

Purpose

Green Line is seeking an additional investment from the Government of Alberta and other partners to align the benefits and project's scope, from Shepard in the southeast to Eau Claire in downtown, with current fiscal realities. Such an investment would confirm the Green Line LRT project's alignment with Alberta government priorities and secure future direct benefits for Calgarians. This includes infrastructure investments that support a comprehensive regional rail network, residential/hotel/commercial development, and delivery of more housing.

Funding Request

Additional Capital Funding Needed: \$1,724 billion plus additional land from the City of Calgary, the Government of Alberta, and the Government of Canada.

Key Themes

1. **Alberta's Share of Federal Funding:** Highlight federal investments in other provinces. Highlight the importance of Alberta government advocacy to Calgary and Alberta getting a fair share of federal transit infrastructure funding.
2. **Growth Pressures – Calgary's Rapid Population Growth:** Calgary's population growth necessitates improved infrastructure to manage housing and transportation needs. *Calgary was the fastest-growing major municipality in Canada in 2023. 5.6% growth and 75,000 new Calgarians represents the most since the early 80s.*
3. **Growth Pressures – Housing:** Green Line Phase 1 has the potential to *unlock 114,000 new housing* units through transit-oriented development.
4. **Growth Pressures – Transportation and Passenger Rail Master Plan:** Green Line will be crucial to supporting the success of Alberta's passenger rail master plan, a future Calgary Union Station (which Green Line can adapt its alignment to be even closer aligned), and Blue Line LRT expansion to the airport.
5. **Growth Pressures - Traffic Congestion:** Reduce congestion and improve commuter times, shifting 4.8 million trips from auto to LRT annually. *Auto travellers save 10% in journey time* due to less traffic congestion, while *Green Line transit travellers will save 20-25 minutes compared to existing bus service in the southeast.*
6. **Economic Impact:** Create 20,000 direct and indirect jobs for Phase 1 construction. Once operational, Green Line supports economic productivity by providing access to 190,000 jobs within walking distance of Green Line.

7. **Infrastructure Project Costs and Fiscal Responsibility:** Address cost increases and emphasize fiscal responsibility through value engineering and scope changes.
8. **Environmental Impact:** Support Alberta's emissions reduction plan with Green Line removing 26,750 tonnes of GHGs annually.

Request for Additional Investment

- **Additional Capital Investment Needed:** \$1,724 billion plus additional land from the City of Calgary, the Government of Alberta, and the Government of Canada.
- **Total Capital Committed:** \$4.9 billion from the City of Calgary (\$1.56B), the Government of Alberta (\$1.54B), and the Government of Canada (\$1.53B).

Budget Numbers

Green Line Capital Costs:	\$6,547 billion
Green Line Capital Budget:	(\$4,903 billion)
Total Green Line Shortfall:	\$1,644 billion
City Capital Costs:	\$80 million
Additional Land Costs	██████████
Total City and Project Shortfall	██████████

Additional land is being considered to facilitate near seamless movements between transport modes. The overall land assemblage also creates a significant opportunity to develop a larger cohesive development in the area with enhanced land value and property tax uplift.

Budget Background

- **Total Capital Funding Committed:** \$4.9 billion from the City of Calgary (\$1.56B), the Government of Alberta (\$1.54B), and the Government of Canada (\$1.53B).
- **The Green Line has \$4.9B in total capital funding from the City of Calgary, the Government of Alberta, and the Government of Canada.** Like all other major infrastructure projects in North America, costs have been impacted by inflation, supply chain disruptions, market conditions, and key labour and skills shortages.
- **The \$4.9B budget for Green Line was set in 2015**, and the alignment for the first stage of the overall 46 km project vision was approved by City Council in 2020. The provincial and federal governments provided their final approval on Phase 1, from Shepard to Eau Claire in 2021.

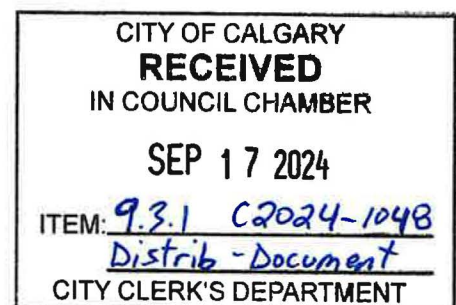


Cost Reductions

- During the Development Phase, which began in May 2023, Green Line has worked collaboratively with contractors to reduce project costs, demonstrating the value of the open book negotiation process.
- Value engineering efforts have focused on the alignment, structures, stations, tunnel, Maintenance and Storage Facility, systems, and traffic management. **To date these efforts have resulted in significant cost reductions of approximately \$400 million.** Some of the material value engineering examples include:
 - MSF design and layout optimization;
 - Change from 3-Car to 2-Car Consist (while meeting 2076 forecasted demand);
 - Structural wall optimization at various locations along the alignment;
 - Station elevation adjustments (e.g., Ramsay/Inglewood; 26 Avenue station location);
 - Improved tunneling productivity;
 - Use of ballast on guideways and bridges;
 - Eliminating Bridges (e.g., 46 Avenue SE); and
 - Reducing elevated guideway lengths (Ogden Road; 11 Street).
- Change to **contracting strategy**, from DBF to multi-contract, will result in **~\$600M reduction**.
- **Deferral of underground station reduces cost by ~\$300M** and change from underground to **at-grade station at 4 Street Station** is a **~\$400M reduction**.

