



New York State Archives

**New York State Engineer and Surveyor Original and
Preliminary Cross Sections for 1895 Survey of Erie Canal
Improvement B0650**

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Overview of the Records

Repository:	New York State Archives
Summary:	This series consists of hand-drawn cross sections from an 1895 survey done for proposed canal improvements. Various colored lines represents the existing canal bed; proposed improvements; and water level of the canal. Measurements give changes in elevation for use in determining the amount of excavation or fill needed for the improvements. Represented are parts of the middle and western division of the Erie and Oswego canals, along with several prominent feeders.
Creator:	New York (State). State Engineer and Surveyor
Title:	Original and preliminary cross sections for 1895 survey of Erie Canal improvement
Quantity:	6 cubic feet
Quantity:	17 volumes; 14000 plans
Inclusive Date:	1896
Series:	B0650

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Arrangement

Geographical by canal division within volumes according to contract or section number, and therein by station number.

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Scope and Content Note

The series consists of hand-drawn cross sectional drawings from an 1895 survey done for proposed canal improvements. The diagrams indicate elevations of the existing canal bed and adjoining abutments and calculate the degree of change, or excavation, needed to deepen the canal. Such survey drawings might be used to produce contract drawings at a later date, and some of the drawings in this series pertain to contracts previously let for canal improvements. The drawings chart parts of the Middle and Western Division of the Erie and Oswego canals,

along with several prominent feeders. The cross sections are in two groups that apparently reflect differing work methods in the two divisions.

Creation of the records was authorized by Chapter 79 of the Laws of 1895. That law directed the Superintendent of Public Works to enlarge and improve the Erie, Oswego, and Champlain canals by deepening them to 9 feet, completing the lengthening or improving of locks and providing necessary machinery for drawing boats through them, and building vertical stone walls where necessary. This work was to be done by contract according to plans, specifications, and estimates prepared and approved by the State Engineer and Surveyor, which included the kind and quality of material to be used.

Volumes 1 through 6 are entitled Original Survey Cross Sections. They represent the Middle Division of the Erie and Oswego canals, with a few pages devoted to the Black River Canal. Cross sections for various feeders (e.g., Chittenango Feeder) often appear toward the end of the volumes. The arrangement of the volumes by contract number indicates that they document areas covered by existing canal contracts for which further work is proposed. Most of the information available about these drawings comes from the title block on the volume covers, which gives the authorizing legislation, contract number (if any), and a note of the area covered by the drawings, including the distance in miles. In addition to the cross sections there are several pages of traverse lines; structural drawings and plans of walls, culverts and dams; and profiles of spur lines of grounds and abutments near bridges. There are occasionally penciled notes in the margins giving such information as starting points of contracts, and calculations/ revisions to measurements.

The drawings in these six volumes are done in red and black ink on graphing paper (10 squares to one inch grid). The black line represents the existing canal bed; the red line shows proposed improvements. Measurements give changes in elevation for use in determining the amount of excavation or fill needed for the improvements. The elevations are apparently measured against the number of squares in the grid pattern. There are rare instances of additional color shading done in crayon, with a legend code showing earth and fill removal, old and new walls, and road materials necessary. Station numbers appear with each drawing, often along the left margin. The cross sections are drawn several to a page, by ascending station number. They typically measure 5 x 35 cm or larger. Although the page size is a uniform 45 x 57 cm, some pages are in landscape orientation within the volume. Volume size is 46 x 58 cm.

Volumes 7 through 17 are entitled Cross Sections Preliminary Survey. They represent sections 13 to 23 of the Western Division of the Erie Canal, including some slips and feeders (e.g., Genesee River Feeder). The arrangement of the volumes by section number indicates that no existing contracts had been let for the proposed work. These cross sections contain the same kinds of measurements as those in the differently titled volumes in the series. Each page has the section number and "Western Division Erie Canal" stamped across the top, and a handwritten date (in 1896) and the initials or name of the preparer in the lower right corner. Station numbers appear adjacent to each drawing.

The drawings in these eleven volumes are done in black, red, and blue ink on graphing paper (10 squares to one inch grid). The black line represents the existing canal, the red line shows proposed improvements, and the blue line is the water level of the canal. A separate horizontal red line runs at the top of each drawing and gives the "H.I. Elevations". This refers

to the "height of instrument" elevation that represents height above tide water. Measurements show the amount of change in elevation relative to this measure. A separate vertical red line represents the towpath line, which is a perpendicular constant to the canal bed. The cross sections are drawn several to a page, by ascending station number. They typically measure 7.5 x 51.5 cm or larger on a page size of 45 x 57 cm. Volume size is 46 x 60 cm.

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Other Finding Aids

Available at Repository

Volume list is available at the repository.

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Use of Records

Access Restrictions

There are no restrictions regarding access to or use of this material.

Access Terms

- Erie Canal (N.Y.)
- Locks (Hydraulic engineering)
- Plans (orthographic projections)
- Profiles
- New York (State)
- Maintaining infrastructure
- New York (State)--Western New York
- Constructing canals
- Bridges
- Black River Canal (N.Y.)
- Dams--Drawings
- Cross sections
- Surveys
- Canals--Design and construction
- Oswego Canal (N.Y.)

- **New York (State). Department of Transportation**