

CONFIDENTIAL.

Montreal, November 12th. 1910.

Sir,

I beg to thank you for the contents of your confidential letter of the 10th. instant.

The Board's plans have been approved by everybody including my two colleagues. Four of the best Companies of England, Germany, Canada and the United States have tendered on these plans and are ready to guarantee their strength and efficiency with a deposit of one and a half millions. Of all the tenders acceptable to the Board the English tender on the Board's design is \$950,000.00 and the American tender on the same design is \$270,000.00 cheaper than any tender on any other design. The English, German and American firms guarantee the completion of the bridge on the Board's Design No. V one year earlier than the St. Lawrence Bridge Company on their own design "B". Therefore, if I had any personal feeling in this matter I should certainly, in view of the above, be absolutely satisfied, no matter to whom the contract is awarded.

The design of the Board is for a Warren truss, such as has been used by all engineers for the last fifty years. There is nothing in that design original with me, except perhaps

the high floating erection of the centre span, which is adopted as well for design "B" as for the Board's design. There is consequently no reason, personal or otherwise, why I should insist on a Warren truss being adopted in preference to any other of equally efficient design.

From the report of the Board, dated October 26th. you will see that design "B" is acceptable to me providing that plans, details and material are made in accordance with the specifications of the Board, including modifications allowed to other bidders. I wish to add that I would be willing to modify any clause of the specifications as long as the strength of the bridge is not affected thereby, but perhaps you do not realize how far I have already gone in the concessions I made to obtain the signature of my colleagues to the report of October 26th.

I enclose a draft of report I had prepared in answer to your letter of the 29th. ult. which will place clearly before you my objections to the plans of the St. Lawrence Bridge Company accompanying their tenders.

I have seen Messrs. Duggan and Johnson and they seem to be disposed to accept the specifications of the Board, in which case there will remain no technical objection to their design.

Yours respectfully,

Hon. Geo. P. Graham,

Minister of Railways & Canals,

Ottawa, Ont.

Confidential

Montreal, November 10th. 1910.

Sir,

In answer to your letter of the 29th. ultimo, I beg to submit the following:

As a member of the Board, I cannot go outside the limits fixed in the report of the whole Board to you dated October 26th., in regard to a recommendation as to whom the contract should be awarded. Respecting plans "A", "B" and "C" of the St. Lawrence Bridge Company, another conference was held with the representatives of that firm to find how near they were willing to come to the specifications of the Board. Owing to the very material differences between the specifications proposed by the Bridge Company and those of the Board, the conditions attached to the Board's approval of plans "A", "B" and "C" as set forth in their report of October 26th., have not been fulfilled to any extent.

A bridge built on the design and specifications of the Board will be from 38% to 53% stronger than if built on the design and specifications of the St. Lawrence Bridge Company, and some members of the Board's design will be as much as 69%

The specifications referred to are only such article or articles of the specifications which affect the strength of the bridge.

stronger than the corresponding members of the St. Lawrence Bridge Company.

The distribution of material in the design of the St. Lawrence Bridge Company is very unsatisfactory, owing to the large variations in the factors of safety of individual members. The Board's design provides, on the contrary, a much more homogeneous distribution of material.

The details of the St. Lawrence Bridge Company's design are very scant and inferior to the Board's; the gusset plates are taken as part of the main sections and the number of splices is very much larger than in the Board's design; and as the quality of the details of the Board's design is part of the specifications, the details of the St. Lawrence Bridge Company are not made in accordance with the specifications of the Board.

The only tenders, therefore, which remain acceptable to the whole Board, are the four tenders on the Board's design V. I know of no reasons, from an engineering standpoint, why the contract should not be given to either of the four firms tendering on it.

I would add, however, that, as mentioned in the report of the Board, dated October 26th. the design of the St. Lawrence Bridge Company would be perfectly acceptable to me, providing that plans, details and material were made in accordance with the specifications of the Board, including modifi-

ations allowed to other bidders.

Yours respectfully,

Hon. Geo. P. Graham,

Minister of Railways & Canals,

Ottawa, Ont.

CONFIDENTIAL.

Montreal, 3rd. December 1910.

Sir,

Referring to our conversation of yesterday.

I feel, after seriously thinking the matter over, that the construction of the Quebec Bridge should not be retarded through any fault of mine by taking an unreasonable time to answer your letter of November 29th.

It will probably take me, however, the whole of next week to prepare my reply, so that I will not be able to forward it until after the 14th. instant, the date you have fixed for the next meeting of the Board.

This, I trust, will meet your wishes in the matter.

Yours respectfully,

Chairman and Chief Engineer.

Hon. Geo. P. Graham,
Minister of Railways & Canals,
Ottawa, Ont.