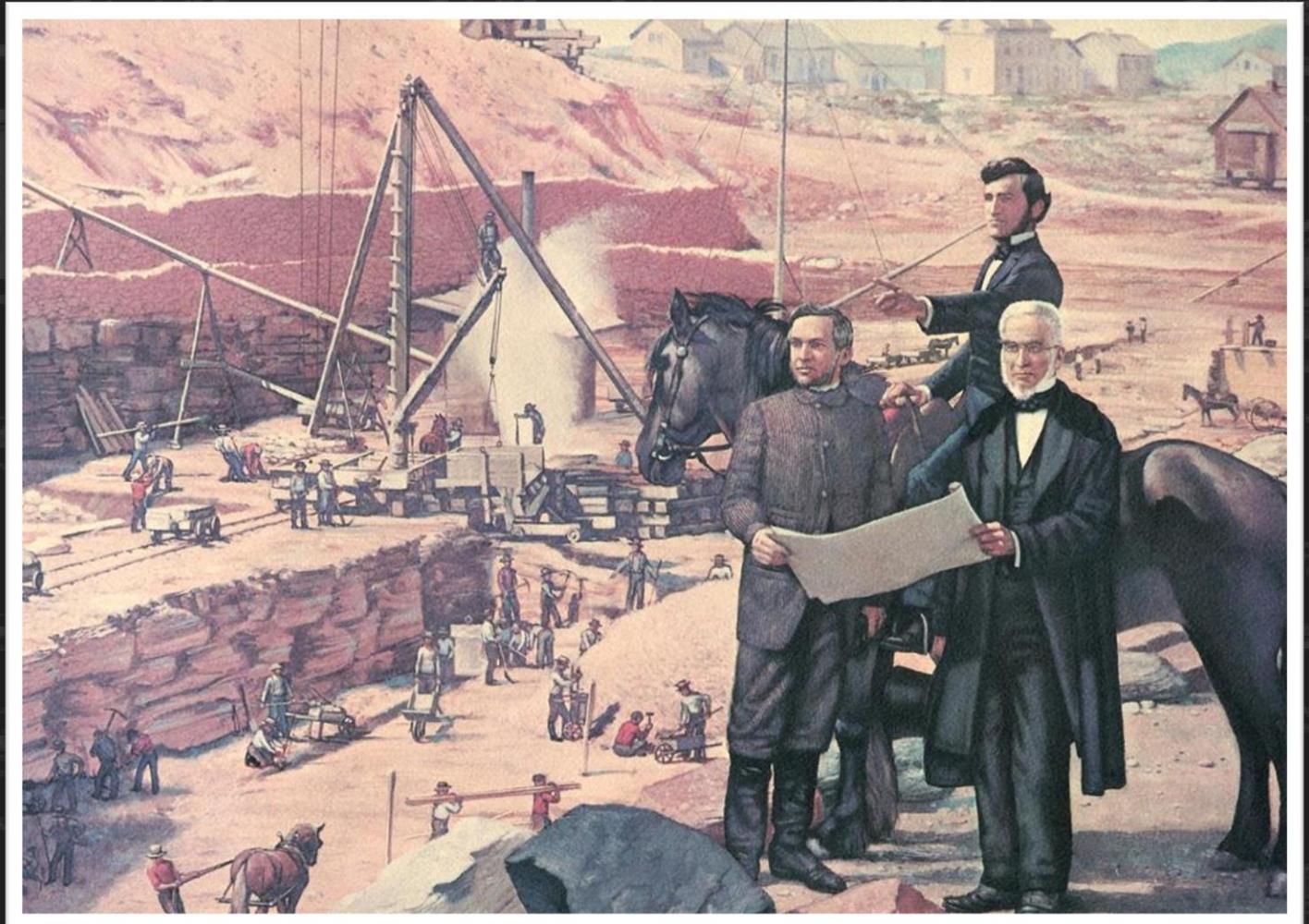


SO, YOU WANT TO BUILD A LOCK? HERE IS WHAT YOU'LL HAVE TO DO.

Michelle Briggs

Chief Park Ranger, Soo Locks
U.S. Army Corps of Engineers



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WHY EVEN BUILD A LOCK?



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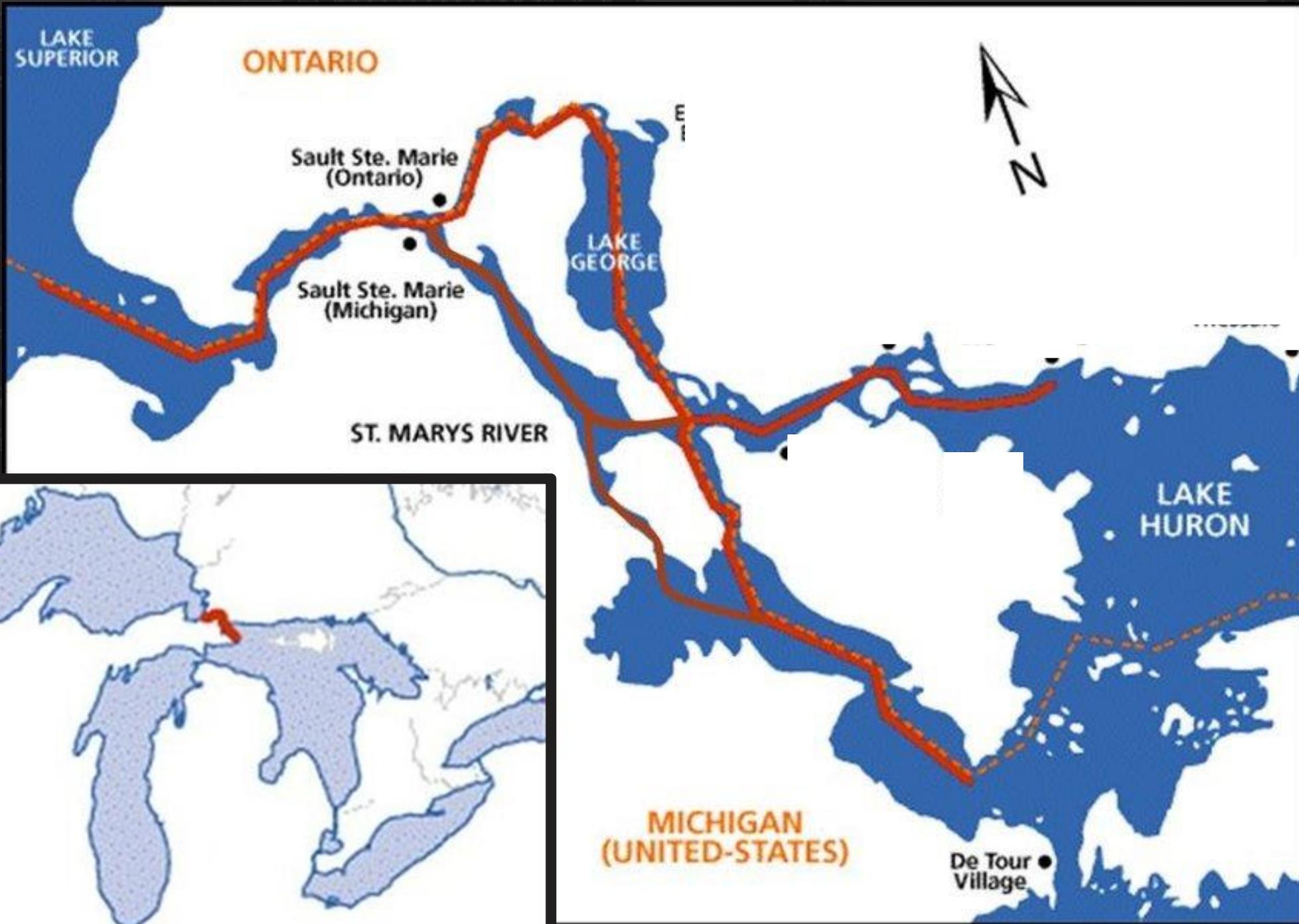
WHY EVEN BUILD A LOCK?



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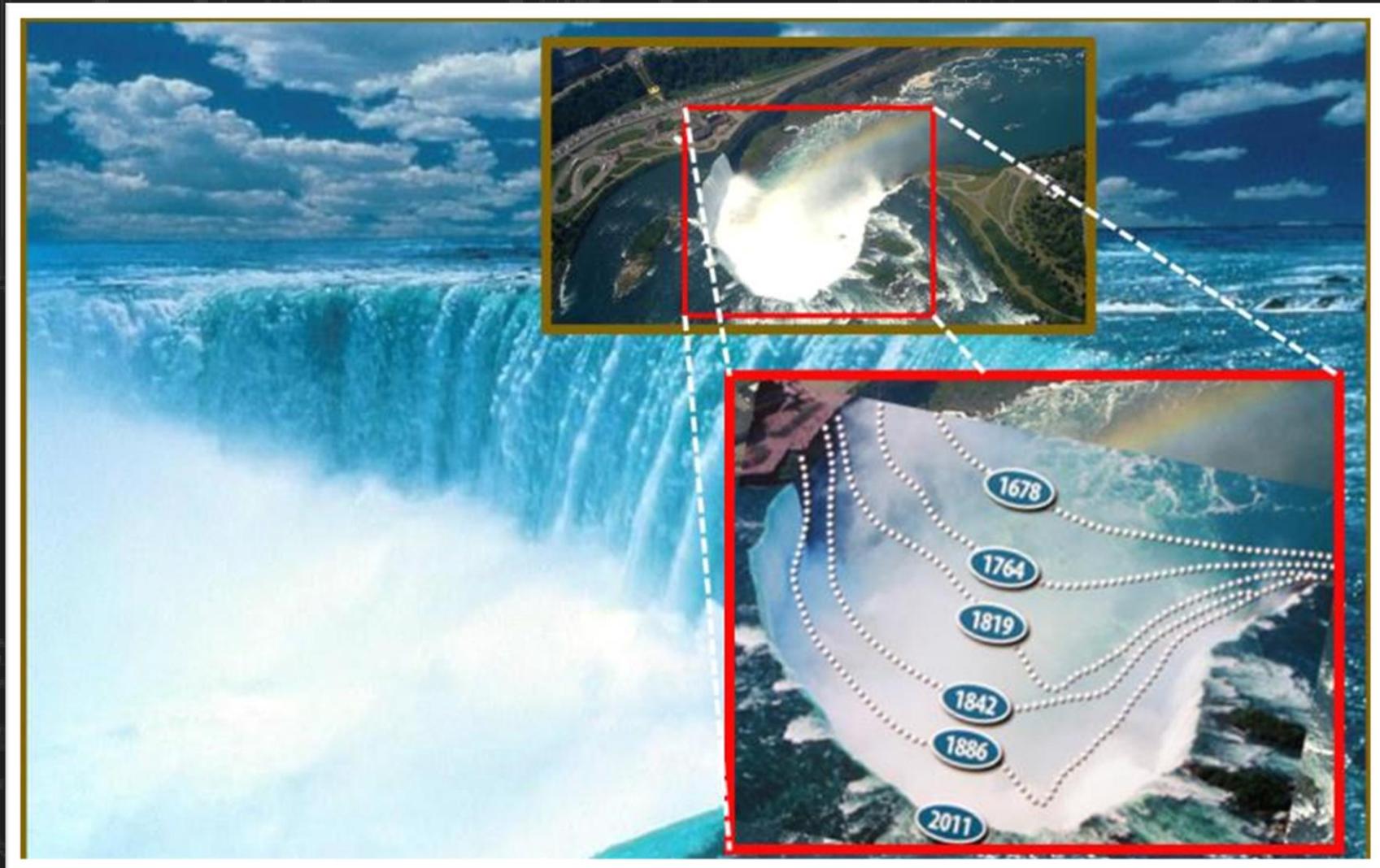


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IF YOU LET IT FLOW, WON'T THE RAPIDS DISAPPEAR?



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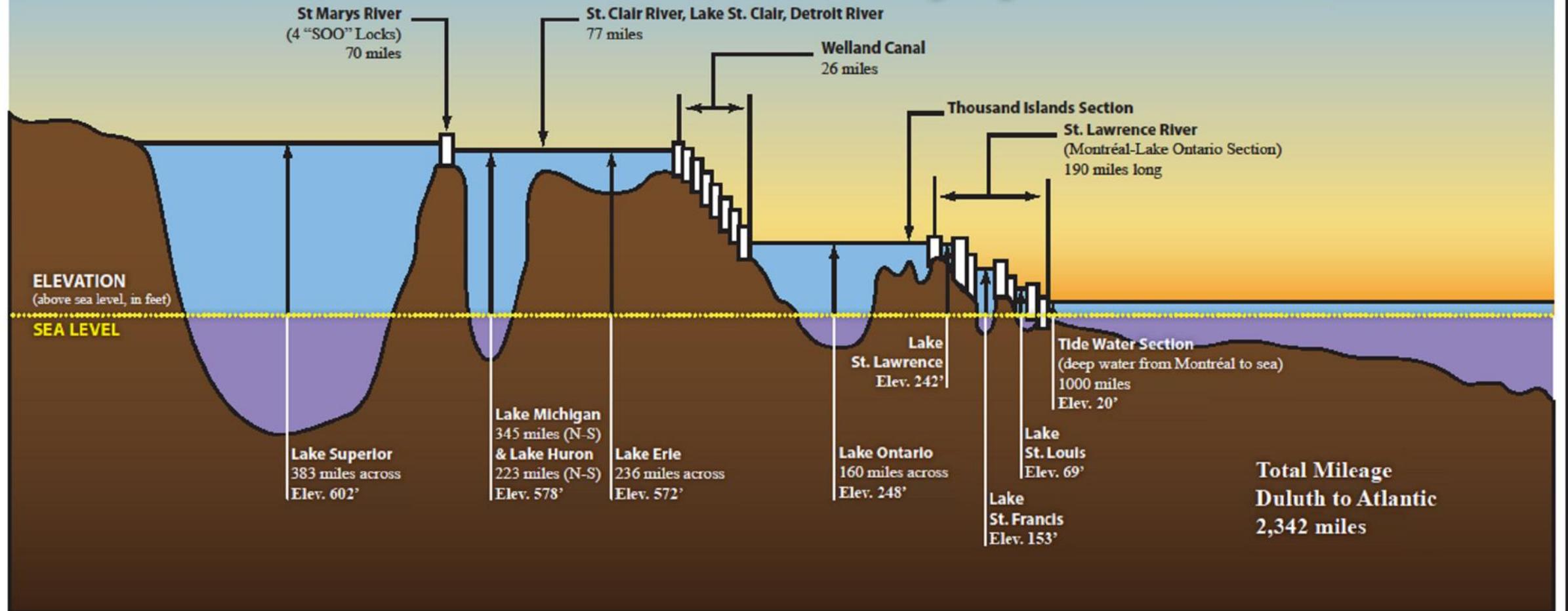


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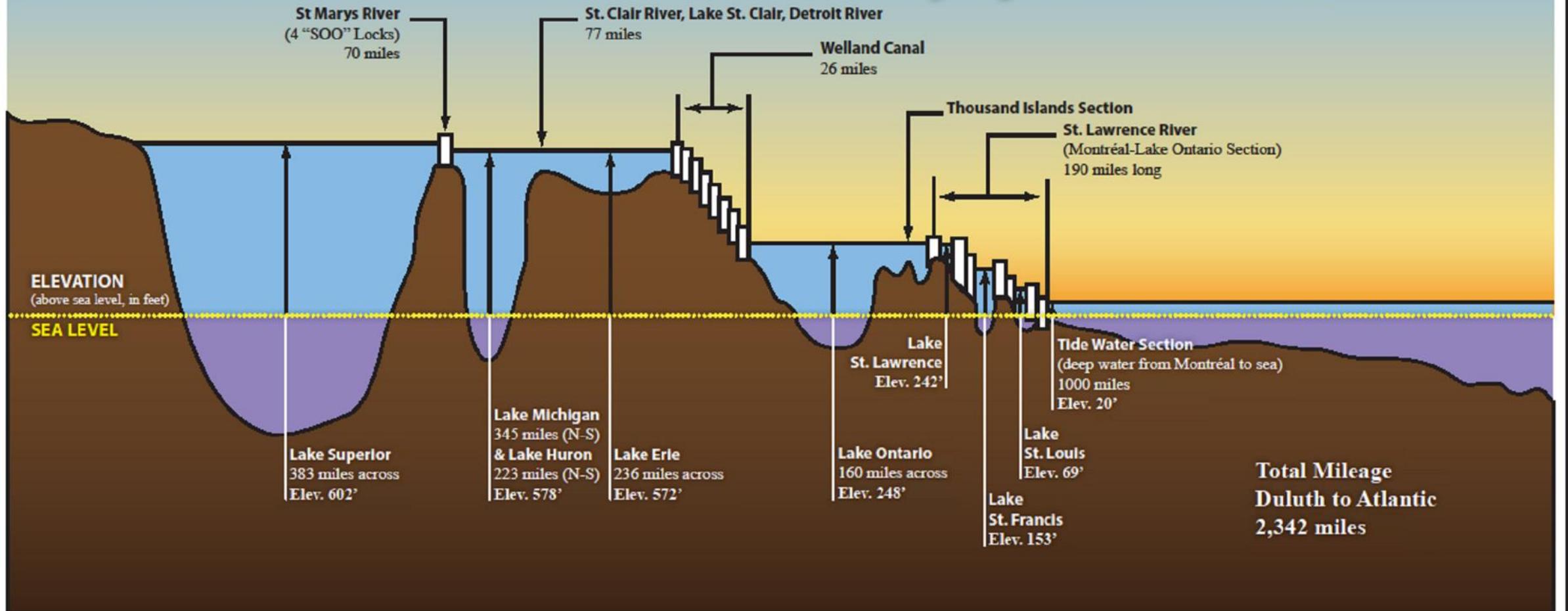
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Great Lakes and St. Lawrence Seaway System Profile



WE HAVE TO GO AROUND IT.

