

CRUM ROAD BRIDGE  
Spanning Israel Creek at Crum Road,  
approximately  $\frac{1}{2}$  mile south  
of Walkersville  
Walkersville Vicinity  
Frederick County  
Maryland

HAER No. MD-90

HAER  
MD  
II-WALKV.V,  
2-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Northeast Region  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, PA 19106

HISTORIC AMERICAN ENGINEERING RECORD

HAER  
MD  
11-WALKERSVILLE  
2-

CRUM ROAD BRIDGE

HAER No. MD-90

**Location:** Spanning Israel Creek at Crum Road, approximately ½ mile south of Walkersville, Walkersville vicinity, Frederick County, Maryland

USGS: Walkersville quadrangle  
UTM Coordinates: 18 298660 4371800

**Engineer/Architect/  
Builder/Fabricator:** Attributed to the King Iron Bridge Company, Cleveland, Ohio

**Date of Construction:** circa 1890

**Present Owner:** The Board of County Commissioners of Frederick County, Maryland  
Frederick County Courthouse  
Frederick, Maryland 21701

**Present Use:** not in use

**Significance:** Listed in the National Register of Historic Places in 1978, the Crum Road bow string arch truss bridge is significant for its unusual design and because it is among the oldest steel or iron truss bridges remaining in Frederick County. Frederick County has 26 metal truss bridges of which three are of the bow string arch type.

**Project Information:** This documentation was undertaken in April, 1993 in accordance with the Memorandum of Agreement among the Advisory Council on Historic Preservation, the Maryland State Historic Preservation Officer and the Army Corps of Engineers as a mitigative measure prior to the relocation of the bridge to Heritage Park in Walkersville.

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### Setting

The Crum Road bow string truss bridge, now closed to vehicular traffic, carried Crum Road across Israel Creek just south of Walkersville in central Frederick County. The bridge is located along a straight stretch of the road which links State Route 194 through Walkersville with State Route 26 at Mt. Pleasant between Libertytown and Ceresville. Crum Road leads in a north-south direction and Israel Creek at this point runs almost due east-west. The straight path of the road is not interrupted by the bridge. The bridge is set among open farm fields. Trees line the course of Israel Creek. Large sycamore trees are located on each side of the bridge.

### Bridge Description

The bridge is a single span structure, 63 feet, 4 inches in length to the abutments, consisting of a bow string truss system with a wood deck supported by steel stringers and floor beams. The bridge rests on the original stone abutments and wing walls sheathed with concrete in 1975.

The truss system has eight sections or bays varying in height to form an arc. The highest bay at the center of the span is 6.95 feet, decreasing to meet the deck on each end. Between the bays are diagonal members crossing to form an X web in each section. The diagonal web members consist of 7/8 inch diameter steel rods. The top chord, of unusual design consists of four, two-angled flanged pieces bolted together to form an octagonal tube. The bottom chord consists of parallel pairs of steel beams 5 inches high by 7/16 inch wide. The deck is 13 feet, 5 inches wide with a clearance of 9 feet above the stream. On each side of the bridge are a pair of outriggers on extended stringers, placed as part of the original construction to stabilize the arched truss.

Various dates have been given for the construction of the Crum Road Bridge, ranging from 1875 to the 1890s. The National Register nomination records the date as ca. 1880, while engineering studies conducted for the Frederick County Department of Public Works estimate the date as about 1890. Frederick County's other bow string truss bridge, the Bennie's Hill Bridge near Burkettsville is dated ca. 1900 with a tablet bearing the inscription of the King Bridge Company, Cleveland, Ohio. Unfortunately no plaque remains for the Crum Road Bridge and no documentary evidence has been found to provide a definitive date of construction.

The bridge has been closed to traffic since 1991 when an upstream bypass over four large conduits was put in place. The Crum Road Bridge is to be moved to Heritage Park in Walkersville where it will be used by pedestrians. Ownership and maintenance responsibility will be turned over to the Town of Walkersville.

