



Green Line Board **Report**

ISC: Unrestricted

Item #8.1

Report #GLB2022-0653

Green Line Board March 2022 Progress Report

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1 Executive Summary

1.1 March Highlights

The Request for Qualifications (RFQ) was released on March 31, 2022, using the Design-Build-Finance (DBF) model with a Development Phase. The release of the RFQ is an exciting and significant milestone for the Green Line LRT Project and follows the announcement of the new fleet of low-floor LRVs and beginning of the Beltline Downtown Utility Relocation Project (BDURP).











The initial LRV Infrastructure Interface Package (IIP) was reviewed and approved for incorporation in the DBF with Development Phase procurement documents while continuing to work through the LRV design progression. The IIP provides LRV design information in a format which is focussed specifically on interfaces with the infrastructure and organized by specific discipline and assets. The function of the IIP is to concisely convey information on the LRV which is pertinent to the design and construction of the infrastructure. The IIP will be updated as the LRV design progresses through the Development Phase.

BDURP continues to move forward with the Beltline East deep utility relocation work starting in April 2022. The Green Line team continues to support the third-party utility providers with their civil work, which is expected to ramp up significantly in April 2022. The tender package for the deep utility work in the Downtown and Beltline West is scheduled for release on April 1 and close on April 29, 2022.

The recruitment for the Green Line Leadership Team is complete with the addition of the Construction Director who will join the team in April 2022 and brings significant construction experience in high-profile mega projects throughout Alberta.

1.2 Project Status Dashboard

Functional Area	Overall Program Status	Last Month's Status	Comments
Health & Safety	●	●	There were no safety incidents with Green Line personnel, consultants, and contractors in March. Mandatory vaccination for City employees and contractor vaccination declaration requirements were lifted in March. Mask use is no longer mandatory in the office but is still recommended when in close proximity of others and in large groups.
Environmental	●	●	Site specific Phase 2 Environmental Site Assessment (ESA) work began for three properties in the Downtown area and six properties in the Southeast area. The Phase 2 ESAs are expected to be completed by the end of June 2022.
Stakeholder Relations	●	●	Stakeholder impact assessments for 4 Street S.E. station area were completed. Pre-construction planning and stakeholder outreach continues in other BDURP

Functional Area	Overall Program Status	Last Month's Status	Comments			
			<p>construction areas, with information sessions scheduled for early May 2022.</p> <p>Green Line shared information about upcoming construction activities for BDURP at the Culture + Entertainment District's key stakeholder update meeting in March.</p>			
Schedule			<p>The DBF with Development Phase RFQ was released on March 31, 2022.</p> <p>BDURP Beltline East construction is on track to start in April 2022. Completion milestones are on track.</p>			
Cost			The Green Line team continues to proactively monitor various elements of the project, including risks associated with BDURP and escalation.			
Quality			<p>Quality Management System orientation was provided for the Green Line Leadership Team.</p> <p>The implementation of the Program Quality Management Plan was reviewed and approved by the Green Line Leadership Team.</p>			
LEGEND*:	On Plan 	At Risk 	Off Plan 	Not Started 	Not Applicable	N/A

*Definition of legend for the dashboard in Appendix 1

1.3 Project Highlights

Project	Summary of Status this Month	April Look Ahead
Phase 1	RFQ was released on March 31, 2022.	<p>Prepare for and hold the RFQ Applicants' Meeting and respond to RFQ-related Requests for Information (RFIs).</p> <p>Begin work on the Delivery Partner RFP.</p> <p>Continue to progress the preparation of RFP procurement documents.</p> <p>Continue discussions with project owners in other jurisdictions.</p>



Enabling Works	A revised Guaranteed Maximum Price (GMP) submission was submitted by PCL for Beltline East segment for review by the Green Line team.	Continue work with PCL to finalize the Beltline East revised GMP. PCL provided the construction schedule information, along with deep utility schedule for Beltline East. The schedule related to third-party utilities has been requested and will be consolidated to establish a baseline schedule The deep utility tender package for Downtown and Beltline West is scheduled for release on April 1 and close on April 29, 2022.
LRV	The IIP to inform the Phase 1 DBF procurement was completed.	Continue progress towards completion of Conceptual Design Review (30%) for the LRV Supply Agreement.

