

**BRIEFING NOTE FOR INFORMATION**

DATE: November 23, 2015
PREPARED FOR: Honourable Todd Stone, Minister of Transportation and Infrastructure
MEETING: November 24, 2015
ISSUE: Evergreen Line Status Update

BACKGROUND:

The Evergreen Line is an 11-kilometre rapid transit line that will connect without transfer to the Millennium Line at Lougheed Station in Burnaby and end near Douglas College in Coquitlam. The total project budget is \$1.431 billion, which includes the base project scope (\$1.403 billion) and provision for Lincoln Station (\$28 million). The Province is contributing \$586 million, the Government of Canada is contributing \$424 million, TransLink is contributing \$400 million and other partners (the City of Coquitlam and the owners of Coquitlam Mall) are contributing \$21 million towards the new Lincoln Station.

Construction Update

Major construction on the Evergreen Line started in February 2013. EGRT Construction – a consortium led by SNC-Lavalin – is the primary contractor.

Construction is well underway on all aspects of the project, including roadworks, guideway, station areas, and tunnel boring:

- Elevated guideway and at-grade guideways are complete;
- Track and system installation is nearly complete in all areas other than the tunnel;
- Stations are between 83 per cent and 100 per cent complete;
- Testing & Commissioning commenced in the North Road/Clarke Road corridor (Lougheed Station to the south portal of the tunnel) in July and is now 90 per cent complete – testing of the Port Moody section will commence in February; and
- Main tunnel boring started in June 2014 and is now more than 90 per cent complete.

A diagram illustrating the progress of the EGRT construction contract is attached.

A separate contract has been let to Bombardier for the design and build of 28 new MK III vehicles. The first four vehicle train was delivered to Vancouver in October 2015. BCRTC is currently undertaking testing and commissioning work to put the train into service.

The Province retained the responsibility to design and construct station plaza areas and some parking infrastructure. The design for these aspects of the project is substantially complete and tendering of this work will commence later in the fall.

Overall, the project is approximately 80 per cent complete, including EGRT work, Province work and the vehicle contract. For the main construction contract, EGRT is approximately 90 per cent complete.



Tunnel Construction

On March 7, 2014 an event marked the start of tunnel construction. At that time, it was anticipated that it would take about a year to bore the two-kilometer tunnel. The main tunnel boring activity began in June 2014. The tunnel boring machine (TBM) requires regular maintenance to change the cutter head tools as they wear during boring. The contractor has encountered difficulties during maintenance stoppages, which has resulted in a delay to expected duration of tunneling. Tunneling is currently anticipated to be complete in late 2015.

To date, there have been four sinkhole occurrences on the project (one at Chateau Place, one at Cecile Drive, and two at Clarke/Seaview Drive). The TBM was stopped at Clarke and Seaview Drive from late March until September 2015 (six months). This was because EGRT found it particularly challenging to maintain face stability at this location. In June, EGRT enlisted advice from a number of additional technical experts from around the work (specifically experts from Germany and the UK) and adopted some additional techniques to assist in facilitating the maintenance. These were implemented successfully and tunnel boring resumed in late September, and has progressed well since then.

EGRT is forecasting TBM breakthrough sometime between November 28 and December 3, 2015.

Under the Design-Build-Finance (DBF) contracting model, EGRT accepted the geotechnical risk in relation to the bored tunnel.

Schedule

The original project schedule was for the project to be open in summer 2016. As a result of the technical challenges associated with tunneling, in February 2015, the schedule was revised to opening in fall 2016.

Despite the extended stop at Seaview for maintenance, EGRT has been able to mitigate a significant amount of overall schedule pressure through re-sequencing work. Assuming breakthrough at the end of November, the contractor's schedule now shows a Substantial Completion date of the end of January 2017. The schedule contemplates a further month to allow TransLink to put the line into service, although it is anticipated that with careful planning this duration can be reduced to a few days.

Although it is possible that work may be accelerated to allow for a completion date in 2016, EGRT advises that there is still significant work required to fit out the tunnel, and in their view the most likely Substantial Completion date is end of January 2017.

The project continues to work closely with SNC/EGRT to ensure that every possible mitigation measure is being implemented to support the project schedule, and this will continue through until Substantial Completion.



Budget

The project remains on budget, as the contractor is responsible for all costs relating to the schedule delay under the terms of the fixed price contract.

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Project Alignment and Work in Progress to November 2015

