

Northwest LRT Extension

Grade Separation

Recommendation:

That the April 13, 2016, Integrated Infrastructure Services report CR_3317, be received for information.

Report Summary

This report identifies the options for the Metro Line to cross Princess Elizabeth Avenue, including grade separation as part of the next phase of the Northwest LRT extension.

Previous Council/Committee Action

At the September 2, 2015, Transportation Committee meeting, the following motion was passed:

That Administration provide a report on the feasibility of grade separation at the Princess Elizabeth Avenue crossing as part of the next phase of the Northwest LRT extension through Blatchford and beyond.

Report

Administration is providing information to Committee regarding a number of options that could be considered for a grade separation of the Metro Line at Princess Elizabeth Avenue. The purpose of this report is to provide an opportunity for Committee to consider the potential of a grade separation for the Metro Line to cross Prince Elizabeth Avenue. The grade separation could be done with either an underground or elevated structure and potentially on a different alignment. A grade separation could be added as a component of the next phase of the Northwest extension. Administration is not making a recommendation at this time.

With the consideration of a grade separation there is also the potential to consider a different alignment to improve the interaction between LRT and the road network. This would also provide a potential opportunity to reassess development opportunities and to promote or improve ridership potential. Attachment 1 provides different grade separation options each with potential variations based on completing a conceptual planning process. All options would require an amendment to the Transportation System Bylaw 15101 and would require public engagement with the public and key stakeholders, as these options would require a portal structure (the area where the LRT declines down into the tunnel) for an underground option or bridge abutments for an elevated structure.

As illustrated in Attachment 1, Options 1 and 2 provide potential grade separations that closely align with the original intent of the LRT system. The station configuration remains consistent with the original plan with the potential for a slight modification to the permanent NAIT station. With the possibility of a new alignment and recent interest from Kingsway Mall (Oxford Properties) there is a potential to pursue Transit Oriented Development on their site. Options 3 and 4 identify an additional LRT station and different options to cross both 106 Street and Princess Elizabeth Avenue. Further consultation with Oxford Properties is required to determine the feasibility of incorporating the LRT alignment into their future development.

In Option 3 there is a potential to move the LRT crossings at 106 Street further south and the Princess Elizabeth Avenue crossing further west away from the Princess Elizabeth Avenue/106 Street intersection. Moving the at-grade crossings further away from the intersection may improve the traffic congestion in this area. Detailed traffic modelling would be required to determine the traffic impacts of these options.

All options would allow the existing LRT system to stay in service to the existing temporary NAIT station during construction of the grade separation, however, a period of time would be required to connect the new line into the existing line. Service would end at Kingsway/Royal Alexandria Station and bus bridging would be required from Kingsway Station to NAIT until the switchover was completed. Conceptually the length of this shutdown could be between three to 12 months.

Order of magnitude conceptual cost estimates for the four options range from \$35 million to \$95 million as detailed in Attachment 1.

Community Engagement

Advancement of any option would require engagement with the public and key stakeholders.

Budget/Financial Implications

Presently there is no budget for the extension of the Metro Line. The additional costs for a grade separation could be included in budget estimates for future funding of the next extension of the Metro Line.

Attachment

1. Princess Elizabeth Avenue Grade Separation - Options 1 - 4

Others Reviewing this Report

- D. Wandzura, General Manager, City Operations
- T. Burge, Chief Financial Officer and Treasurer, and General Manager, Financial and Corporate Services
- R. G. Klassen, General Manager, Sustainable Development