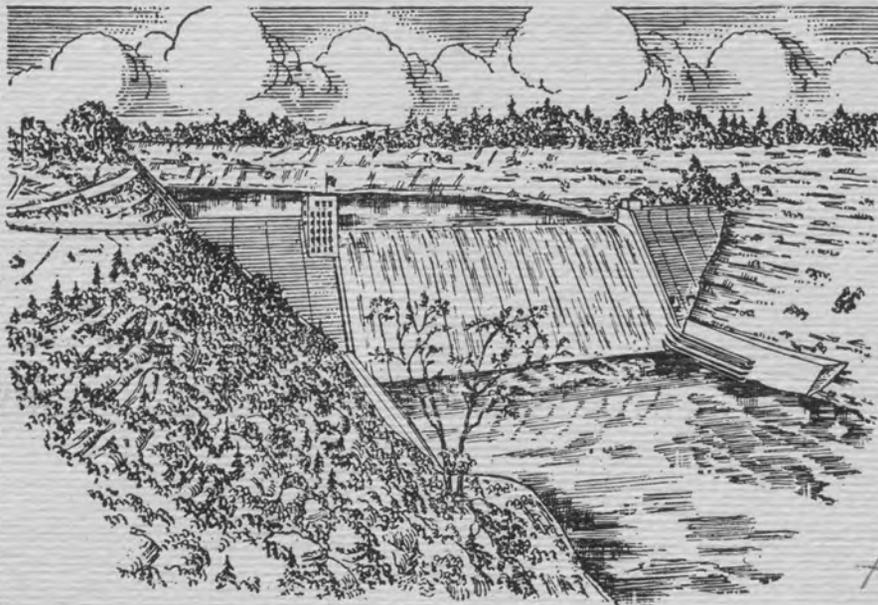




DEDICATION

# *Mt. Morris Dam*



NEW YORK STATE  
FLOOD CONTROL COMMISSION

UNITED STATES DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS



JUNE 26, 1952



*This dedication ceremony is sponsored by the  
New York State Flood Control Commission  
in cooperation with the Corps of Engineers,  
United States Department of the Army, and  
the New York State Department of Public  
Works.*



# Program



SENATOR WALTER W. STOKES

*Chairman, New York State Flood Control Commission*

Master of Ceremonies

•

NATIONAL ANTHEM

•

INVOCATION

THE REVEREND THOMAS BRENNAN

•

INTRODUCTION OF SPECIAL GUESTS

•

MUSICAL INTERLUDE

•

COLONEL WENDELL P. TROWER

*Representing the Chief of Engineers,  
United States Department of the Army*

•

THE HONORABLE B. D. TALLAMY

*Personal Representative of the Governor, Secretary of the  
New York State Flood Control Commission and  
Superintendent of the New York State  
Department of Public Works*

•

BENEDICTION

THE REVEREND MAURICE VERDUIN

[ 3 ]





THOMAS E. DEWEY  
*Governor*



LT. GEN. LEWIS A. PICK  
*Chief of Engineers*



SENATOR WALTER A. STOKES  
*Flood Control Commission*



B. D. TALLAMY  
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MAJ. GEN. GEORGE J. NOLD  
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*U. S. Corps of Engineers*



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E. B. HUGHES  
*Public Works Department*



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*U. S. Corps of Engineers*



CHARLES S. WOOLSEY  
*Public Works Department*



GERALD MURRAY  
*Flood Control Commission*



JOSEPH P. RONAN  
*Public Works Department*





THE LATE COLONEL FRANK H. FORNEY, FORMER BUFFALO  
DISTRICT ENGINEER AND COMMANDING OFFICER OF THE  
19TH ENGINEER COMBAT GROUP — KILLED IN KOREA  
NOVEMBER 29, 1950



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L. E. DIXON COMPANY, *San Gabriel,  
California*

SHOFNER, GORDON & HINMAN, *Los Angeles,  
California*

HUNKIN-CONKEY CONSTRUCTION COMPANY,  
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W. V. GREELEY, *Project Manager*

GEORGE BRALYE, *Chief Engineer*

D. J. LEITCH, *Office Manager*

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LEON FRECKLETON, *Mechanical Superintendent*  
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L. J. PEARCE, *Structural Superintendent*

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BERT HARBER, *Carpenter Superintendent*  
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GUS RAYNER, *Albany*

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FREDERIC H. STUTZMAN, *Albany*



# Mount Morris Dam



**L**ARGEST AND MOST ELABORATE of all flood control projects in New York State, the Mount Morris Dam was authorized for construction by Congress in the Federal Flood Control Act of 1944. It is located in the High Banks section of the beautiful Genesee river valley near the northerly end of Letchworth State Park, just south of the village of Mount Morris and about 40 air miles south of the city of Rochester.

Although designed primarily for protection of Rochester, second largest city in Upstate New York, the project, by controlling flood waters of the Genesee river, will eliminate annual river overflows which have caused devastation to thousands of acres of fertile farm lands in the lower reaches of the Genesee river and Canaseraga creek valleys. Protection also will be provided for business establishments and extended residential areas in the Genesee valley.

