



# Green Line Board October 2022 Progress Report

ISC: Unrestricted



# 1 Executive Summary

## 1.1 October Highlights

Following the release of the Phase 1 Design Build Finance with Development Phase (DBF-DP) Request for Proposal (RFP) to the two pre-qualified proponent teams on September 26, 2022, the procurement process is proceeding as per schedule. Following the conclusion of the RFP evaluation in Q1 2023, one of the proponent teams will be selected to become the DBF-DP Development Partner during an approximately 12-month long development phase to advance design, determine the risk allocation, establish price, and confirm a project schedule.

The deep utility relocation work in the intersection of Olympic Way and 12 Avenue SE is now complete. The remaining roadway work is being completed to allow for the full intersection to reopen in early November 2022. Coordination between area partners in the Beltline East and Downtown continues for ongoing detours to minimize traffic and pedestrian impacts in preparation for the upcoming works.

Coordination between City colleagues, Calgary Municipal Land Corporation (CMLC), Calgary Stampede and Calgary Sport and Entertainment Corporation (CSEC) continued to support planning for the Calgary Flames regular season home opener on October 13, 2022, and the corresponding increase in vehicle and pedestrian traffic in the Beltline area. Green Line partially reopened two lanes of traffic for all Calgary Flames home games while City colleagues integrated full lane reversals and signal light revisions at multiple intersections to support Calgarians entering and exiting Stampede Park. The changes were supported by enhanced communications through Green Line and all partners and their channels to help Calgarians plan their trip in advance. The traffic accommodations will continue until the intersection is fully open which is expected to occur in early November 2022.

The pictures below show the partial opening of the Olympic Way and 12 Ave SE intersection and remaining work to fully open the intersection.





## Next Month Look Ahead

As part of the LRV contract, Construcciones y Auxiliar de Ferrocarriles (CAF) is providing an LRV mock-up, which is now in transit and expected to arrive in November 2022. Green Line is coordinating with Calgary Transit to receive, review and store the mock-up once it arrives.

As part of the procurement process, Green Line will continue to review requests for information and participate in meetings with the two pre-qualified proponent teams.

The work in Beltline East will achieve a major milestone in early November 2022 with the full reopening of the Olympic Way and 12 Avenue SE intersection. This will facilitate traffic and pedestrian movements in the area for Calgary Flames home games and major events through the winter.

The following construction activities for Beltline Downtown Utility Relocation Project (BDURP) are occurring in November 2022:

### *Beltline*

- Begin the installation of storm, water, and sanitary infrastructure in the intersection of 12 Avenue SE and 6 Street SE and along 12 Avenue SE.
- Continue manhole and duct bank installation work on 5 Street SE between 11 Avenue and 12 Avenue SE.
- Complete duct bank work at the following locations:
  - Centre Street north of 11 Avenue SE.
  - 1 Street SE between the laneway and 11 Avenue SE.

### *Downtown*

- Begin duct bank relocation work at the following locations:
  - 3 Avenue SW between 3 Street SW and 2 Street SW.
  - 4 Avenue SW between 2 Street SW and 1 Street SW.
- Continue gas line relocation work on 5 Avenue SW between 4 Street and 2 Street SW.
- Continue duct bank relocation installation work on 2 Avenue SW between 3 Street and 2 Street SE.
- Continue duct bank relocations work at the following locations:
  - 7 Avenue SW between 2 Street and 1 Street SW
  - 1 Street SW between 7 Avenue and 2 Avenue SW
- Begin installation of two storm manholes on 5 Avenue SW west of 2 Street SW

## 1.2 Program Status Dashboard

The table below provides the program status dashboard update for October 2022 including the overall program status and a comparison to the previous month.



