

United States Department of the Interior
National Park Service

New York State Barge Canal Historic District
Albany, Cayuga, Erie, Herkimer, Madison, Monroe, Montgomery,
Niagara, Oneida, Onondaga, Orleans, Oswego, Rensselaer, Saratoga,
Schenectady, Seneca, Washington, and Wayne Counties, New York

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Lockport. Oswego and Lockport are significant entry points to the canal system, which may explain why the state built more substantial lockhouses at those locations.

History: Lock O-8 was constructed 1910 under Contract 35, electrical machinery was installed under Contracts 90 & 90A. O-6 was built as a siphon lock, the only one on the Barge Canal system. Flow of water into and out of the chamber was effected by siphons, housed in concrete “humps” at the four corners of the lock. Rather than opening and closing mechanical valves, the operator manipulated hand valves on 4” vacuum pipes to initiate the siphon action and start water flowing into or out of the culverts on either side of the chamber. The design got a lot of attention in the contemporary engineering press. Reports claimed that the siphons filled the chamber faster and with less turbulence than conventional slide valves and required virtually no power to operate.¹⁸⁶ A vacuum pump was installed in 1943 to supplement the siphon when they were inhibited by periods of high water in Lake Ontario.¹⁸⁷ Electric butterfly valves replaced the siphons and the chamber was lined with steel plate in 1968 and hydraulic gate operators were installed in 1975.¹⁸⁸ The cable bridge spanning the middle of the chamber was built in 1949.¹⁸⁹

Mile 22.92
E377914
N4812692

Bridge Street / NY 104 bridge, Oswego O-14 (1 Non-Contributing Structure)
BIN-4053920
City of Oswego, Oswego County
Unpainted steel stringer/multi-beam, 541' long, 51.8' between curbs. Constructed 1969

Mile 22.96

Oswego Lake Terminal
HAER NY-537 Constructed 1916, Contract T30
City of Oswego, Oswego County

CAYUGA-SENECA CANAL

Erie Canal near Montezuma to Cayuga Lake at Cayuga and Seneca Lake, town of Waterloo

¹⁸⁶ Barge Canal Bulletin, III, 7 (July 1910), pp 309-16; “The Siphon Lock at the Barge Canal at Oswego,” Engineering Record 62, no 5 (July 30, 1910), p. 122-24.

¹⁸⁷ AR-SPW, 1943, p 51.

¹⁸⁸ Maintenance Contracts M66-6, M75-5

¹⁸⁹ AR-SPW, 1949, p. 126

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Reconstruction of the Cayuga-Seneca Canal was authorized and funded six years after the Barge Canal Law of 1903.¹⁹⁰ Contracts on this segment of the canal system were designated by letter rather than number.

- Mile 0.00 Junction with Erie Canal
Town of Tyre, Seneca County
- Mile 0.54 **Thruway Bridge S-1A&B** (1 Non-Contributing Structure)
E358909 BIN-4435021 / 4435022
N4762041 Town of Tyre, Seneca County
Twin girder & floorbeam spans, each 623' long, 52.8' between curbs. Constructed 1953; non-contributing highway bridge.
- Mile 2.97 **Freebridge US 5 & 20 Bridge S-1** (1 Contributing Structure)
E358255 BIN-4001970
N4758168 Town of Tyre, Seneca County
Steel Warren thru-truss approximately 127' long over channel, 315' long overall with approaches, 40' between curbs, no sidewalks. Constructed 1932.
- Mile 4.04 **LOCK CS-1 (Mud Lock), Cayuga** (2 Contributing Structures, 1 Non-Contributing Building)
E358511 HAER NY-521
N4756498 6817 River Road, Town of Cayuga, Cayuga County
Constructed 1915, Construction Contract A, Electrical Contract M
The site includes Lock CS-1, a Taintor gate dam, and a non-contributing lockhouse.
Lock CS-1 is located east of the Seneca River channel. It has a 7.5' lift to the south with normal pool elevations of 374' below and 381.5' (the level of Cayuga Lake) above. There is a vertically operating guard gate supported by steel lattice towers at the upstream (south) end of the chamber. Original style gate and valve operating machinery remains in service. The chamber was lined with steel plate in 1966.
The **dam** spans the Seneca River with six Taintor gates equipped with overhead concrete counterbalances. It regulates the level of Cayuga Lake.
Originally, a gasoline-electric powerhouse, similar to those associated with Mohawk River movable dams and Locks E25 and E26, stood atop a built-up mound on the artificial island between the lock and the river channel. It survived into the early 1960s alongside a hip-roofed concrete storehouse that also dated to original construction. Neither is extant; they may have been removed when the lock was

¹⁹⁰ Chapter 391, Laws of 1909.