### Historical Background

Construction of the Crum Road Bridge is attributed to the King Iron Bridge Company of Cleveland, Ohio. According to the National Register documentation for this bridge, the original patent for the bow string arch truss bridge was first registered in 1840. Zenas King of the King Iron Bridge Company patented his own Tubular Arched Bridge which became one of the company's most popular designs. In general, bow string arched truss systems were not common, making up less than 10 percent of all highway iron truss bridges. The Crum Road Bridge National Register nomination quotes James Waddell's 1891 book, The Designing of Ordinary Iron Highway Bridges, which stated that at least 90 percent of all American iron highway bridges were of the Pratt or Whipple truss systems.<sup>1</sup> Other truss types, including the bow string arch truss made up the remaining 10 percent. Of the approximately 40 truss bridges in Frederick County in 1978, three were of the bow string arch truss type.

The existence of Crum Road predates the construction of the bridge. The road is shown on Isaac Bond's 1858 map of Frederick County, but not on Charles Varlé's 1808 map. The road seems to have developed as a shortcut from Walkersville to the Libertytown Pike, today's State Route 26. The town of Walkersville developed fairly late for Frederick County. Most of the buildings appear to date from the mid-19th century or later. According to J. Thomas Scharf's History of Western Maryland, published in 1882, Walkersville was "one of the newest" and "one of the most attractive places in the County, and in the past three years over thirty substantial houses have been erected within its limits.

"It was named in honor of John Walker, who owned the land on which it was laid out...Its beautiful location and proximity to the fine turnpike skirting it [Maryland Route 194] make it a favorite resort for drives and excursions from Frederick City."<sup>2</sup> If Scharf's description is correct and Walkersville was a "resort" or destination for outings in 1882, it seems appropriate that the straight road leading from Walkersville south would be improved with a new bridge about 1890. Crum Road in general and the bow string truss bridge in particular illustrate the development of this community of Walkersville and the traffic that must have been generated as people took pleasure drives in the area between Frederick and Walkersville.

From the standpoint of its structure, this bridge is significant as presenting a less common bridge truss type of which only three were known to

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<sup>1</sup> James A.L. Waddell, The Designing of Ordinary Iron Highway Bridges, (New York: John Wiley & Sons, Inc. 1891) p. IV. as quoted in the National Register of Historic Places Inventory - Nomination form, prepared by Cheryl Widell, January 19, 1978.

<sup>2</sup> J. Thomas Scharf, History of Western Maryland. (Philadelphia: Louis H. Everts, 1882) p. 625.

