



2020 June 16

**To:** Councillor Farkas

**From:** Michael Thompson

**Re:** Response to Administrative Inquiry from 2020 May 11 – Green Line Program

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This memo provides a response to the 2020 May 11 Administrative Inquiry submitted by Councilor Farkas. The Administrative Inquiry identifies seven questions related to the Green Line Program.

In its entirety, the Green Line will deliver high-quality transit service to Calgarians in north central and southeast communities. Construction of the Green Line is our next step towards completing Calgary's transit network, as set out in *RouteAhead: A Strategic Plan for Transit in Calgary*. Along with the new MAX bus rapid transit lines, Calgarians will have fast, frequent and reliable transit service that connects communities, employment hubs, and key destinations across the city.

### **Administrative Inquiry Questions and Green Line Program Responses**

**1. Why has administration recommended no changes to the Green Line following the global recession and COVID-19 crisis?**

As Calgary's largest job creation project, construction of Green Line Stage 1 will be an important part of The City's economic recovery. Green Line will generate 12,000 direct jobs and 8,000 supporting jobs during construction and operations. The enabling works construction program has already put Calgarians to work with over 100 projects delivered or underway.

The Green Line Program is planned for long-term city building opportunities and spurring redevelopment and investment opportunities in Calgary businesses and communities like Inglewood, Ramsay, Ogden and the North Hills Communities (Crescent Heights, Tuxedo Park, etc.) Green Line will be more than just a transit line that moves people; it will be integrated into communities, providing a focal point for current and future development and community amenities.

Calgary Economic Development has been working toward diversifying Calgary's economy; many jobs in these new sectors, like technology and agribusiness, will be located outside the downtown. Stage 1 of the Green Line LRT increases mobility to employment hubs such as hospitals, post-secondary institutions, Quarry Park, and the SE industrial area across the city by providing critical connections to the transit network via transfers to and from the MAX BRT lines and the existing Blue and Red LRT lines.

At the June 1 Green Line Committee meeting, Administration presented a slide deck titled "Green Line Re-Casting Business Case for COVID-19 and Economic Recovery" This presentation outlined four potential scenarios which have been evaluated with respect to recovery from both COVID-19 and the current economic recession. The presentation outlined that through almost all scenarios the Green Line Stage 1 meets the ridership demand and demonstrates the need for the Green Line Stage 1 project.

**2. Is the Green Line truly a "shovel ready" project? Has the detailed engineering work been completed? Has the land been acquired? Is borrowing capacity in place? etc. allowing for construction to begin tomorrow if that is the will of Council?**

Calgary's comeback strategy identifies transportation infrastructure projects as being crucial to recovery. "Shovel ready" projects are being prioritized by all orders of government to get people working and to stimulate the economy. Segment 1 of the Green Line is shovel ready with the procurement process moving forward with the Request for Qualifications shortlisted proponents to be announced in June 2020, and the Request for Proposal to be issued no later than July 24, 2020. Given Segment 1 will be delivered as a design build finance project, the proponent teams will be bidding on the project starting on July 24, 2020 however, the detailed design and construction will begin in 2021.

The City has been investing in enabling works projects clearing the way for Green Line. Over 100 enabling works construction projects, including land preparation (over 80% of the land has been acquired for the project), heavy rail projects, transit improvements, environmental remediation and utility relocation, primarily for Segment 1, have been completed or are currently underway. There are several significant enabling works projects such as the 78 Avenue SE grade separation which will start construction this summer and which is currently out for tender in the construction market.

Report GC2020-0616 presented to the Green Line Committee on 2020 June 02 recommended that Council approve the required borrowing bylaw for the Green Line Stage 1 project. Administration has recommended that Council give first reading to the bylaw (i.e. anticipated to occur on June 16, 2020), which would be followed by second and third reading (i.e. anticipated on July 20, 2020).

**3. What is the cost difference between high floor vehicles, currently used by our LRT system, and low floor vehicles, currently proposed for the Green Line LRT?**

In 2017, Council made the decision to move forward with the low floor vehicles. Industry and transit systems are trending towards low floor. For a similar cost, low floor vehicles provide modern technology that offers the ability to travel at the same speeds, increased flexibility, compatibility with adjacent traffic and easier integration with the surrounding land uses, streets, sidewalks and pathway systems.

	Length	Capacity*	Estimated Cost
Low Floor Vehicle	80m	415	\$18.50m
High Floor Vehicle	75m	417	\$18.75m

\*Capacity = Planning/Practical Capacity = 75% of AW2 (all seats taken and 4 people/m2)

The low floor vehicles are longer and provide for increased capacity per length creating less dead space on trains and platforms, improved passenger flow and more passenger doors. Improved distribution and an enhanced customer experience are achieved with longer, low floor vehicles. Calgarians will also benefit from overall better accessibility with low floor technology.

**4. COVID-19 profoundly reduced transit ridership throughout the city and threatens to do so in the mid to long term. Given that the rationale for the Green Line proposal is heavily dependent on ridership, has The City redone these models in light COVID-19 and the recent oil crash?**

At the Green Line Committee on 2020 June 01, Administration presented a slide deck titled "Green Line Re-Casting Business Case for COVID-19 and Economic Recovery" This presentation outlined four potential scenarios which have been evaluated with respect to recovery from both COVID-19 and the current economic recession. The presentation outlined that through almost all scenarios the Green Line Stage 1 meets the ridership demand and demonstrates the need for the Green Line Stage 1 project.

**5. Why has the Nose Creek alignment been eliminated from consideration? What are the relevant costs, benefits, and tradeoffs?**

In 2014, Council approved Centre Street North as the optimal route for the North Central LRT as it served a high ridership corridor, supported redevelopment along the route, and assisted in achieving The City's long-term transportation and land use goals. Council re-approved this decision in 2017.

The Nose Creek alignment did not adequately serve communities south of Beddington Trail and thus a parallel high frequency bus network would still be required, duplicating operating costs. The LRT can travel faster in Nose Creek, but there is limited population in the Nose Creek and adjacent to the stations. Access to the downtown from the Nose Creek alignment would either be via connection to the Blue line adjacent to the Calgary Zoo, or via a long switchback through Inglewood, Ramsay and the Beltline. Both connections to the Downtown had significant impacts to travel time, ridership, and cost.

The vision developed for the North Central LRT Route Planning Study was for a transit service that improves mobility in existing and new communities in North Central Calgary, connecting people and places and enhancing the quality of life in the city.

**6. Has administration considered a Green Line southeast-only route that does not go north of the Bow River?**

A number of options were considered as part of the Stage 1 option evaluation. A southeast only Green Line that terminates at either 7 Avenue S.W. or 2 Avenue S.W. has been evaluated and the cost benefit for the southeast only alignments are lower than the recommended Stage 1 alignment from 16 Avenue N. to 126 Avenue S.E. To validate the Stage 1 recommendation, an evaluation of the alignment from 2 Avenue S.W. to Seton was evaluated and it performed lower from a cost benefit perspective than the recommended Stage 1 alignment from 16 Avenue N. to 126 Avenue S.E.

**7. What is the capital cost increase if the Green Line goes further south to the South Health campus?**

The cost to extend the Green Line from the Shepard station to the Seton station is approximately \$0.9B.

Please feel free to reach out to me should you have any further questions on this topic.

Sincerely,

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