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rehabilitated in 1966.¹⁹¹

The concrete block **lockhouse** on the east side of the chamber was constructed in 1966 as part of that rehabilitation and is non-contributing. It is three bays wide by three deep with its long axis and the ridge of its gable roof parallel to the lock chamber. An earlier lockhouse stood on the opposite side of the chamber near the powerhouse.

History: Lock C1 and its dam were built by Scott Brothers of Rome as part of Contract A. Work started in February 1911 and was completed in 1914.¹⁹² Lupfer and Remick of Buffalo built the powerhouse and installed the lock's electrical and mechanical equipment in 1915-16 under Contract M. The DPW built earth berms at the upper end of Lock CS-1 and raised all of its electrical machinery by 2' in 1927 after seasons of unusually high lake levels flooded the site repeatedly.¹⁹³ Like other locks on the Cayuga-Seneca Canal, and unlike others on the system, CS-1 was originally fitted with wooden lock gates. Those gates were replaced with steel during 1930s and replaced again when the chamber was lined with steel plate in 1966.¹⁹⁴ The original buffer beams, built into recesses in the walls outside the gates, were replaced in 1943 by overhead beams supported by towers.¹⁹⁵ Counterweighted overhead buffer beams appear in photographs of several locks taken during the 1950s, but none survive on the system.

Mile 4.22

The Cayuga-Seneca Canal splits above Lock CS-1. One branch leads about 1½ miles south to Cayuga Lake. Boats can travel from there to Ithaca and the salt mines at Lansing. The other branch bends to the west, passing up through locks CS-2 & 3 in Seneca Falls and CS-4 in Waterloo to the level of Seneca Lake. From there boats can travel to Watkins Glen and Montour Falls.

Mile C5.93
E358625
N4753487

Finger Lakes Railroad Bridge, Cayuga Lake Outlet S-2 (1 Contributing Structure)
BIN-4435030

Over Cayuga branch of Cayuga-Seneca Canal, Village of Cayuga, Cayuga County Steel Warren thru-truss approximately 220' long over channel with plate girder deck approaches, 335' long overall, single track. At eastern end of a long causeway connecting islands at the north end of Cayuga Lake. Constructed 1907. The Finger Lakes Railroad marks the canal's entry into the north end of Cayuga Lake

¹⁹¹ The powerhouse is visible in photos taken by Alfred Gayer in 1961. Canal Society of NYS collections.

¹⁹² AR-SES 1911, p. 143; 1912, p. 199; 1913, p. 242; 1914, p. 231.

¹⁹³ AR-SPW, 1928, p. 8.

¹⁹⁴ Maintenance Contract M66-1.

¹⁹⁵ AR-SPW, 1943, p.47.

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and one of the boundaries of this historic district.

Mile 5.70
E356335
N4755557

State Route 89 Bridge S-3 (1 Non-Contributing Structure)

BIN-4034310

Over Seneca branch of Cayuga-Seneca Canal, Town of Seneca Falls, Seneca County
Steel stringer/Multi beam, 248' long, 28' between curbs. Constructed 1964.

Mile 5.99
E355959
N4755363

Finger Lakes Railroad Bridge S-4 (1 Contributing Structure)

BIN-4435050

Town of Seneca Falls, Seneca County

Steel skew Warren thru-truss over navigation channel approximately 135' long with
plate girder approach on north, 246' long overall, single track. Constructed 1917.

Mile 7.98
E354223
N4752899

LOCKS CS-2 & 3, Seneca Falls (3 Contributing Structures, 1 Non-Contributing Building)

HAER NY-522

Seneca Street, Town of Seneca Falls, Seneca County

Locks CS2 and CS3 form a staircase flight, the only one on the Barge Canal other than Locks E34-35 at Lockport on the Erie. The site consists of two lock chambers, a dam with concrete spillway and earthen embankment sections, and a non-contributing lockhouse (built after the period of significance). Seneca Falls hydroelectric plant (FERC P-2438) is not included within the district boundary.