Functional Area	Overall Program Status	Last Month's Status	Comments
Health & Safety	●	●	<ul style="list-style-type: none"> <li>There were three safety incidents in October 2022.</li> <li>Green Line has had no Lost Time Incidents (LTI), Medical Aid (MA) or First Aid (FA) incidents in the past year.</li> </ul>
Environmental	●	●	<ul style="list-style-type: none"> <li>Site specific limited Environmental Site Assessment (ESA) work is ongoing.</li> </ul>
Stakeholder Relations	●	●	<ul style="list-style-type: none"> <li>Connected with more than 160 businesses and key stakeholders in October 2022.</li> <li>Met commitment to area partners to partially re-open the Olympic Way and 12 Avenue SE intersection in time for Calgary Flames season home opener.</li> </ul>
Schedule	●	●	<ul style="list-style-type: none"> <li>Phase 1 DBF-DP RFP activities are on schedule.</li> <li>BDURP construction is on schedule.</li> <li>LRV mock-up delivery is on schedule.</li> </ul>
Cost	●	●	<ul style="list-style-type: none"> <li>Green Line continues to proactively monitor program costs.</li> <li>Appropriate mitigation measures for key risks continue to be established, reviewed, and implemented.</li> </ul>
Quality	●	●	<ul style="list-style-type: none"> <li>Program Quality Management Plan implementation continued with ongoing oversight of BDURP construction works, and LRV Supply project quality compliance.</li> </ul>

\*Definition of legend for the dashboard in Appendix 1

### 1.3 Financial Summary as of October 31, 2022

Category	Committed Cost	Cost to Date	Cost Year to Date
Owner's Cost	\$77,562,665	\$77,083,038	\$11,806,952
Design & Engineering	\$282,294,095	\$263,543,263	\$27,091,997
Construction, Land & Other Assets	\$539,005,253	\$438,018,031	\$35,497,901
Bus Rapid Transit	\$4,527,211	\$4,527,211	\$1,233,304
<b>Grand Total</b>	<b>\$903,389,224</b>	<b>\$783,171,543</b>	<b>\$75,630,154</b>

\*Details on specific inclusions in Appendix 1.



## 1.4 Milestone Schedule

As work progresses for Green Line, near term milestones and achievements for the program include:

- Q4 2022 – Delivery of LRV mock-up to Calgary (enroute)
- Q1 2023 – Completion of LRV Preliminary Design Report (PDR) Submissions (on-going)
- Q1 2023 – Phase 1 DBF-DP Development Phase to begin

The completion of the LRV PDR submissions has been moved to Q1 2023 from Q4 2022 in this reporting period. Discussions are underway with CAF to address the PDR schedule. The revised completion date does not impact the program schedule and will not delay subsequent LRV deliverables.

## 1.5 Risk Management

Risk is continually monitored by Green Line. Below are some of the key risk items for October 2022 that continue to be addressed by the team:

- Green Line continues to monitor financial market changes due to the current economic climate.
  - Regular external due diligence is ongoing as required to support Green Line.
- The market is unwilling to accept certain risks that have been transferred to the private sector in similar projects.
  - Green Line is proceeding with a strategy to utilize a DBF with Development Phase to best allocate, mitigate, and manage risks. This strategy takes into consideration successful market precedents.
  - Utility relocation works that are currently underway provide higher confidence to the prospective applicants in minimizing risks and encourage active participation through the procurement process.
- Utility relocation works in Beltline and Downtown are ongoing in tight working areas, which can potentially impact travelling public and pedestrians.
  - Green Line continues to proactively engage and notify stakeholders of potential construction related impacts (e.g., road closures).

## 1.6 Stakeholder Relations

On November 15, 2022, Green Line is hosting a Business Information Session event to provide local suppliers, contractors, and businesses with information on the procurement process while also introducing them to the two pre-qualified proponent teams. While Phase 1 will be led by a consortium with previous experience delivering projects of similar size and complexity, the construction will rely on the local industry. As part of the event communications, Green Line launched its own LinkedIn profile to ensure that businesses and business owners receive project information through a business focused channel. As of October 31, 2022, more than 490 people had followed the account.

In addition to the construction notices sent to more than 160 stakeholders in Beltline and Downtown, the direct stakeholder outreach for October 2022 is summarized below.

Stakeholder Activity	Quantity
Business outreach*	75
Residential/property outreach*	31
Email/social/311 requests	10
Key stakeholder/partner meetings	57
Information sessions/events	1

\* Outreach includes calls, meetings, and on-site visits.



Business and community video profiles continue to drive strong engagement. Three business and two community profiles were shared in October 2022, generating almost 17,000 views on Green Line social media platforms.

## 2 Health and Safety

### 2.1 Overall Program

Green Line continues to provide oversight to ensure safety compliance by Green Line staff, consultants, and contractors at construction sites.