With the Mount Morris Dam in operation, there can be no repetition of the extensively destructive flood catastrophes of the past. During the crest of a flood in 1865, the discharge of the Genesee river reached a rushing torrent of 24,000,000 gallons per minute, which is three times the volume of water hurtling over the American Falls at Niagara. During this flood, railroad and highway communications in Rochester were just non-existent and business and residential areas floundered in a flood of eight feet of water.

Historical floods of record date back to 1800 and, although the flood of greatest mag-

nitude was in 1865, there have been twelve other floods of destructively major proportions, the most recent occurring in 1942.

Construction of the Mount Morris Dam has not been realized without overcoming numerous obstacles and hurdles which have confronted, not only the Flood Control Commission, but the Corps of Engineers, both agencies being handicapped, in a large sense, by World War 2 and the limitation on expenditure of Federal funds, and, in a smaller sense, by the usual problems that beset prosecution of a project of the magnitude of this dam.

Army Engineers, pursuant to the 1936 Federal Flood Control Act, conducted a public hearing at Rochester September 25, 1936 to determine the economic justification and feasibility of providing flood protective measures in that region. In July 1941 the Great Lakes Division Engineer issued a public notice stating that the Great Lakes Division and the Buffalo District Office recommended construction of a flood control reservoir on the Genesee river near Mount Morris, subject to the conditions that local interests furnish lands, easements and rights of way and maintain and operate the project after completion. The War Department Board of Engineers for Rivers and Harbors on April 6, 1942 issued a public notice to the effect that "the Board is not convinced of the advisability of the United States undertaking the improvement recommended by the Division Engineer."

A hearing before the Board of Engineers for Rivers and Harbors was arranged by the

Flood Control Commission and conducted June 8, 1942 in Washington, D. C. The Commission was joined by the State Department of Public Works, the counties of Livingston and Monroe and the city of Rochester. Supreme Court Justice Earle S. Warner of Phelps, then a State Senator and Chairman of the Commission, headed the group. Evidence purporting to show the economic justification and engineering feasibility of constructing the dam was presented to the Board. The Commission also requested the Board to give consideration to the State contention that local requirements of providing lands, easements and rights of way and maintaining the project after completion should not be invoked in the case of the Mount Morris Dam unless those requirements were made applicable to projects of a similar nature in all other States. In May 1944 the Secretary of War recommended that Congress authorize construction of the project substantially in accordance with plans of the Division and District Engineers but eliminating the local requirements.

Construction of a dam at Mount Morris is not a novel idea. The first study of the advisability of such a structure was made in 1889 by the State of New York, the purpose of a dam at that time being for regulation of supply water for the Erie Canal and not for flood control. In the first decade of 1900 the Rochester Gas & Electric Corporation made surveys and studied a construction program for a dam and power plant to be located near Mount Morris and in the early 1920's acquired for this purpose most of the land now included in the reservoir area. The program later was abandoned.

The original Federal flood control plan was to construct an earth dam and reservoir with sufficient capacity to store a 3-inch run-off from the controlled area. Three years of extensive

hydrological-geological research by Army Engineers and consultants resulted in selection of the exact site and a determination that the dam should be a concrete structure providing for storage of 5.8 inches of run-off.

The dam, finally designed to develop full storage capacity of the reservoir site, is a concrete gravity type structure with a central overflow spillway anchored at each end to the walls of the gorge by non-overflow abutment sections. The spillway is 550 feet long and the two abutments 223 and 230 feet, right and left respectively, making a total dam surface length of 1,003 feet. Interiorly, from the bottom of the access shaft in the right bank to the head of the curtain wall stairs in the left bank the total length is 1,188 feet.

Height of the dam at spillway crest is 216 feet and at the abutment sections is 246 feet. The total height from foundation to top of the operations tower on the right abutment is 282 feet, making the Mount Morris Dam the fourth highest in Eastern United States.

Below the spillway is a stilling basin 12 feet deep and 240 feet long extending the full 550 feet across the river. This basin has a five-foot-thick concrete floor and stepped sides, the latter assuring that the seamy shale sides of the gorge will not be undercut and still permitting the flow over the spillway to be kept smooth without dangerous cross currents. There are 73 baffle piers and a stepped sill at the end of the basin to break up the swift flow of the spilling water and to form a hydraulic jump.

Running through the dam are three galleries. From the bottom gallery grout holes were drilled into the rock and grout forced under pressure to form a concrete curtain completely around the upstream side of the dam. Drain holes were drilled from the downstream side of the gallery to drain water leaking

through the curtain or the dam. The center gallery contains oil pressure machinery for operating the sluice gates in the conduits which form the outlet works. The outlet works consist of nine hydraulically controlled rectangular sluice gates in the center section. The top gallery carries the Mount Morris village water supply line, air vents for the sluices and utility facilities for the dam and operation tower. The tower houses an office, recording gages, gasoline and electric stand-by power units, transformers and other electrical equipment.