Great Lakes and St. Lawrence Seaway System Profile



17TH & 18TH CENTURIES



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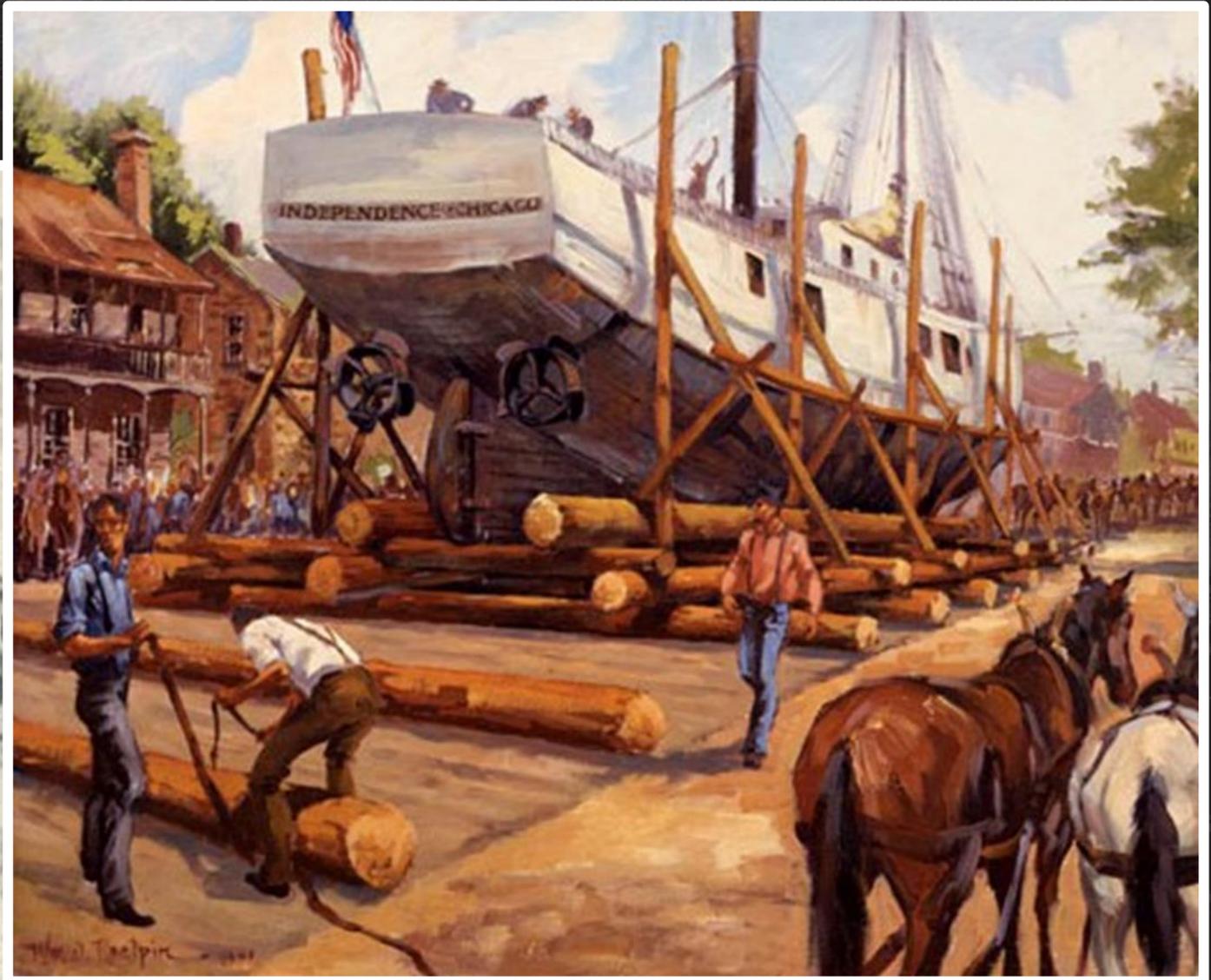


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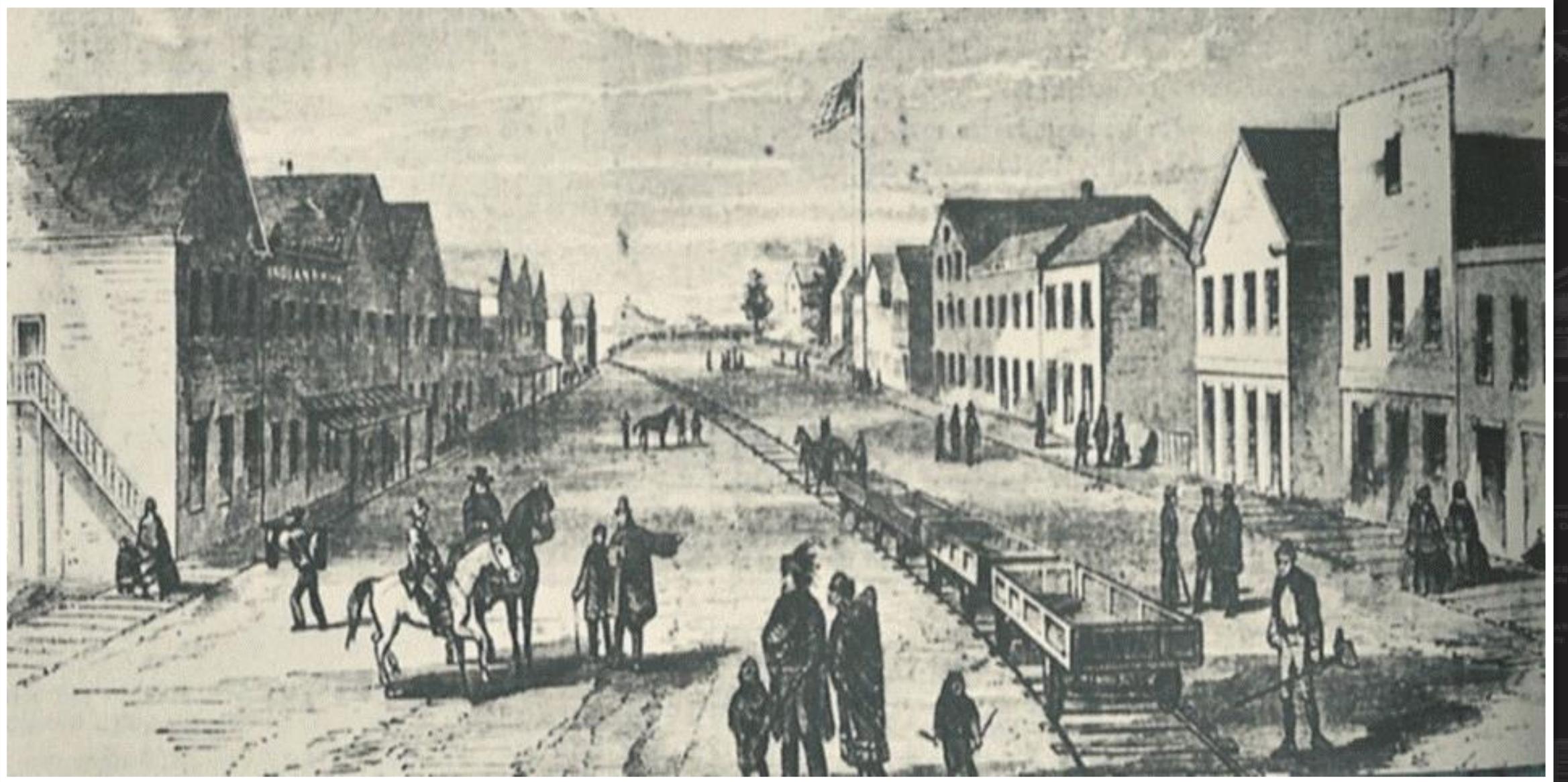
19TH CENTURY



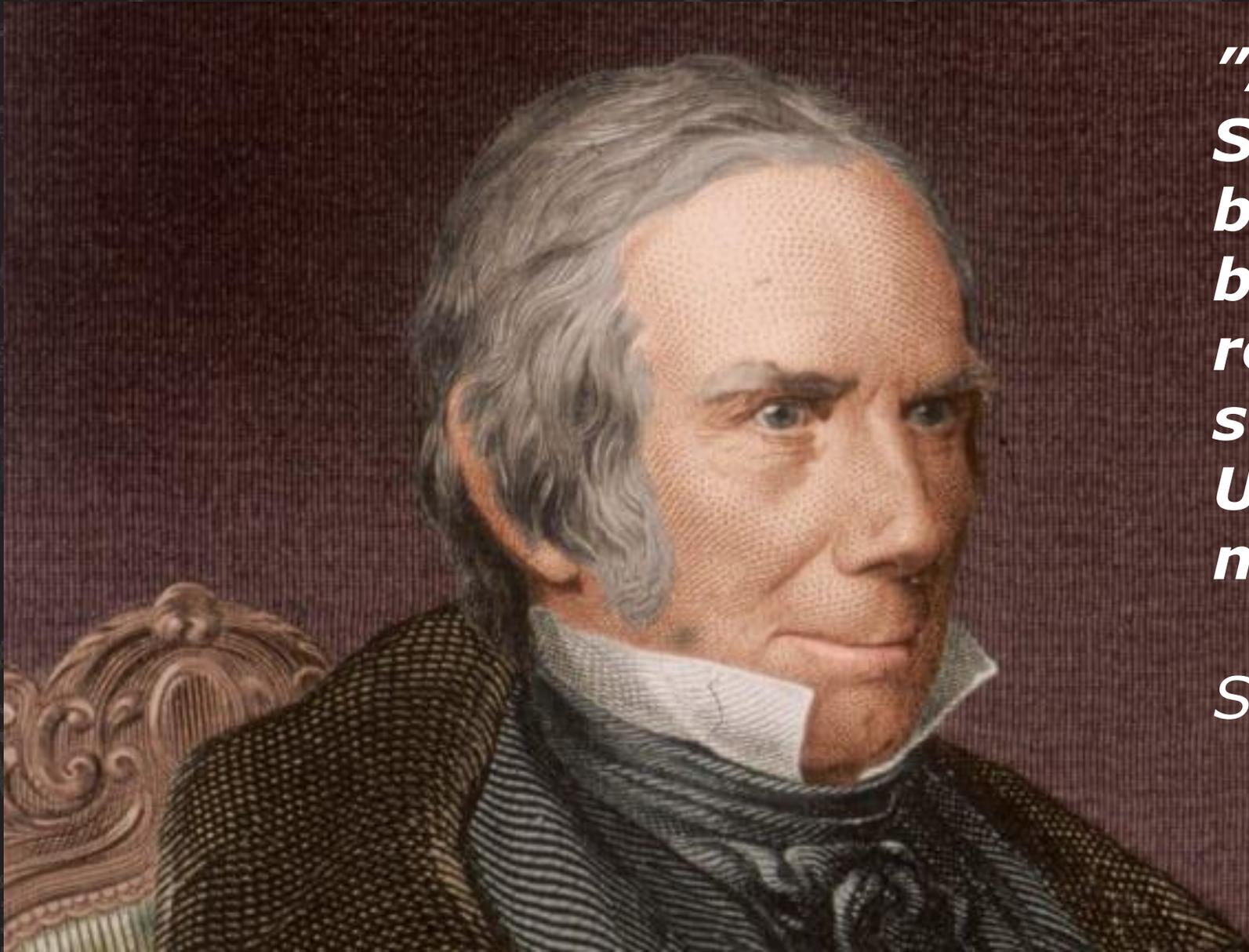
19TH CENTURY



19TH CENTURY



YOU WILL NEED TO GET PERMISSION

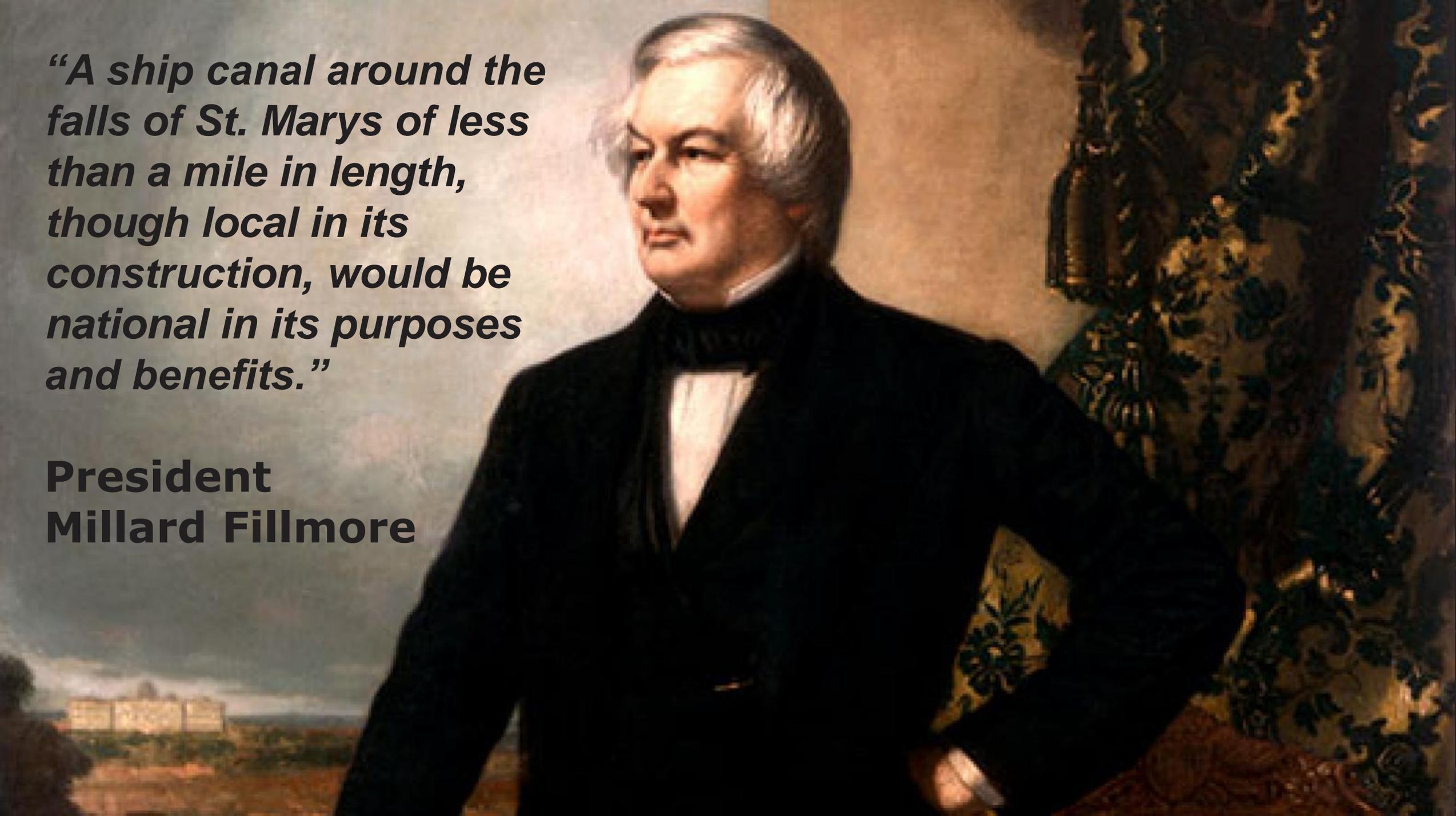


“A Canal at Sault Ste. Marie would be a work quite beyond the remotest settlement of the United States, if not the moon”

Senator Henry Clay

“A ship canal around the falls of St. Marys of less than a mile in length, though local in its construction, would be national in its purposes and benefits.”

**President
Millard Fillmore**



Lock Name	Authorization	Construction	Complete
State Lock	August 26, 1852	1853	1855
Weitzel Lock	July 11, 1870	1870	1881
Original Poe Lock	August 2, 1886	1889	1896
Davis	March 2, 1907	1908	1914
Sabin	July 25, 1912	1912	1919
MacArthur	March 7, 1942	1942	1943
Current Poe	July 24, 1946	1961	1968
New Lock at the Soo	November 11, 1986	2020	**2030**

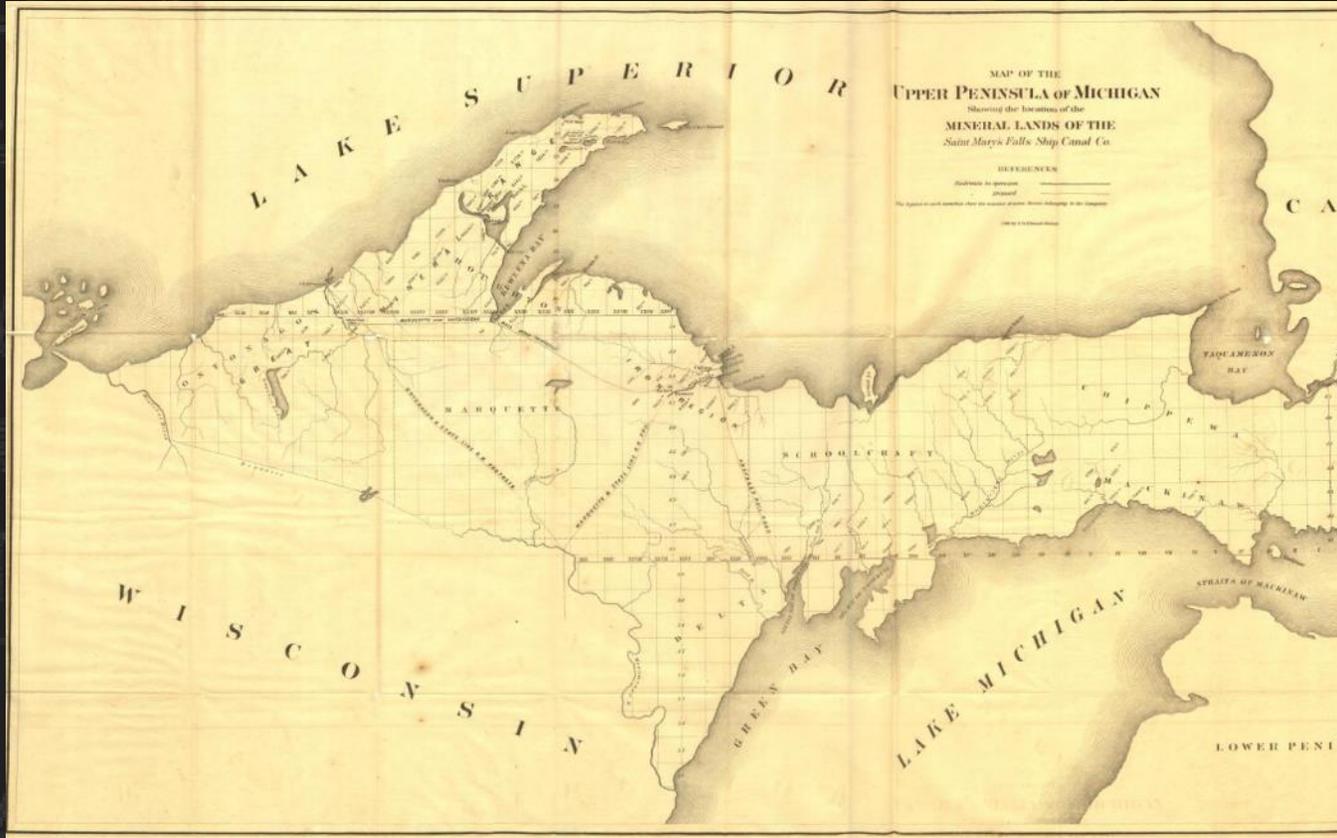


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YOU ARE GOING TO NEED THE MONEY



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YOU ARE GOING TO NEED THE MONEY

New Lock at the Soo Allocations and Capabilities

- A** Federal Allocation
- B** Bipartisan Infrastructure Law
- M** State of Michigan
- C** Capability



* Based on Authorized Project Cost of \$3.219B and includes a management reserve of \$617.9M that is not currently planned to be requested but could be requested for currently unknown contractual needs.