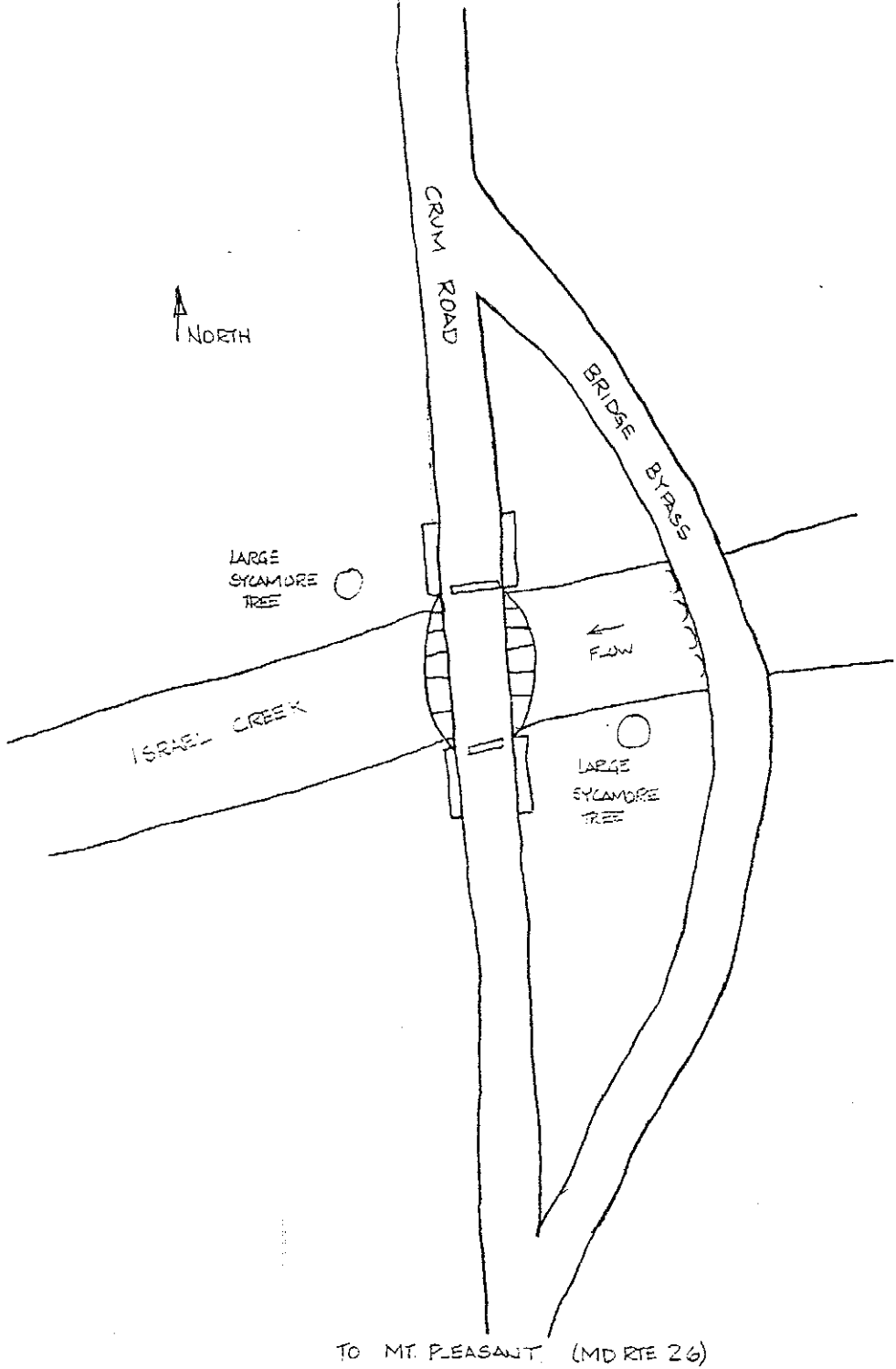
have been constructed in Frederick County. If about 40 steel truss bridges were standing in 1978, and 26 remain in 1993, these historic structures are vanishing at the rate of almost one each year. This bridge, however, will be preserved in Walkersville's park, close to its original setting on Israel Creek.

A search was undertaken for historic photographs of this bridge through consultation with the following sources: the Frederick County Historic Sites Survey Consultant; local historians with the Frederick County Library's local history section; published postcard albums and photographic histories of the county; and historic sites survey documentation. The Frederick County Department of Public Works' file on this bridge contains photographs as early as the 1960s. No earlier photographs have been located.