The dam will impound the run-off from a watershed of 1,077 square miles. It will create a reservoir which, at full pool (760 feet above sea level), will extend to the Lower Portage Falls in Letchworth Park. In width the reservoir will be confined entirely to the natural steep-sided banks of the gorge which vary from 150 to 550 feet in depth and from one-quarter to three-quarter miles in width. At maximum pool the reservoir will have a storage capacity of 337,000 acre-feet, equal to nearly six inches of run-off from the drainage area above the dam, and which will provide ample protection from storm floods of greater severity than any in the river's recorded history. Under normal conditions the reservoir will be empty to the level of the conduit inverts of the dam (Elevation 585.0 feet) to provide temporary storage of flood waters in excess of the natural capacity of the river channel. Flood waters thus stored in the reservoir will be released gradually through control of the nine conduit outlets of 2,700 cubic feet per second capacity each in the base of the spillway section. It will require 16 days to empty the reservoir from the spillway crest level without flood danger to the lower reaches of the valley.

The prime contract for construction of the Mount Morris Dam was awarded January 23, 1948 to the Mount Morris Dam Builders, an

organization comprising five outstanding individually incorporated construction contractors: Arundel Corporation, Baltimore, Maryland; J. C. Maguire of Los Angeles, California; L. E. Dixon Company, San Gabriel, California; Shofner, Gordon and Hinman, Los Angeles, and Hunkin-Conkey Construction Company, Cleveland, Ohio.

Estimated cost of the structure, all borne by the Federal Government, is \$24,650,000. Lands, easements and rights of way were acquired by the State of New York and conveyed to the Federal Government, subject to reimbursement.

The Mount Morris gorge, comprising the reservoir site, and Portage Falls at the head thereof in Letchworth Park are natural scenic attractions. The existing High Banks road on the left side of the river permits views of the gorge at many points. The Letchworth Park provides picnic and camping facilities which undoubtedly will be used more extensively in the future than in the past. It is expected that patronization of the Letchworth State Park will be more highly developed because of the Mount Morris Dam.

Completion of this mammoth project could not have been realized except for the splendid cooperation between the Corps of Engineers, the Department of Public Works, the Flood Control Commission, the Genesee State Park Commission and other interested agencies. It is most fitting and proper that the Flood Control Commission pay tribute and formally acknowledge here the efforts of those individuals who have been so actively interested in the progress of the project. In this group are Lieutenant General Raymond A. Wheeler, Former Chief of Engineers, United States Department of the Army; Lieutenant General Lewis A. Pick, Chief of Engineers; Major General George J. Nold, Deputy Chief of Engi-

neers; Brigadier General C. H. Chorpening, Assistant Chief of Engineers; Colonel Wright Hiatt, Assistant Chief of Engineers; George L. Beard, Chief of the Planning and Development Division of the Office of the Chief of Engineers; Colonel Wendell P. Trower, Great Lakes Division Engineer; Colonel Philip R. Garges, Buffalo District Engineer; and the late Colonel Frank H. Forney, Colonel Herbert D. Vogel, and Colonel H. W. Schull, Jr., Former Buffalo District Engineers; Supreme Court Justice Earle S. Warner, Former Chairman of the Flood Control Commission; Charles H. Sells, Former

Superintendent of Public Works and Former Secretary of the Flood Control Commission; B. D. Tallamy, Superintendent of Public Works; J. B. McMorrان, Chief Engineer of the Department of Public Works; Henry TenHagen, Deputy Chief Engineer of the Department of Public Works; E. B. Hughes, Director of the Bureau of Rights of Way and Claims, Department of Public Works; J. Frank O'Marah, Former Director of this Bureau, and Gordon W. Harvey, Chief Engineer and General Manager of the Genesee State Park Commission.



