

(3) The act of their construction is not one against which a charge of duplication can be made.

(4) It is inadvisable to proceed at this time with the full construction of these radials on account of the greatly inflated costs applying both to line and equipment.

(5) It is most important, however, that the commission proceed with the development of its full plans applying to financing as well as construction, in order that it may be in a position to acquire such existing radials and property as may be economically purchased, and which will later form parts of the completed systems.

Dealing with estimated costs, Mr. Murray figures for the roadbed, right-of-way, overhead equipment, etc., on the Toronto-Niagara Falls line a total of \$17,498,635. In the matter of rolling stock he points out that a very considerable rise in cost has taken place, and he places the cost at \$4,800,000 instead of \$4,150,000 allowed in the revised estimates of the Hydro-Electric Commission. He feels, therefore, that a total of \$22,298,635 would be a conservative estimate for the line.

For the traffic investigation, Mr. Murray consulted J. K. Punderford, vice-president of the Connecticut Company, a corporation that owns and operates practically all the urban and interurban railway lines in the state of Connecticut. Mr. Punderford supports Mr. Murray in the opinion that the income estimated by the commission, namely, \$2,500,000 per annum, is justified. This practically equals the total annual costs figured at present abnormal levels, exclusive of depreciation of equipment, sinking fund or the use of the Grand Trunk property at Hamilton.

It should be reassuring to the people of the province of Ontario to find the plans and estimates prepared by the engineering staff of the Commission strongly upheld by an outside and impartial engineer of the eminence of Mr. Murray. Verification of the Commission's work in this respect should make its course easier in others.

PERSONALS

J. F. WRIGHT, Canadian Geological Survey, Ottawa, and N. A. MCINTOSH, Queen's University, Kingston, are making a detailed geological map of the Brockville area.

ROMEO MORRISSETTE has resigned his position with the department of public works, Canada, to accept one with the National Shipbuilding Corporation, Three Rivers, Que.

J. G. STEPHENSON, of Paynton, Sask., is to be resident architect for the federal department of public works in the province of Saskatchewan, with headquarters at Regina.

JAMES BAIN, mechanical and electrical superintendent for the works department of Hamilton, Ont., has been named by the board of control as mechanical engineer for the city.

F. R. EWART, of Ewart, Jacob and Byam, consulting engineers, Toronto, has been appointed a member of the board of conciliation which will investigate the dispute between the Toronto Hydro-Electric Power Commission and its electrical workers.

DR. JOHN A. DRESSER, consulting geologist, of Montreal will head a party including PROF. ALEX. MACLEAN, University of Toronto, and EDMUND SPEAKER, of the department of geology, John Hopkins University, Baltimore, Md., to investigate the possibilities of the Peace River district.

CHARLES TAYLOR has been appointed to take charge of the Ontario business of W. I. Bishop, Ltd., engineering contractors of Montreal, with offices at 32 Front St. West, Toronto. Mr. Taylor is well known throughout Ontario in construction circles having been engaged in erecting completely equipped industrial plants for a number of years, specializing in reinforced concrete structures.

PROF. A. T. LAING, who is in charge of the course in highway engineering at the University of Toronto, has been engaged by the department of highways of Ontario to make

a special investigation of automobile headlights in connection with the new non-glare headlight law that is to come into effect in a few weeks. Prof. Laing will make a thorough enquiry into present practice with respect to headlights both in Canada and the United States and will draft regulations and specifications for their control.

ARTHUR SURVEYER, who was recently elected chairman of the Montreal Branch of the Engineering Institute of Canada, gained his first engineering experience in the public works department at Ottawa, and since 1911 has been in private practice in Montreal. He is a member of several engineering societies in Canada, as well as abroad. He is a member of the Engineering Institute of Canada, the "Societe des Ingenieurs Civils de France," and the International Federation of Consulting Engineers. He was a member of the St. Lawrence River Commission, and is now a member of the Board of Directors of the Ecole Polytechnique, and of the Advisory Council for Scientific and Industrial Research. He has specialized in hydraulic and municipal engineering.



H. C. SWARTS, master mechanic of bridges of the Grand Trunk Railway, with headquarters in St. Thomas, has been appointed superintendent of bridges and buildings from Toronto to Portland, Maine, with headquarters in Montreal.

THOMAS S. SCOTT, professor in civil engineering at Queen's University, has resigned to undertake road construction work at Brockville. Prof. Scott has been at Queen's since 1915, with the exception of a year in Halifax with the Royal Canadian Engineers. He returned from Halifax last fall to take charge of the highway engineering course in the Science Faculty at Queen's, but this unfortunately failed to materialize.

NEW YORK STATE OPPOSES ST. LAWRENCE DEEP WATER ROUTE

STRONG opposition to the Great Lakes-St. Lawrence deep water route to the sea was presented by New York state interests at the session of the International Joint Commission, held in Buffalo recently. According to the testimony, New York City should continue to be the outlet for all the business of the United States and a great part of the business of Canada. Since New York state had expended an enormous sum in building a barge canal with a twelve-foot draft, the remainder of the country should use it for all time, though it meant two extra handlings, extra terminal charges and increased breakages.

Murray Hurlburt, commissioner of docks and ferries for New York City, stated that to carry through the St. Lawrence improvement would involve the abandonment of millions already expended in New York harbor. He admitted that there is congestion in handling the business now offering through New York, but added that it is not the fault of New York, but of the country as a whole. His remedy for insufficient transportation facilities was to wait.

Other witnesses adduced the arguments that the St. Lawrence development is impracticable, that ocean steamers cannot navigate canals, and that, anyway, there will never be enough business to justify the construction of the route.