YOU NEED TO FIND A CONTRACTOR

Statistics of Labor materials &c used & employed in building Canal.

Labor	Days Labor	Iron	Pounds	Square timber in Piers	Cubic Feet
upon excavation & filling	268,276	Lock gates	111,920	Lock foundations	98,537
Lock Masonry	50,350	Piers	43,377	Lock gates	16,065
Lock foundations	10,363	Lock foundations	46,293	Lock gates	6,720
Piers	13,066	repairs and Miscellaneous work	22,340	Miscellaneous	43,080
Lock gates estimated	7,717			Total	197,555
Slope Wall	7,889				
Miscellaneous work	17,242				
Total	396,393				

600 men employed at one time
 100 horses
 25 head Cattle
 25 sail vessels
 6 Barges
 1 Dredge

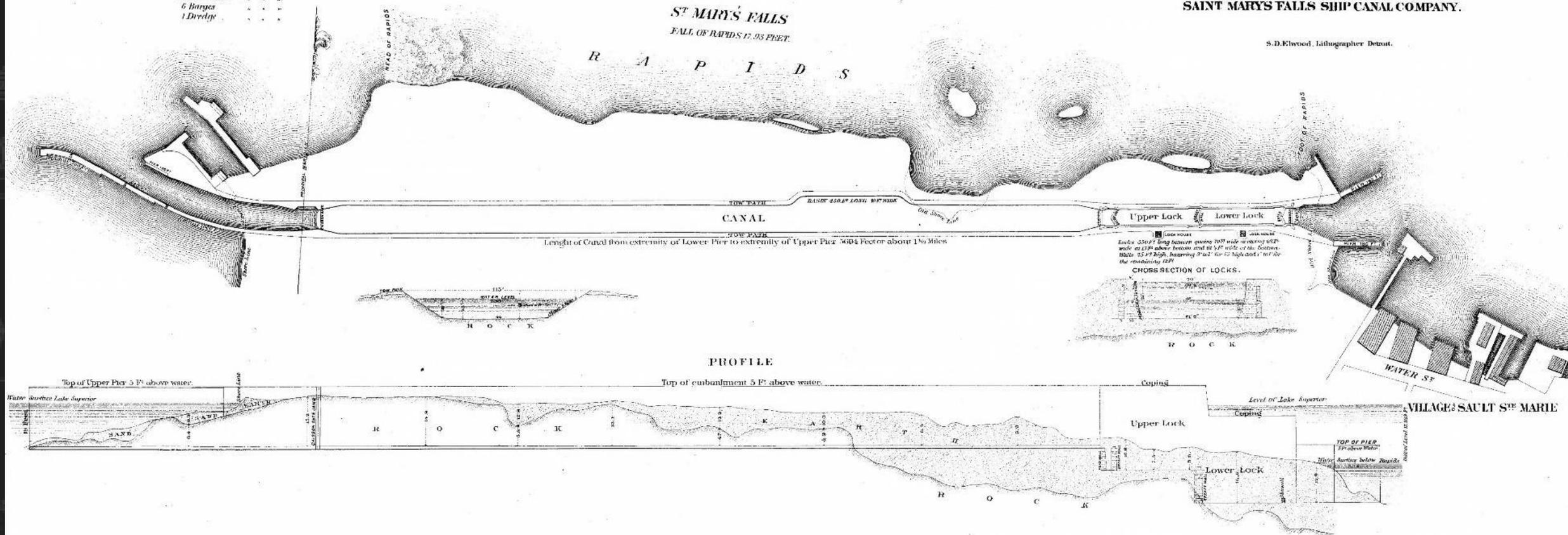
approximately 150 tons of Iron besides many tons in Machinery not included
 Lumber board measure for Miscellaneous purposes
 Powder 3,137 bags
 Drill Steel 9,750 Pounds

THE SAINT MARY'S FALLS SHIP CANAL MICHIGAN

Constructed in 1853 - 4

by the
SAINT MARYS FALLS SHIP CANAL COMPANY.

S. D. Elwood, Lithographer Detroit.



REPORT OF THE DIRECTORS

OF THE

St. Mary's Falls Ship Canal Co.

TO THE

STOCKHOLDERS;

WITH ACCOMPANYING MAPS AND PAPERS.

SEPTEMBER, 1858.

no 450 Transportation
Library

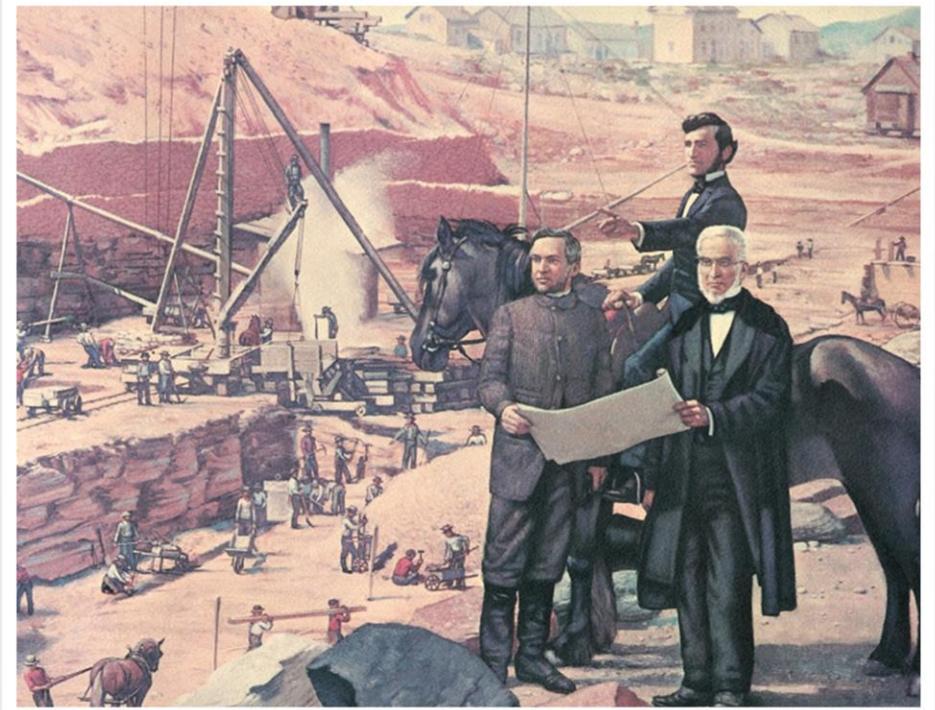
DIRECTORS AND OFFICERS OF THE
1858.

ERASTUS CORNING,
ERASTUS FAIRBANKS,
J. W. BROOKS,
NATHANIEL THAYER,
JOHN F. SEYMOUR.
J. V. L. PRUYN,
BENJAMIN TIBBITS,
DIRECTORS.

ERASTUS CORNING, PRESIDENT.
J. W. BROOKS, VICE PRESIDENT.
J. V. L. PRUYN, SECRETARY AND TREASURER.
Office, Albany, N. Y.

General Land Office at Detroit,
GEORGE S. FROST, *Land Agent.*

Upper Peninsula Land Office at Marquette,
CHAS. T. HARVEY, *Land Agent.*







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YOU'LL NEED TO TEST YOUR PLAN

Statistics of Labor materials &c used & employed in building Canal.

Labor	Days Labor	Pounds	Cubic Feet
upon excavation & filling	208,776		
• Lock Masonry	20,350		
• Lock foundations	10,363		
• Piers	13,000		
• Lock gates estimated	7,317		
• Slope Wall	5,889		
• Miscellaneous work	12,262		
Total	290,593		
		Iron in Lock-gates	Square timber in Piers
		191,996	98,837
		43,327	Lock foundations
		16,993	Lock gates
		10,350	Miscellaneous
		Total 290,593	Total 197,255
		Lumber board measure for Miscellaneous purposes	4,895,000 Square feet
		Powder	3,157 kegs
		Drill steel	9,730 Pounds

100 men employed at one time
 100 horses
 25 head Cattle
 25 sail vessels
 6 Barges
 1 Dredge

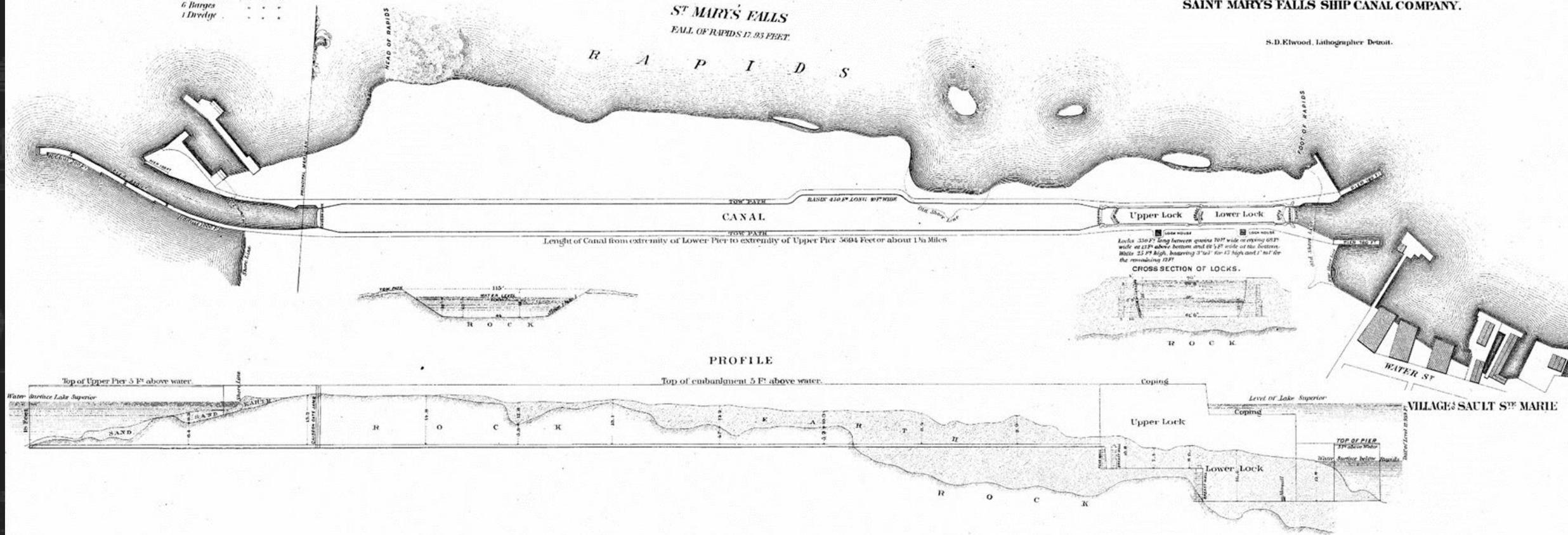
THE SAINT MARYS FALLS SHIP CANAL MICHIGAN

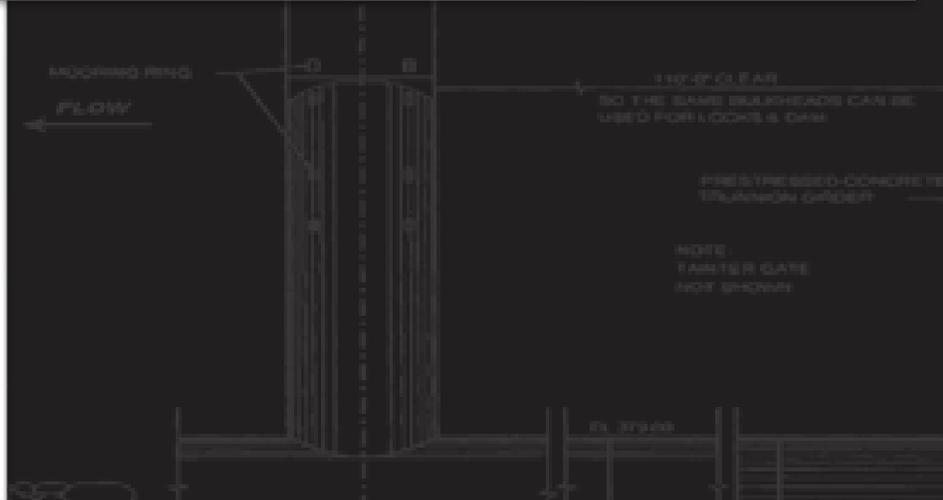
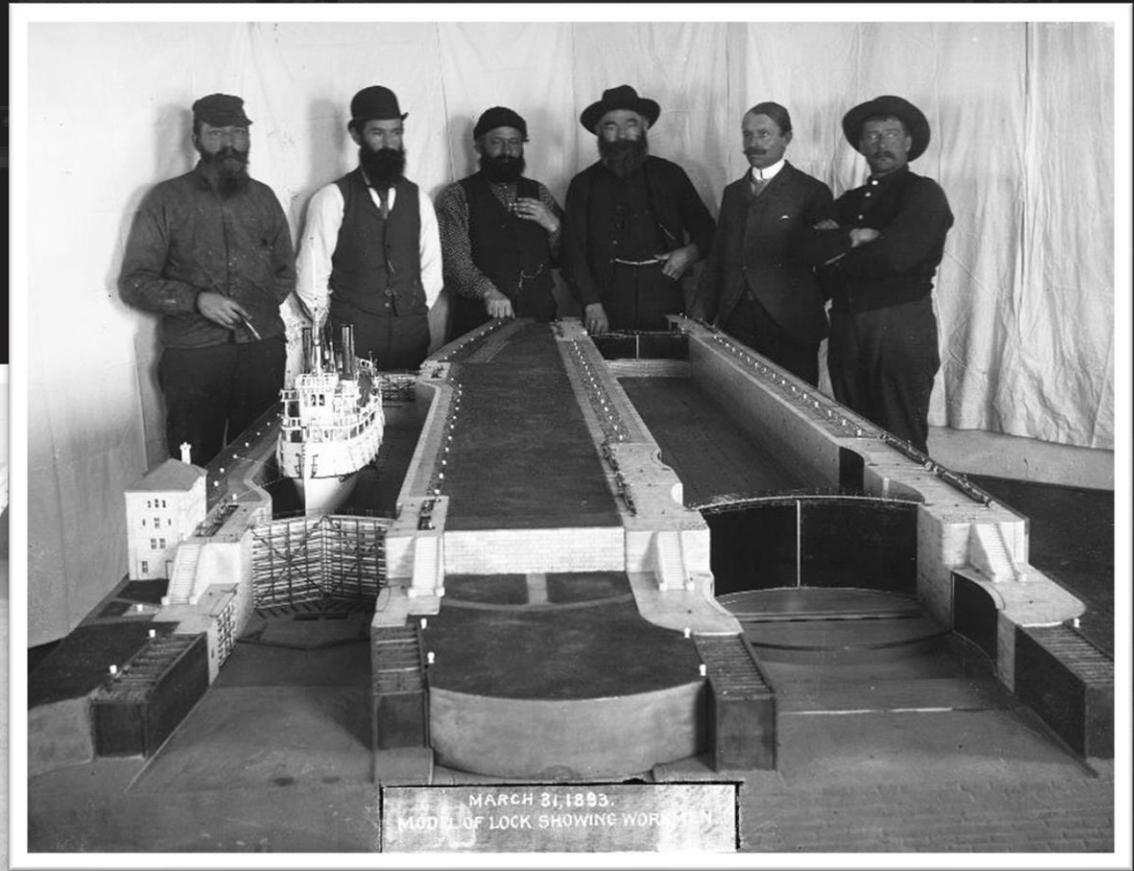
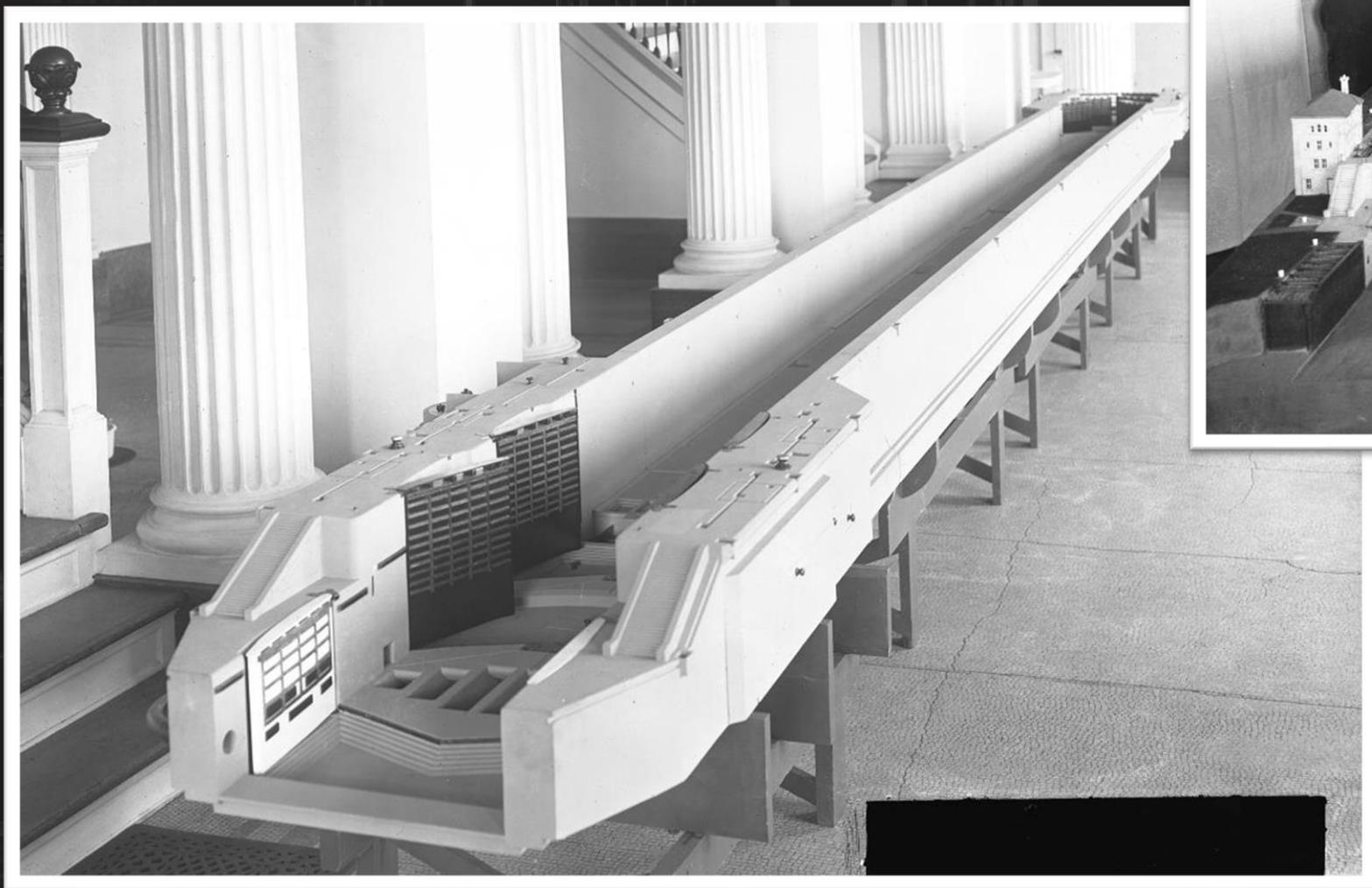
Constructed in 1853 - 4