1.3 Financial Summary as of end of March 31, 2022

Category	Committed Cost	Cost to Date	Cost Year to Date
Owner's Cost	68,901,394	68,701,394	3,425,308
Design & Engineering	278,129,361	243,914,409	7,463,143
Construction, Land & Other Assets	490,128,309	407,587,830	5,067,700
Bus Rapid Transit	3,343,573	3,343,573	49,666
Grand Total	840,502,637	723,547,205	16,005,817

**Details on specific inclusions in Appendix 1.*

1.4 Milestone Schedule

Near term milestones and achievements for the project include:

- March 2022 – Completion of LRV Infrastructure Interface Package (Achieved)
- March 2022 – Phase 1 DBF with Development Phase RFQ – Issue to Market (Achieved)
- April 2022 – BDURP – Beltline East construction to begin
- End of Q3 2022 – Phase 1 DBF with Development Phase RFP Release

1.5 Risk Management

Below are some of the key-risk items that continue to be addressed by the team:

- Competing pressure in the North American marketplace may limit the pool of qualified teams interested in participating in the Phase 1 DBF with Development Phase procurement:
 - Steps have been taken to improve the Phase 1 DBF with Development Phase procurement process and documents based on feedback received through recent market soundings to make the procurement more balanced, reasonable, and attractive to the market.

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- Market and economic trends:
 - The Green Line team continues to assess market changes due to the current economic climate. Regular due diligence is ongoing with external consultants to ensure alignment with current market trends.

The risk register and mitigation strategies are continuously reviewed and updated through the Risk Management process.

2 Health and Safety

2.1 Overall Program

There were no safety incidents on the Green Line project for the month of March 2022.

The March safety focus was a return to Daylight Savings Time on March 13, 2022. Statistics show that the result of turning clocks ahead one hour ahead increase safety incidents.

The City followed Alberta Health regulations with the lifting of mandatory vaccination and mask use on March 1, 2022, as well as lifting contractor vaccination declaration requirements.

The Green Line team continued to provide oversight to ensure safety compliance by Green Line staff, consultants, and contractors at various project sites as well as to observe any public activity issues along the alignment.

Overall Program Metrics

The following chart contains the recorded incidents for the rolling 12-month period as of March 31, 2022:

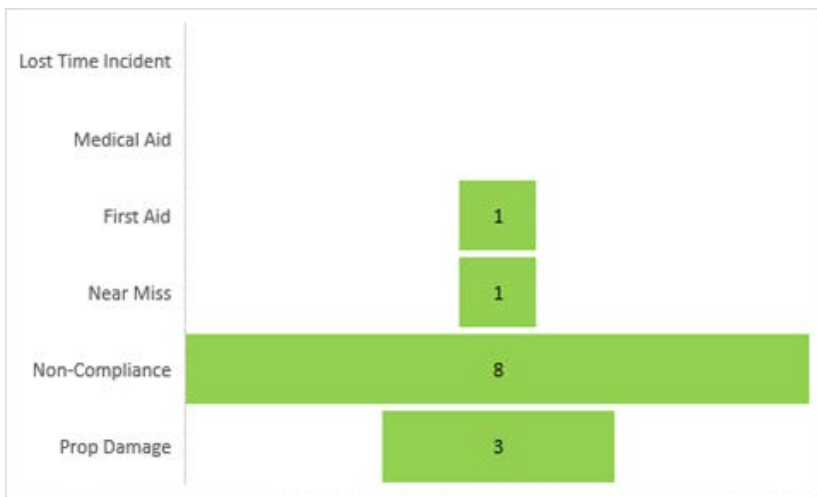


Table 1 and Table 2 provide additional information on safety incidents and safety metrics. There were no safety incidents with Green Line personnel, consultants, and contractors in March.



