



# Green Line Board **Report**

ISC: Unrestricted

## Green Line Board June 2022 Progress Report



# 1 Executive Summary

## 1.1 June Highlights

The Request for Qualifications (RFQ) for Phase 1 DBF with Development Phase (DBF-DP) closed on June 23, 2022, and the evaluation process began on June 25, 2022. Following the evaluation, recommendations will be made to the Green Line Board, and with their approval, Green Line will release the Request for Proposal (RFP) for DBF-DP.

Workshops with the Owner's Engineer (OE) towards the finalization of the Technical Performance Requirements (TPRs) are ongoing. The Reference Concept Design (RCD) is completed and was submitted by the OE for the Green Line Technical Team's review. The RCD and TPRs are an essential piece of work required to move forward with the RFP for DBF-DP and required significant work from the team.

Progress was made on the Beltline Downtown Utility Relocation Project (BDURP) with the deep utility and casing installations in the Beltline East work area. The initial work in the 5 and 6 Street intersections was completed and all roadways and sidewalks were re-opened by the end of June 2022 and ahead of the Calgary Stampede.

### Next Month Look Ahead

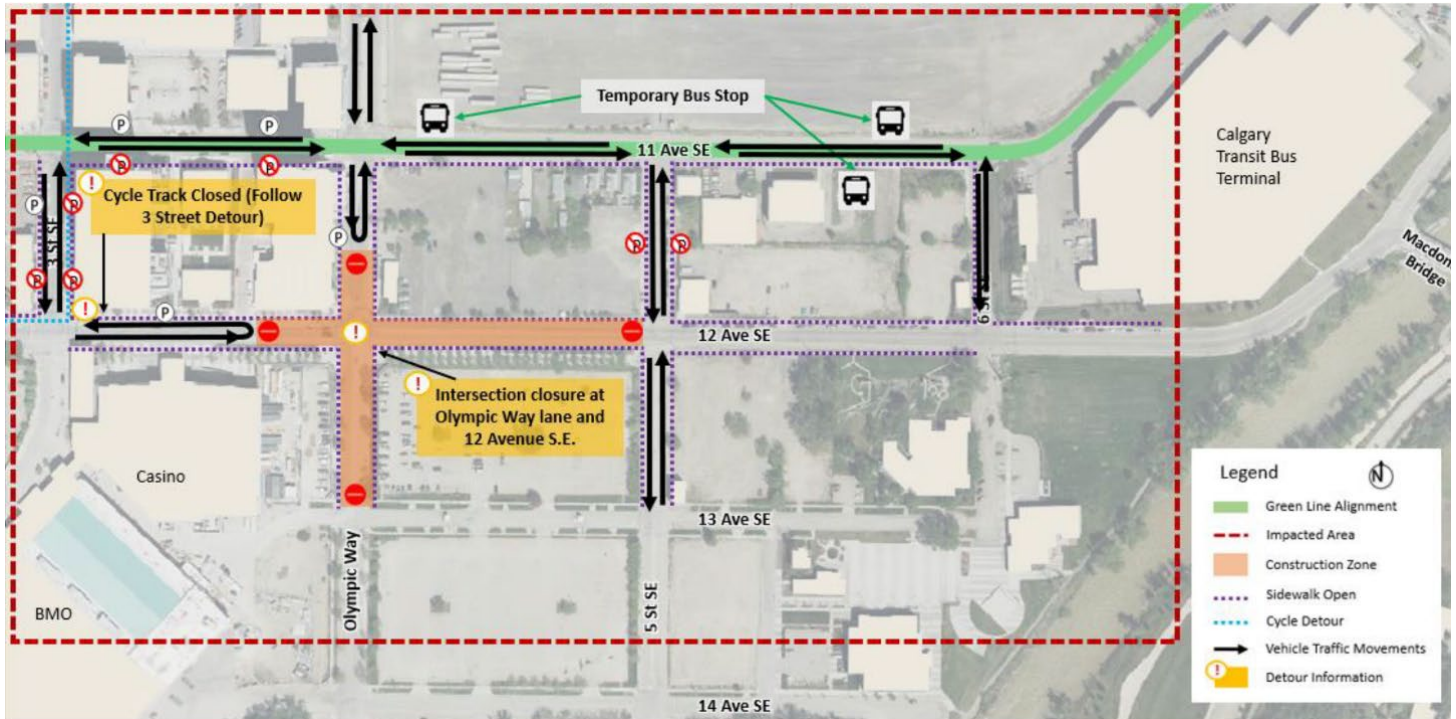
The RFQ evaluation process for DBF-DP RFQ will continue through July and Green Line continues to work on the finalization of the RFP documents for the DBF-DP.

Construction of the LRV mock-up will be completed and subsequently received at a Calgary Transit facility in Q4 2022 for further review and engagement with stakeholders. Weekly technical coordination meetings continue as the design of the LRV is advanced.