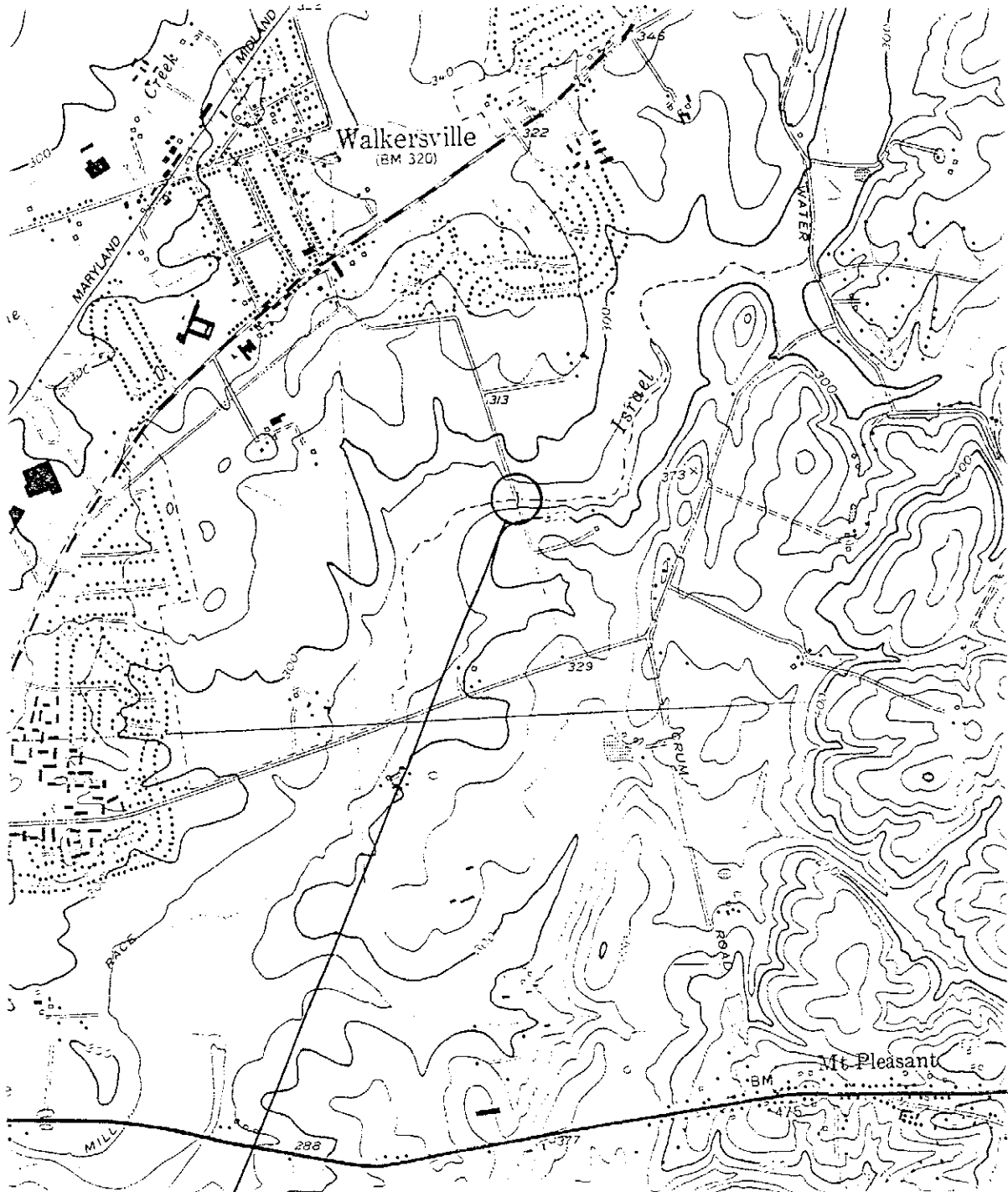
#### Bibliography

- Bond, Isaac. Map of Frederick County, Maryland. Baltimore, Maryland, 1858.
- Frederick County Department of Public Works, bridge inspection records.
- Lake, D.J. Atlas of Frederick County, Maryland. Philadelphia: C.O. Titus & Co., 1873.
- Scharf, J. Thomas. History of Western Maryland. Philadelphia: Louis H. Everts, 1882.
- Waddell, James A.L. The Designing of Ordinary Iron Highway Bridges. New York: John Wiley and Sons, Inc., 1891.
- Widell, Cherilyn. "Crum Road Bridge" nomination to the National Register of Historic Places, 1978.

TO WALKERSVILLE



Walkersville Quad



Crum Road Bridge