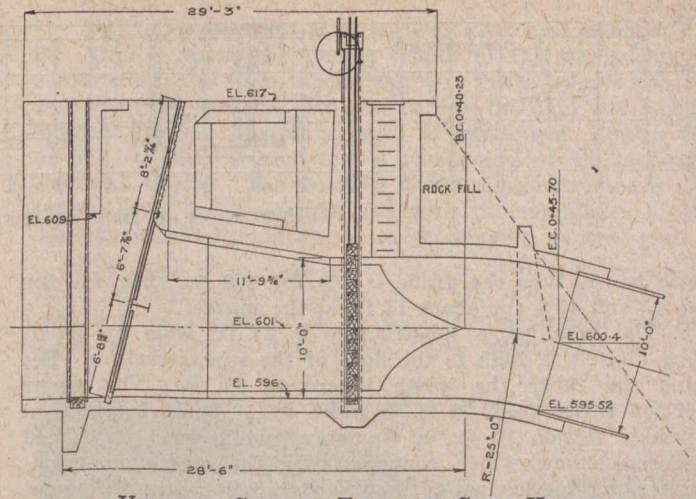


HORIZONTAL SECTION THROUGH GATE HOUSE



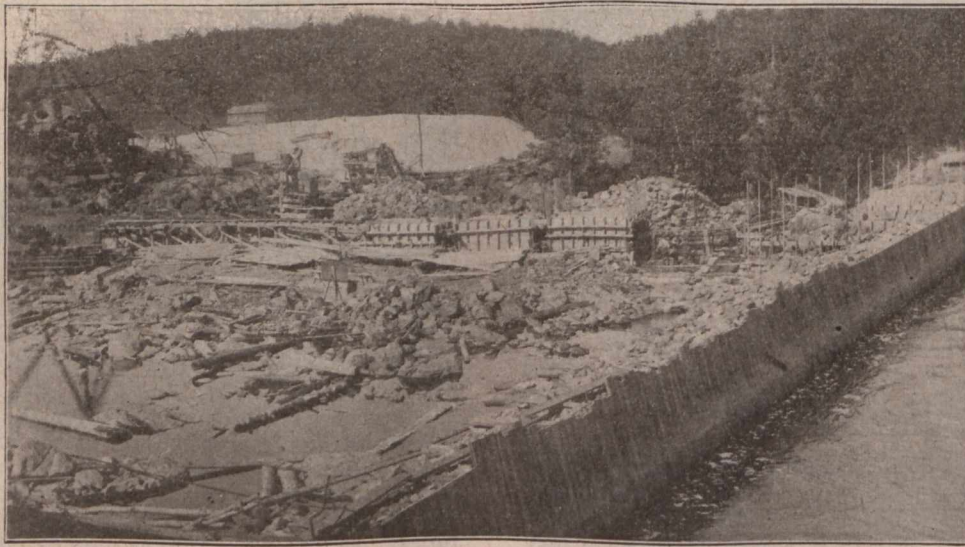
VERTICAL SECTION THROUGH GATE HOUSE

tioning, concrete is no longer specified as 1:2:4, 1:3:6, etc., but is called "Class A," "Class B," and "Class C" concrete. Class B concrete, which was used for the mass work at High Falls, is concrete developing a strength of 2,000 lbs. Class A concrete, which is used with reinforcing, is concrete developing a strength of 2,500 lbs. Test cylinders of Class B concrete taken from the forms at High Falls showed from 2,500 to 2,700 lbs. strength. At first lower results were obtained, but by cutting down the amount of water used and exercising greater care in the proportioning of the materials, the higher strengths were soon secured. Some samples of Class A concrete did not fail at 4,000 lbs., which is the limit of the "Hydro's" machine, so they were held there for three minutes and then tested no further. Crushed stone and gravel were used as aggregate. The stone is a trap of high quality.

Work on the High Falls plant started in October, 1918, and is now about 75% completed. The dam is finished, the gate house partially constructed, the foundations and walls for the power house are poured, the canal has been excavated

and the pipe line graded. The pipe has not yet been constructed but the material is on the job, as is also all of the hydraulic and electrical machinery for the power house. The plant will probably "turn over" next spring. It will supply power to the "Hydro's" Rideau system at 23,000 volts, 3-phase, 60 cycles. The construction is being handled

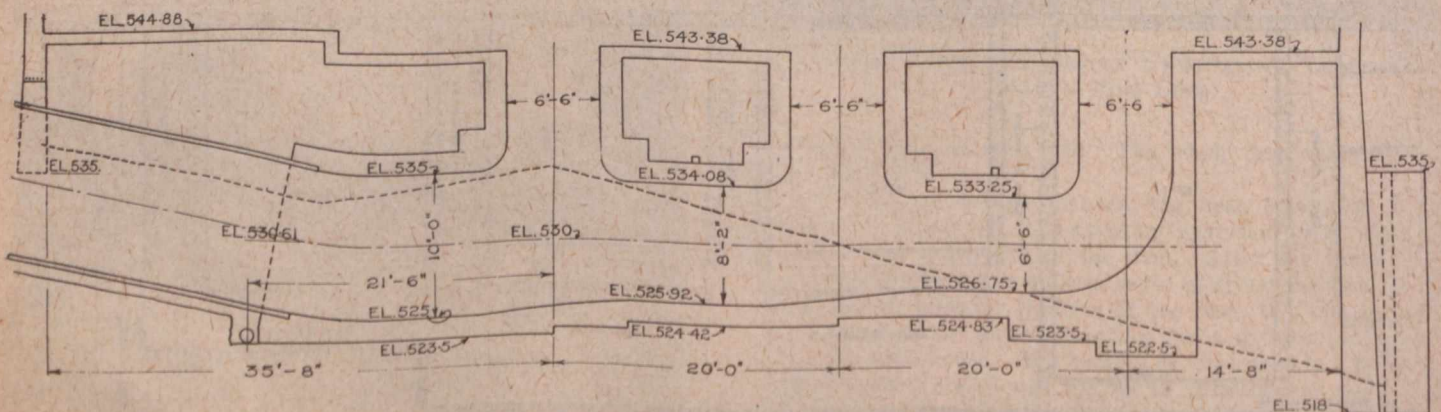
throughout by the construction department of the "Hydro." The wood-stave pipe was supplied by the Pacific Coast Pipe Co., Ltd., of Vancouver. The structural steel was fabricated by the Dominion Bridge Co., Ltd., of Toronto and Montreal. The cement used was purchased from the Canada Cement Co., Ltd., and the reinforcing steel from the Steel Co. of Canada, Ltd., of Hamilton



DAM SITE, SHOWING COFFERDAM FOR DIVERSION OF STREAM DURING CONSTRUCTION

Hon. Sir Adam Beck is chairman of the Hydro-Electric Power Commission of Ontario; W. W. Pope, secretary; and Frederick A. Gaby, chief engineer. The design and construction of the High Falls plant, with the exception of the electrical work and the power-house superstructure, are under the direction of the Commission's hydraulic department.

(Concluded on page 467)



LONGITUDINAL SECTION ALONG CENTRE LINE OF POWER HOUSE