

HAER
DEL
2-HOCK.V,
3-

STATE BRIDGE NO. 177
Brackenville Road, Spanning Mill Creek
Hockessin Vicinity
New Castle County
Delaware

HAER No. DE-51

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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

HAER
DEL
2-HOCK.V,
3-

HISTORIC AMERICAN ENGINEERING RECORD

STATE BRIDGE NO. 177

HAER NO. DE-51

LOCATION: Brackenville Road, spanning Mill Creek, Hockessin vicinity, New Castle County, Delaware.

USGS Kennett Square, PA-DE Quadrangle,
UTM Coordinates: 18.440900.4403050

DATE OF CONSTRUCTION: 1846

BUILDER: New Castle County

PRESENT OWNER: Delaware Department of Transportation

PRESENT USE: Highway bridge

SIGNIFICANCE: Bridge No. 177 is a representative example of a stone single-arch wagon bridge, typical of mid-nineteenth-century bridges built with local labor and materials along roads in New Castle County and other areas of the Mid-Atlantic region.

PROJECT INFORMATION: A July 1996 evaluation of Bridge No. 177 resulted in a recommendation of immediate repairs. This recordation project was undertaken pursuant to an agreement between DelDOT and the Delaware State Historic Preservation Office. Bridge No. 177 was recorded in July 1996 by the Cultural Resource Group of Louis Berger & Associates, Inc., East Orange, New Jersey, for DelDOT. Photography was performed by David C. Berg, Architectural Historian. Research was conducted by Philip E. Pendleton, Architectural Historian.

DESCRIPTION

State Bridge No. 177 is a stone arch bridge constructed as a single-arch span carrying Brackenville Road over Mill Creek. The bridge's setting is that of an area that still retains some rural character, a sense reinforced by the presence of the woods lining Mill Creek and by the relatively narrow width of Brackenville Road itself, though, in fact, the area has undergone steady and very extensive exurban residential development since World War II. The upper stonework (i.e., the parapet) was removed in 1965, but the remainder of the original bridge survives intact beneath a broader concrete deck. Regarding its orientation, the stone bridge is built in the more commonly employed "right" or straight form to carry the road directly over the stream. The bridge is aligned running from southwest to northeast. The arch is segmental in design, and spans twenty feet. The original stone-built structure is twenty-one feet broad at the spandrels, the slightly broader wing wall sections being of U-shaped configuration. Apart from the relatively large, squared voussoir stones that form the arch, the bridge is composed of rubble or undressed stones that have been laid as random rubble. The stone used appears to be gneiss, probably quarried locally. The random rubble stonework has been fairly heavily parged. This general reinforcement of the structure was probably carried out at a point relatively early during the period from 1921, when the unparged structure was photographed, through 1964, the beginning date for DelDOT's maintenance records for the bridge (P.A.C. Spero & Company 1991:17). (The 1921 photograph has unfortunately been lost or mislaid since its use in a 1991 publication.)

The reinforced concrete slab that was laid over the stone bridge in 1965 is twenty-four feet wide and carries two lanes of roadway. Galvanized guard rail serves as parapet. The original stone parapet rose about three feet above the road and was capped by stone coping.

A simple inscription is carved in a relatively large stone lodged in the midpoint of the northwest spandrel wall, reading:

N. C. C.
1846

HISTORICAL BACKGROUND

State Bridge No. 177 was constructed in 1846 by the New Castle County government as one instance in an extended series of bridge improvements that transpired between 1820 and 1870. The stone arch bridge underwent a radical alteration in 1965 when the parapet was removed so that the bridge could be widened via the overlaying of a concrete slab. Its nature as a stone-arch structure remained readily observable from the side, however. As of July 1996, the bridge was slated for removal and replacement with a modern structure.

Bridge No. 177 is situated in Mill Creek Hundred, New Castle County, Delaware, spanning Mill Creek to carry Brackenville Road. It lies in the northern part of Mill Creek Hundred in a local vicinity known as Hockessin. The settlement of this area by the English and the Ulster Scots commenced circa 1710-1715, although a very few Swedish or Dutch pioneers may have arrived earlier. The land of Hockessin was of above-average fertility, and the area soon became known for its agricultural prosperity. Besides good land, the presence of fall line topography and numerous substantial streams in Hockessin and neighboring localities provided opportunities for the employment of waterpower by gristmills and other hydraulic industrial facilities (Conrad 1908:478-79; Lake 1976).

