

## North Toronto Grade Separation, Canadian Pacific Railway.

The C.P.R. is carrying out the grade separation work on its line across the northern part of Toronto, in compliance with the Board of Railway Commissioners order, which called for the elevation of its tracks as well as those of the Canadian Northern Ontario Ry. line, which is projected to enter Toronto from the west along a route following that of the C.P.R. most of the way through that portion of the city. This order called for the elevation of all through tracks from Dufferin St. on the west to Summerhill Ave. on the east, with subways for the majority of the streets crossed. The construction work is being conducted by the C.P.R., the C.N.O.R. and the city sharing equally in the cost with the C.P.R.

The C.P.R.'s North Toronto line was formerly owned by the Ontario and Que-

bec Ry., work on which is now under way.

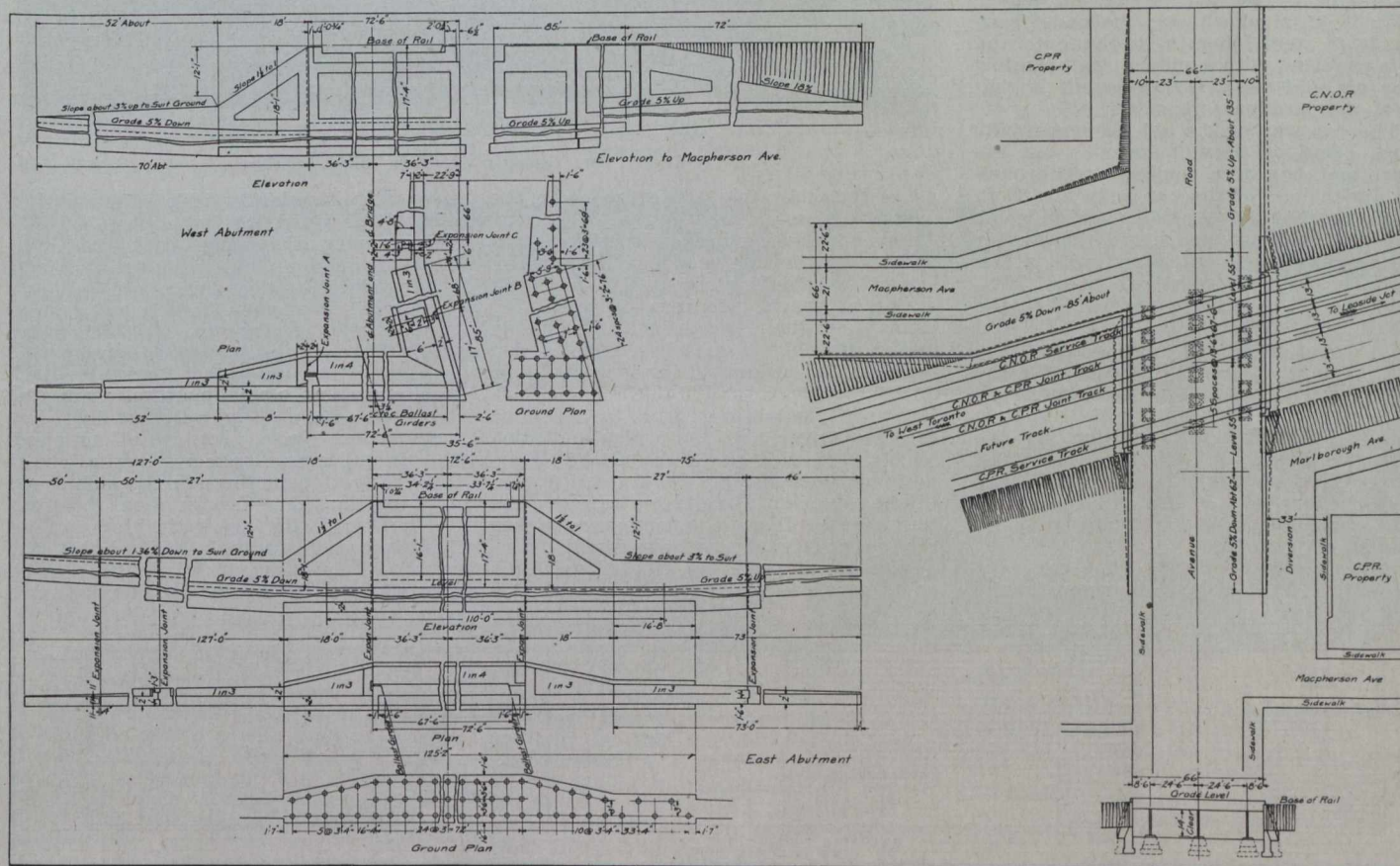
The viaduct is to be built for 5 tracks, and will be about 3 miles long, covering the more congested portion of the route. Of these five tracks, the northerly one will be used as a service track by the C.N.O.R., as that line connects at both ends with the C.P.R. route from the north. The southerly one will be for C.P.R. service. Of the three central tracks, the two northerly are to be built at present, and will be used jointly for through service. The fifth track will not be built at present, but provision is made for laying it as occasion may require.