There were three safety incidents on Green Line in October 2022. Each incident resulted in minor property damage and no injuries occurred.

On October 11, 2022, duct bank relocation work in Beltline West was being performed by a Third Party resulted in a gas line service connection being struck. Green Line immediately addressed the root cause by advising Third-Party utility companies to ensure all underground utilities are located using tracer wire and hydrovac in advance of any excavation activity.

A second incident on October 11, 2022, included an articulating loader contacting the front bumper of an unoccupied water truck in Beltline East. Prior to this incident, a site wide safety stand down was arranged by Green Line to emphasize the importance of safety and to take all necessary precautionary measures to mitigate any future safety issues. After the incident, Green Line immediately met with the Contractor again and issued a letter of concern requesting the Contractor to provide a comprehensive plan to proactively mitigate potential recurring safety issues. The Contractor subsequently provided a plan and identified additional measures to enhance safety at the project site such as conducting daily audits, and providing additional trainings such as Trenching and Excavation, Heavy Equipment Operation, and Excavation/Ground Disturbance Program. The implementation and effectiveness of the measures is being monitored.

On October 22, 2022, a public vehicle hit a construction fence installed to secure the work zone in Beltline East. No work was happening at the time and the incident which resulted in some damage to the fence. Police attended the scene and any further action, if required, shall be led by law enforcement agencies.

#### Overall Program Metrics

The following tables contain the recorded incidents and non-compliance for the Program:

**Table 1: Green Line Safety Incident Frequency Statistics**

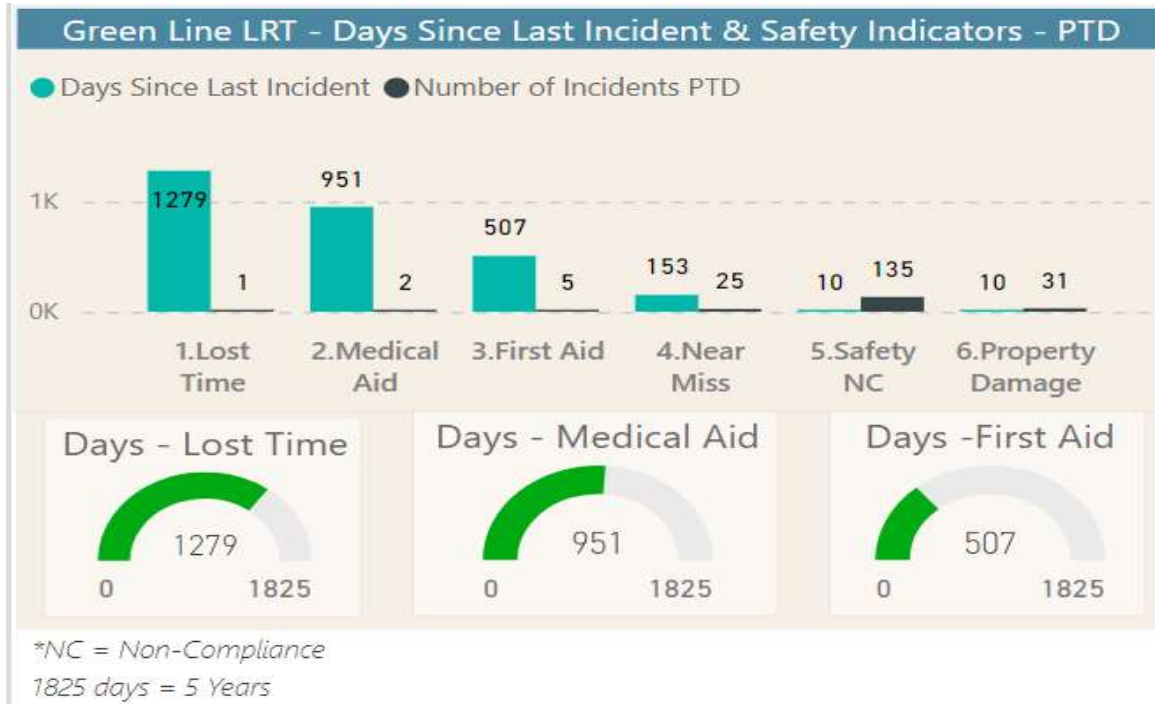
Performance Indicator		Green Line & City Staff	Contractors	Green Line, City Staff & Contractors
TRIFR: Total Recordable Injury Frequency Rate	per 200,000 hrs	●	●	●
<i>*Statistics based on a rolling 12-month period from October 31, 2021, to October 31, 2022</i>				





## Overview of Safety Metrics as of October 31, 2022

The safety metrics are highlighted in the chart below and represent the Program to Date (PTD).