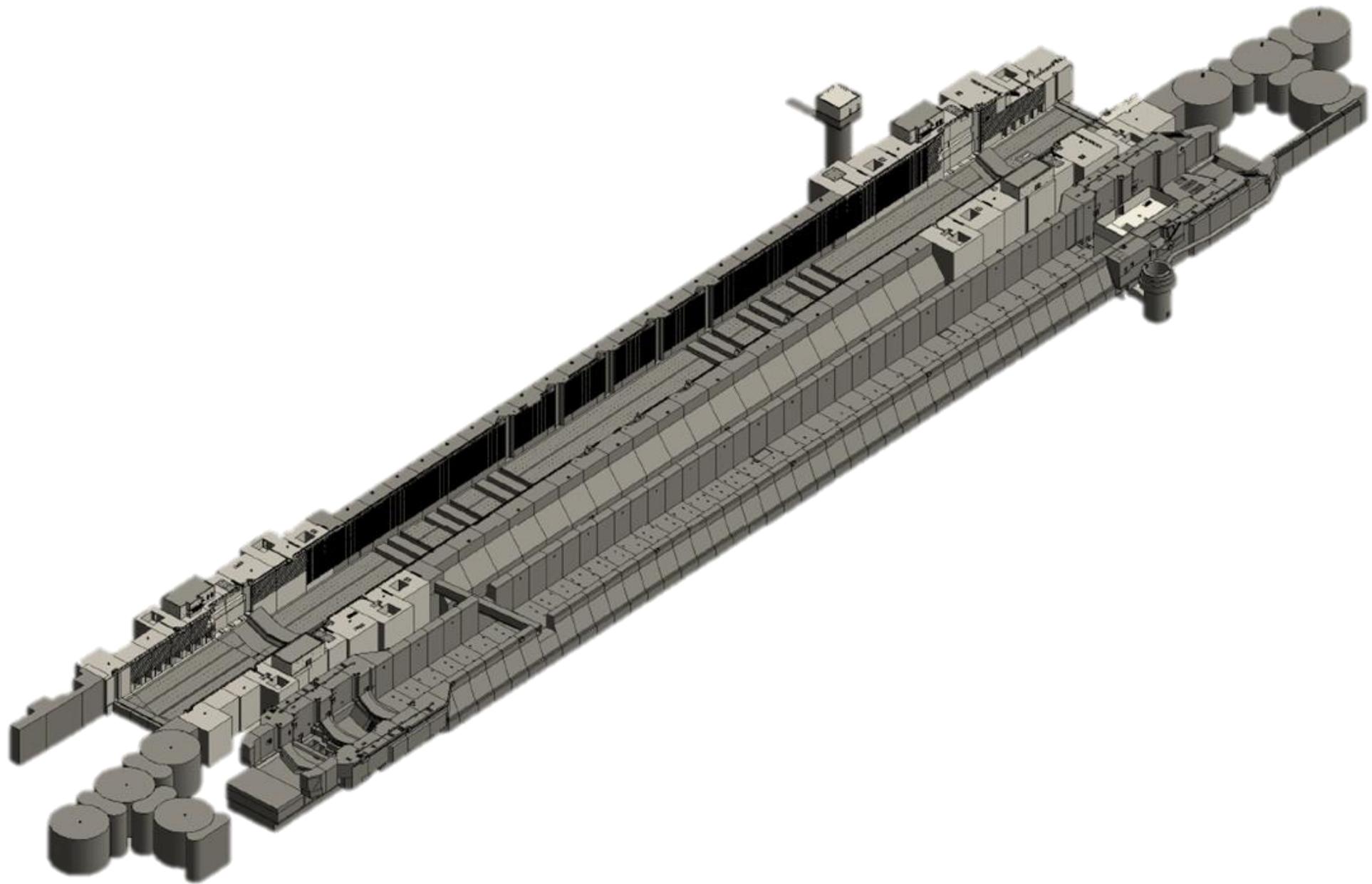
by the

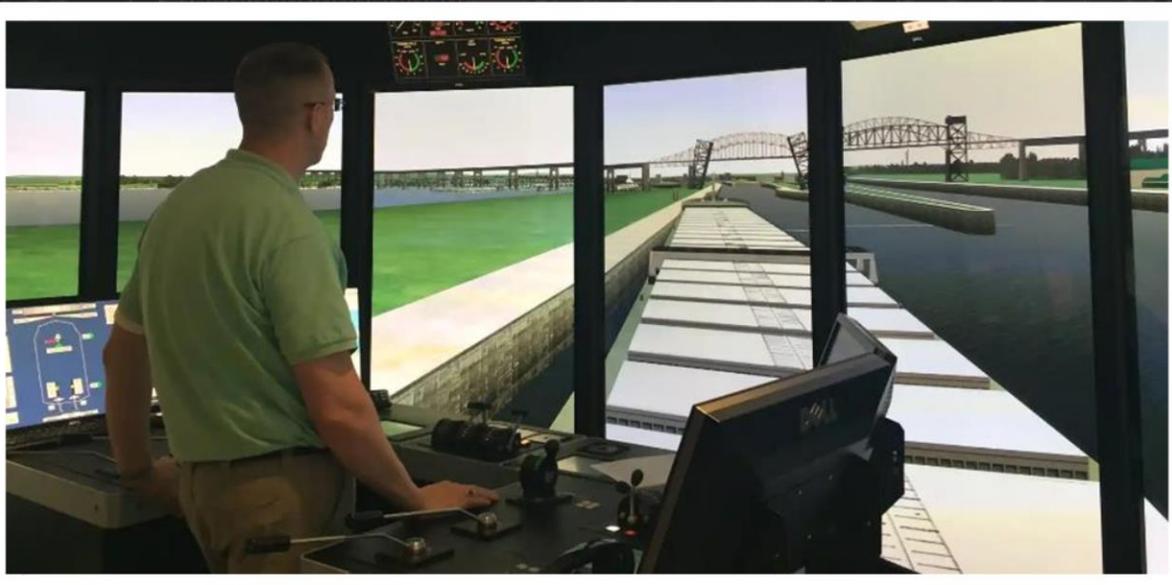
SAINT MARYS FALLS SHIP CANAL COMPANY.

S. D. Elwood, Lithographer Detroit.





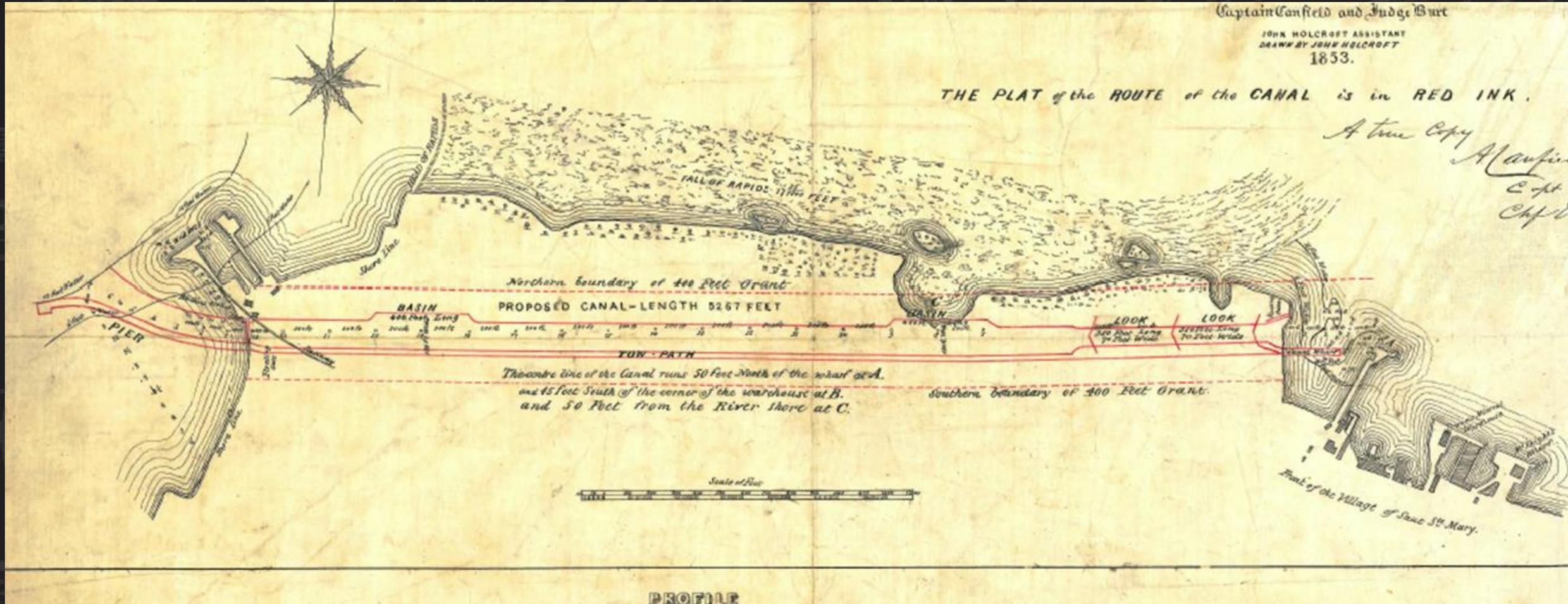




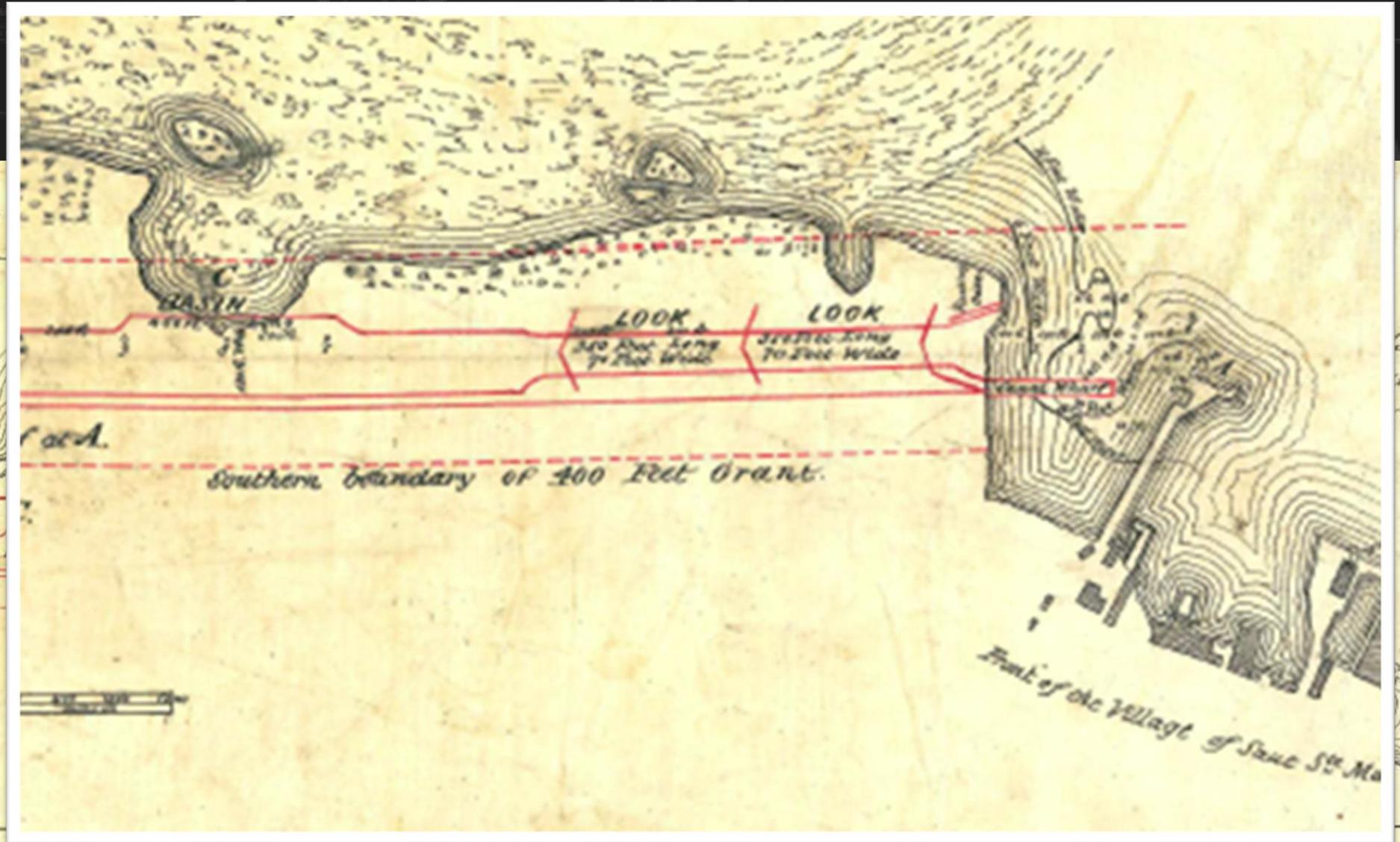
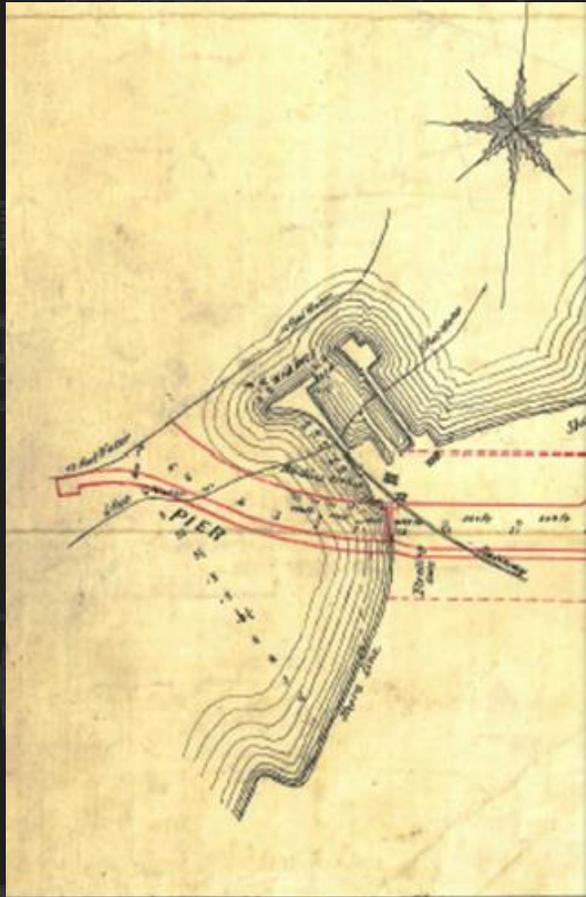




