)

4 [illegible]

5 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] ID 77 [illegible]

[illegible]

FREDERICK CO MD

CREEK BRIDGE

1. F-G-115

2. MD 77 (Rocky Ridge Hdqtrs [illegible] Creek

3. Federick Co. MD

4. [illegible]

5. [illegible]

6. [illegible]

7. Factor of [illegible]

8. [illegible]

9203385

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

Property/District Name: Bridge 10053 Survey Number: F-8-115

Project: MD 77 over Owens Creek, Frederick Co. Agency: ~~MHT~~/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)

Based on the information provided by SHA, Bridge 10053 does not meet the National Register criteria for individual listing. The steel beam structure was built in 1932 and has no engineering or historical significance. It is one of many of its type in the state. In addition, the bridge is not located in any known historic district.

Documentation on the property/district is presented in: Project File

Preparedby: RitaSuffness

Elizabeth Hannold — January 12, 1992
Reviewer, Office of Preservation Services — Date

NR program concurrence: ✓ yes ___ no ___ not applicable

B Andrews — 1.13.93
Reviewer, NR program — Date

DK

F-6-115

Survey No. FR

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

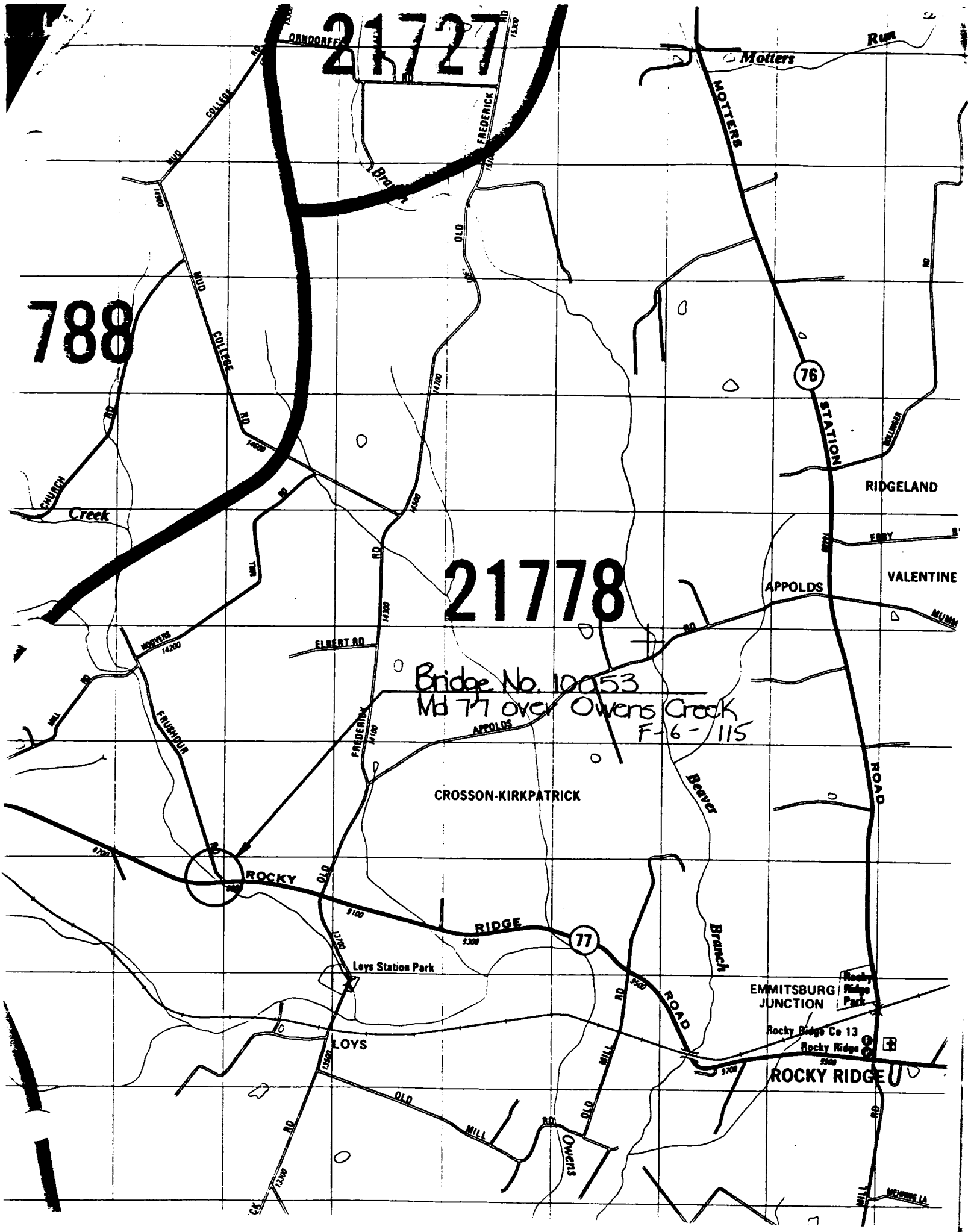
V. Resource Type:

Category: Structure

Historic Environment: rural

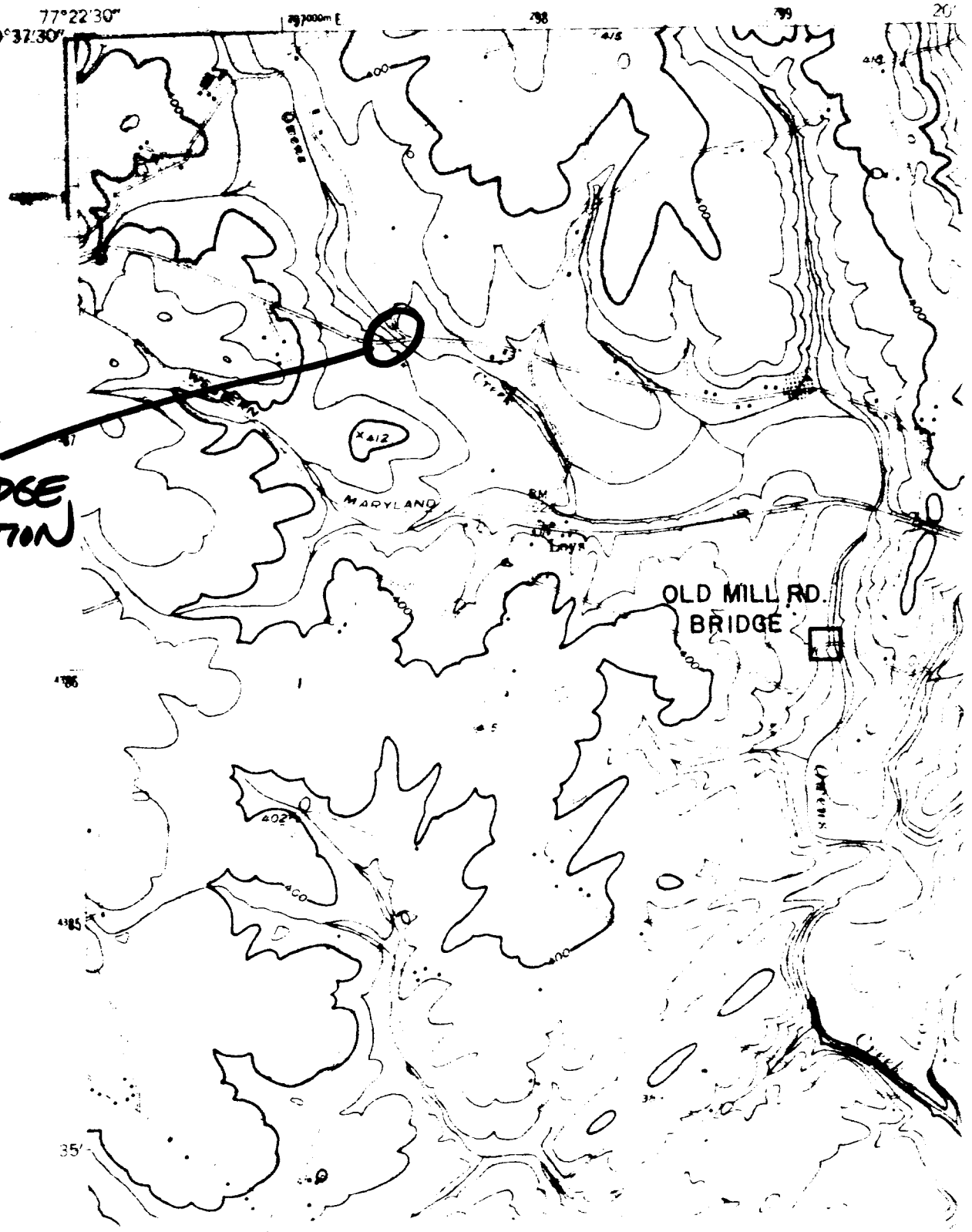
Historic Function(s) and Use(s): transportation

