

COAST TO COAST

Edmonton, Alta.—The C.N.R. is getting out 725,000 ties and 2,000,000 feet of piling for use on 100 miles of the Oliver Branch and 40 miles of the Peace River line beyond Sangudo. F. Owens, of Edmonton, has the contract.

Toronto, Ont.—Mr. H. H. Couzens, general manager of the Toronto Hydro-Electric System, reported that an expenditure of \$1,375,000 was necessary to provide adequate extensions and equipment for the System. An issue of debentures for this amount is under consideration.

Toronto, Ont.—Good progress is being made by the Hamilton Bridge Co., sub-contractors for steel under Quinlan and Robertson on the Don Section of the Bloor Street Viaduct. The same applies to the Rosedale Section, which the Dominion Bridge Co. has under contract. On both sections the contractors are considerably ahead of schedule.

Galt, Ont.—The electrification of the Galt-Elmira branch of the G.T.R. was discussed at a city council meeting recently. It was pointed out that the line should be continued to Hamilton and Niagara Falls, and it was also proposed to construct a branch radial to Guelph. The electrification of the Galt-Elmira branch was strongly favored.

Kingston, Ont.—The Board of Trade is agitating for a better harbor, and has approached the government in the matter. It is desired to improve the present harbor to enable it to receive vessels of increased tonnage for the traffic that results from the completion of the new Welland Ship Canal. It is proposed to dredge the harbor to 25 feet in depth.

Ottawa, Ont.—According to Hon. Frank Cochrane, Minister of Railways and Canals, up to January 1st, 1916, \$5,018,711 had been spent in dredging, lighting and other improvements at Port Nelson. It would take another \$5,000,000 to complete these harbor improvements. On the Hudson Bay Railway, \$9,957,340 had been spent to date and \$5,500,000 would be required to finish the work.

Ottawa, Ont.—The new pumping plant at Lemieux Island, together with alterations and improvements to intake pipes, have enabled the maximum pumping capacity of the city to be raised from 22,500,000 gallons to 27,000,000 gallons per day, the latter figure having been reached at one period during the recent Parliament Buildings fire. The average pumping rate at present is about 19,000,000 gallons per day.

Toronto, Ont.—Special legislation may be necessary for an arrangement between the city and the township of York whereby the latter may obtain a water supply from the former. The matter is under consideration at the present time. Although the city is now using about 50,000,000 gallons per day, and is pumping only enough for its own requirements, it is stated that by June next the pumping capacity will have been increased to 110,000,000 gallons per day.

Lethbridge, Alta.—The Dominion Government contemplates an irrigation project north of this city that will comprise about 100,000 acres. The engineering staff of the Department has been working on detailed surveys for some time. There are several other projects under way, such as the Taber extension (nearing completion) comprising 17,000 acres, and also a 350,000-acre block east of Lethbridge, upon which the Irrigation Branch of the Department are at present conducting surveys.

TORONTO BRANCH, CANADIAN SOCIETY OF CIVIL ENGINEERS.

The February meeting of the Toronto Branch of the Canadian Society of Civil Engineers was held at the Engineers' Club, Toronto, on the 10th inst., Mr. G. A. McCarthy, chairman of the Branch, presiding.

During the business session preceding the presentation of the technical subject under discussion for the evening, the secretary, Mr. L. M. Arkley, read a letter from Prof. C. H. McLeod, secretary of the Society, announcing that at the recent annual meeting a resolution had been adopted providing for the election of a committee to devise ways and means of increasing the prestige and activities of the Society, and calling upon the Toronto Branch to make six or more nominations from which three would be elected as representatives of the Toronto district. The members nominated at the meeting were Messrs. G. A. McCarthy, J. R. W. Ambrose, J. G. G. Kerry, A. F. Macallum, S. B. Clement, H. E. T. Haultain, E. W. Oliver and A. H. Harkness. The executive was given power to make an alternative nomination in the case of any of the above desiring not to act.

When this and other business was concluded, Mr. G. R. G. Conway, consulting engineer, Toronto, gave an informal lecture on "Recent Dam Construction in British Columbia," with particular reference to work with which he has been associated as chief engineer and consulting engineer.

The lecture, which was illustrated with a fine series of lantern views, described the construction of the Bear Creek dam on Vancouver Island, which forms one of a number of dams built for the storage of water at Jordan River, 40 miles west of the city of Victoria, for the hydro-electric plants of the British Columbia Electric Railway Company.

This dam is 1,020 feet in length and 50 feet in height, with $2\frac{1}{2}$ to 1 downstream slope and 3 to 1 upstream slope, and contains 148,400 cubic yards of material. The dam was built by the hydraulic process and impounds 328 million cubic feet of water, the top elevation being 1,483 feet above sea level.

Five miles below Bear Creek dam has been constructed the Jordan River dam of the "Ambursen" type, which is the highest dam in Canada, the extreme height being 128 feet. It is, so far, the second highest reinforced concrete dam that has been built, the highest being the La Prele dam in Wyoming, which has a maximum height of 136 feet. The Jordan River dam is 891 feet in length with a spillway 305 feet long provided with 8 feet of freeboard. It contains 21,200 cubic yards of concrete and 380 tons of reinforcing steel was used in its construction. The dam impounds 612 million cubic feet of water, the top elevation being 1,360 feet. From this dam the main water supply is delivered by flume to a forebay from which the penstock pipes are taken so as to utilize a head of 1,145 feet at the power house where impulse wheels have been installed to a capacity of 25,000 horse-power.

Mr. Conway also described the construction features of Coquitlam dam which impounds water for the Coquitlam-Buntzen hydro-electric project of the British Columbia Electric Railway Company. This dam, which is the best and largest example of hydraulic fill construction in Canada, is 99 feet in height, 950 feet in length exclusive of spillway. The storage obtained by building this dam amounts to 180,500 acre-feet, or 7,873 million cubic feet.

The lecturer described in detail the hydraulic sluicing operations in which 4-inch and 5-inch monitors were employed with a nozzle pressure of 80 lbs. per square inch.