*Project  
Photographs*





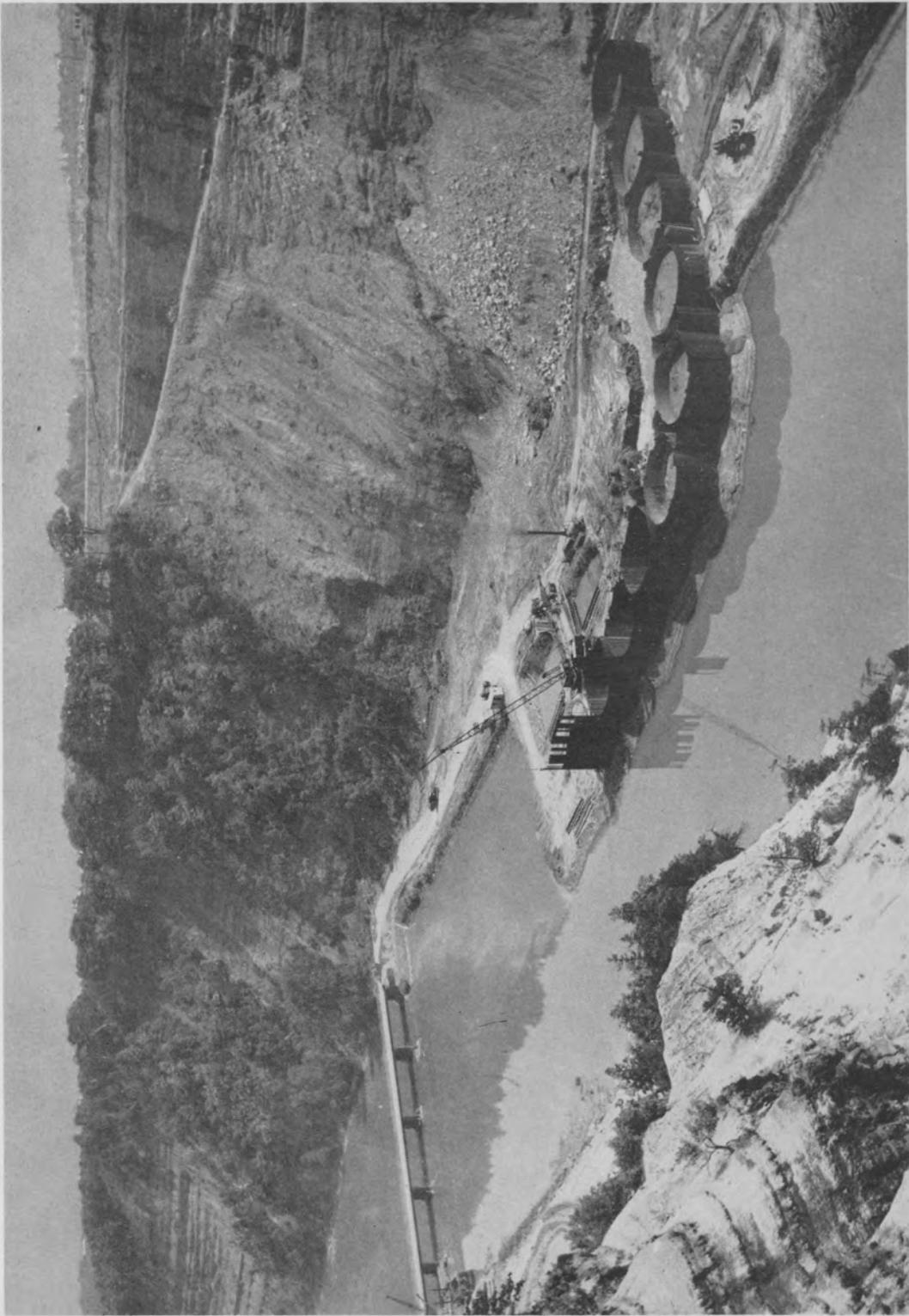
BEFORE THE DAM — AN ISOLATED GENESEE VALLEY FARM DOWNSTREAM OF MT. MORRIS