Known Design Source: Unknown


21727
788
21778
Bridge No. 10053
Md 77 over Owens Creek
F-6-115
Motters Run
MOTTERS STATION ROAD
76
RIDGELAND
VALENTINE
APPOLDS
CROSSON-KIRKPATRICK
ROCKY RIDGE ROAD
77
Loys Station Park
LOYS
EMMITSBURG JUNCTION
Rocky Ridge Park
Rocky Ridge Co 13
Rocky Ridge
ROCKY RIDGE
Beaver Branch
Owens
Creek
MUD COLLEGE RD
FREDERICK RD
OLD FREDERICK RD
CHURCH RD
ELBERT RD
FRUSHOUR
OLD MILL RD
MILL RD
ORNDORFF RD
BOLLINGER
MEHRING LA

F-6-115

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Bridge No. 10053 - Md. 77 over Owens Creek

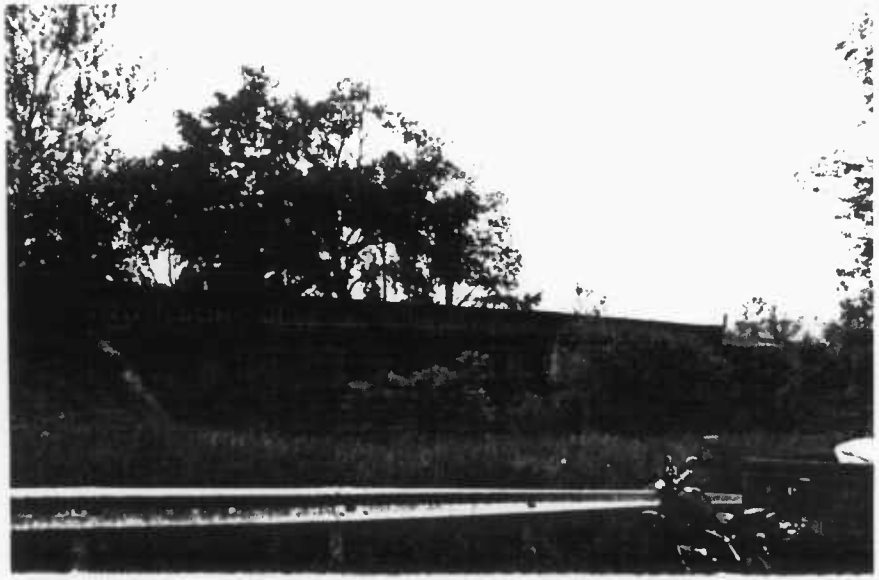
F-6-115

Looking West

Looking South

Looking East

Looking North



F-6-115

Up Stream

Down Stream