YOU'RE GOING TO NEED SOME DAMS

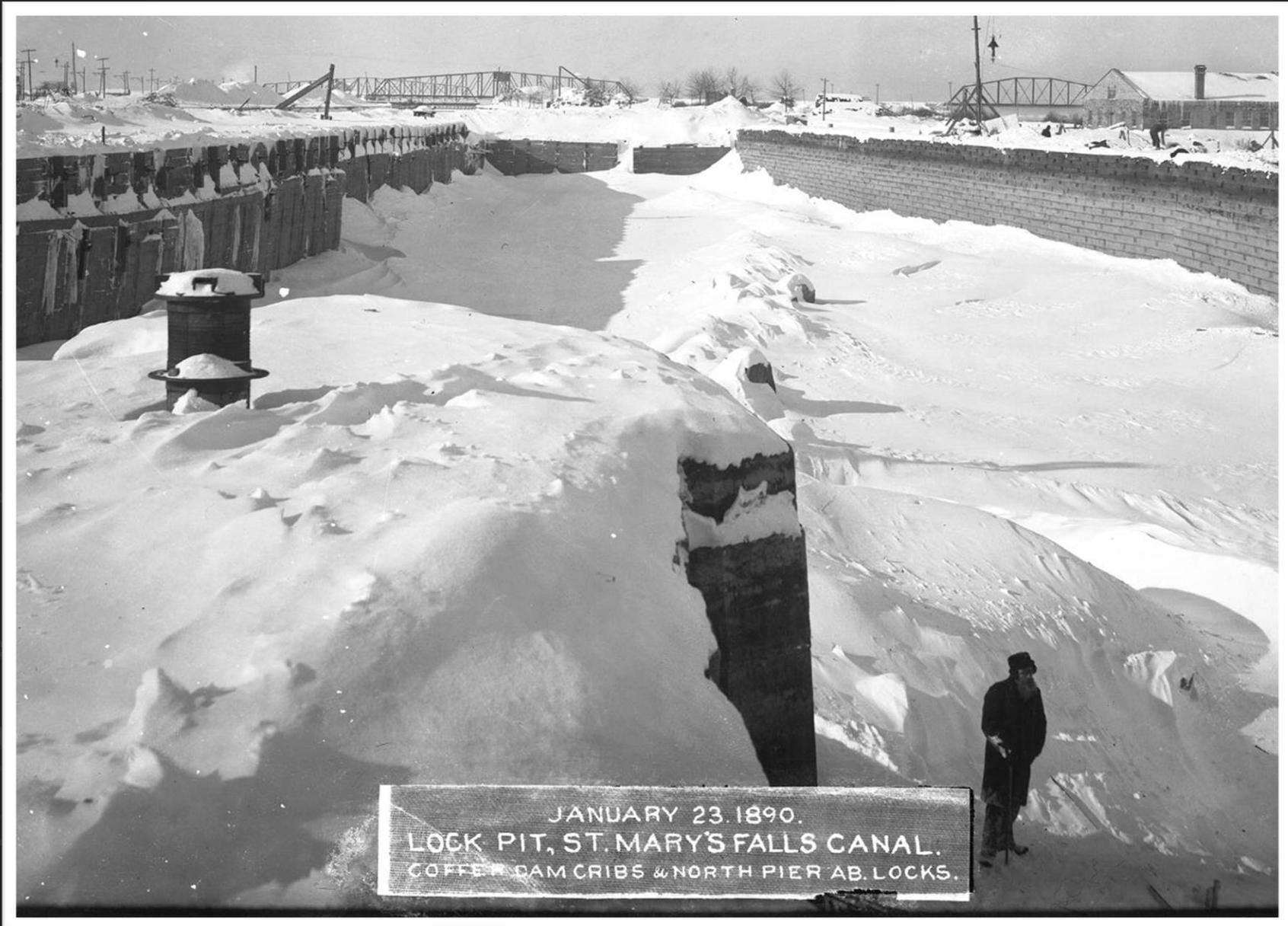


YOU'RE GOING TO NEED SOME DAMS



PROFILE

ORIGINAL POE LOCK



JANUARY 23, 1890.
LOCK PIT, ST. MARY'S FALLS CANAL.
COFFER DAM CRIBS & NORTH PIER AB. LOCKS.



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MACARTHUR LOCK



NEW FIRST LOCK
ST. MARYS RIVER, MICHIGAN
ST. MARYS FALLS CANAL
Constructing lower cofferdam, view looking East
July 4 1942

No. 58



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CURRENT POE LOCK



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NEW LOCK AT THE SOO



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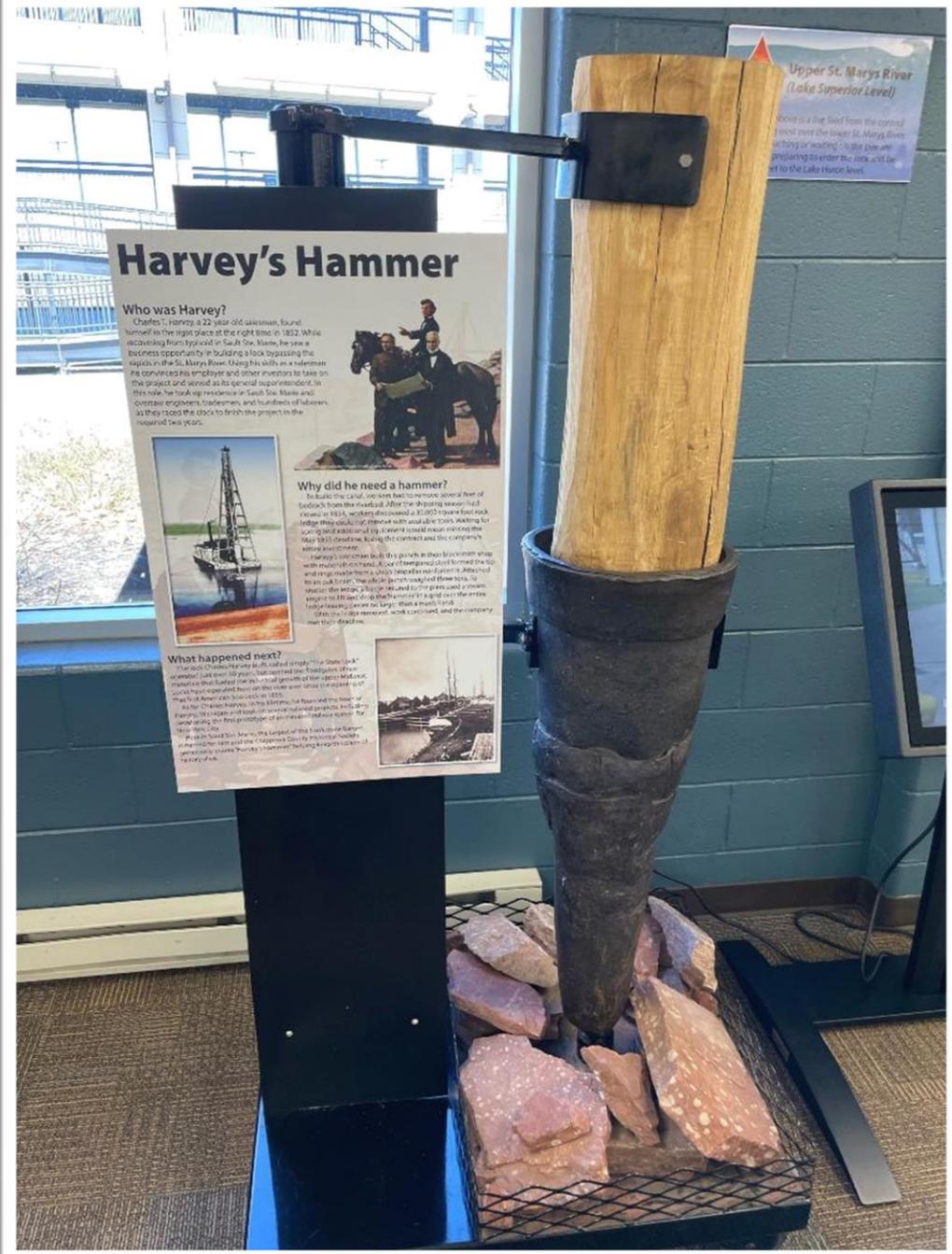
YOU NEED APPROACH CANALS



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Harvey's Hammer

Who was Harvey?

Charles Harvey, a 22-year-old steamboat found himself in the right place at the right time in 1852. While recovering from typhoid in South St. Marys, he saw a business opportunity in building a lock bypassing the rapids in the St. Marys River. Using his skills as a steamboat captain, he convinced his employer and other investors to take on the project and served as its general superintendent. In the role, he took up residence in South St. Marys and oversaw engineers, tradesmen, and hundreds of laborers, as they raced the clock to finish the project in the record two years.



Why did he need a hammer?

To make the canal, workers had to remove several feet of bedrock from the riverbed. After the shipping season had closed in 1854, workers discovered a 10,000-pound bedrock ledge they could dig, remove with available tools, and float for use as a keel for the canal. In May 1855, Harvey took the contract and the company's engineering crew.

Harvey's men built the punch in their blacksmith shop with multiple iron bars. A layer of tempered steel formed the tip and eight iron bars, which were used to drive it. Attached to an oak frame, the pile driver weighed three tons. To operate the device, Harvey and his men used a steam engine to lift and drop the hammer in a controlled manner. The hammer's weight was used to drive the pile into the ground, and the company was able to complete the project in the record two years.



What happened next?

The lock Charles Harvey built, called simply "the Stone Lock," opened in 1856. In 1857, Harvey took over the St. Marys River Lock and Canal Company, which operated the lock and canal. In 1858, Harvey was elected mayor of South St. Marys, Michigan. He was also elected to the Michigan State Senate in 1860.

As the Chicago-based, in the 1870s, he sponsored the construction of a large-scale canal project, including the St. Marys River Lock and Canal Company. He was also elected to the Michigan State Senate in 1860.

Upper St. Marys River (Lake Superior Level)

This is a log float from the canal project near the lower St. Marys River. It was used for moving logs and other materials to the Lake Superior level.

SABIN LOCK



ST. MARYS RIVER MICHIGAN
FOURTH LOCK
GENERAL VIEW LOOKING WEST SHOWING
DREDGING ON EAST APPROACH
JUNE 15 1918



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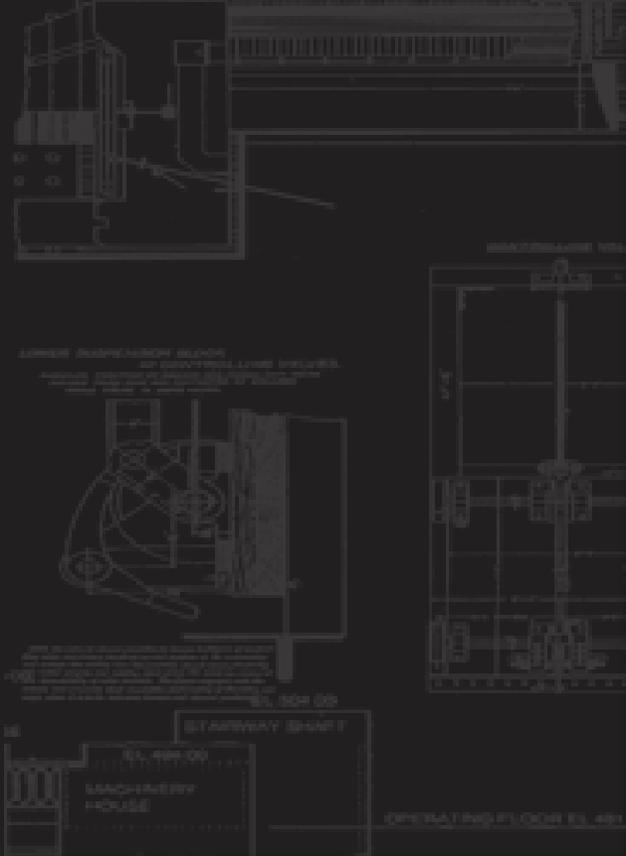
MACARTHUR LOCK



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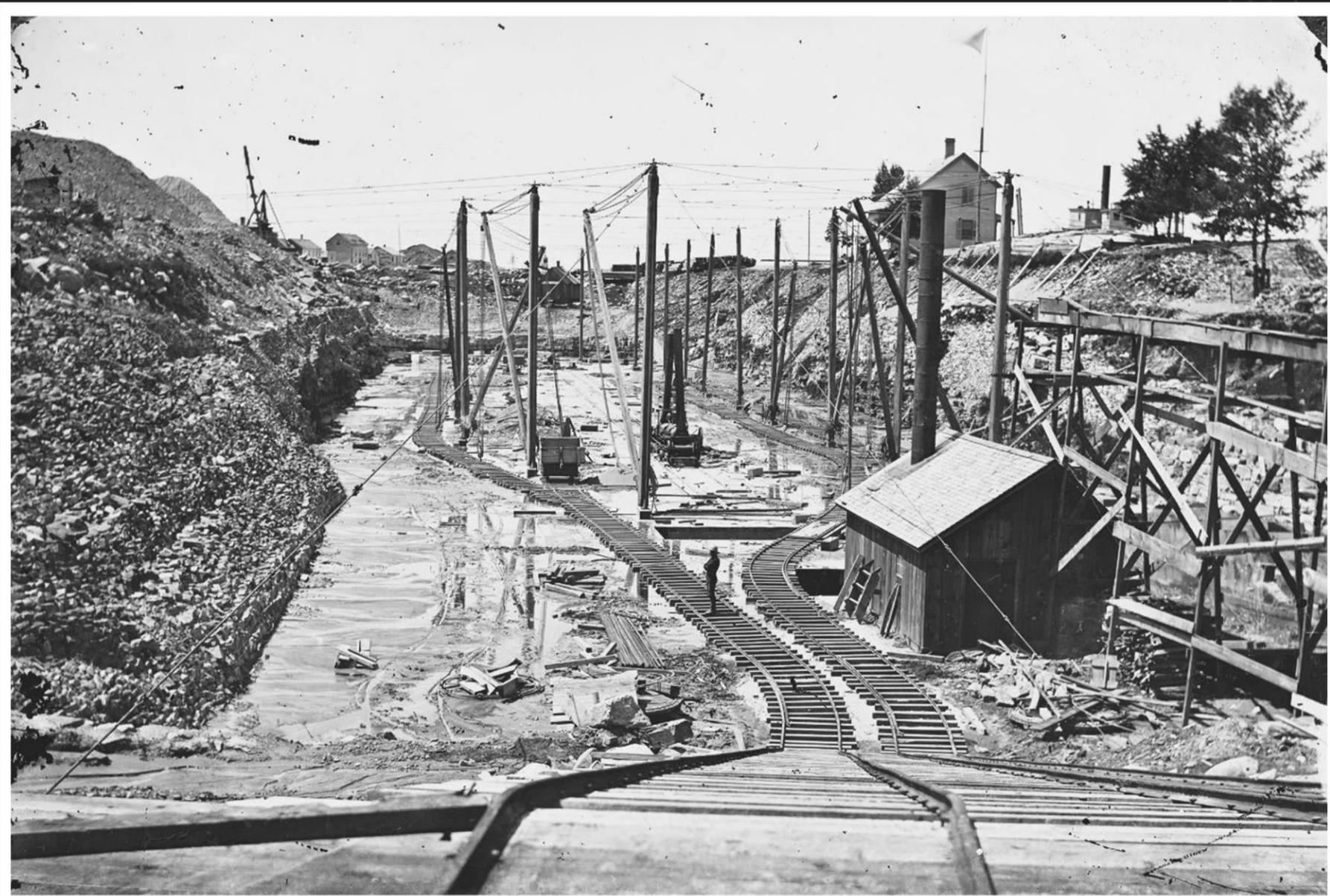


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YOU'RE GOING TO HAVE TO DIG A BIG HOLE



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SABIN LOCK

IMPROVING ST. MARYS RIVER, MICHIGAN
NEW LOCK AND CANAL. SECTION II
ROCK EXCAVATION
BLAST OF 4650 LBS. DYNAMITE
IN ABOUT 100 HOLES AVERAGING ABOUT 25 FT. DEEP
MAY 27, 1913

831



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YOU'RE GOING TO HAVE TO DIG A BIG HOLE



NEW FIRST LOCK
ST. MARYS RIVER, MICHIGAN
ST. MARYS FALLS CANAL
View of excavation at time of blast, looking Northwest
June 30, 1942

