

BRIDGE NO. 04619
(Village Hill Road Bridge)
Village Hill Road crossing Ten Mile River
Columbia
Tolland County
Connecticut

HAER No. CT-176

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PHOTOGRAPHS

WRITTEN AND HISTORICAL DATA

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

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HISTORIC AMERICAN ENGINEERING RECORD

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(Village Hill Road Bridge)

HAER No. CT-176

Location: Village Hill Road crossing Ten Mile River
Columbia
Tolland County, Connecticut

UTM: 18.728400.4619940
Quads: Columbia, Conn., 1:24000

Date of Construction: 1909

Engineer: William Grant, contractor
Architect: unknown

Present Owners: Town of Columbia
Town of Lebanon

Present Use: Vehicular bridge

Significance: The Village Hill Road Bridge links the towns of Columbia and Lebanon as it crosses over the Ten Mile River. Historically, it provided access to the mills of William Card, which are on the Columbia side of the river; it may also have provided a by-way between the turnpikes to the north and south. By 1869, there was a frame bridge at this site; in 1909, the frame bridge was replaced by a masonry, stone-arch bridge.

Project Information: The towns of Columbia and Lebanon plan to rehabilitate and widen the Village Hill Road Bridge. To mitigate the adverse effect, the State Historic Preservation Office stipulated documentation to HAER standards. This documentation was undertaken to fulfill this stipulation.

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Summary Description of Bridge and Setting

Connecticut Bridge No. 04619, commonly known as the Village Hill Road Bridge, is a small structure spanning the Ten Mile River, a tributary of the Willimantic River. At the site of the bridge, the Ten Mile River is the border between Lebanon, Connecticut and Columbia, Connecticut. The Village Hill Road Bridge is technically owned by both Columbia and Lebanon; for the purpose of this report, Columbia has been determined the primary location, and Lebanon a reference location.

The area surrounding the Village Hill Road Bridge is primarily rural and undeveloped. In the eighteenth and nineteenth centuries, however, several mills sat on the Columbia side of the river; Village Hill Road and the bridge (historically known as the Card's Mills Bridge) probably provided transportation for mill business, including worker access and shipping. The bridge and associated roads may also have provided a by-way, as they are situated between two turnpikes.

Both Columbia and Lebanon are small towns typical of eastern Connecticut. Lebanon was formed first, primarily by settlers from Norwich, about 1695 (Cole 1888: 731-1). The tract of land that compromised eighteenth-century Lebanon included present-day Columbia, and was incorporated as a town in 1700; in 1804, Columbia was established as a town in its own right, with the Ten Mile River as part of the boundary. Both towns were primarily agricultural, with minimal industry. Tributaries of the Willimantic and Yantic Rivers powered grist mills, saw mills, and other small-scale industry. Two mill sites are in the vicinity of the Village Hill Road Bridge. Both Lebanon and Columbia, as well as the Village Hill Road Bridge, were, however, on the route from Hartford to Norwich. Both Hartford and Norwich were incorporated as cities by 1784, making travel between them necessary. Thus, both towns were influenced by their location between the two towns and the traffic that followed. Although the Village Hill Road Bridge was not on the Hartford-Norwich turnpike, the highway was less than a mile to the south of the Village Hill Road Bridge, and therefore travelers certainly were a major influence in the area.

Prehistoric and Historic Context

For both prehistoric and historic native peoples, the Ten Mile River area probably offered seasonal hunting resources along the river and around nearby upland wetlands, possible anadromous or other seasonal finfish capture points, and a travel route between the Willimantic River and numerous points to the west. In at least early historic times, the project area vicinity was part of a large area used by

Mohegan and Pequot people for hunting and fishing. Within about a mile radius of the bridge, the files of the Connecticut State Archaeologist report two prehistoric Native American archaeological sites, both of which include temporally-diagnostic artifacts suggesting site ages from Middle or Late Archaic through Middle or Late Woodland periods (c. 7500-450 years ago). By the 1670's, the area was under Mohegan control; under Uncas, the parcel of land including present day Lebanon, Columbia, and the Village Hill Road Bridge was deeded to English settlers.

