

HISTORIC AMERICAN ENGINEERING RECORD

OHIO AND ERIE CANAL, FEEDER CHANNEL

HAER No. OH-59-J

Location: South of Route 82, Sagamore Hills vicinity, Summit County, Ohio

The south end of the feeder channel is at latitude: 41.320569, longitude: -81.587073. The north end is at latitude: 41.322943, longitude -81.586424. The coordinates were obtained on February 11, 2021 using Google Earth. There is no restriction on their release to the public.

Present Owner: Ohio Department of Natural Resources

Present Use: Canal Feeder Channel

Significance: The Pinery Feeder Channel, originally constructed in 1827, was an integral component of the feeder complex that has supplied water to the section of the Ohio and Erie Canal between Lock No. 36 and the canal's northern terminus at Cleveland from 1827 to the present day. It continued to divert water into the canal for industrial purposes even after the end of canal navigation in 1913. The watered section of the canal is a designated National Historic Landmark.

Historian: Scott D. Heberling, Heberling Associates, Inc., 2021

Project Information: This documentation was undertaken in June 2020 as mitigation for the removal of the Brecksville Diversion Dam (HAER No. OH-59-G), part of a larger project to restore the free flow of the Cuyahoga River. The feeder channel will remain in place and continue to function after completion of the project. The Cuyahoga River Ecosystem Restoration Canal Diversion Dam Project is a partnership among Cuyahoga Valley National Park; Friends of the Crooked River; Ohio Environmental Protection Agency; Ohio Department of Natural Resources; U.S. Army Corps of Engineers; and Northeast Ohio Regional Sewer District. The field team consisted of Scott D. Heberling, Project Historian, Heberling Associates, Inc.; and Andrew Baugnet, Photographer.

For additional information, see:

Ohio and Erie Canal
Ohio and Erie Canal, Brecksville Diversion Dam
Ohio and Erie Canal, Pinery Feeder Dam
Ohio and Erie Canal, Head Gates

HAER No. OH-59
HAER No. OH-59-G
HAER No. OH-59-H
HAER No. OH-59-I

Part I. Historical Information

A. Physical History:

1. **Date(s) of construction:** 1827
2. **Engineer:** Not known
3. **Builder/Contractor:** Henry Burnham; William Brown and Merrick Sawyer

4. **Original Plans and construction:**

The Records of the Ohio Board of Canal Commissioners and the Ohio Board of Public Works contain no construction plans or specifications for the Pinery feeder channel. The 1827 construction contract provides notes concerning the construction of the dam and head gates but makes no mention of the channel.¹ The specifications probably were similar to those for the canal prism itself, outlined in an appendix to the *Eleventh Annual Report of the Canal Commissioners* entitled “Rules and Specifications, Relating to the Construction of the Ohio Canal: And the Estimating of Work Performed Thereon.”²

An 1892 survey map shows a channel that varied in width from 24' to 35', extending approximately 900' from the head gates at the Pinery feeder dam to the north end of Lock No. 36 where it intersected the canal. A set of waste gates at the north end returned excess water to the Cuyahoga River.³

5. **Alterations and Additions:**

Throughout its period of use from 1827 to the present, the feeder channel has been dredged many times to remove accumulated silt and vegetation. More substantial repairs were necessary after major flood events. As a result, the width and depth of the feeder channel have changed over time. However its location and basic dimensions have remained the same.

B. Historical Context:

For additional information concerning the construction, operation, and significance of the Ohio and Erie Canal and the Pinery Feeder, see the documentation for the Ohio and Erie Canal (HAER No. OH-59) and the Ohio and Erie Canal, Pinery Feeder Dam (HAER No. OH-59-H).

The Pinery Feeder was one of twelve feeder complexes that supplied water to the Ohio and Erie Canal. On July 26, 1827 the Canal Commissioners awarded a contract to Henry R. Burnam of Boston, Ohio to build a permanent dam and feeder at the head of the Pinery Narrows. According to the contract Burnam would “construct a dam across the Cuyahoga River near the head of the first rapids below the mouth of Chippewa Creek, & a feeder from thence below the Lock [No.