No. 50



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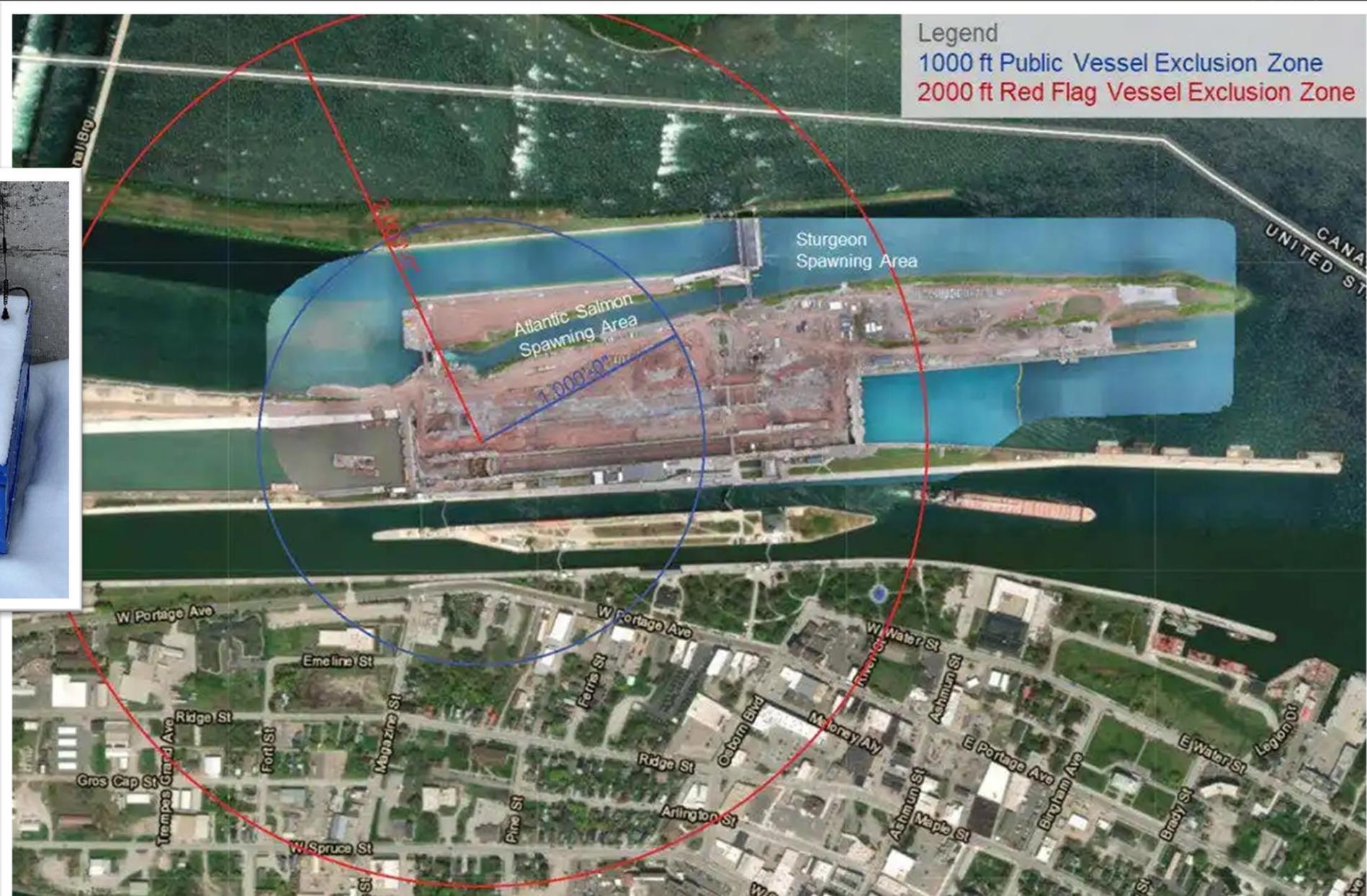
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THE NEW LOCK AT THE SOO



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THE NEW LOCK AT THE SOO



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DAVIS LOCK



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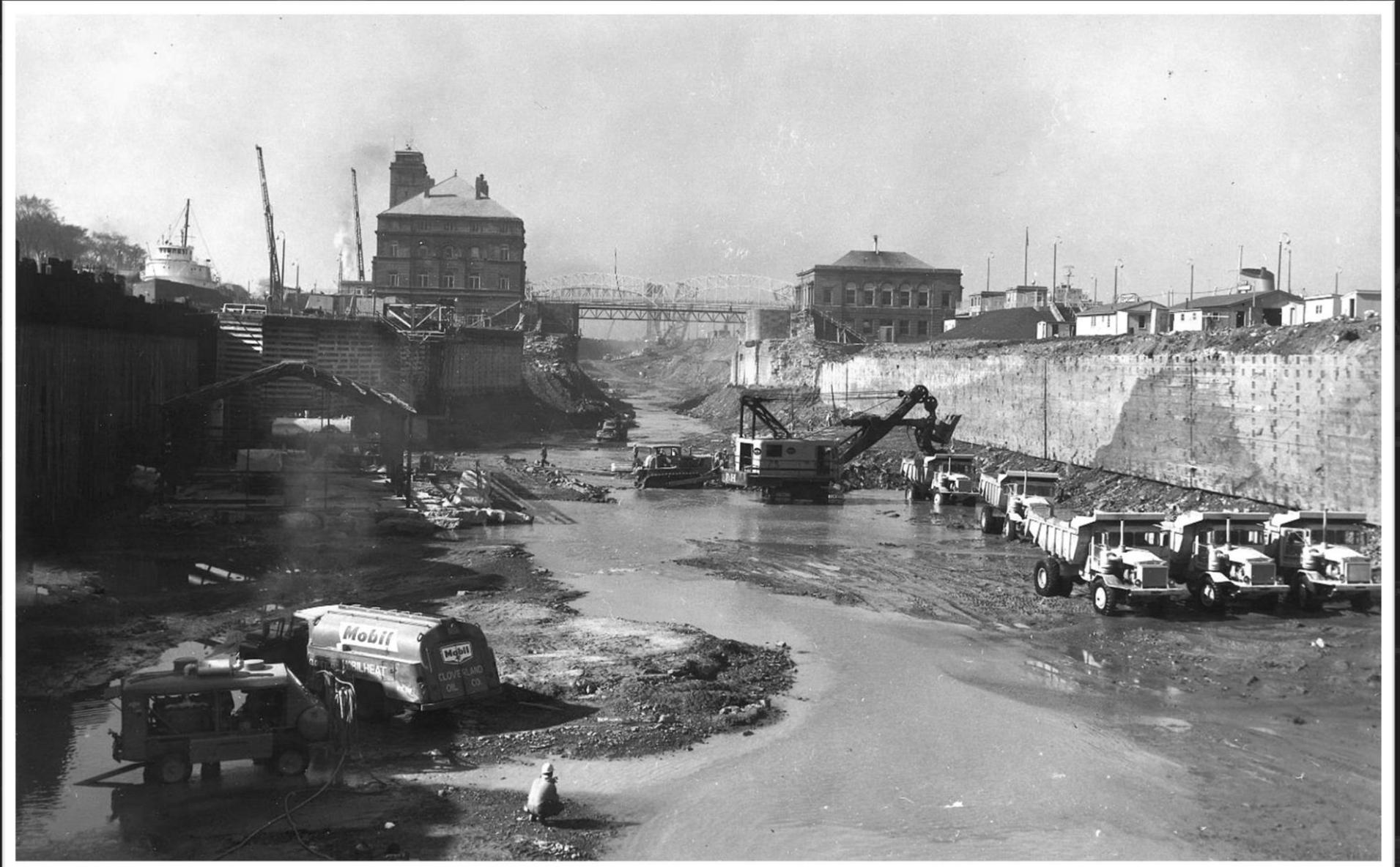


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DAVIS LOCK



CURRENT POE LOCK



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NEW LOCK AT THE SOO



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YOU'LL NEED TO BUILD INFRASTRUCTURE

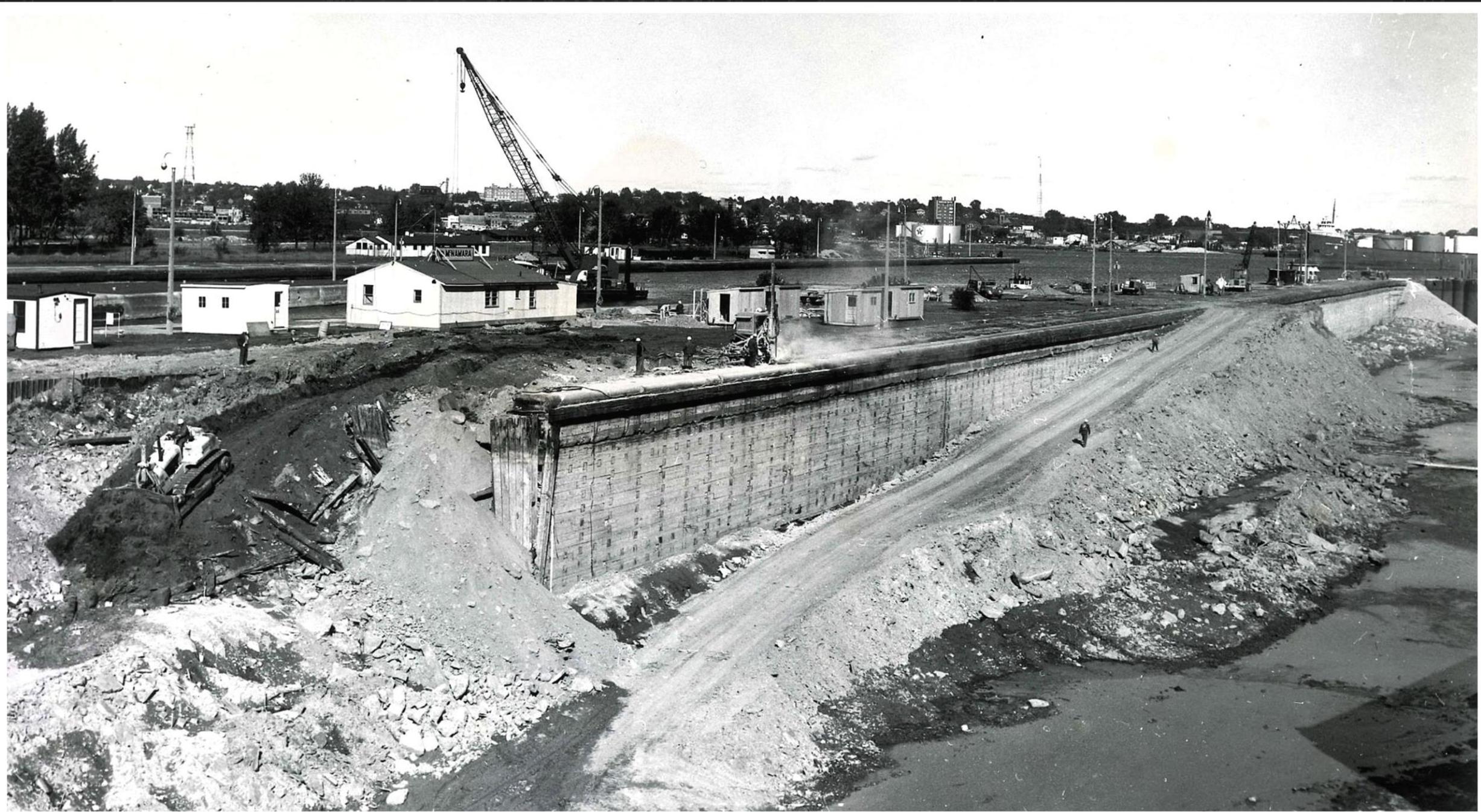


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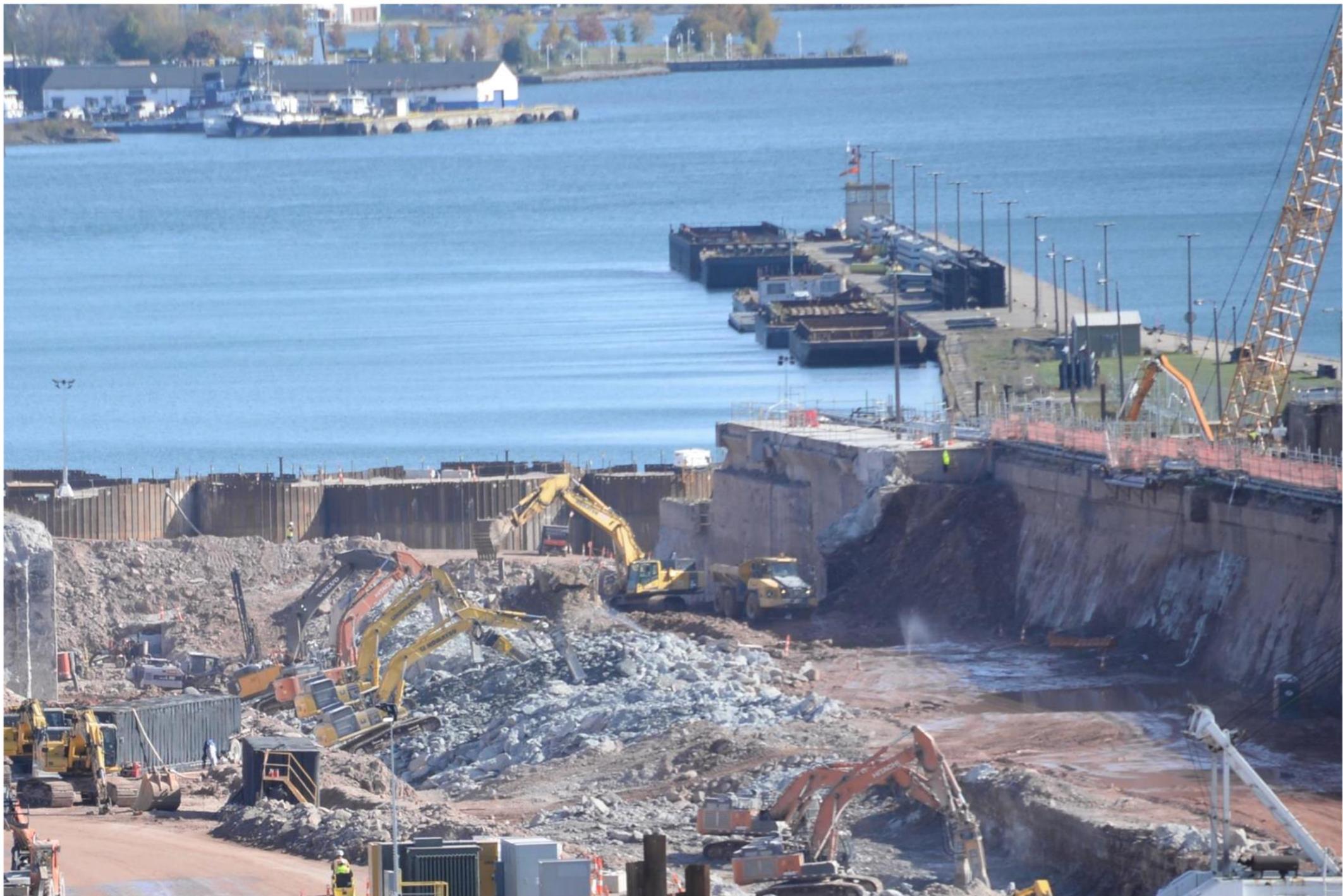








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YOU'LL HAVE TO GET BEDROCK CORES



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YOU FINALLY GET TO BUILD IT!



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№102



SEPTEMBER 25, 1891.
STONE YARD AT FORT BRADY.
UNLOADING OF 15 TON STONE.



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123



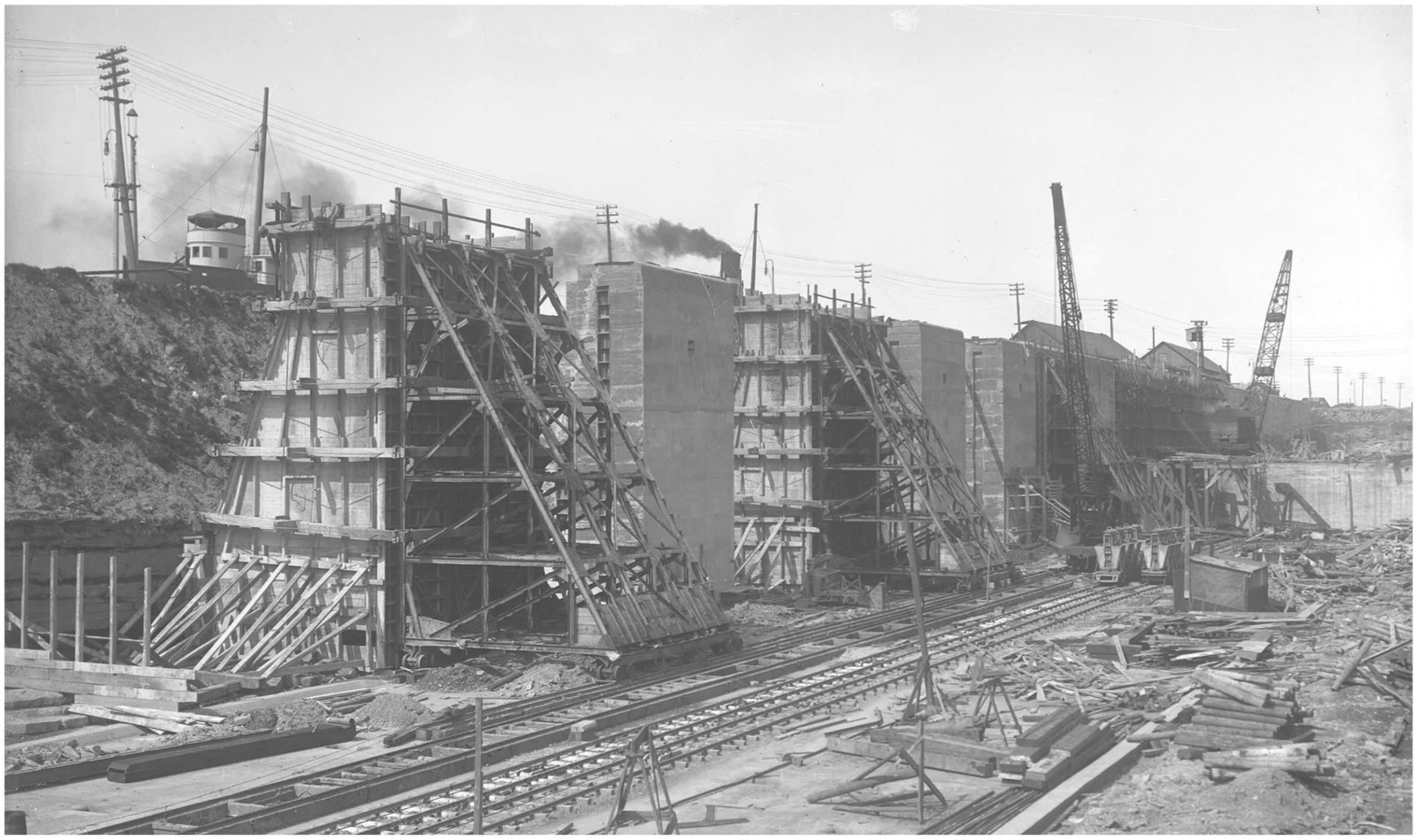
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IMPROVING ST. MARYS RIVER, MICHIGAN
NEW LOCK AND CANAL. 3RD LOCK MASONRY
VIEW LOOKING EAST SHOWING
CRUSHER PLANT, BROKEN STONE AND SAND
APRIL 1, 1912