To date, only one subway has been built, that at Avenue Road, which is shown in the accompanying illustration. The others will be proceeded with as ordered, the headway clearance of all but this completed subway being as yet under

The elevation work between subways has been carried forward in a similar manner, leaving the southerly track open at grade, building a trestle on the north side, on which traffic was diverted. The portion that has so far been elevated is the section from Summerhill Ave. to near Davenport Road, including Yonge St. crossing, which is now being carried on a temporary timber trestle, pending a settlement in the clearance dispute. The two northerly tracks are completed, and the others are being pushed forward. On this section, the elevation is about 12 ft. above the former grade.

It is expected that the new Union Station for the C.P.R. and C.N.O.R. will be in this portion of the line, on the east side of Yonge St., but no definite decision has been announced.

The next subway to be built will be at Davenport Road, where two streets—Davenport Road and Poplar Plains Road—will be carried under the tracks in one



Avenue Road Subway, North Toronto Grade Separation.

bec Ry., which was absorbed by the C.P.R. in the 'eighties. Originally, this was the only entrance the C.P.R. had to Toronto, but some years ago a diversion was made from Leaside Jct., about two miles east of the centre of the city, to the line across the city waterfront, and thence into the Union Station. This, in conjunction with the C.P.R.'s Toronto, Grey and Bruce line, sidetracked the North Toronto line, the trains entering the Union Station from the east by way of Leaside Jct., and from the west by way of West Toronto. The North Toronto line was afterwards used for freight purposes, a noncongested cut off for through freight being thereby obtained. As the C.N.O.R.'s new line will also enter the north end of the city, the possibility of considerable traffic being handled across the double line made it appear advisable in the Board's opinion to elevate the tracks through the central portion of the

consideration, the city demanding greater head room than the railways feel prepared to give. The Avenue Road subway is 66 ft. wide, with a roadway clearance of 14 ft. It is of a concrete substructure construction, with the former street level depressed about 5 ft. Macpherson Ave. enters the subway from the west on the north of the tracks, requiring a slight street diversion, with retaining wall along that side. All street approaches are on a 5% grade. The subway is crossed on steel plate girders. Work on this subway was carried forward without interruption to train service by leaving one track at grade and building the concrete abutments on both sides of this track, finally carrying the service across on a trestle bridge at the new elevation, and building in the open space in the abutments. The street traffic was diverted to the east on the Marlborough Ave. side.

subway, by forming a T entrance from the north, the two streets uniting at the tracks.

Subways are projected, in addition to the three mentioned, at Spadina Road, Howland Ave., Bathurst St., Christie St., Shaw St., Ossington Ave., and Davenport Road. These are all to the west of the semi completed portion.

The elevation work is being carried out under A. L. Hertzberg, M. Can. Soc. C.E., Division Engineer, Ontario Division, with B. Ripley, M. Can. Soc. C.E., Engineer of Grade Separation, directly in charge.

The question of introducing on the C.P.R. Eastern Lines, the unit system of organization for the general superintendents and superintendents offices which has been in force on the Western Lines for some time, is said to be under consideration.