¹ Articles of Agreement between Henry R. Burnam and Alfred Kelley, July 26, 1827, “Contracts,” *Records of the Department of Public Works of Ohio*, Series 1231, Ohio History Center, Columbus, OH.

² Ohio Board of Canal Commissioners, *11th Annual Report of the Canal Commissioners* (1833), 43-53.

³ Ohio Board of Public Works, Records of the Board of Public Works, “Map of the Ohio Canal, Summit County, Ohio, surveyed by D.C. Kennon (1892),” State Archives Series 1353, Ohio History Center, Columbus, OH.

36].” The feeder was sufficiently complete to be put into use during the fall of 1827 but Burnam apparently was unable to finish the work since on December 6 a new contract was awarded to William Brown and Merrick Sawyer to finish the job. Construction was completed in 1828.⁴

By the time that the earliest detailed maps of the canal were created by D.C. Kennon for the Board of Public Works in 1892, the Pinery Feeder already had been repaired and rebuilt several times.⁵ Most of this work involved the dam, head gates, and waste gates since those structures were most susceptible to flood damage. Repairs and maintenance to the channel likely included periodic dredging and repair of breaches in the banks. The dam and head gates were rebuilt again in 1905-06 in connection with the state’s comprehensive improvements to the northern division of the canal but there is no mention of any work done to the feeder channel.⁶

After the catastrophic 1913 flood the Pinery Feeder and the canal section between Brecksville and Cleveland were repaired and continued to operate since they supplied cooling water to the American Steel and Wire Company’s Cuyahoga Works. The company performed routine maintenance on the leased section of canal including the feeder.⁷ In 1949 and 1951 AS&W replaced the 1905 head gates and 1906 dam. The work was funded by AS&W but was designed and supervised by the Ohio Department of Public Works.⁸ Undated photographs indicate that the feeder channel was dredged and the west embankment rebuilt sometime subsequent to this project.⁹ AS&W continued to maintain the feeder structures until the late 1980s when the National Park Service acquired the Ohio and Erie Canal Lands within Cuyahoga Valley National Park and assumed responsibility for maintenance.

Part II. Structural/Design Information

A. General Statement:

1. Character:

The Pinery feeder channel represents standard civil engineering and construction practices of its era. Its significance is related to its role in supplying water to the Ohio and Erie Canal, a

⁴ Articles of Agreement between Henry R. Burnam and Alfred Kelley, July 26, 1827, “Contracts,” *Records of the Department of Public Works of Ohio*, Series 1231, Ohio History Center, Columbus, OH); Harlan Unrau and Nick Scrattish, *Historic Structure Report, Ohio and Erie Canal, Cuyahoga Valley National Recreation Area, Ohio* (Denver, CO: National Park Service, Denver Service Center, 1984), 101-102.

⁵ Ohio Board of Public Works, “Map of the Ohio Canal” (1892).

⁶ Ohio Board of Public Works, *67th Annual Report (1905)*, 181; Ohio Board of Public Works, *68th Annual Report (1906)*, 58, 67.

⁷ Carol Poh Miller, “Ohio and Erie Canal,” HAER No. OH-59, Historic American Engineering Record (HAER), National Park Service, U.S. Department of the Interior, 1987, 8.

⁸ Sam Tamburro, “History of the Brecksville Dam,” (Brecksville, OH: National Park Service, 2003), 7; American Steel and Wire Company, “Map Showing Replacement of Ohio Canal Inlet Gates, Drawing, February 7, 1949;” Sheet 7238-1, Ohio Department of Public Works, “Construction Plans of Brecksville Diversion Dam, Cuyahoga and Summit Counties, Drawings, July 16, 1951.”

⁹ *Canal Society of Ohio Collection, 1830-2011*, RG 99/101, Series D, Photographs, Box 17, Folder 3, University of Akron University Libraries, Archival Services, Akron, OH.

function that continues today. Its original appearance resembled that of the canal prism itself: a wide earthen ditch of standard dimensions that was designed to carry water.

2. Condition of fabric:

The feeder channel often becomes choked with silt and vegetation and requires frequent dredging in order to function properly. The sides of the channel are overgrown with vegetation.