Phase 1 Scope

- From **Shepard, in the southeast, to Eau Claire in Downtown**, and connected into the Red and Blue Lines, and three MAX BRT.
- **Full 18km alignment** of twin track including a bored tunnel.
- **12 stations** and three Park and Ride facilities along the alignment.
- Maintenance & Storage Facility (MSF) at Shepard





Green Line Governance

- Unlike many other major infrastructure projects in Canada, Calgary's Green Line LRT is led by an independent Board of Directors. This additional governance was a requirement from the Province and part of the 2020-2021 provincial review.
- The Board is comprised of Don Fairbairn (Chair), Ian Bourne (Vice Chair), Janet Annesley, Larry Beasley, Patricia McLeod, Marcia Nelson, Bharat Mahajan, Fred Cummings, and David Duckworth.
- The Board also has substantial executive experience building major infrastructure projects at many of Canada's top engineering, finance and oil and gas companies. Recruited by an external firm who received applications from more than 300 candidates, the province reviewed and approved the Board composition in Q4 2020.
- The Board oversees an experienced executive team led by CEO Darshpreet Bhatti. Darshpreet has been responsible for complex transit infrastructure projects including the Metrolinx Hurontario Light Rail Transit Project and Region of Waterloo Rapid Transit (LRT/BRT) Project. He has also been involved in navigating and delivering major city-building initiatives, including the Toronto Waterfront Revitalization, the City of Brampton AcceleRide Project, and the City of Windsor Detroit River Tunnel project, providing genuine leadership to the team and with stakeholders to realize the full potential of each project.

Calgarians Support Green Line

- In advance of main construction, Green Line reached out to Calgarians to understand their questions and concerns about construction, and to solicit overall project feedback.
- Local Calgary firm, Stone-Olafson was engaged, and they undertook a scientifically controlled survey, an open-engagement survey tool and facilitated a series of focus groups.
- From the research, Calgarians are overwhelmingly supportive (~90%) of the Green Line and view it as a critical investment in Calgary's future.

Key Themes and Supporting Points

Key Themes	Supporting Points
Alberta's fair share of federal funding	<ul style="list-style-type: none"> • The Alberta government has been defending Alberta's priorities and fighting for a fair share of federal funding for the province. • Premier Danielle Smith and the Alberta government have been great champions of Albertans and their advocacy is critical to getting a fair share of federal transit infrastructure funding for Calgary and Alberta. • In Ontario, the Investing in Canada Infrastructure Program's Public Transit Infrastructure Stream has already approved over 400 projects to improve public transit. The federal government has committed \$8.3 billion to the program, and the provincial government has committed \$7.3 billion. • In 2021, the Government of Canada invested up to 40% of four projects to a total of \$10.4 billion in what its news release called the biggest public transit investment in GTA history for four projects (Scarborough Subway Extension - \$5.5 billion; Eglinton Crosstown West - \$4.7 billion; Ontario Line - \$10.9 billion; Yonge North Subway Extension - \$5.6 billion). <ul style="list-style-type: none"> ○ On June 21, 2024, a Metrolinx project report showed that the Ontario Line is now going to cost \$27.2 billion, a 43% increase from two years earlier.
Growth pressures – Calgary's rapid population growth	<ul style="list-style-type: none"> • Calgary was the fastest-growing major municipality in Canada in 2023. 5.6% growth and 75,000 new Calgarians represent the most since the early 80s. • Calgary to grow by 121,700 new residents from 2023 – 2026, according to the City's population outlook. • Calgary Metropolitan Area to grow by 188,500 new residents from 2023-2026, according to the City's population outlook. • 53% of the 169,000 people that moved to Alberta in 2023 moved to the Calgary Economic Region according to Statistics Canada.
Unlocks housing through transit-oriented development (growth pressures – housing)	<ul style="list-style-type: none"> • Transit-Oriented Housing Development: Opportunity to unlock up to 114,000 much-needed housing units through strategic transit-oriented development. • Housing supply is a significant issue in Calgary. CMHC estimates that Canada needs about 3.5 million additional housing units by 2030 to restore affordability. • 1 in 5 Calgary households can't afford their housing: According to the City's 2023 Housing Needs Assessment, one in five Calgary households couldn't afford their housing, a problem that is accelerating due to the housing and affordability crisis and Calgary's population growth.
Passenger rail master plan, (growth)	<ul style="list-style-type: none"> • Crucial part of future Passenger Rail Master Plan: A strong LRT network within Calgary is crucial to the success of a passenger rail master plan for the province.