Together, **Locks CS2** and **CS3** have a 49' lift to the west with normal pool elevations of 381.5' below (the level of Cayuga Lake) and 430.5' above. There is a short approach wall on the south bank below CS2. There is no approach wall or guide structure above CS3. Lock CS2 is lined with steel plate. The concrete lining of CS3 is exposed. The exterior concrete of CS2 is fully exposed next to the dam spillway on the north side. The north side of CS3 is submerged above the dam. The exterior walls on the south side of both chambers are partially exposed above the earthen embankment portion of the dam. A single leaf guard gate stands at the upper end of CS3. The DC gate and valve operating machinery for both chambers were replaced with butterfly valves and direct-acting hydraulic cylinders in 1974. A steel pedestrian and cable bridge spans the chambers, just below the middle gates, and is used for access between neighborhoods in Seneca Falls.

The concrete spillway section of the **dam** abuts the north side of lock chambers at the mid-point gates. A catwalk across the top serves as an extension of the pedestrian bridge. Originally, a dedicated lock powerhouse stood at the south end of the spillway, next to the lock chambers but that is no longer extant and the foundation

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remains do not retain integrity. Four sluice gates have been installed in the former turbine bays. The spillway section is about 50' long and has been fitted with Obermeyer gates – hinged steel panels supported by inflatable rubber bladders. A commercial hydroelectric plant stands at the north end of the concrete dam.

An earthen embankment forms the southern portion of the dam, running about 190' from a point near the upper gates of Lock CS3 to the southern valley wall.

The **lockhouse** stands in the corner between CS3 and the earthen embankment. Access is to the main (upper) floor across a gangway that leads from the lock-deck. The downstream slope of earthen embankment dam provides a walk-out basement to the lower level. The lockhouse is two bays wide and three deep. Its long axis and the ridgeline of its gable roof are at right angles to the lock chamber. This version of the lockhouse was probably built during the 1970s and is therefore non-contributing.

History: Locks CS2 & 3 and the dam were built by Larkin and Sangster under contract C. Work started in 1913 and was completed by 1914. Valves, buffer beams, the guard gate, and wooden lock gates were supplied and installed by Lupfer and Remick of Buffalo under Contract G. The sluice gates were closed and the area behind the dam started to fill on August 15, 1918. Two days later, water reached the spillway and the locks were used to pass contractor's vessels. Not long after that, commercial tows carrying salt from mines at the south end of Seneca Lake started to ply the canal on a regular basis. Lupfer and Remick also built and equipped the powerhouse under Contract M. Their work was completed in 1916.¹⁹⁶

A horseshoe-shaped cutoff wall, 4' wide by 10-15' tall, was built under the upper end of lock CS3 in 1917 under Contract P.¹⁹⁷ By 1927 the dam had developed a leak of "alarming proportions" and the pool was drawn-down to install another cut-off wall.¹⁹⁸

Locks CS2 and CS3 were originally equipped with timber gates. Those were replaced by steel in 1938. The upper gates of CS-3 had been used at the New London junction lock and had been in storage since that lock was converted into a drydock during the 1920s.¹⁹⁹ The locks were rehabilitated in 1974. The lockhouse probably dates to that project.²⁰⁰

¹⁹⁶ AR-SES 1913, p. 244; 1914, p. 233; 1915, pp. 224-25, 228; 1916, pp. 202, 206; Arnold Barben, *The Flats* (Seneca Falls: Seneca Falls Historical Society, 1981), p. 32.

¹⁹⁷ AR-SES 1917, p. 263; AR-SES, 1918, p. 184.

¹⁹⁸ AR-SPW, 1927, p. 22.

¹⁹⁹ AR-DPW, 1939, p. 23.

²⁰⁰ Maintenance Contract M74-3.

