

Editorial

CANADIAN SOCIETY OF CIVIL ENGINEERS.

Every member of the Canadian Society of Civil Engineers whose time is not occupied in munitions or other war work should make a special effort to attend the thirty-first annual meeting of the society in Montreal next week.

To be present at a national gathering of the men of his profession is a duty that every member owes not only to himself but to the profession. The three days of association with his fellow engineers next Tuesday, Wednesday and Thursday will greatly benefit each and every one.

Not to speak of the change of scene and air and the other benefits of a little vacation of this sort, the new ideas that will be gathered by each engineer who attends the meeting, and the stimulus and inspiration to be obtained from the contact with many of his most successful fellows, will return to the traveller a big dividend upon the comparatively small outlay. Attention is called in this connection that the railways are offering return passage at single fare rates.

MERCIER'S REPORT ON THE AQUEDUCT.

Paul E. Mercier, city engineer of Montreal, has submitted a report to the Montreal city controllers which replies to the aqueduct criticisms made last November by the ratepaying engineers of Montreal. Because it was written in English only, the report was not adopted by the controllers, who referred it back to Mr. Mercier with the request that it be translated into French. A Montreal newspaper, however, secured one of the advance copies of the report and has published liberal extracts from it. Assuming that the newspaper has quoted Mr. Mercier's report correctly, he apparently disagrees with the ratepaying engineers and flatly disputes their statements.

Mr. Mercier again intimates that the scheme has already been reported upon by other engineers, and he mentions other arguments that are differences of opinion rather than of facts, but a large part of his report is made up of quotations of facts and figures which are materially different from the facts and figures set forth in the ratepaying engineers' report. It should be easy for an impartial board to determine which set of facts and figures is correct and to find why the discrepancies occur.

As an example of the difference in facts between the two reports, it is noted that the ratepaying engineers say that the capacity of the headrace would be reduced to an average of about 7,000 h.p. in winter, even assuming that no frazil troubles be experienced. Mr. Mercier claims that water gauge readings extending over a period of nineteen years have been studied, and that the theoretical water horse-power was less than 13,000 for only one day.

In replying to the ratepaying engineers' argument that the bottom would be eroded, the retaining walls undermined and much other damage done if higher velocities of water were obtained, Mr. Mercier says that he does not think that a concrete floor would be so affected.

The ratepaying engineers state that about \$5,200,000 has already been spent, including an allowance of \$300,000 for boulevards, bridges, fencing and cleaning up, but no allowance for the claims of the Cook Construction Co. Mr. Mercier states that the amount of money that has been spent exclusive of filtration plant and pumping is \$4,013,510. About \$5,581,000 will be required to complete the work, says Mr. Mercier.

The ratepayers say that the minimum capital cost, based on the maximum safe capacity of the plant as designed, will be \$1,515 per h.p.; Mr. Mercier says that the capital cost will be \$737 per h.p. if all items are charged against the power development.

The minimum fixed charges and operating expenses will amount to \$757,000 per annum, say the ratepayers; they will amount to \$479,800, says Mr. Mercier.

The minimum fixed charges and operating expenses will be \$108 per h.p. per annum, say the ratepaying engineers; this figure should be \$40, says Mr. Mercier.

Mr. Mercier justifies an expenditure of \$40 per h.p. per annum, whereas the city is now buying power for \$20 (twenty hours) to \$30 (twenty-four hours) per h.p. on contract from the private power companies, by asking who can state what the city would have to pay for electric energy in 1920, and by stating that the city cannot afford to gamble on the problematic future cost of power "when it can, at the actual market price, have its own water power and street lighting system at a lower cost or even at the same cost and be totally independent of any probable future trust."

It was pointed out in *The Canadian Engineer*, November 11th, 1915, that the power contract manager of the Montreal Light, Heat & Power Co. stated that his company is prepared to contract with the city for 10,000 h.p. (6,000 h.p. for pumping and 4,000 h.p. for lighting) at \$25 for 24-hour power or \$20 for 20-hour power.

The Canadian Engineer also stated in the above-mentioned issue that the city has the club that it could use on the private power companies of going to Quebec for a hydro-electric bill similar to Ontario's in case a fair contract with the companies should ever be found impossible.

Mr. Mercier suggests that a commission of two engineers and one business man be appointed to advise the controllers. We heartily concur in this suggestion. In the May 18th, 1916, issue of *The Canadian Engineer* suggested that an independent commission should be appointed consisting of "three qualified engineers, a banker who is conversant with the city's finances—Sir Frederick Williams-Taylor would be most acceptable—and, as chairman, some prominent Montreal business man who has the welfare of the city at heart and who has been efficient and successful in general business matters, but who has never 'mixed in' politically."

If Mr. Mercier's suggestion of two engineers and one business man be carried out by the controllers, we would strongly urge that Sir Frederick Williams-Taylor be appointed as the business man and chairman of the commission, and that the Montreal city council appoint one of the two engineers and the Canadian Society of Civil Engineers, the other.