No 720







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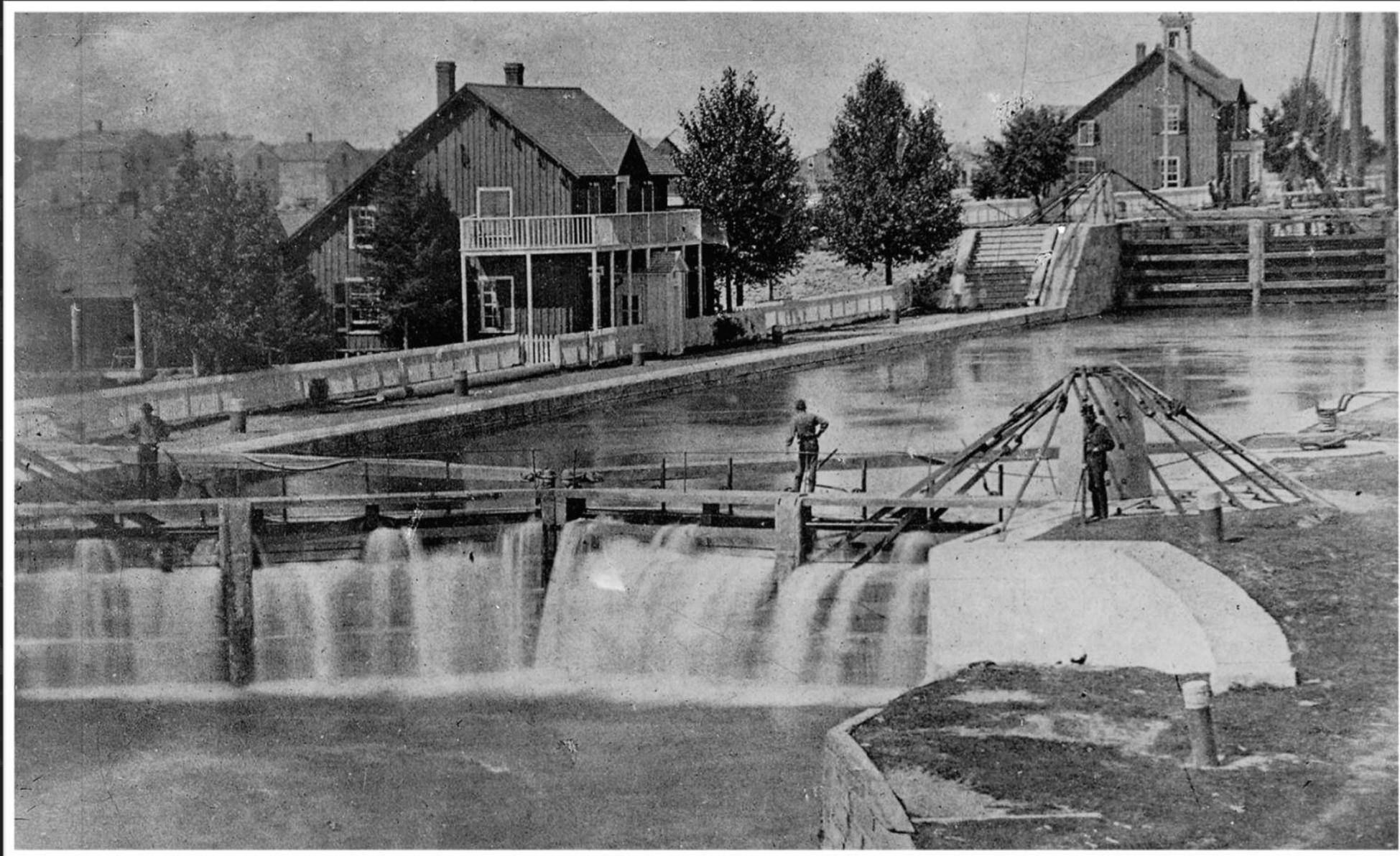




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YOU'LL NEED TO CONTROL WATER FLOW

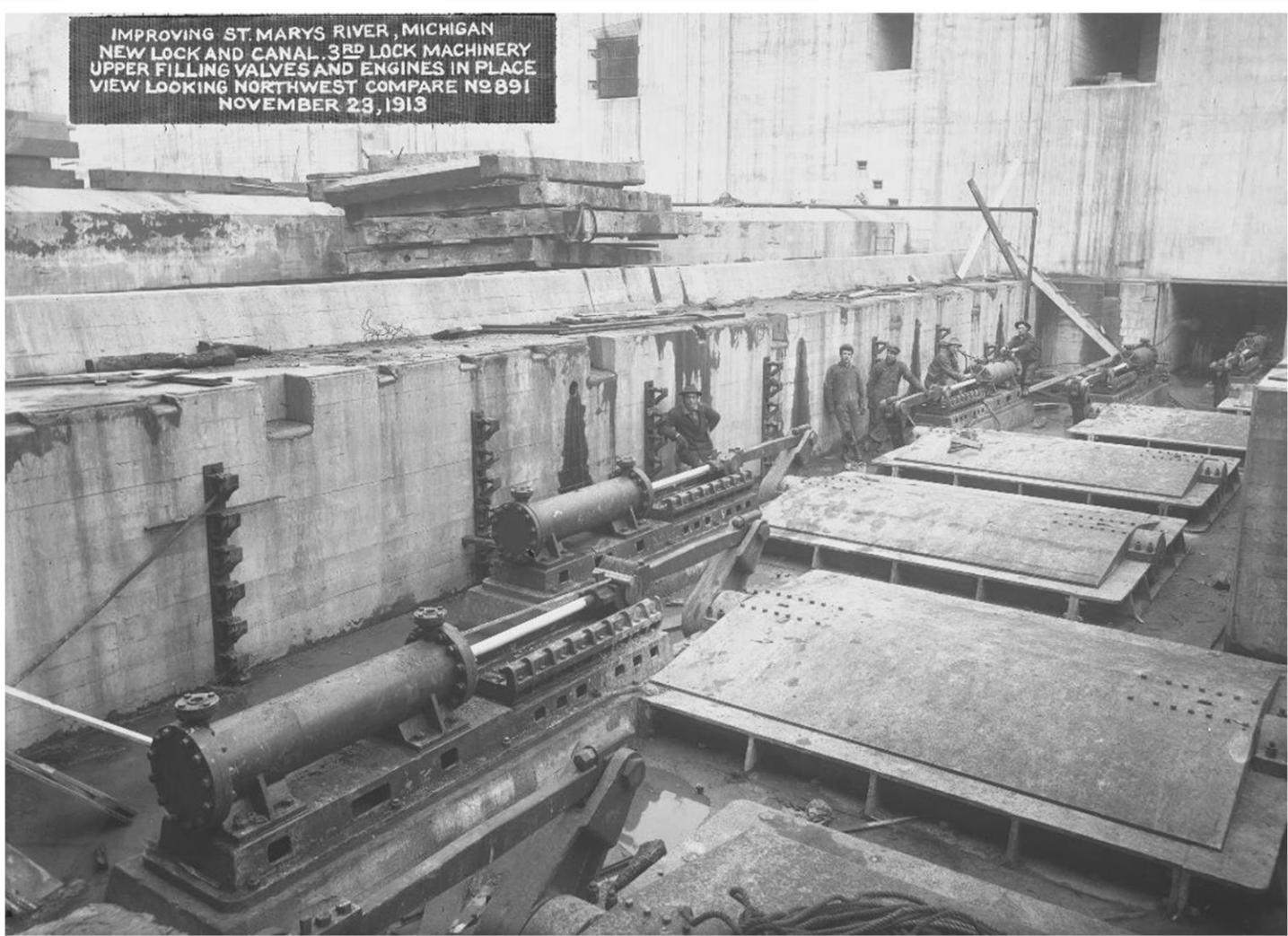


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IMPROVING ST. MARYS RIVER, MICHIGAN
NEW LOCK AND CANAL, 3RD LOCK MACHINERY
UPPER FILLING VALVES AND ENGINES IN PLACE
VIEW LOOKING NORTHWEST COMPARE NO 891
NOVEMBER 23, 1913



AUGUST 3, 1890,
ACCIDENT TO LOCK OF 188
REPAIRING BROKEN VALVE

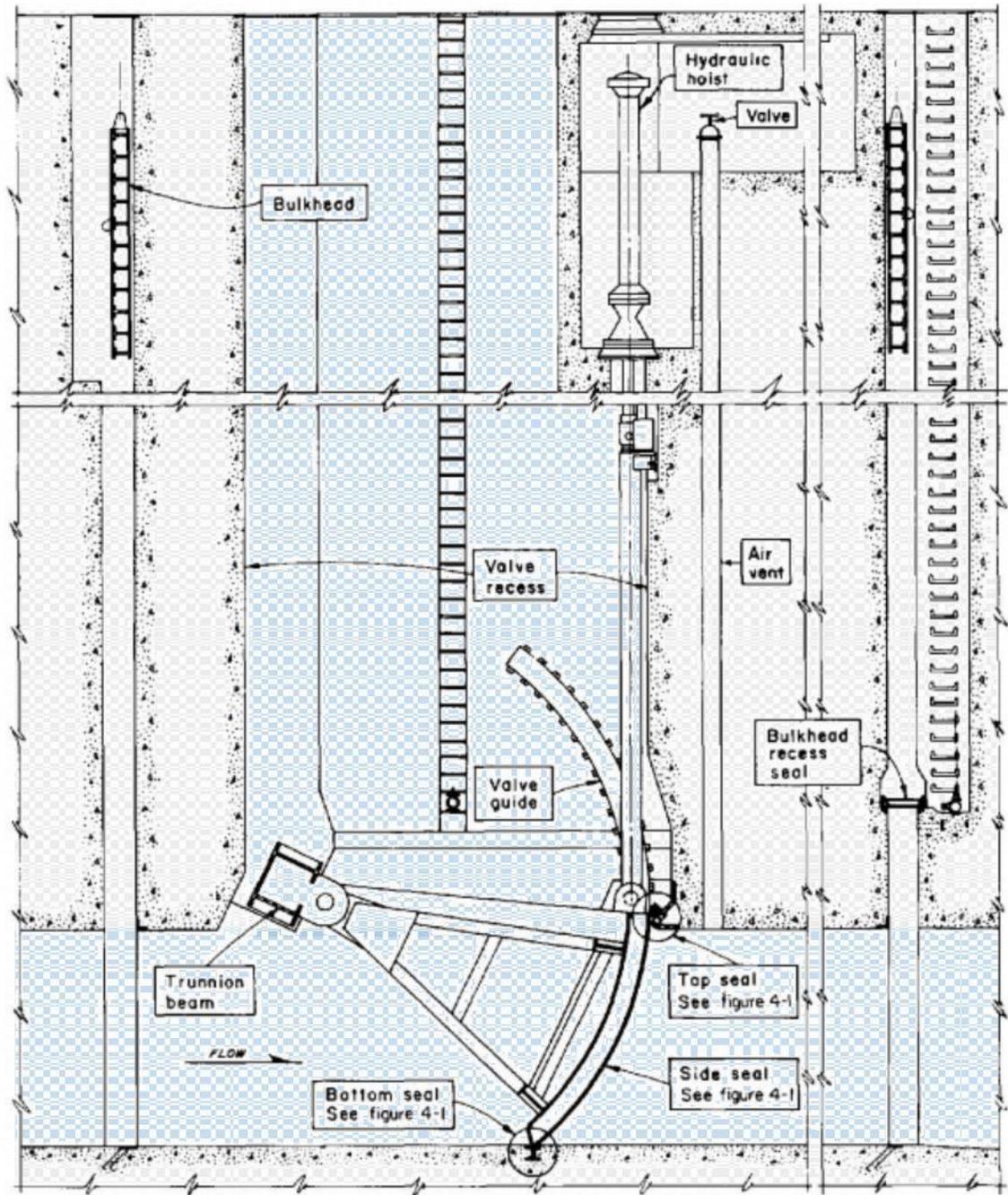


Figure 1-6. Elevation view of typical reverse tainter valve machinery hoist.



YOU'LL NEED SOME GATES



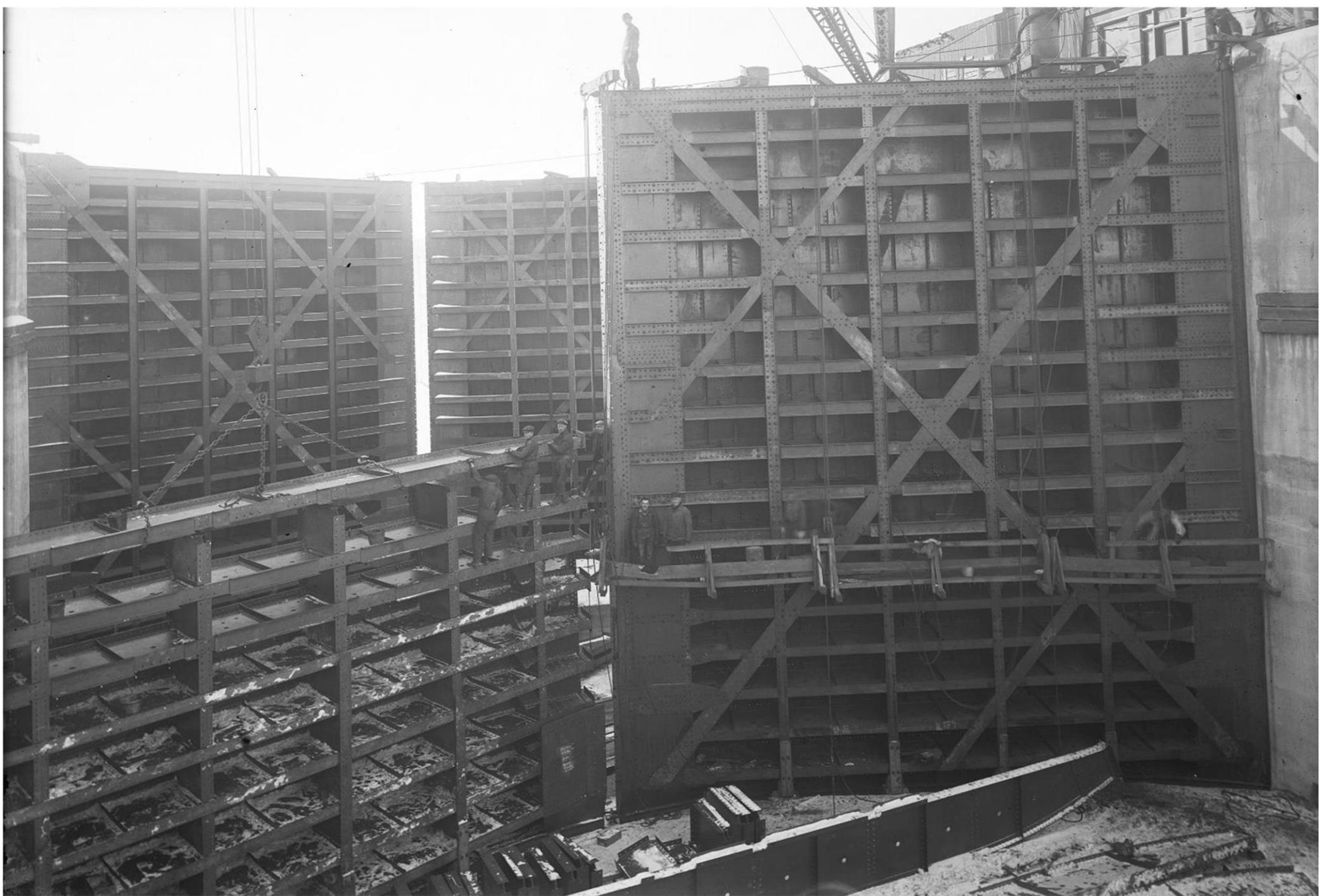
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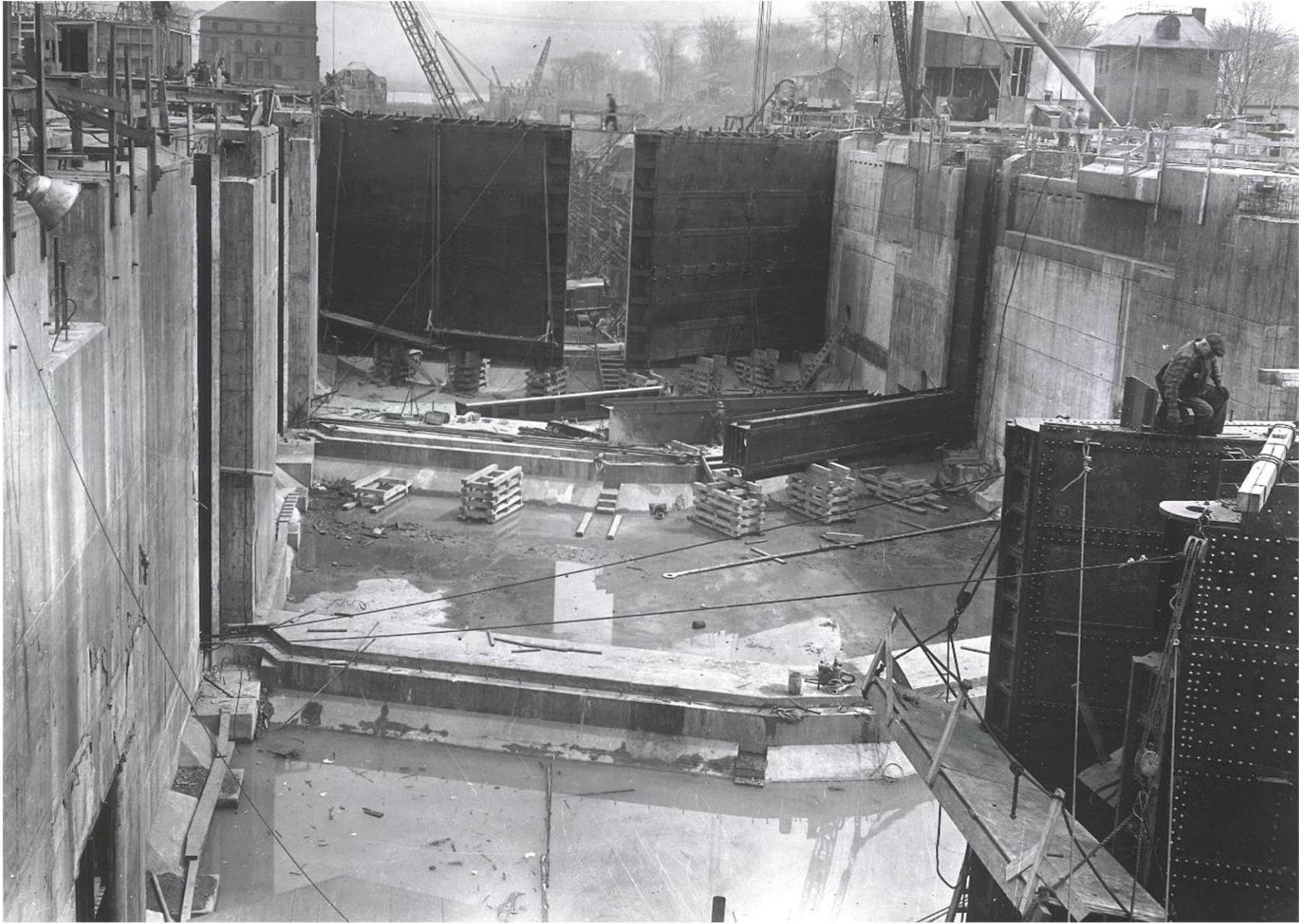






