

being 19 ft. The flow will be regulated by timber stop-logs bolted together in pairs, handled by an electrically-driven lifting machine operating on a track along the length of the deck.



CANAL ENTRANCE AND SPILLWAY

Access to the deck, which is 6 ft. higher than the crest of the spillway, is obtained through a tunnel 4 ft. wide and 7 ft. high through that part of the spillway extending to the forebay walls at the railway crossing. The land entrance is at the ground level behind the bulkhead wall, which extends to meet the crib protection work parallel to the railway. The other end of the tunnel terminates in a well 4 ft. wide and 16 ft. long, exit being by means of an iron ladder.

Electric lights are placed at frequent intervals throughout the tunnel. A drain is provided to take care of any seepage. This section of the spillway, owing to the tunnel through the centre, is made wider than the regular section, and also is reinforced with steel.

The water diverted by the dam passes underneath the Canadian Government Railway, Montreal-Halifax Line, which at this point crosses on a deck plate girder bridge 105 ft. long, comprising two spans of 76 and 35 ft., respectively, base of rail being 12 ft. above pond level. These are supported on masonry abutments and a steel bent on pedestals.

The canal, which passes under the 70 ft. span, was formerly the channel conveying water to a grist mill, on the site of which the power house is being erected.

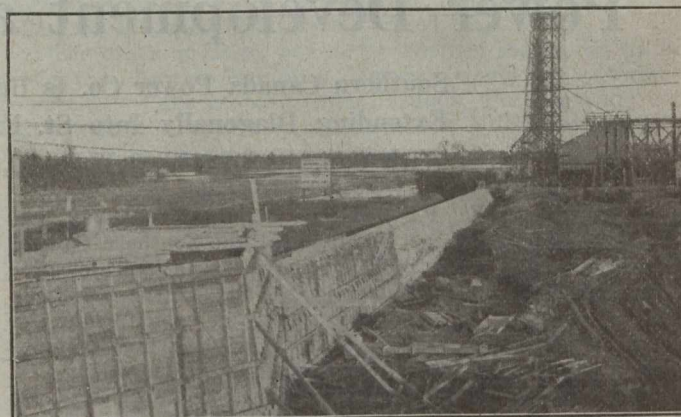
The concrete wall on the east side of the channel completely encloses the steel bent and pedestals, and that on the west side is carried in front of the abutment, thoroughly protecting the bridge foundations.

Immediately south of the railway bridge, the canal walls terminate in a bridge abutment on the west side and a pier on the side adjoining the dam. This layout conforms to the plans of the Canadian Government Railways for a bridge on a proposed grade revision, and the work was performed

under agreement with the railway company. For the present, the concrete work is only poured to the same elevation as the forebay walls. The necessary additions to complete the work up to the bridge seats, etc., will be done later by the railway company.

North of the railway, the canal was crossed by the public highway on a single arch concrete bridge at an elevation about 9 ft. below the top of the existing walls. This bridge was demolished and replaced by a two-span, reinforced concrete bridge 65 ft. long, with a roadway width of 24 ft. The floor is 9 ins. thick, supported by seven concrete beams 16×27 ins., sealed on the under side by a 4-in. slab in order to prevent any accumulation of debris during high water periods. The approaches to the bridge are earth with a top finish of broken stone, and are constructed to a grade of 1 in 20.

The forebay wall between the bridge and the transformer house has a retaining wall section, and averages 18 ft. in height. The batter on the stream side is 1 in 12, and on the

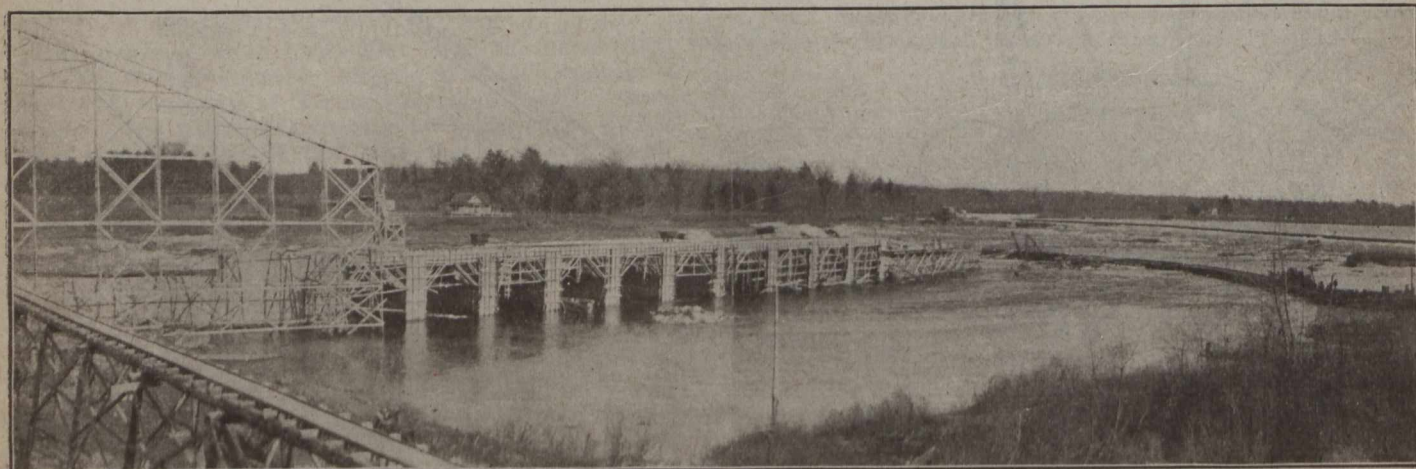


VIEW OF DAM FROM THE CANAL

back 4 in 12. That part of the wall on the opposite side, extending 168 ft. from the power house, is a spillway section, the crest being $2\frac{1}{2}$ ft. higher than that of the main dam, and is intended to take care of abnormal flood water.

The construction of the intake to the power house provides for four units, the ultimate capacity of the plant, but at present only two are being installed. The headworks for the other units consist of piers and deck constructed as far as the back of the future gates, and provide for the installation of stop-logs.

The power house and transformer house adjoin and are under one roof. The former, including the generator room and gate house, is 71×66 ft., and when completed to house the four units, will be 71×140 ft. The transformer house is 37×101 ft., and is large enough to contain all necessary



STOP-LOG SECTION OF DAM