<p>pressures - transportation)</p>	<ul style="list-style-type: none"> • The Green Line alignment can be adapted to further integrate with a future Calgary Union Station: A multi-modal hub in the City of Calgary, which would connect more Calgarians with the current LRT network and all modes of passenger rail. • Blue Line LRT expansion to the Calgary airport will allow communities along the Green Line to access the airport through Calgary’s LRT network.
<p>Traffic congestion (growth pressures - transportation)</p>	<ul style="list-style-type: none"> • As the city’s population grows, so will the demands on our transportation network. Without new options like the Green Line, our roads and existing transit system will continue to become more congested. • Less congestion on major north-south arterials for easier movement of goods, labour and services within the city. 4.8 million trips would be shifted from auto to LRT annually. • Commuter time savings: Auto travellers save 10% in journey time due to less traffic congestion, while transit travellers who use Green Line will save 20-25 minutes compared to existing bus service in the southeast. Estimated Value of Time (VOT) of \$1.275B. • Deerfoot Trail impacts: Without Green Line, a significant expansion to Deerfoot Trail would be required to accommodate future population growth.
<p>Job creation, economic productivity, and economic corridors</p>	<ul style="list-style-type: none"> • 20,000 direct and indirect jobs will be created building Phase 1. • 1,000 workers per day will work on the Green Line project during peak construction. • 190,000 jobs within walking distance and 450,000 within bussing distance: Green Line will support economic productivity by providing access to 190,000 jobs within walking distance of stations and nearly 450,000 jobs in Calgary (nearly 30% of all jobs) within a fifteen-minute bus ride of a Green Line LRT station. A number that will only grow as more than 100,000 new jobs are expected in north and southeast communities over the next 25-30 years.
<p>Infrastructure project costs, Green Line fiscal responsibility, urgency, and risk of delays</p>	<ul style="list-style-type: none"> • Major infrastructure and transit infrastructure projects across North America are facing rising costs driven by inflation, supply-chain disruptions, market conditions and key skills shortages. • Through negotiations, the positions taken by contractors have been vetted through extensive due diligence led by the Board, Green Line Program Team and supported by CSIX, a consortium of third-party firms providing expertise in infrastructure engineering, procurement, construction, project controls, and urban development – as well as other experienced consultants and advisors. • Green Line cost reductions achieved through Development Phase negotiations: <ul style="list-style-type: none"> ○ Value engineering: ~\$400M saved ○ Scope changes: ~\$700M saved (station deferral and horizontal alignment) ○ New multi-contract strategy: ~\$600M saved



	<ul style="list-style-type: none"> • Additional delays will increase costs: If the current procurements and contracts are cancelled, which could result from further delays, we expect an additional \$723M in costs to be incurred. • Uncertainty drives costs and impacts reputation: All three levels of government face the potential of rising costs and reputational damage with further uncertainty or delay of the Green Line project, not just for Green Line but all capital infrastructure investments. • Urgency: Time-sensitive due to potential for contractor exit and loss of contractor resources and negotiated costs/terms.
<p>Connecting Calgarians to work, downtown, major attractions and communities</p>	<ul style="list-style-type: none"> • Daily trips and new transit riders: More than 50,000 daily trips on opening day, and almost 18,000 new transit riders. • 180,000 Calgarians downtown in 30 minutes: With Phase 1 of Green Line completed, 180,000 Calgarians would be able to travel downtown within 30 minutes by LRT or bus. • Transit options for 70,000 Calgarians living within a 10-minute walk of Green Line. • Future Event Centre and Rivers District development: In addition to bringing Calgarians downtown, Green Line will bring Calgarians to the future Event Centre and Rivers District, and when the future Blue Line expansion to the airport is complete, be able to bring riders to the airport within Calgary’s LRT network.
<p>Supporting Alberta’s Emissions Reduction and Energy Development Plan</p>	<ul style="list-style-type: none"> • Support the made in Alberta emissions reduction plan: As per the Alberta government, the Emissions Reduction and Energy Development Plan, “is Alberta’s approach to enhance our position as a global leader in emissions reductions, clean technology and innovation, and sustainable resource development.” • Green Line Phase 1 reduces GHGs by 26,750 tonnes annually. • Shifts 4.8 million auto trips to LRT annually, while also reducing traffic congestion.
<p>Changing the alignment</p>	<ul style="list-style-type: none"> • The process of revising the design, completing additional land acquisition and utility relocation, means there is no way to simply pivot to another option. • The estimated cost of \$723M of a new procurement is based on escalation, premiums associated with an additional market engagement, costs for downsizing the overall team and any new operating costs associated with a delay in scope. It does not include the cost of completing current projects, any risk allowance associated with a lack of market engagement or litigation risk due to existing development contracts.