



Alexandria Times

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Out of the Attic

Alexandria Canal Culvert

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Image: 1845 Ewing Map. Project area outlined in blue, path of stream highlighted in red, running beneath the canal.
Office of Historic Alexandria.

In 1840, work began on a canal to link the seaport of Alexandria to the larger Chesapeake and Ohio Canal at Georgetown and increased economic opportunities. Building canals required a great deal of know-how and problem-solving skills. A prosaic but important challenge for 19th-century engineers was how to divert water intersecting the canal path. The designers of the Alexandria Canal used culverts to direct water underneath structures.

Recent archaeological excavations on North St. Asaph Street between Montgomery and First Streets, unearthed this fascinating engineering history. During construction monitoring, archaeologists from R. Christopher Goodwin and Associates uncovered a four-foot diameter stream culvert with a flat bottom. The structure is barrel-vaulted with double brick walls and was used to divert an unnamed stream underneath the canal.

Some areas of the culvert rested on a stone base, underlain by timber cribbing necessary to support the heavy structure above. This cribbing consisted of large timbers paralleling the culvert and narrow timbers underlying it perpendicularly. The excavated section of the feature measured more than 70 feet in length and continued to the northwest out of the project area, possibly running under St. Asaph Street. Archaeologists carefully measured, documented, and took photographs of the culvert to keep a record of this interesting piece of Alexandria history.

Historic documents suggest that this culvert was built between May 13, 1843 — when the *Alexandria Gazette* issued a call for proposals for a 400-yard long, 60,000 brick, four-foot diameter “culvert under the Alexandria Canal Basin near the Spa Spring” — and November 1843, when the canal was completed to the turning basin. The direction of the culvert is not clear in historic records, but it is likely that it did not deviate much from the natural course of the stream, which generally ran north to south





Office of Historic Alexandria City of Alexandria, Virginia

through this area. The orientation of the excavated feature generally aligns with the documented course of the stream shown in the 1845 Ewing map.

Spa Spring, a popular gathering place in the 1830s, was probably a tributary of the culverted spring. Alexandrians viewed the natural springs in this area as healthy alternatives to the often tainted well water of the city. Privies and wastewater run-off could contaminate wells, rendering the water harmful to drink. In Alexandria, water from the public wells was even implicated in several deaths. To address these local concerns, the Alexandria Canal Company “made ample provision for the conveyance of this water, by means of pipes, from one [stream] of which flows a copious supply of water, of about a gallon per minute.”

Engineer William Turnbull supervised the construction of the Alexandria Canal. His published notes from 1873 cover the years 1835 through 1840 but do not discuss the construction of this culvert. However, based on the excavated remains and the call for proposals, the culvert is similar to ones built for the Erie Canal. Wooden cribbing structures like the one found at this site are rarely mentioned in either original building notes or in later discussions of canal culverts, but they are critical for supporting and stabilizing the larger brick and stone structure.

“Out of the Attic” is published each week in the Alexandria Times newspaper. The column began in September 2007 as “Marking Time” and explored Alexandria’s history through collection items, historical images and architectural representations. Within the first year, it evolved into “Out of the Attic” and featured historical photographs of Alexandria.

These articles appear with the permission of the Alexandria Times and were authored staff of the Office of Historic Alexandria.