

of the fulfilment of his obligations. (Water Resources paper No. 16, page 326).

(3)—Term of lease twenty-five to ninety-nine years according to importance of water-power and capital required for development. (Do. p. 326).

(4)—Unless otherwise mentioned, which is the exception, property leased automatically reverts to the Crown on expiration, which is, therefore, free to renew or otherwise dispose of the water-power for future period. (File 8924-W).

(5)—Inspection permitted officers of the Crown at all times to ascertain if conditions of lease fulfilled or concerning the amount of power produced. Officers' reports final. Lessee must also twice each year submit a sworn statement of horse-power developed and how utilized. (Lease A, secs. 11 & 13).

(6)—Compensation on termination. As a rule the works are to revert to the Crown at the end of the term without compensation. But notwithstanding the general principle, in a few cases a clause has been inserted providing for the appraisal of the property by experts and the Government may be led through arbitration to indemnify to a certain extent the lessees for a certain class of works. (File 8924-W).

(7)—Annual Rental is made up of two factors. (a) A fixed sum payable from inception of lease varying according to size of development. In one case this factor was something over \$3,000.00. The object is to avoid speculative holdings. (b) An additional yearly charge of ten to thirty-five cents per horse-power developed, according to geographical and other advantages of site, this charge being payable from the time the power is produced.

Rental revisable every twenty-one years counting from signing of contract, but in case of disagreement is left to arbitration under provisions of code civil procedure. (File 8924-W).

(8)—Development up to the full capacity of plant is provided for. As a rule a minimum development is stipulated by the Government and it is approximately equal to 50% of the minimum or permanent power of the site. As a rule, also, the lessees are under obligation to supply their surplus power, on demand, to any corporation, company or person for such time and price as may be determined by the Quebec Public Utilities Commission. (Lease A sec. 9, and File 8924-W. Follow sec. 9, of lease form Quebec file).

(9)—The establishment of a more comprehensive development of site would apparently require coming to terms with lessee and, in case of non-agreement, special legislation.

(10)—Stream Regulation and Control. Leases now provide that Crown may collect extra royalty for surplus power developed by lessee from additional flowage caused by storage reservoirs constructed or acquired by the Crown. Quebec has undertaken the construction of large storage works and regulation of certain of its rivers, notably the St. Maurice, the St. Francois and the St. Anne. From the regulation of the St. Maurice alone it is estimated that the different falls and rapids that are to be found along the river including the developed emplacements have become capable of generating 1,000,000 permanent horse-powers, that is to say power available 365 days in the year.

There is already an assured revenue of \$130,000.00 obtained from three companies. (File 8924-W).

(11)—Revision of rates charged consumers. Apparently governed by general statutes relating to public utilities. No special provisions in leases except as indicated in five and eight above.

(12)—Cancellation Features. Sixty days after default lease may be cancelled by Order in Council without recourse to law, thirty days notice of intention being given lessee. Upon cancellation lessee forfeits deposit and all rights on lands leased. (Lease A, sec. 18).

(13)—Apparently there are no general regulations governing the disposal of water-powers, but lessees look to their individual leases to determine the extent of their rights and obligations besides which they must observe the ordinary federal and provincial laws respecting navigation and the use of water. (W.P. of Can. p. 150 and file 8924-W).

(14)—Transfer of lease requires assent of Lieutenant Governor in Council. (Lease A, sec. 12).

FLOOD STRIKES CENTRES IN TWELVE DAYS

But Does no Damage to Big Reinforced Concrete Truss Bridge Over Etobicoke River on Toronto-Hamilton Highway

WITHIN twelve days after the pouring of the arched top chords and the lower chords and hangers of the reinforced concrete truss bridge built across the Etobicoke River by the Toronto-Hamilton Highway Commission, a flood carried away part of the centering, yet no failure ensued, although it has always been the general practice to allow a month (and more in cold weather) to elapse before striking centres.

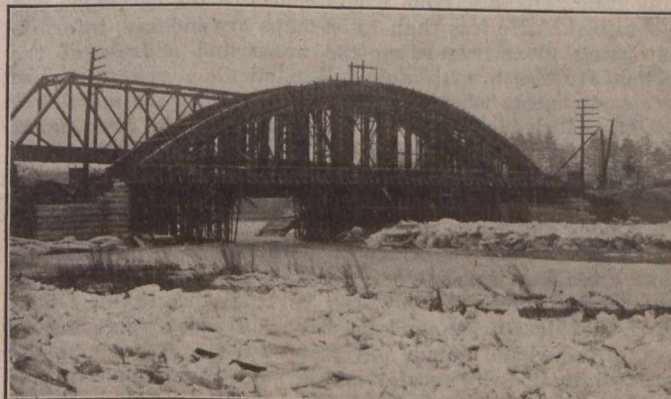
This bridge has a clear span of 122 ft. 7½ ins. and is probably one of the largest of its kind in Canada. It is one of four, all of similar design, along the route of the Toronto-Hamilton Highway, for which contracts were awarded about



DAMAGE TO TEMPORARY TRESTLE AND CENTERING UNDER NEW CONCRETE BRIDGE CROSSING ETOBICOKE RIVER

a year ago. Construction was started last summer but owing to labor shortage was not completed before cold weather. Shortly after completion of the bridge in December, ice 4 ins. thick formed a short distance upstream, the water under the bridge running clear. (The river is about 100 ft. wide, with a depth of 3 ft. at low water).

The weather moderated within a few days and the ice broke and jammed against the wooden trestle that had been built alongside the new bridge in order to carry the highway traffic during construction. About 40 ft. of the trestle was hurled against the falsework of the new bridge, leaving a gap of about 27 ft. in the centering, as shown by the accompanying illustrations.



FIELDS OF ICE PILED ON BANKS OF ETOBICOKE RIVER FOUR DAYS AFTER FLOOD HAD SUBSIDED

The trestle was rebuilt, but about three weeks ago was again carried away by flood. Then it was decided to remove the remainder of the falsework of the new bridge and to put the concrete structure into commission, levels were