

The Canadian Engineer

An Engineering Weekly

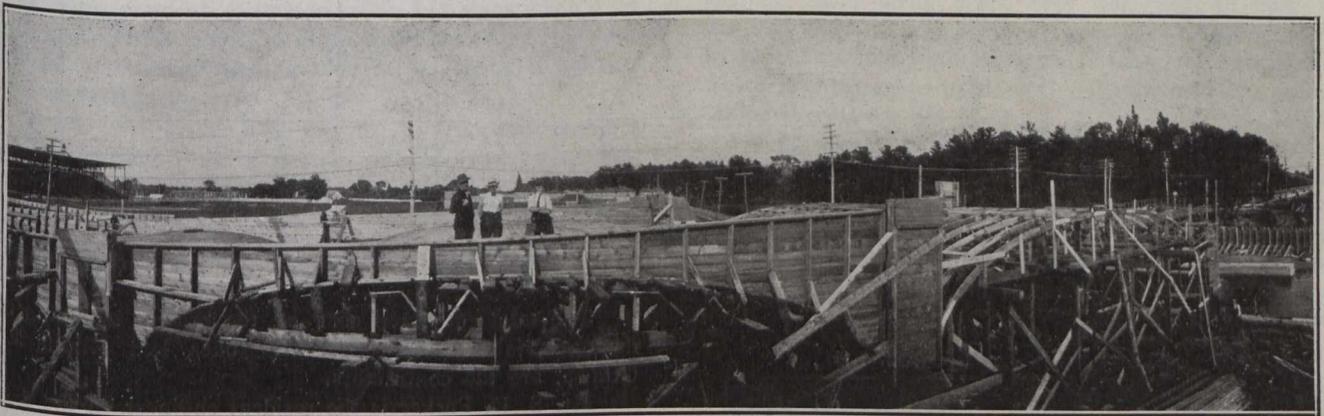
BANK STREET HIGH LEVEL BRIDGE, OTTAWA

BY L. McLAREN HUNTER*

The Bank Street high level bridge, which is being constructed over the Rideau Canal by the city of Ottawa, is more than two-thirds completed. This new crossing will considerably help the development of Ottawa South, as it will enable the electric railway to cross the canal at this point. This they have been wanting to do for some time, as

north approach consists of three arches with spans 62 feet, 50 feet, and 40 feet, and rises of 14 feet, 11.5 feet and 8.7 feet respectively, and 230 feet of retaining wall.

The south abutment of the bridge (a section of which is reproduced) is of a 1:3:6 gravel mixture up to the springing line. At the base it is 25 feet 6 inches, and at the



Bridge Under Construction.

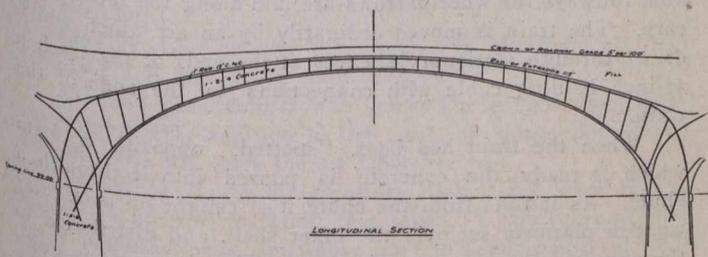
the traffic along Bank Street to Ottawa South is so very heavy; in fact, the heaviest in the city. The new bridge is badly required, as the old swing bridge was quite inadequate—to say nothing of the constant delay and congestion of traffic due to passing barges and boats.

The bridge is designed to allow of the uninterrupted passage of boats and barges along the canal (and also for

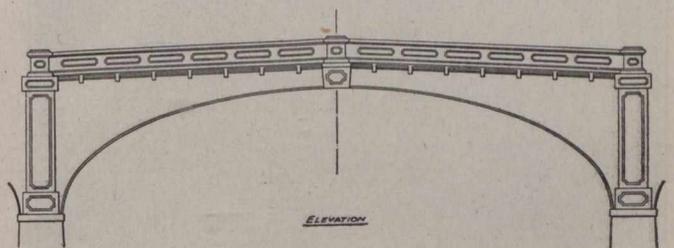
springing line 10 feet. The height of the abutment to the springing line is 24 feet.

The piers are of the same proportions as the abutment; they all rest on a good, sound gravel, free from clay of any kind, and are carried about five feet below the canal bottom.

The main arch is 76 feet, with a rise of 17.5 feet. A 1:2:4 mixture of broken stone concrete is used, reinforced



Longitudinal Section.



Elevation of Span.

heavy highway traffic) having a clearance of twenty-nine feet above water level.

The main channel is spanned by a seventy-six-foot arch with a rise of 17.5 feet. The south approach consists of one arch span 62 feet, rise 14 feet; one arch span 50 feet, rise 11.5 feet, and about 30 feet of retaining wall, which completes the approach to the north side of Echo Drive. The

top and bottom with $\frac{3}{8}$ -inch square steel bars placed 12-inch centre to centre, and tied together both vertically and horizontally with $\frac{1}{2}$ -inch square steel bars at 3 feet centres.

The whole structure has been designed to conform with the specifications of the Department of Railways and Canals.

The Ottawa Improvement Commission's driveway will be continued under the north arches, through to the exhibition grounds, along the north bank of the canal as at present.

* City Engineer's Department, Ottawa.