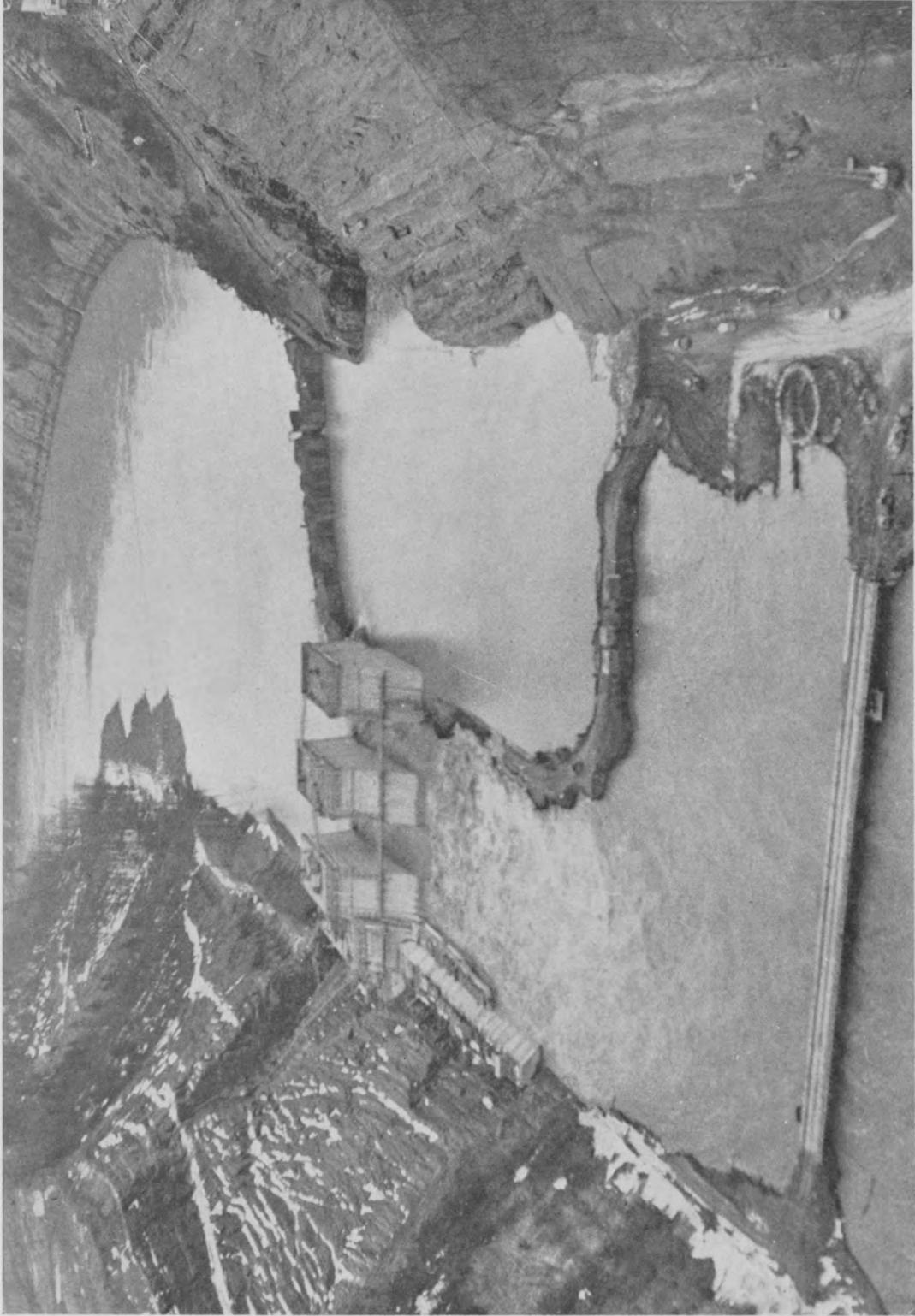
CENTER LINE OF THE DAM — 1948





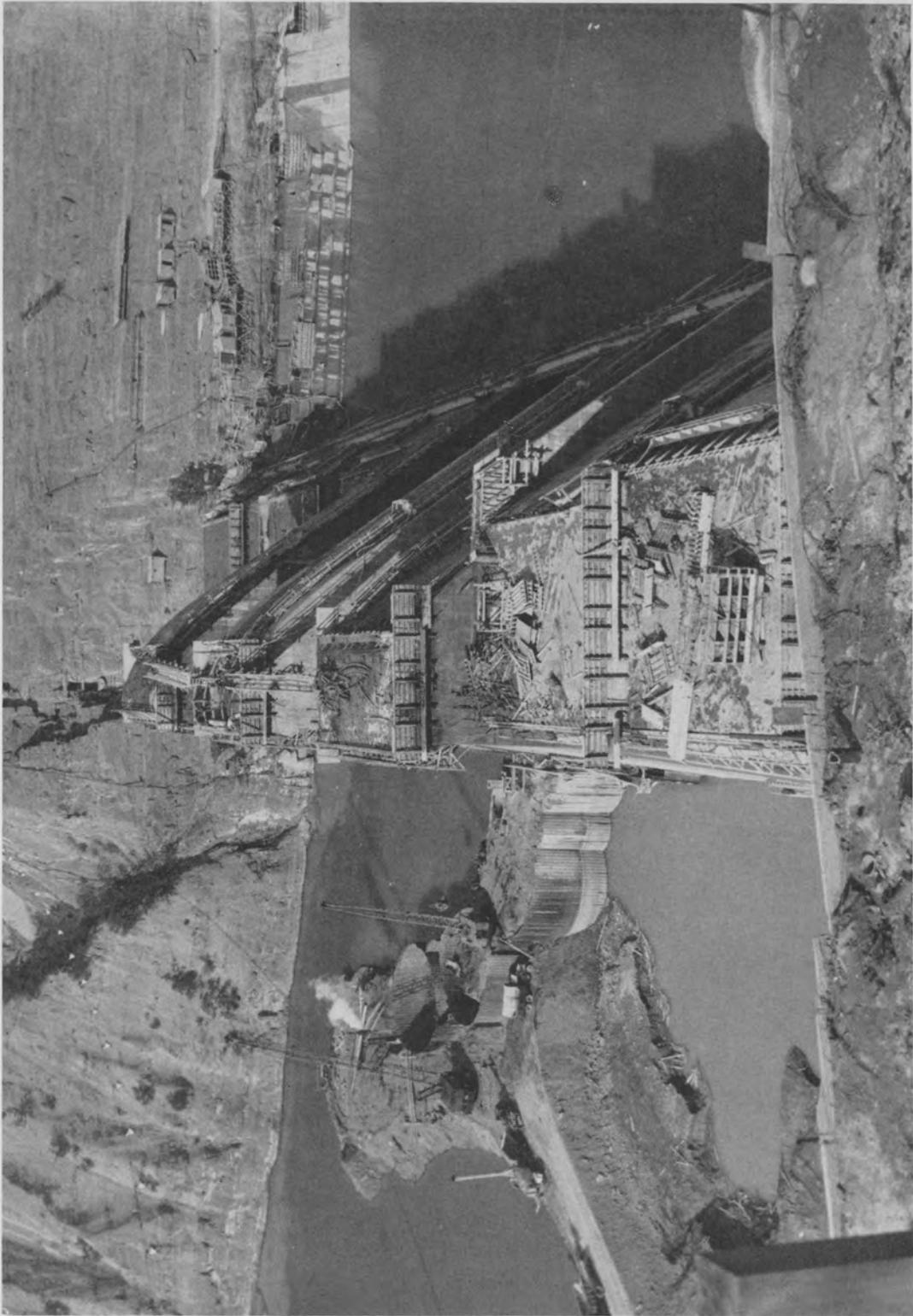
CELLS FOR FIRST STAGE COFFERDAM — 1948





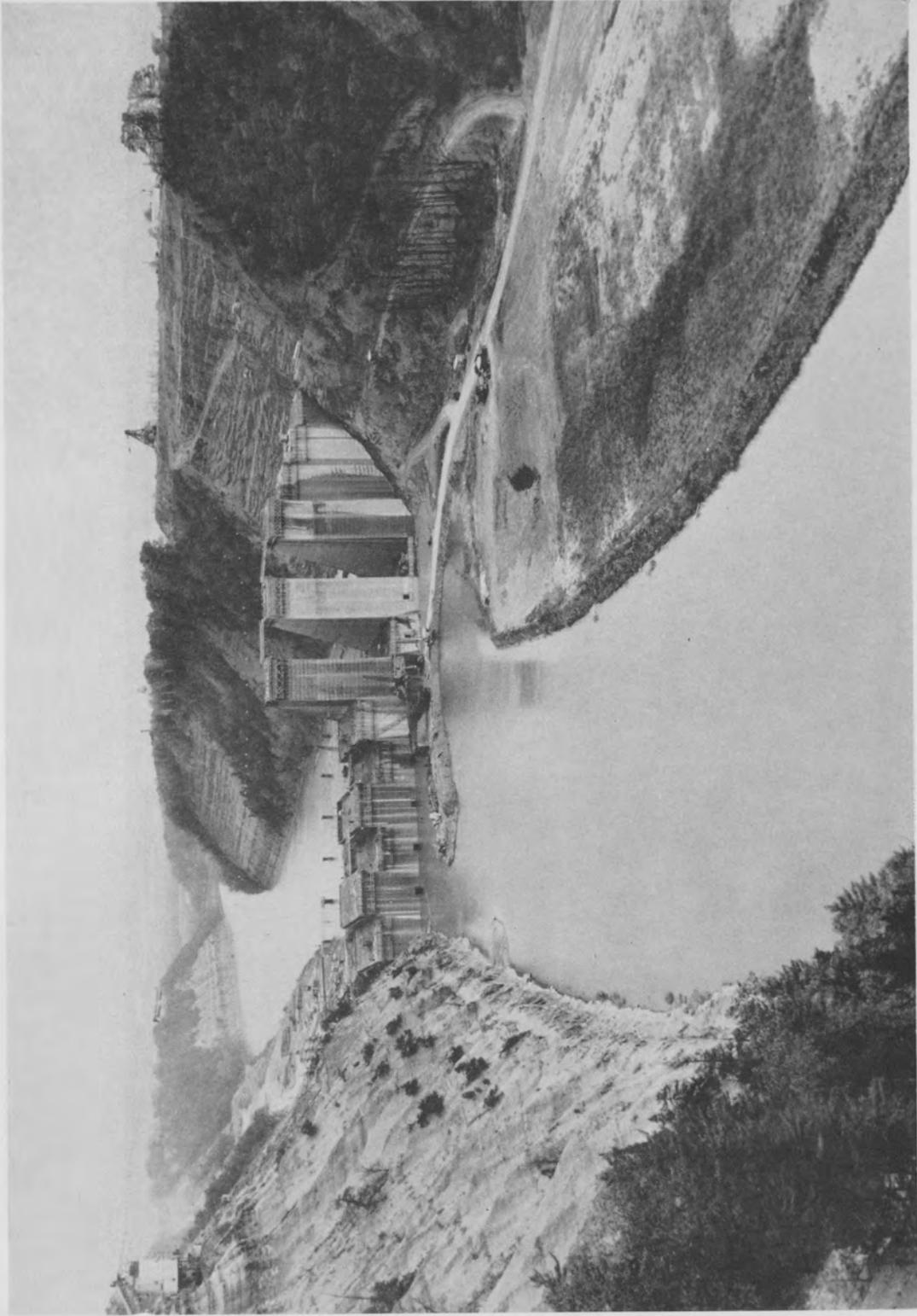
PARTIALLY CONSTRUCTED DAM DURING MARCH 1950 FLOOD





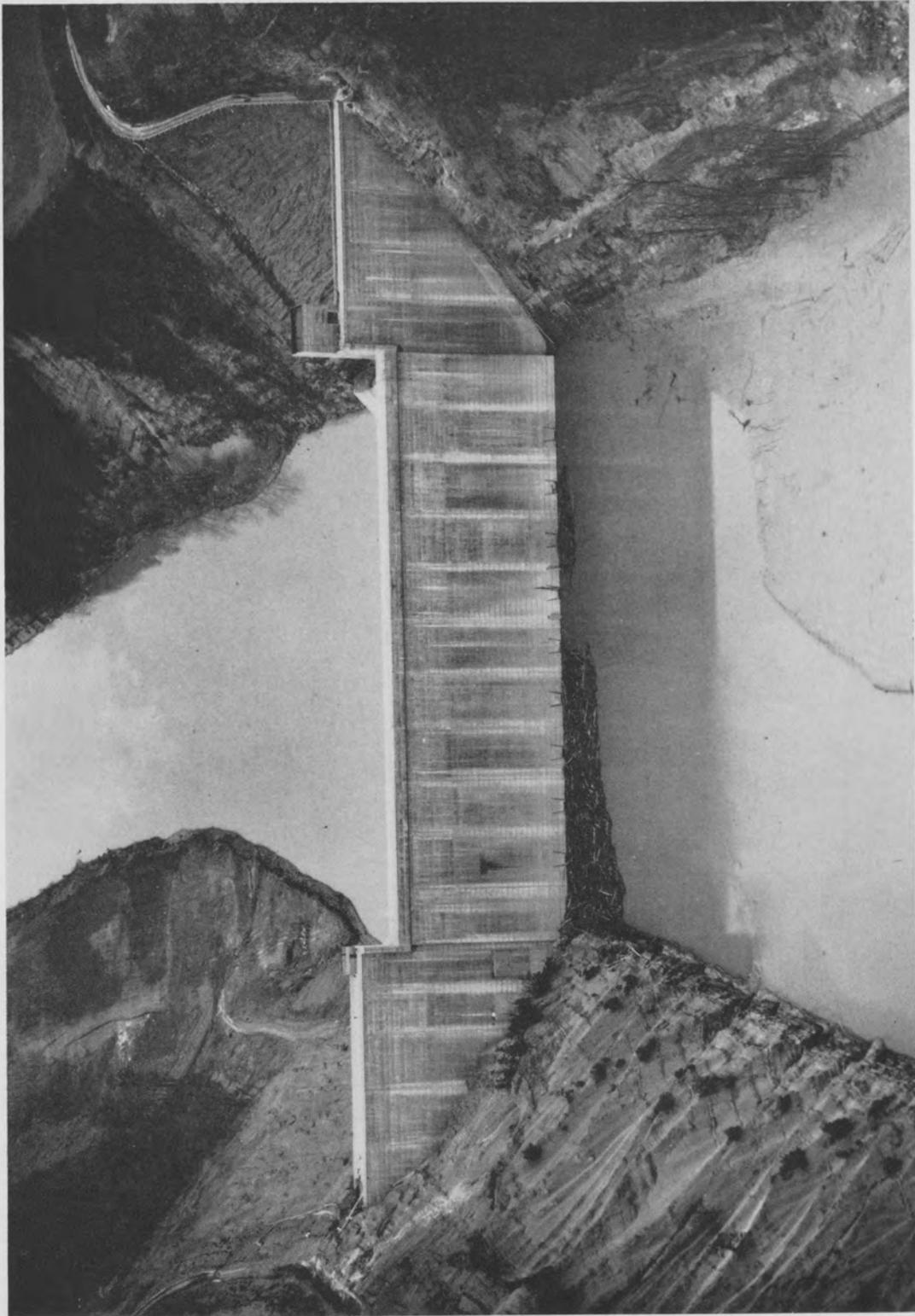
CONSTRUCTION PROGRESS — OCTOBER 1950