Safety targets continue to be met and safety will remain a focus for Green Line as BDURP construction activity continues in Beltline and Downtown. Safety Targets include zero Lost Time Incidents (LTI's) for all Green Line related work, compliance with monthly inspections on enabling works, requirement to input all safety records into the Green Line database, maintaining joint Occupational Health & Safety committee representation and performing safety audits.

An example of a Near Miss was a vehicle in close proximity to construction equipment. Examples of Safety Non-Conformance include workers not wearing safety glasses or smoking within the work zone. Examples related to Property Damage include a zoom boom contacting a street sign and a loader contacting a fence or equipment.

### Certificate of Recognitions Audit

Green Line completed the 2022 Certificate of Recognitions (COR) external audit interviews in October 2022. The audit ensures Green Line compliance with The City's Safety Management System. The final report is anticipated to be delivered to Green Line before the end of 2022. A safety audit action plan will be developed to address any findings or opportunities for improvement.



## Appendix 1 – Dashboards & Financial Summary Legends

### Dashboards Legends

<b>Health and Safety</b>	<p>Zero LTIs or</p> <p>Scheduled monthly site inspections completed with &lt; 2 missed or Joint OH&amp;S committee meetings and inspections on track or</p> <p>Green Line COR Internal Maintenance Audit completed with minor findings or all mandatory training complete</p>	<p>One LTI or</p> <p>≤5 scheduled site inspection not completed or missed a Joint OH&amp;S committee meeting or inspection or</p> <p>Green Line COR Internal Maintenance Audit completed with major findings or &lt;90% mandatory training completed</p>	<p>More than one LTI or</p> <p>&gt;5 scheduled site inspections not completed or multiple Joint OH&amp;S committee meetings or inspection not completed or</p> <p>Green Line COR Internal Maintenance Audit failed or less than 75% mandatory training complete</p>
<b>TRIFR: Total Recordable Injury Frequency Rate</b>	<p>Per 200,000 hrs</p> <p>≤1.33</p>	<p>Per 200,000 hrs</p> <p>&gt;1.33 and ≤2.66</p>	<p>Per 200,000 hrs</p> <p>&gt;2.66</p>
<b>Environmental</b>	<p>Greenline environmental requirements and permits are progressing and adhere to Municipal/Provincial/Federal Obligations.</p> <p>Quality of life impacts (noise, vibration, dust, light) resulting in minimal complaints from stakeholders or elected officials.</p>	<p>Specific Environmental permits or requirements are in progress; reliance on approving authorities timelines may cause temporary delays. Delays not expected to impact critical path.</p> <p>Quality of life impacts (noise, vibration, dust, light) resulting in moderate complaints from stakeholders or elected officials.</p>	<p>Contract requirements conflict or falling to meet the Municipal/Provincial/Federal obligations. Risk to schedule critical path or budgets.</p> <p>Quality of life impacts (noise, vibration, dust, light) resulting in significant public complaints from stakeholders or elected officials.</p>
<b>Stakeholder Relations</b>	<p>Minimal risk of reputational damage or localized stakeholder issues</p>	<p>Moderate risk of reputational damage or Multiple stakeholder issues that require urgent action</p>	<p>Severe risk of reputational damage or Major risk with funding partners</p>
<b>Schedule</b>	<p>No delay to critical activities or critical milestones</p>	<p>Delay to intermediate milestones by less than two weeks</p>	<p>Delay to critical activities or critical milestones</p>





<b>Cost</b>	Costs forecast within the budget	Costs forecast to be over budget by less than 35% of retained contingency	Cost forecast to be over budget by more than 35 % retained contingency
<b>Quality</b>	Quality requirements adequate/defined or in progress or  Audits performed per plan with no/minor findings or  NCR identification and resolution are within 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  NCR(s) remain open that impact the safety/security and quality of new infrastructure or would adversely affect the ability to achieve Substantial Completion or MSF Completion

### 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.