B. Description:

The south end of the feeder channel begins at the head gate structure where the water diverted from the Cuyahoga River enters the channel. The channel then turns north and continues approximately 900' to the downstream (north) end of Lock No. 36 where it enters the canal through a gap in the towpath embankment. A modern pedestrian bridge carries the Ohio and Erie Canal Towpath Trail over the feeder at approximately the same location as the towpath bridge depicted on the 1892 mapping. A poured concrete abutment is evidence of the former towpath bridge. Historically there was a set of waste gates just to the west where excess water was discharged into the Cuyahoga River, but most of the gates and discharge channel are buried beneath fill and only the top of one concrete abutment wall is visible.

The width of the feeder channel varies from 25' to 35' feet at the water line and 40' or more at the top of the embankments. The earthen banks on either side rise 9' to 11' above the channel and are covered with scrub vegetation. The water in the feeder is at a constant level for the structure's entire length although its depth varies, depending on the amount of accumulated silt and debris. It always has the same level as the water in the canal between Locks No. 36 and 37.

C. Mechanicals/Operation:

The feeder channel is a simple earthen ditch that carries water from the Cuyahoga River to the Ohio and Erie Canal. There are no mechanical systems or machinery. Operation of the head gates is described in the documentation for that structure (HAER No. OH-59-I).

D. Site Information:

The Pinery Feeder is located at the head of the gorge known as the Pinery Narrows. The head gates that control the flow of water into the feeder channel are located adjacent to the dam at the south end of the channel. The surrounding terrain is fairly level and is situated about 12' above the river channel. The massive Route 82 Brecksville-Northfield High Level Bridge, built in 1931, spans the river, canal, and feeder channel. The Ohio and Erie Canal Towpath Trail follows the route of the canal and is adjacent to the feeder channel. The canal section to the north of the feeder is watered, while the section to the south is unwatered and mostly silted in.

Part III. Sources of Information

A. Primary Sources:

American Steel and Wire Company. "Map Showing Replacement of Ohio Canal Inlet Gates." Sheet 7238-1. February 7, 1949. Available at Cuyahoga Valley National Park, Resource

Management Division files, Peninsula, OH. This map and related plans may be subject to copyright so were not reproduced here.

Canal Society of Ohio Collection, 1830-2011. RG 99/101, Photographs, Series D, Box 17, Folder 3. Available at University of Akron, University Libraries, Archival Services, Akron, OH.

Ohio Board of Public Works. Annual Reports of the Board of Public Works, 1836-1838 and 1839-1912. Available at Ohio History Center, Columbus, OH.

Ohio Board of Public Works. *Map of the Ohio Canal, Summit County, Ohio*. Records of the Board of Public Works, Canal Plat Maps, 1892-1912. Surveyed by D.C. Kennon. State Archives Series 1353. Available at Ohio History Center, Columbus, OH.

Ohio Department of Public Works. Articles of Agreement between Henry R. Burnam and Alfred Kelley, July 26, 1827. "Contracts." *Records of the Department of Public Works of Ohio*, Series 1231. Available at Ohio History Center, Columbus.

Ohio Department of Public Works. "Construction Plans of Brecksville Diversion Dam, Cuyahoga and Summit Counties." 1951. Available at Cuyahoga Valley National Park, Resource Management Division files, Peninsula, OH.

B. Secondary Sources:

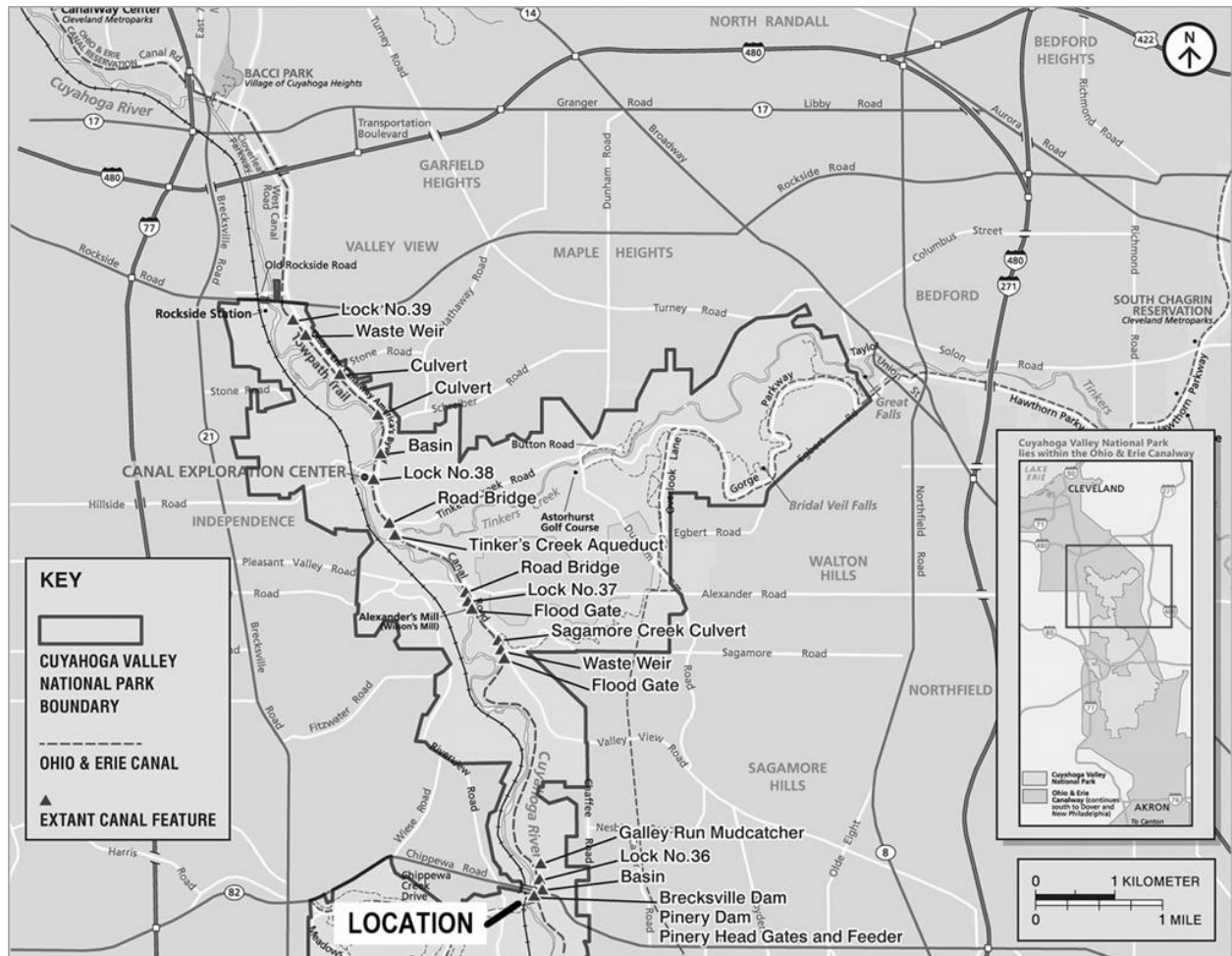
Poh-Miller, Carol. "Ohio and Erie Canal," HAER No. OH-59, Historic American Engineering Record (HAER), National Park Service, U.S. Department of the Interior, 1979.

Tamburro, Sam. "History of the Brecksville Dam." Brecksville, OH: National Park Service, 2003. Available at Cuyahoga Valley National Park, Resource Management Division, Peninsula, OH.

