

structures with steel callipers, tested metallic tape and Chesterman's steel rule, and I think you can rely upon their accuracy. Attached to this report are details of the measurements of the several members of each structure. From these measurements I have made up the weights of each bridge, as follows:

	Lbs
Lefebvre—2 spans, 113,664 lbs. each, total.....	237,328
Blackville—3 spans, 118,664, 27,212 27,212, total..	173,088
Hutchinson's—1 span, 26,018, 2 spans plated girders (11,096) total.....	48,210
Tabor's—1 span	72,275
Culssack's—1 span	75,151
Petitcodiac—1 span.....	36,381
Elgin—1 span	45,749
Campbell's—1 span.....	151,972
Total.....	840,154

UNDER THE TENDER SYSTEM.

To make comparison between the highway bridges built in New Brunswick and those of Nova Scotia erected by their local government, I have obtained plans containing the data upon which public tenders are invited in that province. A full list of the tenders received for each structure will be found in the provincial engineer's annual report, copies of which I enclose herewith for the past four years.

The weights of the several structures are not given in the annual reports, but from the plans and other data I am enabled to make up a very close estimate of the weight of each, which I think you can safely rely upon within 5 per cent., and which will afford you a basis of comparison between the cost of these structures as built by the respective governments of Nova Scotia and New Brunswick.

Below is a list of a number, the weights of which I have worked out in detail as per sheets herewith attached

- 1 span, 80 feet; weight, 26,739 lbs.
- 1 span, 100 feet; weight, 28,111.
- 1 span, 120 feet; weight, 39,047.
- 1 span, 160 feet; weight, 65,232.
- 1 span, 200 feet; weight, 129,137.

UNDER THE NO TENDER SYSTEM.

The reports of the commissioner of public works of New Brunswick, which you handed me, do not contain definite information as to the cost of the superstructures which I have measured, except in the case of Lefebvre's,

Campbell's and Blackville, which are as follows, as given on page 23 of commissioner's annual report of 1897:

Lefebvre—Substructure, \$7,887; superstructure, \$15,350; sundry inspection, etc., \$735.45; total, \$23,972.45.

Campbell's — Superstructure, \$10,400; sundry inspection, etc., \$370.08; total, for superstructure, \$10,770.08.

Blackville — Substructure, \$5,053.95; superstructure, \$10,459.22; sundry inspection, etc., \$336.82; total \$15,849.99.

THE DEADLY COMPARISON.

The papers you forwarded me bearing upon this subject show that the chief commissioner admitted in the legislature last session that the prices paid to the Record Foundry Co. and to Ruddick of Chatham were at the rate of 6 1-2c. per lb. This would appear to be corroborated by my calculations, as will be seen by the following:

The aggregate weight of these three bridges, Lefebvre, Campbell's and Blackville, is 562,388 lbs. The aggregate cost of these as given in the chief commissioner's report is \$36,209.22, showing the cost to have been 6.44c. per lb., taking my weights as a basis.

To enable you to make a comparison of the price per lb. paid by the respective governments of Nova Scotia and New Brunswick, I submit the following:

The aggregate weight of five bridges in Nova Scotia, above mentioned, is 288,266 lbs. The aggregate cost is \$10,165, equal to 3.52c. per lb. One half of the above were built upwards of five years ago, when the price of bridge material was 25 per cent. higher than last year.

I would especially call your attention to the fact that the above price of 3.52c. per lb., is not f. o. b. cars at the contractor's works, but delivered, erected, floored and painted complete.

This would show that Nova Scotia bridges are purchased at a price of 2 77-100c. per lb., as compared with 6 1-2c. per lb. paid by the New Brunswick government.

The bridges in each province are very similar in general design and character, and the steel chiefly used in both provinces during the past two years is of the "Carnegie" brand.

MORE IN DETAIL.

To make a further comparison of the cost of different spans in the respective provinces, I would refer you to the following: