

Fig. 6.—Elevation, Don Section, Bloor Street Viaduct.

carries 60-ft. double boom with maximum stride of 110 ft. On the Don section are also used two 20-ton guy derricks with 85-ft. masts and 60-ft. booms and one 7-ton guy derrick with 70-ft. mast and 60-ft. boom.

Ransome and Smith concrete mixers were used on the Don section, Beatty and Doty hoists, Beatty swingers on the derricks, Marion steam shovels, and Ingersoll-Rand air compressor plant.

All of the eight piers carrying the six main steel arches were carried down to rock, the elevation of the bottom of the foundations as placed being  $2\frac{1}{2}$  ft. or more below the mean elevation of the rock surface determined after excavation. The foundations of the piers range from 29 ft. to 46 ft. deep, approximately. A

number of views of the foundation and pier work, and a description of general methods followed, appeared in a progress article in *The Canadian Engineer* of December 16th, 1915.

Another article on the Don section, in *The Canadian Engineer* of October 29th, 1914, reported the foundation tests and gave notes on the preliminary work attending the whole project.

The design of the viaduct was also explained in that article with notes on the assumed working stresses, the assumed loads, etc. The arches are of the three-hinged, four-ribbed type. The concrete floor slabs are supported on steel. There is a 21-ft. 9-in. roadway on each side of the car tracks, while for the tracks 21 ft. has been allowed. On each side is a cantilevered sidewalk 10 ft. 9 ins. wide, carrying a curtain wall, as shown in Fig. 10. A general view of

the upper deck is given in Fig. 9. Provision is made for a lower deck to connect with a future system of underground railways. Fig. 3 shows a view through one side of the lower deck, which will not be completed until needed. The tracks will run approximately along where the two temporary stringers are placed to provide a walk for inspection purposes. Just to the left of the track allowance of the lower deck will be noticed a semi-circular bed in the concrete along which will be carried a 42-in. water main. Another main is to be carried similarly through the other side of the lower deck. The clearance of each side of this deck is 14 ft. 6 ins. by 17 ft. 3 ins. high from top of rail. Fig. 4 shows rather clearly the spaces provided for the passage of the underground cars.

The contract for the Rosedale section was let for \$298,555.53 to the Dominion Bridge Co., Ltd., who awarded a sub-contract for the excavation and concrete work to the Raymond Construction Co., Ltd. The order to commence work was given March 24th, 1915, and two years were allowed for completion of the contract, with a bonus of \$25 and a penalty of

\$50 a day. If the weather continues favorable, and the sub-contractors are able to get the handrail poured this fall, they will likely earn a bonus. The work on the 1,260 lineal feet of handrail has just commenced. Otherwise the concrete is nearly all in place.

The Rosedale section includes but a single span, with a 190-ft. arch, pin to pin, as shown in Figs. 7 and 8. The western approach contains an 80-ft. span, masked by concrete, as does also the western approach



Fig. 7.—Rosedale Section, Bloor Street Viaduct, Looking South Along Ravine Drive.

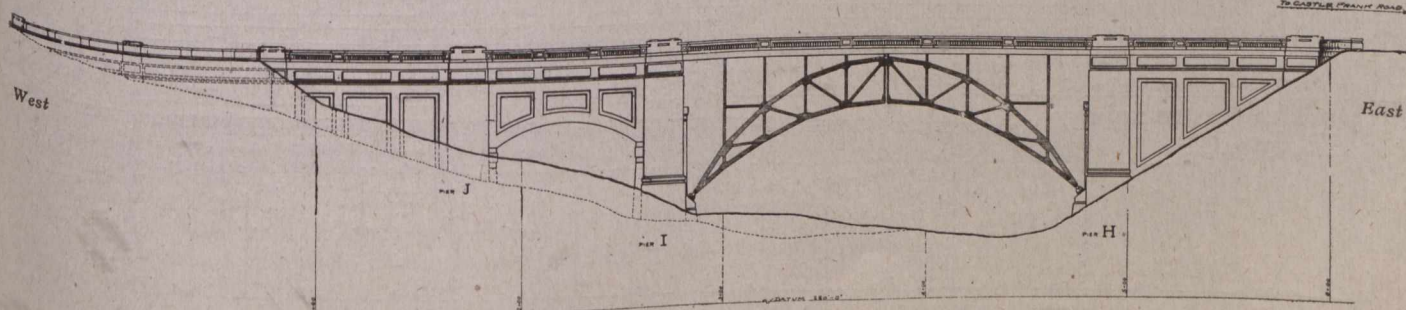


Fig. 8.—Elevation, Rosedale Section, Bloor Street Viaduct.