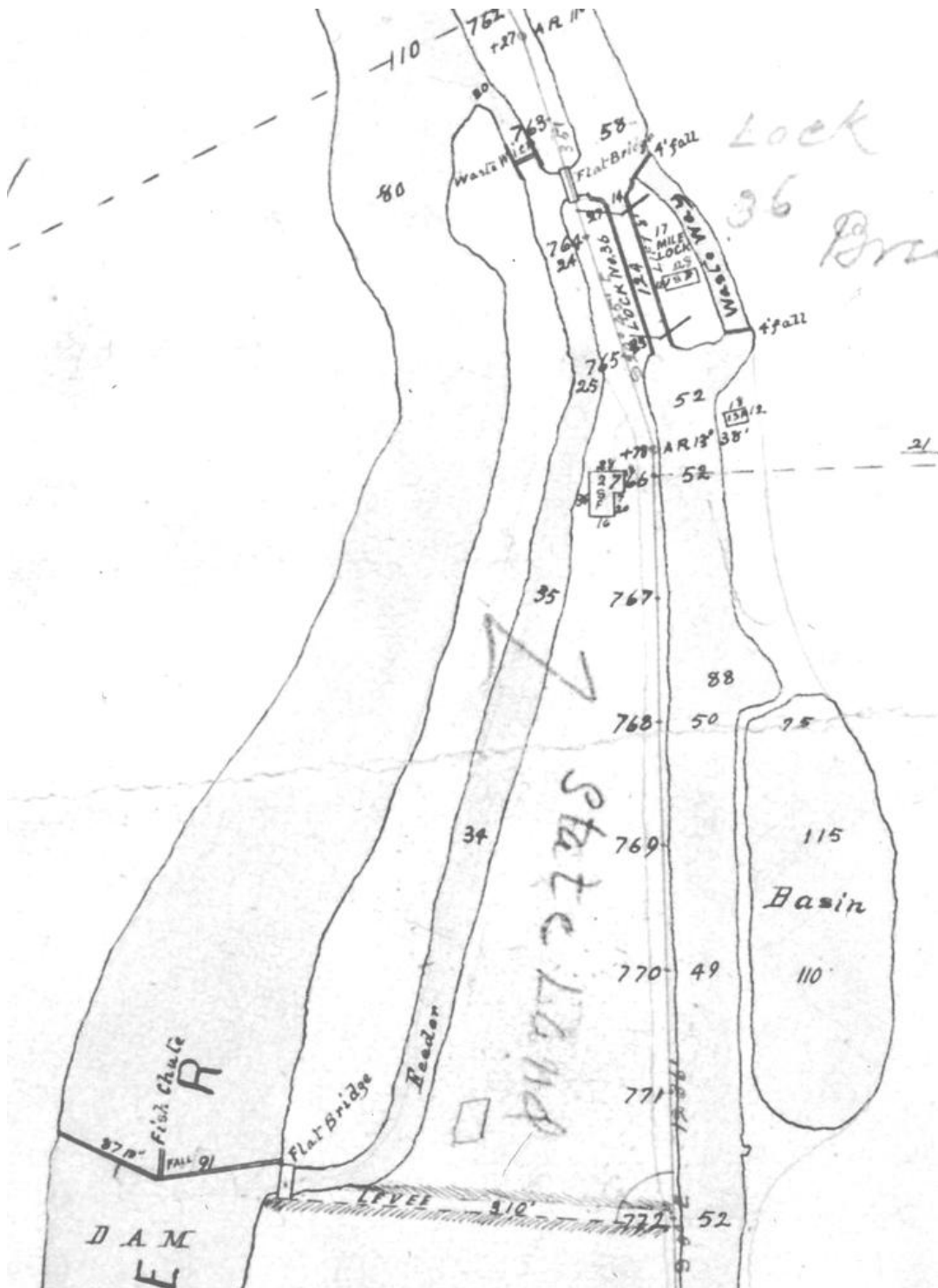
Unrau, Harlan and Nick Scrattish. *Historic Structure Report, Ohio and Erie Canal, Cuyahoga Valley National Recreation Area, Ohio*. Denver, CO: National Park Service, Denver Service Center, 1984. Available at Cuyahoga Valley National Park, Resource Management Division, Peninsula, OH.

C. Likely Sources Not Yet Investigated:

None known.



Location Map (Base Map: Cuyahoga Valley National Park; adapted by Heberling Associates, Inc.)



Ohio Board of Public Works, Records of the Board of Public Works, "Map of the Ohio Canal, Summit County, Ohio, surveyed by D.C. Kennon (1892)," State Archives Series 1353, Ohio History Center, Columbus, OH.