From the mid-eighteenth through the mid-nineteenth century, the confluence in northern Delaware of topography, of the larger Delaware Valley region economy's emphasis on the production of wheat, and of the marked presence of the Quaker entrepreneurial spirit, resulted in the emergence of a unique concentration of the flour milling industry. The mills of the Brandywine Valley, in particular, located some 5-10 miles east of Mill Creek, became known for the mechanical and architectural innovations that were introduced by Oliver Evans and others, but many gristmills and flour mills were also seated along Mill Creek. Farmers from a much greater surrounding region in Pennsylvania, Maryland, and Delaware often brought their wheat via wagon to northern Delaware if they judged the business opportunity favorable to their interest. With many coming from the area of Lancaster and western Chester counties in Pennsylvania, this created a strong flow of wagons through the Hockessin vicinity in addition to the activity of local farmers transporting their wheat crop to mill (Lake 1976).

Although major road improvements were built through the Hockessin area in the 1810s to speed the passage of the Lancaster County-Delaware wagon traffic, Brackenville Road does not represent one of these (Lake 1976). The road's early history is not known, but its relatively long course, four miles in length from Route 7 to Route 82, suggests that it served as a comparatively prominent linking or secondary road for local traffic and is probably a good deal older than 1846 when the stone arch bridge was built. It was identified on a circa 1847 draft of an intersecting road as the "Public Road to Philip's Mill," the latter establishment being seated by Red Clay Creek about two-and-a-half miles northeast of Bridge No. 177 (New Castle County Court of General Sessions Road Papers).

HISTORY OF BRIDGE NO. 177

The erection of Bridge No. 177 was one in a long series of bridge constructions that took place in New Castle County between 1820 and 1870, part of a general national movement for the improvement of local transportation facilities (Lake 1976). At the same session of the New Castle County Levy Court that decided to proceed with building this bridge, that of March 1846, it was resolved that bridge construction expenditures be sharply limited and closely monitored. It was considered that the county's taxpayers had borne a heavy fiscal burden over the past two decades or so due to the high number of bridges that the county had constructed during that period. A petition for the bridge from people residing near its site had been brought to the Levy

Court a month earlier, and a committee had been appointed to examine the site and consider the matter. In March this committee made a report favoring the construction of "a new bridge in Mill Creek Hundred over Mill Creek, near the residence of Job Taylor." The Levy Court ordered that \$400 be appropriated so that the project could proceed (New Castle County Levy Court Minutes). The circa 1847 draft for an intersecting road along the southwest bank of Mill Creek showed the stone arch bridge in place, referred to as "Bridge at Taylor's Forging" (New County Court of General Sessions Road Papers).

The stone-arch form was a comparatively common choice made to span smaller crossings in Delaware during the nineteenth century, especially in the northernmost county of New Castle where building stone was readily available. In the 1920s, some twenty or so stone arch bridges remained standing in New Castle County alone. As of 1988, however, only four stone arch bridges survived throughout Delaware's three counties (HABS/HAER 1988).

The most extensive modification or repair made to the bridge between its original construction and its major alteration in 1965 was the reconstruction of one of the wing walls in 1925. This work, however, preserved the form of the existing bridge (DelDOT Plan Files). The construction, done in 1965, in which the stone parapet was removed and a concrete slab poured to carry a wider roadway, represented a real modification. Following the initial postwar growth burst of the northern Delaware residential suburbs, the alteration of the bridge was undertaken in response to a complaint by local residents regarding the unsafe narrow width of the stone-arch structure (DelDOT Maintenance Files; DelDOT Plan Files).

REFERENCES

- Conrad, Henry C.
1908 *History of the State of Delaware.* 3 vols. Henry C. Conrad, Wilmington, Delaware.
- Delaware Department of Transportation [DelDOT]
various Maintenance Files. File No. 1-177-274. On file at DelDOT Archives, Dover, Delaware.
- various Plan Files. Contract No. 64-04-014. On file at DelDOT Archives, Dover, Delaware.
- Historic American Buildings Survey/Historic American Engineering Record [HABS/HAER]
1988 Delaware State Bridge No. 177, HABS/HAER Inventory Form. Prepared by P.A.C. Spero & Company. On file at HABS/HAER, National Park Service, Washington, D.C.

Lake, Joseph R., Jr.

1976 *Hockessin: A Pictorial History*. Hockessin-Yorklyn-Corner Ketch Bicentennial Committee, Hockessin, Delaware.

New Castle County Records

various New Castle County Court of General Sessions. Road Docket and Road Papers. On file at the Delaware State Archives, Dover, Delaware.

various New Castle County Levy Court. Minutes. On file at the Delaware State Archives, Dover, Delaware.

P.A.C. Spero & Company

1991 *Delaware Historic Bridges: Survey and Evaluation*. DelDOT Historic Architecture and Engineering Series No. 89. Delaware Department of Transportation, Dover, Delaware.

Rea, Samuel, and Jacob Price

1849 *Map of New Castle County, Delaware*. Smith & Wistar, Philadelphia. On file at the Delaware State Archives, Dover, Delaware.

