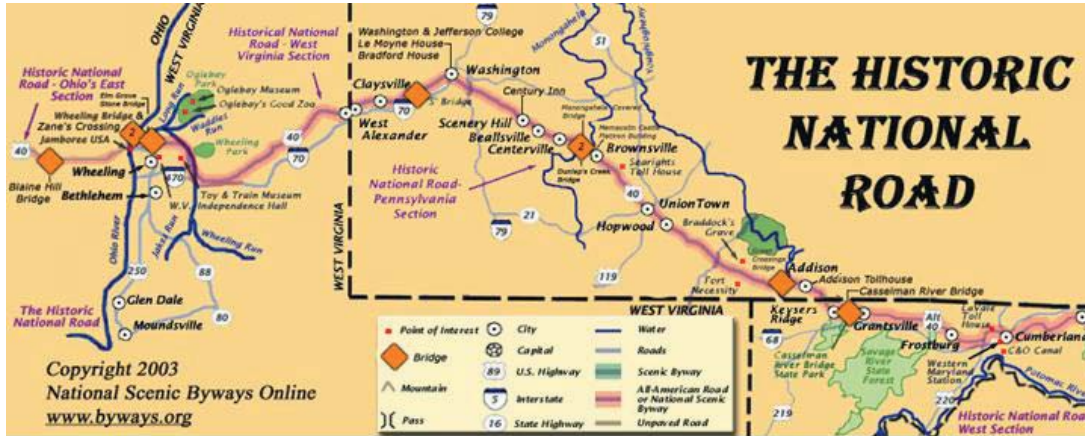


# The Bridges of the National Road — Our Nation's First Toll Road



A leisurely day trip along U.S. 40 through the mountains of western Maryland, the ridges and river valleys of Pennsylvania and West Virginia, or the farmlands of Ohio will bring a twenty-first century traveler in close contact with the last visible vestiges of our nation's first national toll roadway. These vestiges — the mile marker monuments, the bridges, the tollhouses, and the hotels — are a reminder of the spirit of travel of our forefathers and remain an archeological record of the technologies of the day.

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## How It All Began ...

In 1818, the National Road, or then known as the Cumberland Road, was opened to foot and stagecoach traffic. This was the first important road built in the country using federal funds. Its location, originally winding through the Allegheny Mountains from the Chesapeake River in Cumberland, Maryland to the Ohio River at Wheeling, (then) Virginia, was selected by a group of Commissioners under the direction of Thomas Jefferson. Its location was carefully selected utilizing natural topography to best form a route through the arduous mountain terrain. A significant portion of the road's alignment carefully followed Native American



Mile Marker

Indian paths such as the Mingo Path and the old Braddock Trail used by General Braddock and his young assistant, George Washington, during the pursuit of the French at Fort Duquesne, located in present day Pittsburgh, during the French and Indian Wars of the 1760's. In the 1820's, the toll road was extended to Illinois. The federal government turned the road over to the individual states in the 1830's due to its costly maintenance. The states decided to collect fees, or tolls, from travelers to defray the cost, hence, America's first toll road was born.

Present day Route 40 follows, and in many locations, lies on the same alignment as the original National Road. Remark-



Casselman River Bridge

ably, many of the bridges built in the 1818-1840 era still remain — several in very close proximity to present day Route 40. Tollhouses, grand hotels and mileage markers have been restored along the corridor. As we consider the present day complexities of commerce and utilization of our modern toll roads, it is interesting to reflect back to the technology of almost 200 years ago at our nation's infancy and consider the challenges and solutions facing the design and construction of bridges along this original National Toll Road.

Our journey follows the original course of the National Road from the terminus of the C&O Canal in Cumberland and winds westward through the mountains and hill country of

western Maryland, southwestern Pennsylvania, the panhandle of West Virginia, and into the farmlands of Ohio. Along the way we will visit many unique and individual structures.

## The Early Bridges of the National Road

**Casselman (or "Little Youghiogheny") River Bridge.** The National Road quickly rose from the lowlands of Cumberland, Maryland and ascended Savage Mountain, Maryland, crossed the Allegheny Mountain divide and faced it's first formidable river crossing, then known as the "Little Youghiogheny". The resulting 80-foot stone arch bridge, erected in 1813, was the largest stone arch in America at the time of construction and was continuously used from 1813 to 1933. The large span and high profile anticipated the C&O Canal through the mountains and along the river. This beautiful elliptical arch, now located in a state park, is a Registered National Historic Landmark.

**Somerfield (or "Great Crossings") Bridge.** One large river valley penetrates the heart of the Allegheny Mountain range in southwestern Pennsylvania. Braddock's Trail forded this river at its shallowest point and the National Road constructed a handsome 40-foot high, 375-foot long three-span stone arch at this "Great Crossing" of the Youghiogheny River. In 1940, the river valley was flooded for flood control and recreational purposes and remnants of this once marvelous stone bridge and the ruins of the village of Somerfield are visible only in seasons of severe drought. On the eastern end one can see the inscription "Kinkead, Beck & Evans, builders, July 4<sup>th</sup>, 1818".