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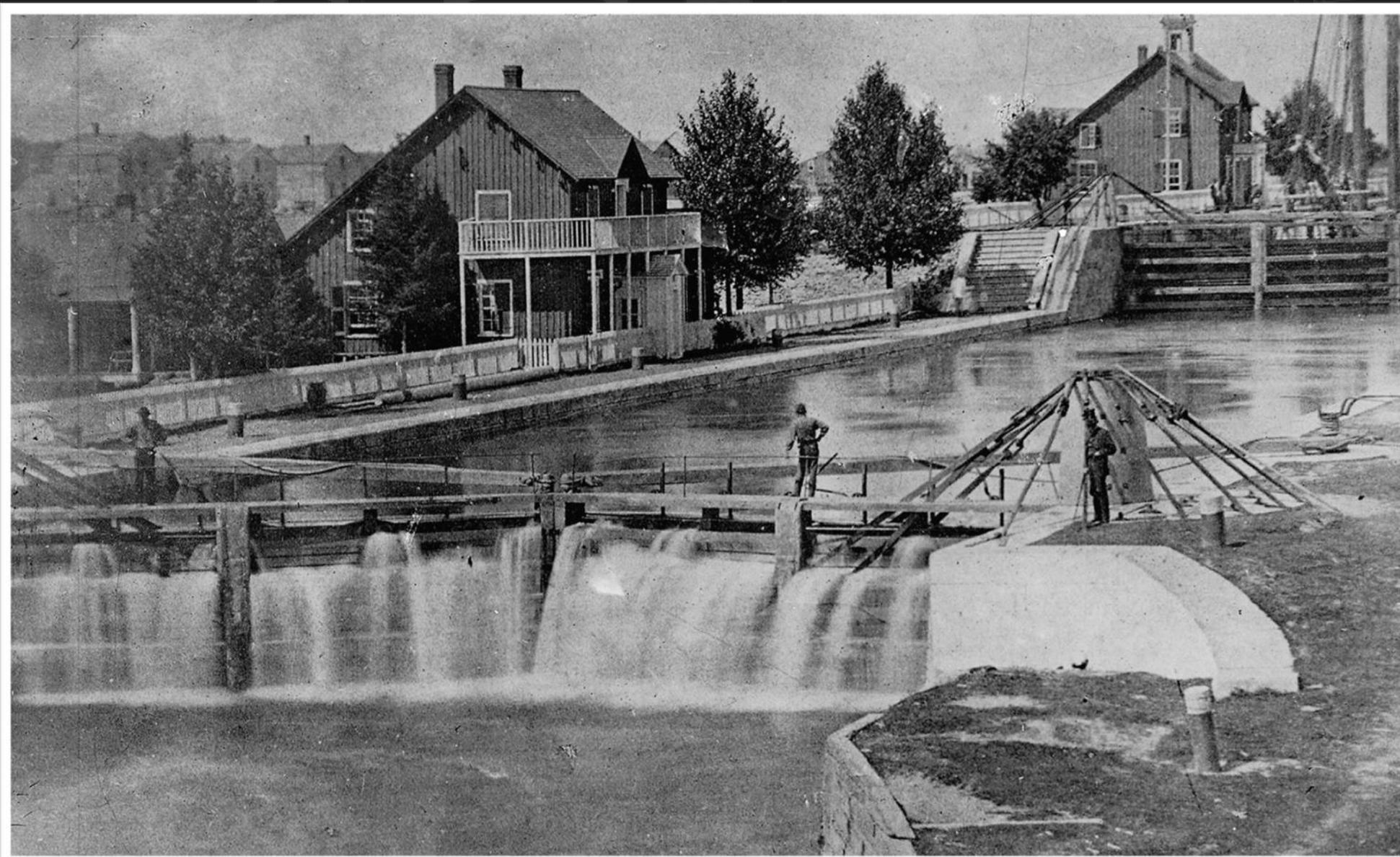






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YOU'LL NEED TO MOVE THOSE GATES



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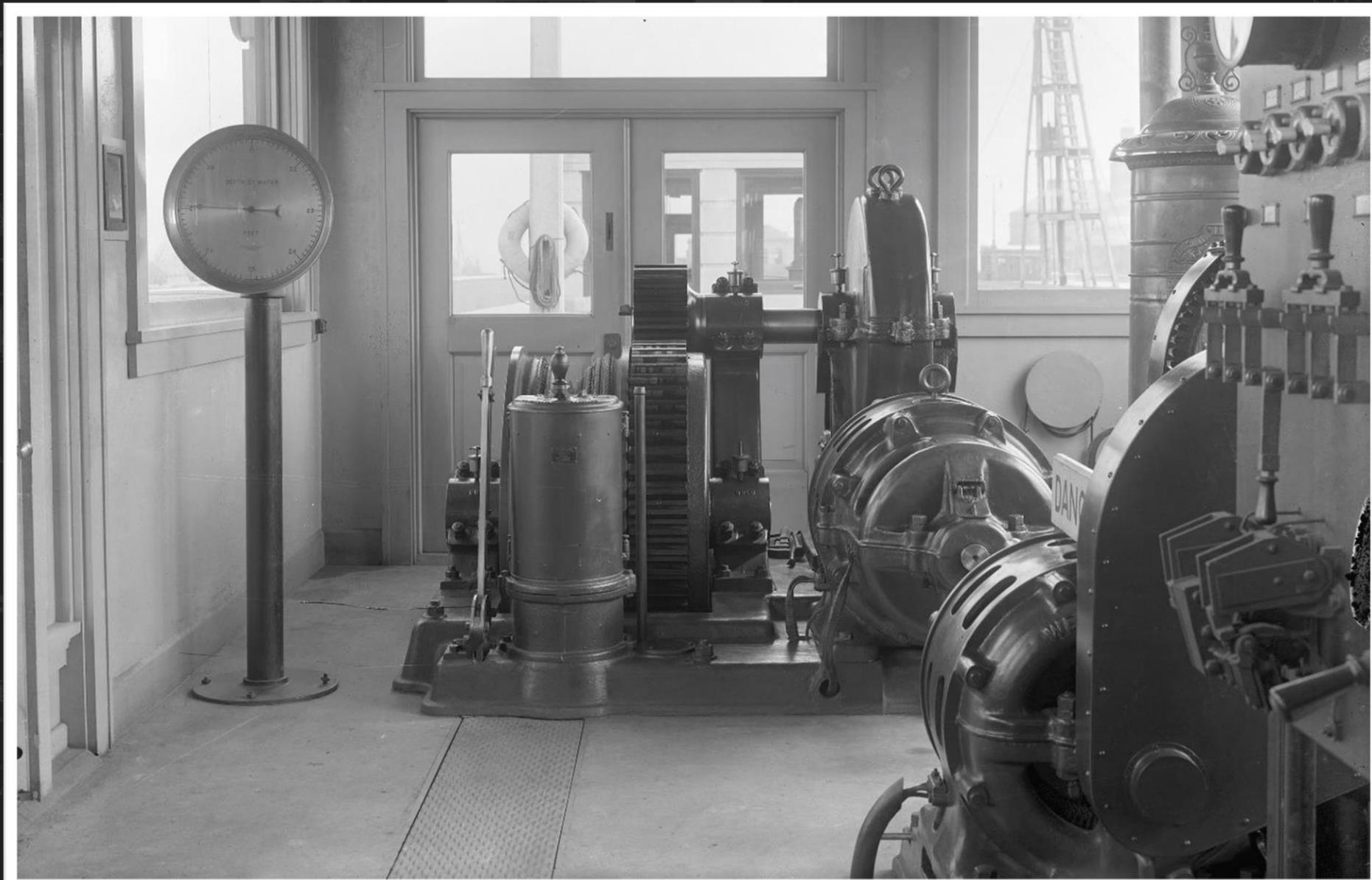


OCTOBER 18, 1894.
TURBINE POWER PLANT
POWER HOUSE.



JUNE 9, 1897.
POWER HOUSE, POE LOCK,
LOOKING N.E.

YOU'LL NEED TO MOVE THOSE GATES

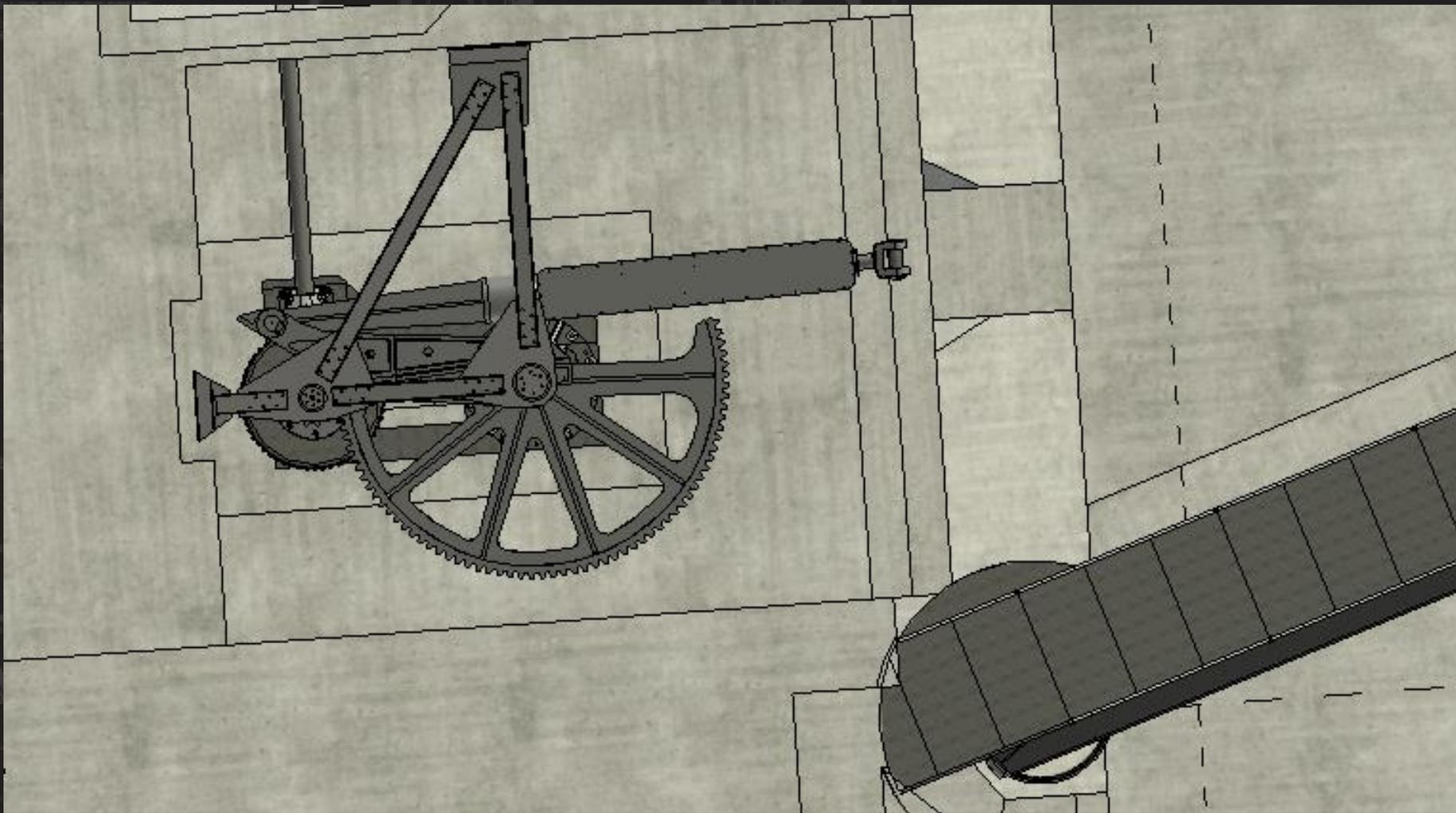


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YOU'LL NEED TO MOVE THOSE GATES



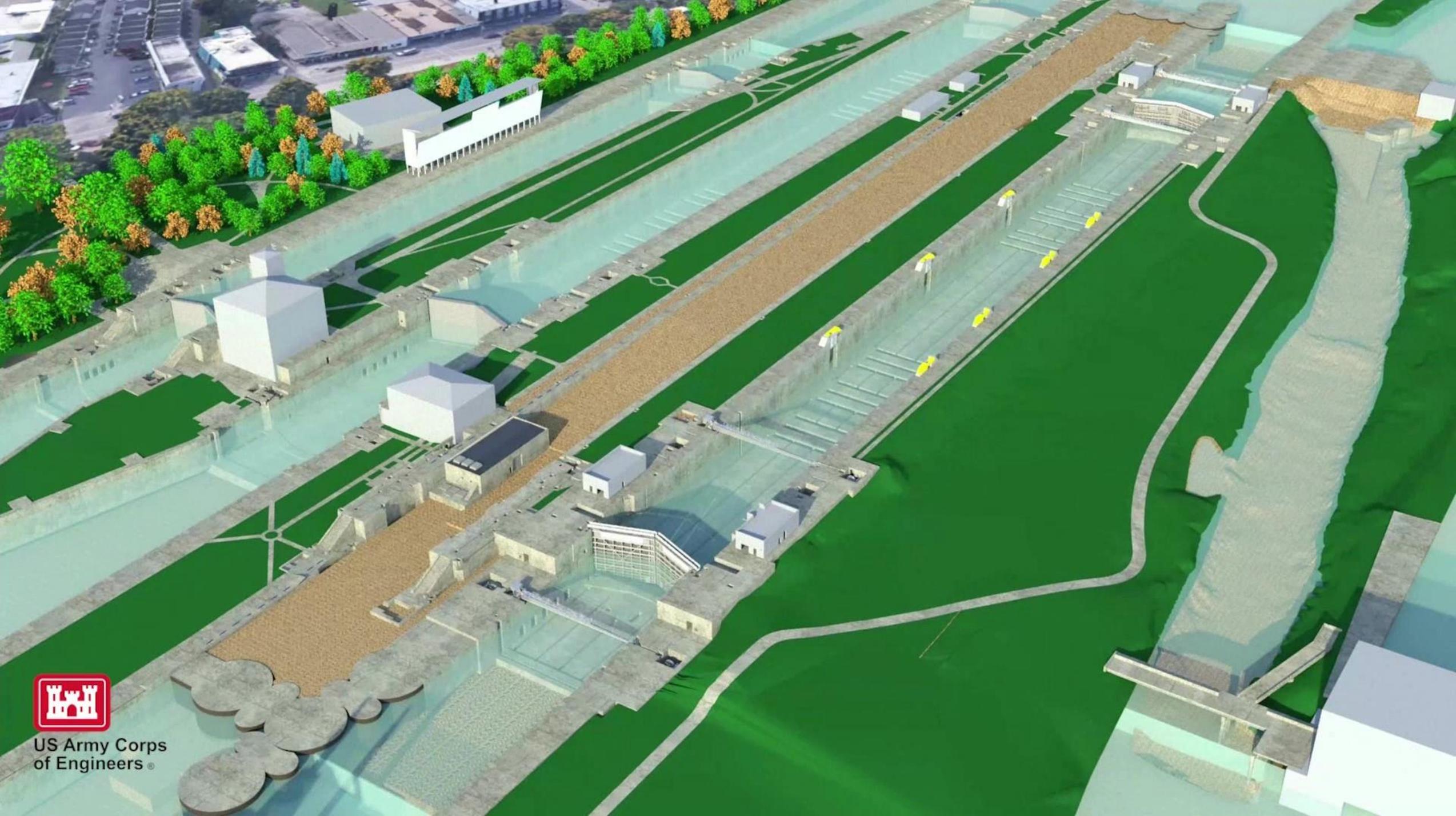
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September 2024