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Mile 8.04

Van Cleef Lake

The dam at locks CS-2 and CS3 raised water levels in this part of the Seneca River valley by nearly fifty feet, flooding an industrial area of Seneca Falls known as "The Flats" and forming a body of water now known as Van Cleef Lake.²⁰¹ Earlier versions of the Cayuga-Seneca Canal wound through the flats along the south bank of the Seneca River, climbing the rapids that formed Seneca Falls by way of five hand-operated stone locks. Several manufacturers had harnessed portions of the Seneca River's falls to drive flour mills, saw mills, and a fulling mill. The largest firms were pump and fire engine manufacturers: Gould Pump Company; Silsby Manufacturing Company; Rumsey & Company; and Cowing and Company. The state purchased all of these factories and a number of homes in the Flats to make way for Van Cleef Lake. Leveson Wrecking Company of Hoboken, New Jersey was awarded Contracts C-1 and C-2 to remove 116 commercial and industrial structures and 60 residential buildings. Work started on November 27, 1914 and was completed by August 1915. A number of houses were moved to higher ground. The industrial buildings were demolished.²⁰²

Mile 8.65
E353401
N4752317

Ovid Street bridge, Seneca Falls (S-6) (1 Non-Contributing Structure)

BIN-4048130

Town of Seneca Falls, Seneca County

Unpainted steel stringer / multi beam, 322' long, 52' between curbs. Constructed 1984.

Mile 8.74
E353275
N4752368

Seneca Falls Terminal (2 Contributing Structures)

HAER NY-523

Town of Seneca Falls, Seneca County

The dockwalls on either side of the channel through downtown of the former village of Seneca Falls originally rose high above the bed of the Seneca River valley. They were built as freestanding structures in 1914-15 as part of Contract C. The lower sub-basements of commercial buildings that front on Fall Street were reinforced with concrete and filled as part of the same project and the space between the buildings and the dockwall was filled to create the level area that is now used as park and parking.

Mile 8.75

Old lock wall (NRE - not counted)

²⁰¹ Named for Lawrence Van Cleef, the area's first permanent Euro-American settler, who built a log house in the Flats in 1789. Barben, p. 1.

²⁰² "Another Section of Barge Canal Opened," *Barge Canal Bulletin* VIII:8 (August 1915), p. 223-5; Barben, p. 32.

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E353216 South bank, Village of Seneca Falls, Seneca County
N4752317

Mile 8.84 Seneca Knitting Mill (point of interest - previously listed)
E353106 Village of Seneca Falls, Seneca County
N 4752307

Mile 8.90 **Bridge Street bridge, Seneca Falls (S-7)** (1 Contributing Structure)
E353001 BIN-4435070
N4752325 Town of Seneca Falls, Seneca County
Steel Warren thru-truss approximately 130' long over navigation channel with multi beam deck approach from north, 176' long overall, 28' between curbs, sidewalks on both sides outboard of trusses. Ironwork supplied and erected 1915 by Phoenix Bridge Company under Contract K.
Local lore holds that Seneca Falls inspired set design for Frank Capra's 1945 movie "It's a Wonderful Life" and that the Bridge Street bridge was the basis for the span where Jimmy Stewart's character played as a child and later contemplated suicide.

Mile 8.98 Old canal lock (NRE - not counted)
E352877 North bank, Village of Seneca Falls, Seneca County
N4752335

Mile 9.16 **Rumsey Street bridge, Seneca Falls (S-8)** (1 Non-Contributing Structure)
E352583 BIN-4435080
N4752281 Village of Seneca Falls, Seneca County
Steel stringer/Multi beam, 403' long, 26' between curbs. Constructed 1959; non-contributing highway bridge

Mile 10.85 **River Road Connector / Mound Road bridge (S-9)** (1 Non-Contributing Structure)
E350127 BIN-4435090
N4751531 Town of Seneca Falls, Seneca County
Unpainted steel stringer / multi beam, 233' long, 40' between curbs. Constructed 1993.

Mile 11.71 **Gorham Street bridge, Waterloo (S-10)** (1 Contributing Structure)
E348760 BIN-4435100 CLOSED
N4751427 Village of Waterloo, Seneca County
Steel Warren thru-truss, 128' long, 18' between curbs, sidewalk outboard of truss on

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east side.