Table 1: Green Line Safety Incident Frequency Statistics

Performance Indicator		Green Line & City Staff	Contractors	Green Line, City Staff & Contractors
TRIFR: Total Recordable Injury Frequency Rate (MA +LTI)	per 200,000 hrs	●	●	●
	per 1,000,000 hrs	●	●	●
LTIFR: Lost Time Injury Frequency Rate	per 200,000 hrs	●	●	●
	per 1,000,000 hrs	●	●	●

** Statistics based on rolling 12-month period from March 31, 2021 to March 31, 2022*

Table 2: Overview of Safety Metrics for the 2022 Calendar Year as of February 28, 2022.

Metric	February	2022 YTD Incidents	Days since Last incident
Lost Time Incident	0	0	1065
Medical Aids	0	0	737
First Aids	0	0	293
Near Misses	0	0	302
Safety Non-Compliance	0	1	63
Property Damages	0	0	322



Appendix 1 – Dashboards Legends

	On Plan	At Risk	Off Plan
Health and Safety	Zero LTIs or Scheduled monthly site inspections completed with < 2 missed or Joint OH&S committee meetings and inspections on track or Green Line COR Internal Maintenance Audit completed with minor findings or all mandatory training complete	One LTI or ≤5 scheduled site inspection not completed or missed a Joint OH&S committee meeting or inspection or Green Line COR Internal Maintenance Audit completed with major findings or <90% mandatory training not completed	More than one LTI or >5 scheduled site inspections not completed or multiple Joint OH&S committee meetings or inspection not completed or Green Line COR Internal Maintenance Audit failed or less than 75% mandatory training complete
TRIFR: Total Recordable Injury Frequency Rate (MA +LTI)	Per 200,000 hrs <0.12 Per 1,000,000 hrs <0.60	Per 200,000 hrs ≥0.12 Per 1,000,000 hrs ≥0.60	Per 200,000 hrs >0.30 Per 1,000,000 hrs <1.50
LTIFR: Lost Time Injury Frequency Rate	Per 200,000 hrs <0.00 Per 1,000,000 hrs <0.00	Per 200,000 hrs ≥0.00 Per 1,000,000 hrs ≥0.00	Per 200,000 hrs >0.13 Per 1,000,000 hrs <0.65
Environmental	Overall environmental requirements are progressing as defined and work plans and budgets are being accurately managed	Specific environmental management subjects are being addressed and progressing; reliance on other project disciplines, information and inputs to complete the work may cause temporary delays	Failing to meet contractually required environmental obligations causing delays and complications for the Contractor and/or Owner
Stakeholder Relations	Minimal risk of reputational damage or Localized stakeholder issues	Moderate risk of reputational damage or Multiple stakeholder issues that require urgent action	Severe risk of reputational damage or Major risk with funding partners
Schedule	SPI ≥ 1.0 or	SPI 0.9-0.99 or	SPI <0.9 or



	No change to critical activities/milestones	Delay of critical milestones by less than 4 weeks	Critical activities delayed by more than 4 weeks
Cost	CPI \geq 1.0 or Costs forecast within the Budget excluding retained contingency	CPI 0.95-0.99 or Costs forecast to be over Budget and <30% retained contingency	CPI < 0.95 or Cost forecast to be > Budget + 30 % retained contingency
Quality	Quality requirements adequate/defined or in progress or Audits performed per plan with no/minor findings or NCR identification and resolution are with expectations	Quality requirements not adequate/defined in at least one area or Audits performed per plan with one or more major findings or NCR identification and resolution are not trending downward	Quality requirements not adequate/defined in multiple areas or Audits not performed or performed with many major findings or Significant non-conformance with contract terms

Note: Ranges of KPIs currently under review.

Financial Summary Legend

Owner’s Costs: Include City of Calgary Staff Time, Communications, Software, and General Corporate Overheads and Inter- Business Unit costs.

Design & Engineering: Includes all OE costs as well as general Project Consultants costs.

Construction, Land & Other Assets: Includes Land, Enabling Works, and Quick Win build costs.

Bus Rapid Transit: Includes all costs related to the Bus Rapid Transit work for Green Line.

Committed Costs represent issued PO values only for Design & Engineering and Construction, Land & Other Assets. For Owner’s Costs and Bus Rapid Transit these are primarily costs incurred to date.