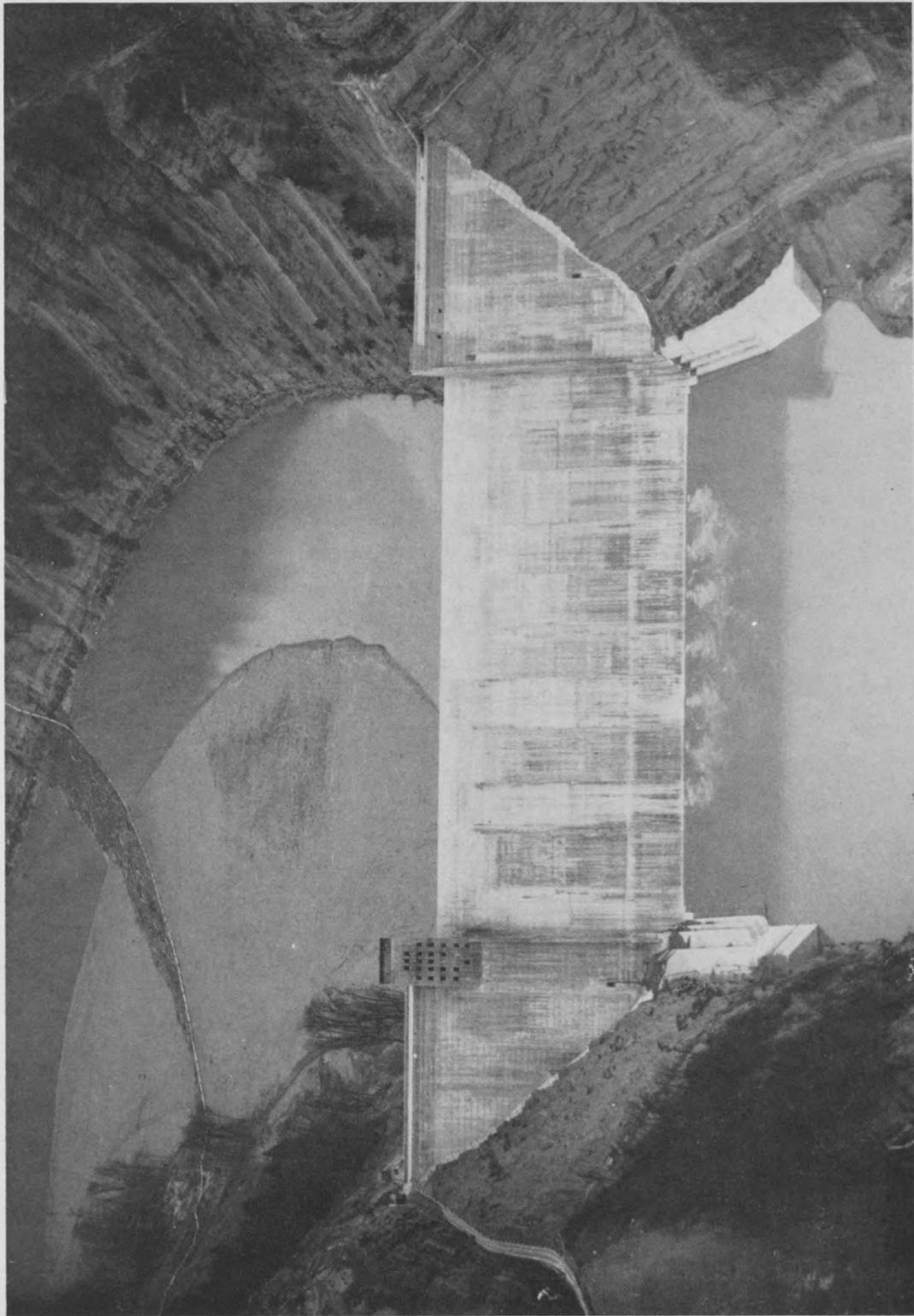
LOOKING DOWNSTREAM — OCTOBER 1950





LOOKING DOWNSTREAM — APRIL 1952

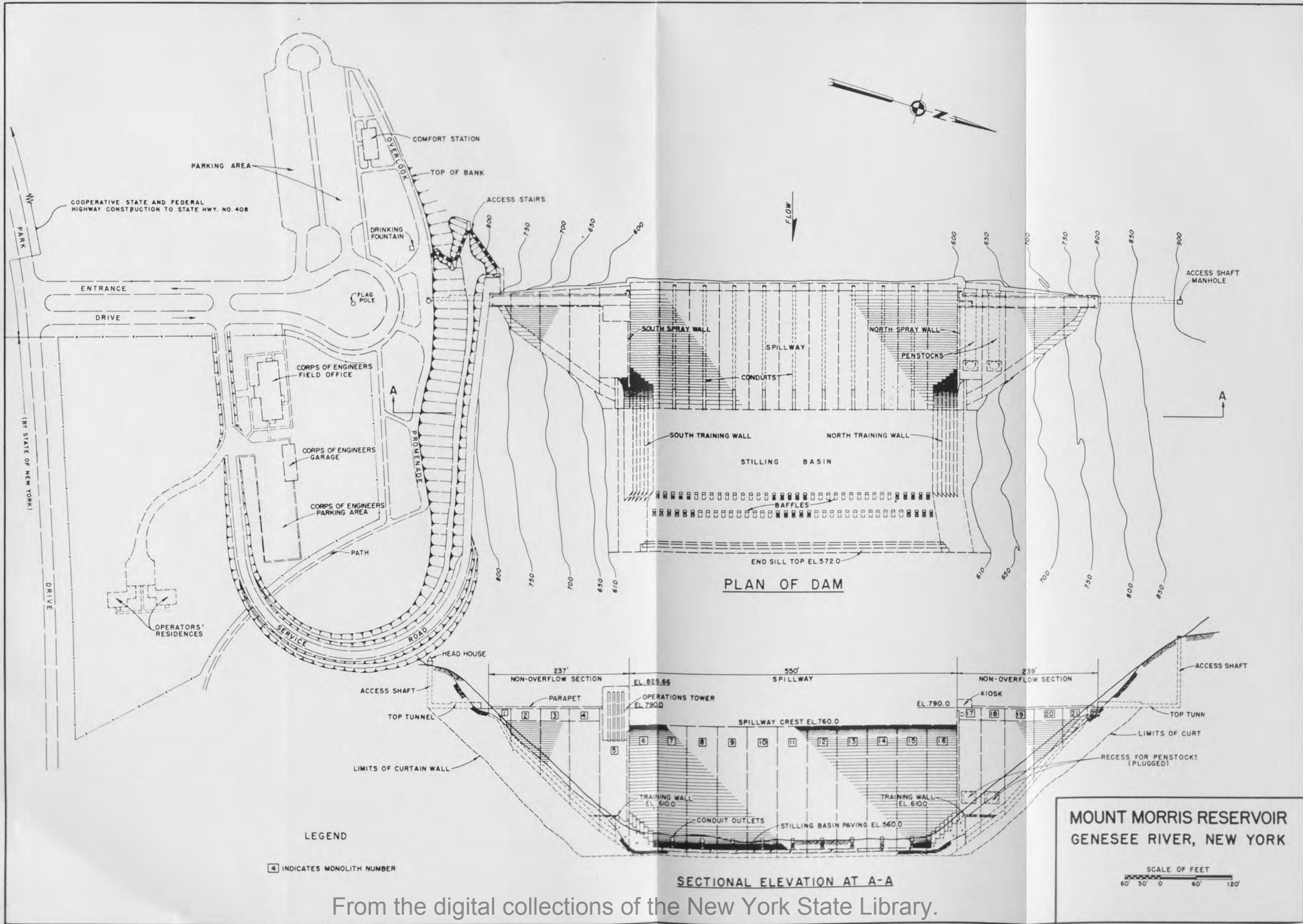




LOOKING UPSTREAM — APRIL 1952







PLAN OF DAM

SECTIONAL ELEVATION AT A-A

MOUNT MORRIS RESERVOIR  
GENESEE RIVER, NEW YORK

SCALE OF FEET  
60' 30' 0' 60' 120'

