

Stone Arch Roadway and Turnpike Bridges

Historical research has located no evidence of any extant, or non-extant but documented, stone arch bridges built in Maryland during the seventeenth and eighteenth centuries. Maryland's surviving nineteenth century stone arch highway or turnpike bridges include a group of some 24 (as of 1977) significant bridges in Washington County (out of an estimated 30 actually constructed between 1818 and 1863). The concentration of such bridges in Washington County (in the group is the famous Burnside Bridge, a key, famous point in the Civil War Battle of Antietam) has inspired considerable historical study, including Helen Ashe Hays's 1910 regional classic *The Antietam and Its Bridges* and a 1965 photo exhibit at the courthouse in Hagerstown (Hays 1910; Mish and Cottingham 1977). Significant stone arch turnpike bridges also were built in other Maryland counties. The oldest documented stone arch bridge in Maryland is the Parkton stone arch, a two-span masonry bridge over the Little Gunpowder Falls, built in 1809 for the Baltimore and York Turnpike. The state's second-oldest stone arch turnpike bridge that has been securely dated is the Casselman River Arch, erected in 1813 on the National Road near Grantsville (Little Crossings Historical Committee 1964).

The design characteristics of Maryland's extant historic stone arch bridges vary in number of spans, shape of piers and parapets, rise-to-span ratio, type of stone employed (brick was also utilized in some cases), and in the treatment of the masonry (coursed rubble, squared, or ashlar). Based on historical research and prior survey forms, the following are descriptions of some representative known stone arch bridges built for turnpikes, the National Road, and private or municipal roads in Maryland:

Parkton Stone Arch: Maryland Route 463 (old Baltimore and York Turnpike) over Little Gunpowder Falls, Baltimore County (MHT-BA-593). Built in 1809 and the oldest surviving, dated stone arch bridge in Maryland. Two arch spans, each 18 feet long. Central pier 6 feet thick and abutments 8 feet thick. Built in 1809 for the Baltimore and York Turnpike, one of the first group of turnpikes chartered by the state. Attributed to John Davis (1770-1864), clerk of Philadelphia Waterworks and first superintendent of Baltimore Water Company.

Casselman River Arch: Old Route 40 (National Road) over Casselman River, near Grantsville, Garrett County (MHT-G-II-C-023). Built in 1813 for the National Road, the first improved turnpike built by the federal government. 354-foot-long bridge built of uncoursed masonry, with single arch span. At time of construction, the largest single-span arch bridge in the United States. The distinctive "humpbacked" shape of the bridge provided better drainage for the roadway. Repaired in 1911 with six steel supporting columns; remained in service until 1933. Recognized as National Historic Landmark (1964).

National Road Stone Arch Bridge at Stanton's Mill: Old Route 40 (National Road) over stream near Grantsville, Garrett County (MHT-G-II-C-016). In contrast to the imposing Casselman River Arch, this bridge is representative of the smaller spans constructed by the Army topographical engineers who laid out the National Road. Built in 1817, the bridge is a single-span 30 feet in length and constructed of cut sandstone blocks. Later altered somewhat by addition of concrete parapet coping and concrete on underside of the arch.

Wilson's Bridge: Originally carried Hagerstown and Conococheague Turnpike, a Maryland-sponsored link to the National Road, over Conococheague Creek seven miles west of Hagerstown, near Wilson, Washington County (MHT-WA-V-001; HAER No. MD-41). Built in 1819 and the earliest dated stone arch bridge among the group of such arch bridges located in Washington County. Built by Silas Harry, of Chambersburg, Pennsylvania, a mason known to have built at least three other turnpike or roadway bridges in Washington County. Constructed of coursed local limestone, Wilson's Bridge is a structure of five segmental arches, symmetrical about the largest, central arch. Cut voussoirs comprise the exterior arch rings, and the bridge is supported by piers with conical projections. After partial collapse, the bridge was rehabilitated and since 1984 has been a pedestrian bridge in a county park (see Plate 4).

Funkstown Turnpike Bridge: Alternate Route 40 over Antietam Creek at Funkstown, Washington County (MHT-WA-I-029). Built in 1823 by the Lloyds of Pennsylvania for the turnpike leading to the National Road, this three-arch bridge of smoothly dressed limestone is the earliest dated, extant stone arch bridge over Antietam Creek in Washington County, where a sizable number of stone arch bridges were constructed between 1823 and 1863. The bridge features segmental arches with carefully cut voussoirs. The Lloyds and their various associate masons constructed the majority of Washington County's significant stone arch roadway bridges of the early nineteenth century. The arches of the Funkstown Turnpike Bridge were widened with concrete during the early twentieth century, and the original stone parapets were replaced with concrete parapets.

Devil's Backbone Bridge: State Route 68 over Beaver Creek, Devil's Backbone near Booth's Mill, Washington County (MHT-WA-II-017). Built in 1824 of coursed limestone with one large segmental arch lined with cut stone. A good, early example of the "humpbacked" variety of stone arch bridge, in which the spandrel walls rise to a peak above the crown of the arch. Only known span built by local stone mason Jabez Kenney.

Burnside Bridge or Lower Bridge: Burnside Bridge Road (old Sharpsburg-Rohrersville Road) over Antietam Creek one mile south of Sharpsburg, Washington County, within Antietam National Battlefield Park (MHT-WA-II-132). This bridge, thanks to its significant association with the Civil War Battle of Antietam, is possibly the best-known stone arch roadway bridge in Maryland. Built in 1836 of coursed locally quarried limestone by John Weaver, the bridge

includes three arches springing from piers which are characterized by rounded or conical projections. Significant for its historic commercial associations like the other stone arch turnpike bridges in Maryland, the Burnside Bridge was the scene of fierce fighting during the September 17, 1862, Battle of Antietam, and has been preserved by the National Park Service.

LeGore Bridge: LeGore Bridge Road over the Monocacy River, near Woodsboro, Frederick County (MHT-F-8-49). A fine example of a privately constructed stone arch roadway bridge of the late nineteenth century, built to provide better access to a significant industrial operation. Built in the 1890s by James William LeGore utilizing limestone from his LeGore Combination Lime Company quarries, the 50-foot-high, five-span LeGore Bridge aided the industrial commerce of Frederick County and has carried modern auto and truck traffic throughout the twentieth century.

Boston Street Bridge: Boston Street over the Harris Creek Sewer, Baltimore City. As this span and others in Maryland demonstrate, masonry arches could also be constructed in brick. This bridge, built in 1901-1902 to finally solve a chronic metal bridge deterioration problem at the site due to powerful sewer gases, was constructed in brick. It employed all the techniques of stone arch construction and exemplifies municipal masonry arch engineering practice in early twentieth century Baltimore, which was then engaged in upgrading the professionalism of its engineering and public works functions.