There is some controversy about the origin of the first English settlers. Traditionally, it has been understood that the town of Lebanon (including Columbia) was settled by citizens of Norwich. However, some historians have claimed that this is not so; although some of the original settlers were from Norwich, by and large they came from a scattering of other towns, including Northampton, Massachusetts (Hine 1880: 6).

Lebanon gained a certain amount of notoriety during the American Revolution; several important revolutionaries, including George Washington and Thomas Jefferson, met there.

Physical Description of the Bridge

The Village Hill Road crosses the Ten Mile River, a tributary of the Willimantic River, along a reach with tight meanders and oxbows which have cut into adjacent well-drained sandy loam glacial outwash deposits. These deposits slope down to both ends of the existing bridge approaches. At the bridge approaches, there are steep drops down to the floodplain. A tributary of the Ten Mile River enters the brook downstream of the bridge. Existing bridge approaches are on fill over the floodplain and adjacent terraces (Raber 1996: 2).

The Village Hill Road Bridge is about eighteen feet wide and thirty feet long. It is a rubble masonry structure with a single circular arch spanning twenty feet, rubble masonry abutments, spandrels and parapets, and wood and metal guardrails extending over the rubble masonry approaches from the parapets. The abutments rest or are near ledge, with low wingwalls on the north side retaining rubble fill material. Raber claims that the abutments and actual bridge were probably erected by the mid-1860s, with subsequent approach work which does not match the stonework of the spandrels. These masonry approaches extend about twenty-five feet northwest and ten feet southeast of the bridge structure (Raber 1996: 2). Later research, however, revealed that the Village Hill Road Bridge was not erected until the early twentieth century; the abutments were also probably erected at that time, while the approaches were added later.

As far as one can tell, the Village Hill Road Bridge has remained fairly unchanged over the years. A significant structural change is in the approaches; the stonework is not continuous with the approaches or abutments, suggesting that the latter were rebuilt sometime after the original construction. The mortar is also probably an addition to the original dry-laid stone. The original railings have also been extended to either side.

History of the Village Hill Road Bridge

Maps first show a bridge crossing the Ten Mile River at Village Hill Road in 1869. The Connecticut State Historic Bridge Inventory accordingly catalogs this bridge as being built ca. 1870. This is a logical assumption, given that due to massive floods in the spring of 1869, many frame bridges were washed away and more sturdy masonry bridges built to replace them. A search of the town records both in Columbia and Lebanon for those years, however, yielded nothing. Columbia's records did not detail the expenses, but listed "bridge" and then the expense; although bridges were built in the 1860's, there was never enough money allocated to a bridge to support the building of a masonry bridge. Additionally, since the bridge has always been jointly owned by the towns of Columbia and Lebanon, one would assume there would be some note explaining payment arrangements. No such note was found. A town employee performed the search in Lebanon, and likewise came up with nothing.

Columbia's records from 1909, however, show a "Copy Bills sent Town of Lebanon on Cards' Mills Bridge Old and New". This report details the removal of an older, frame bridge and its replacement by a stone arch bridge. The total cost of the new, stone arch bridge was \$550.00. Of this amount, Columbia paid \$128.59 and billed Lebanon for \$421.41. It seems that the bridge that appears on the 1869 map is not the bridge that is currently in place today. A frame bridge was constructed in the nineteenth century, and in 1909 was replaced by a sturdier masonry bridge. Bruce Clouette, who was consulted on July 14, 1997, claimed that it was very unusual for a town to go to the expense of building a masonry bridge. Often, he said, they were built downstream from mill sites, where frame bridges would be consistently washed out. Sometimes mill owners would contribute funds to the town for the construction of bridges near their site. The Village Hill Road Bridge is downstream from several mill sites; this information makes it probable that the mills had some hand in its construction.

Referring to the bridge as the "Cards' Mills Bridge" solidifies the link between the Village Hill Road Bridge and the mills that operated on the Columbia side of the Ten Mile River. By 1811, there was a sawmill immediately upstream of the present crossing of Village Hill Road. Further upriver, there were a gristmill and sawmill probably at the same site. Both mill sites were operating until after the Civil War, with the one upriver a large establishment processing grain, sawing lumber, and making shingles. William Card ran the upriver mill from about 1855 until 1875. He lived close by the mill; his residence is apparent on an 1869 map. The Cards Mill community, in Columbia, is named after him. It is likely that he also owned the mill nearer to the Village Hill Road Bridge; however, very little information about the sawmill closer to the bridge has been found. William Card no longer owned the business by 1880, but the large mill upstream was still operating. It remained standing into the twentieth century, and was in ruins by the 1930's (Raber 1996: 3).

Large-scale mills such as these are associated with a certain amount of transportation. People who worked in the mills had to get to work. Likewise, in the case of gristmills and sawmills, customers who wanted services had to be able to get to the mills; shipping was also an issue, requiring nearby transportation. For all these reasons, ready access to major roads was a necessity for mill owners. In the early nineteenth century, the mills in question were easily accessible from Columbia, but not from Lebanon. The construction of a bridge made access simple from both towns.

One of the major roads in the region was the Hartford-Norwich Turnpike, which crosses the Ten Mile River only about a mile south of Village Hill Road. The turnpike was constructed early in the nineteenth century, and in Columbia and Lebanon, followed the route of today's Route 87. It is easily accessible from the Village Hill Road Bridge, on both sides of the river; the construction of the Village Hill Road Bridge would have made the mills easily accessible from the turnpike. The turnpike, however, was kept in notoriously bad condition by the state (Wood 1919:338). It is possible that Village Hill Road, the Village Hill Road Bridge, and Cards Mills Road in Columbia were used as a bypass of the turnpike, as well as providing access to the mills. Another turnpike, the Hebron to Willimantic Route, ran directly to the north of the Village Hill Road Bridge.

Another factor that probably contributed to the building of a stone arch bridge on Village Hill Road at this time is the increasing mobility of people in the early twentieth century. Although the real boom in automobile driving did not occur until later in the century, people were certainly beginning to be more mobile in the early twentieth century; this is reflected by the increased number of bridges built in this period. The Village Hill Road Bridge may reflect this trend as well: increased mobility required sturdier bridges.

Personnel Associated with the Bridge

Few names are recorded in connection with the Village Hill Road Bridge. William Grant was hired as a contractor in the building of the stone arch bridge to replace the old frame one (Columbia 1909).

Of course, William Card, the mill owner, is also certainly associated with the site. Although he may have been involved in the building of the first frame bridge, however, he was no longer in business by 1880. Although the mill remained in operation until the early twentieth century, there is no record of who was operating the mill at this time.

Conclusion:

The Village Hill Road Bridge is a historic, stone arch masonry bridge, built in 1909 in a joint agreement between the towns of Columbia and Lebanon, Connecticut. This stone arch bridge replaced a frame bridge that had been constructed in the mid-nineteenth century. The Village Hill Road Bridge provided access to the mills on the Columbia side of the Ten Mile River; it also may have been used as a by-way between the turnpikes to the north and south of the Village Hill Road.

Sources of Information

A. Engineering Drawings

ConnDOT

1980 Columbia: Village Hill Road over Ten Mile River. Connecticut Department of Transportation. Elevation and Cross Section. June 5, 1980.

No historic engineering drawings of the Village Hill Road Bridge were recovered. Repositories searched include the Columbia Town Hall, the Lebanon Town Hall, the Columbia Public Library, the Lebanon Public Library, the Columbia Historical Society, the Lebanon Historical Society, and the Connecticut State Library.

B. Historic Views

Historic views and photographs of the Village Hill Road Bridge were sought at the Columbia Town Hall, the Columbia Public Library, the Columbia Historical Society, the Lebanon Town Hall, the Lebanon Public Library, the Lebanon Historical Society, and the Connecticut State Library. Additionally, the Town Historians in Lebanon and Columbia were consulted. No historic views of the Village Hill Road Bridge were recovered.

C. Interviews

Carlson, Arnold.
Tolland County resident and engineering historian.
Telephone interview: June 30, 1997.

Bruce Clouette
Preservation Consultant and author, Connecticut State Bridge inventory
Telephone interview: July 14, 1997.

D. Bibliography

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Milne, George McLean

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Wood, Frederick J.

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Figure 1
Location Map
Quadrangle: Columbia, Connecticut 1:24000