Somerfield Bridge



Pennsylvania's Historic Architecture & Archeology

**Dunlap's Creek Bridge.** After penetrating the mountain barrier, the National Road made a beeline for the Monongahela River community of Brownsville, at that time the largest city of western Pennsylvania. The Dunlap's Creek Bridge, within the city of Brownsville, was a scene of particularly unfortunate bridge accidents; until 1839, several bridges crossed this small 80-foot gorge including a chain suspension bridge, which collapsed under the weight of snow. In 1839, the use of an arched iron bridge was conceived by Capt. Richard Delafield due to the close proximities of the Brownsville Foundries. "The Neck" (nickname of downtown Brownsville due to high traffic congestion) was crossed with America's first iron bridge, which remains in vehicular use to this day and is designated as a National Historic Civil Engineering Landmark.

**Monongahela River Crossing.** The Monongahela River was a laborious river crossing in the early days of the National Road; by



Jay W. Mohney

1830, the ferry was replaced with a three-span wooden covered bridge. This remarkable structure with approximately 200-foot wooden arch spans was the first bridge across a major river west of the Appalachian Mountains. In 1910, the bridge was declared an obstruction to river traffic and was pulled down by a cable wrapped around its timbers connected to a moving steamboat. The sound of the cracking wood was



Patrick Connors

heard for miles, and spectators along the bank were soaked by the mighty splash!

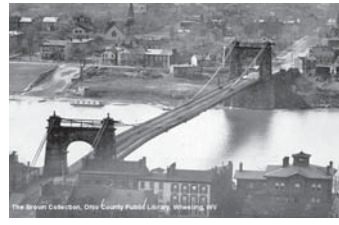
**"S-Bridge".** As the toll road followed the winding ridges and valleys to the Ohio River, many small tributaries were crossed. As typical of the era, the streams were crossed in their shortest direction, regardless of the general path or direction of the roadway. An entire series of stone "S-bridges" were built along small tributaries such as Buffalo Creek. For this two-span arch bridge, the main span was aligned at right angles to the stream; the minor span and approaches were aligned in the east to west direction of the roadway, confronting the likely weary traveler with a contorted "S" pathway.

**Elm Grove Stone Bridge.** As the National Road entered present-day West Virginia, it followed the tributary system of Wheeling Creek and crossed this branch of the Ohio River with a



The Brown Collection, Ohio County Public Library, Wheeling, WV

series of unusual stone elliptical arches for its time of construction. Built in 1818 by Moses Shepherd, it is also known as the Monument Place Bridge due to the memorial nearby dedicated to Henry Clay by Shepherd for his support of the National Road. The bridge remains intact to this date; however, the beautiful stonework has been covered by a rather sterile concrete facing.



The Brown Collection, Ohio County Public Library, Wheeling, WV

**Wheeling Suspension Bridge.** Originally the National Road ended near the mouth of Wheeling Creek along the Ohio River, the destination for travelers continuing by water to the interior of the country. The city of Wheeling was quickly extended across the main channel of the Ohio River to Zane's Island (now known as Wheeling Island) by a 1010-foot long suspension bridge, but it was not an easy task. The Commonwealth of Pennsylvania led by Edwin M. Stanton (later to become Abraham Lincoln's Secretary of War) filed a suit in the U.S. Supreme Court to prevent construction because the bridge would obstruct river traffic. The designer, Charles Ellet, Jr., the father of suspension bridges, pressed forward with the design and construction of this wrought iron structure and managed to complete and open the bridge in 1850. Stanton, upset about the bridge, drove the steamer "Hibernia No. Two" into it to prove the bridge was a hindrance. The court ordered Ellet to substantially raise his bridge, but he succeeded to have the bridge declared a post road, which has seniority over all transportation arteries. Tragically, after this fight, the suspension bridge collapsed when a severe gale induced undulatory motion in the superstructure on May 17, 1854. This increasing twisting motion, caused by aerolastic instability, directly led to collapse of the superstructure in a violent and sudden state. The superstructure was promptly reconstructed in 1860, and in 1872 further strengthened with stayed cables by John A. Roebling and Sons. The structure remains in service to this day.



The Brown Collection of Photographs

**Zane's Crossing.** Zane's Island was a strategic location for crossing the Ohio River. This large island made a natural crossing point for early settlers seeking a path to the west. From 1830, the Zane family maintained a ferry service across the main channel (which ended when the Wheeling Suspension Bridge was completed). Across the back channel of the Ohio River at Zane's Island, the Zane family constructed a wooden, covered toll bridge in 1836. The toll keeper lived on the bridge at the Ohio end.



**Ohio and Beyond.** As the National Road extended from the hilly provinces of western Ohio to the gently sloping farm country of eastern Ohio, Indiana and Illinois, many vestiges of the National Road era remain intact. These bridges lie almost immediately adjacent to US 40 and are easily visible to all travelers. These bridges include the three-span stone arch in Blaine, Ohio (pictured above) and the "S-bridges" in Cambridge and New Concord, Ohio.

## Conclusion

Today, U.S. 40 extends from Atlantic City to San Francisco. In 2002, our first tollroad earned the status of National Scenic All-American Byway, one of the highest honors bestowed on a traveled route. With its spectacular scenery, breathtaking bridges, and historic charm, the National Road possesses the unique ability to transport present-day society back into time, relive the birth our transportation industry, and appreciate the milestones encountered along the way.