Mile 12.26
E347924
N4751547

Washington St Bridge, Waterloo S-11 (1 Non-Contributing Structure)
BIN-4035060
Village of Waterloo, Seneca County
Steel stringer/multi beam, 78' long, 39.4' between curbs. Constructed 1962; non-contributing highway bridge

Mile 12.31
E347843
N4751532

LOCK CS-4, Waterloo (2 Contributing Structures, 2 Contributing Buildings)
HAER NY-524
Intersection of Locust and Washington streets, Village of Waterloo, Seneca County
Constructed 1915, Construction Contract E, G, Electrical Contract M

The site includes Lock CS-4, a Taintor gate dam across the old canal channel north of the lock chamber, a powerhouse, and a lockhouse. A commercial hydroelectric plant on the east side of Washington Street, licensed under FERC P-2438, is not included in the historic district.

Lock CS-4 has a 14.5' lift to the west with normal pool elevations of 430.5' below and 445' (the level of Seneca Lake) above. There are upstream and downstream approach walls on the south bank. There is a single-leaf guard gate upstream of the upper gates and a steel pedestrian/cable bridge below the lower gates. The concrete chamber walls have recesses with tensioned glide cables for mooring small craft. The lock's original valve operating machinery has been replaced and the gates are now operated by direct-acting hydraulic cylinders.

The **powerhouse** stands on the north side of the chamber near the downstream gates. It is one of seven on the system that retains its original hydraulic turbines, vertical-shaft DC generators, and governors and one of only a handful that retains original green glazed tiles on its roof.

The concrete block **lockhouse** was built in 1959. It is two bays wide by two deep. The ridgeline of its gable roof is parallel to the lock chamber. Fixed awnings shade the windows on the south side overlooking the chamber.

Waterloo dam is located about 170' north of the lock chamber across an old channel of the Seneca River. It has six Taintor gate sections. Three on the south end release water to the old Seneca River channel, bypassing Lock CS-4 and directing it to the Waterloo hydroelectric plant. The three on the north end are no longer active. The bridge carrying Locust Street across the bypass channel is supported by extensions of the Taintor gate piers.

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History: The structures at Waterloo were constructed under Contract E, awarded to Cleveland & Sons Company of Brockport in 1913. Concrete work was completed by October 1915. The powerhouse was constructed by Lupfer & Remick under Contract M and the lock gates, valves, guard gates, and Taintor gates were fabricated and installed by the same company under Contract G, which also covered similar work at CS-2 and CS-3.²⁰³ Lock CS-4, like others on the Cayuga-Seneca Canal, was originally fitted with timber gates. Those were replaced by steel gates, fabricated in the Syracuse Canal Shops, in 1940.²⁰⁴ The lock was rehabilitated in 1984. The hydraulic gate operators and new concrete chamber lining were probably installed at that time.²⁰⁵

Mile 16.90
E341733
N4748468
old lock wall (NRE – not counted)
North bank, Village of Waterloo, Seneca County

Mile 16.91
E341736
N4748385
Gas Pipeline Bridge S-12 (1 Contributing Structure)
BIN-4435110
Towns of Waterloo & Fayette, Seneca County
Steel thru-truss, 137' long. Constructed 1925.

Mile 16.95
E341699
N4748293
Lehigh Valley RR Bridge S-13 (1 Contributing Structure)
BIN-4433120
Towns of Waterloo & Fayette, Seneca County
Steel plate girder pony, 105' long, 12.8' wide. Constructed 1917. No longer used.

Mile 17.00
E341716
N4748317
SR 96A Bridge S-13A (1 Non-Contributing Structure)
BIN-4035279
Towns of Waterloo & Fayette, Seneca County
Unpainted steel stringer / multi-beam, 293' long, 66' between curbs. Constructed 1962; non-contributing highway bridge

Mile 17.02
E341698
N4748279
Finger Lakes Railroad bridge S-14 (1 Contributing Structure)
BIN-4435130
Towns of Waterloo & Fayette, Seneca County
Steel skew Baltimore thru-truss, 160' long. Constructed 1916. Built for two tracks, now carrying one.

²⁰³ AR-SES 1915, pp. 222-3, 225; 1916 p. 206; Whitford (1922), p. 567.

²⁰⁴ AR-DPW 1940, p. 21.

²⁰⁵ Maintenance Contract D500021. Other work happened in 1992 under Contract D254402.