During Stampede, Green Line will focus on construction work outside of the Beltline to ensure access to the Stampede for pedestrians and traffic is maintained to the extent possible. Following Stampede, the intersection of 12 Avenue and Olympic Way S.E. will be closed for work including installation of sanitary and storm trunks. Advance notice for pedestrian and traffic access will continue to be provided to businesses and residents in the area. Closure of this intersection will include the following traffic accommodations to allow for continued access for businesses as shown in the diagram below:

- Installation of five variable message boards around the downtown to provide advance notice of the intersection closure and other traffic pattern changes.
- Implementation of a lane reversal of 11 Avenue S.E. east of 3 Street to accommodate two-way traffic, including signal modifications.

Olympic Way & 12 Avenue S.E. Intersection Closure



1.2 Program Status Dashboard

Functional Area	Overall Program Status	Last Month's Status	Comments
Health & Safety	●	●	<ul style="list-style-type: none"> <li>There were no safety incidents in June 2022.</li> <li>Green Line has had no Lost Time Incidents (LTI), Medical Aid (MA) or First Aid (FA) incidents in the past year which is a significant safety milestone.</li> </ul>
Environmental	●	●	<ul style="list-style-type: none"> <li>Site specific Phase 2 Environmental Site Assessment (ESA) work is ongoing. Work at the Mustard Seed site is expected to commence in July 2022.</li> <li>Field work for two properties (2010 11 St S.E. and Lilydale) in the Southeast area were completed.</li> <li>Field work is complete for Eau Claire and Victoria Park and Phase 2 ESA reports are due mid-July 2022.</li> </ul>
Stakeholder Relations	●	●	<ul style="list-style-type: none"> <li>Green Line connected directly with more than 60 businesses and key stakeholders in June 2022 to provide a quarterly Green Line program update and communicate upcoming BDURP construction works.</li> </ul>



Functional Area	Overall Program Status	Last Month's Status	Comments
Schedule			<ul style="list-style-type: none"> <li>Phase 1 DBF-DP procurement activities are on schedule.</li> <li>BDURP Beltline East construction and LRV mock-up construction is on schedule.</li> </ul>
Cost			<ul style="list-style-type: none"> <li>Green Line continues to proactively monitor program costs.</li> <li>Mitigation measures for various key risks continue to be reviewed and implemented.</li> </ul>
Quality			<ul style="list-style-type: none"> <li>Program Quality Management Plan implementation continued with review of Phase 1 RFP quality requirements, oversight of Enabling Works quality compliance and reviews of contractor and LRV supplier quality and inspection plans.</li> </ul>

\*Definition of legend for the dashboard in Appendix 1

### 1.3 Financial Summary as of end of June 30, 2022

Category	Committed Cost	Cost to Date	Cost Year to Date
Owner's Cost	72,361,433	72,265,927	6,989,841
Design & Engineering	279,614,564	253,409,547	16,958,281
Construction, Land & Other Assets	500,594,242	422,632,059	20,111,929
Bus Rapid Transit	4,215,006	4,215,006	921,099
<b>Grand Total</b>	<b>856,785,246</b>	<b>752,522,539</b>	<b>44,981,150</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:

- June 2022 – Phase 1 DBF-DP RFQ submissions received (Complete)
- June 2022 – Roadways and sidewalks reopened in Beltline East to support traffic and pedestrian access for Stampede 2022 (Complete)
- Q3 2022 – Completion of the LRV mock-up
- Q3 2022 – Phase 1 DBF-DP RFP Release
- Q4 2022 – Delivery of LRV mock-up to Calgary

### 1.5 Risk Management

Risk is continually monitored by Green Line and below are some of the key risk items that continue to be addressed by the team:



- Green Line is competing with other North American projects. This may lead to a limited number of willing/capable bidders reducing competition among applicant teams.
  - Green line is proceeding with the approved procurement strategy, Design-Build-Finance (DBF) with a Development Phase, which incorporates feedback received from the market. Green Line has further engaged with prospective applicants through Project meetings.
- Green Line continues to monitor financial market changes due to the current economic climate.
  - Regular due diligence is ongoing.
- 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).
- Ongoing pandemic/health concerns.
  - Implemented safety protocols including a hybrid work model to effectively manage project needs while continuing to look for ways to limit potential impacts to the Program team and stakeholders.

## 1.6 Stakeholder Relations

Communications and information sharing is ongoing along the Green Line alignment to update Calgarians and businesses of progress as well as construction activities that may impact them.

In addition to construction notices sent to more than 50 stakeholders in Beltline East, the direct stakeholder outreach for June 2022 is summarized below.

Stakeholder Activity	Quantity
Business outreach*	54
Residential/property outreach*	12
Email/social/311 requests	23
Key stakeholder/partner meetings	10
Information sessions/events	1

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

Outreach to businesses in June 2022 occurred mostly in Beltline East and West and included in person distribution of a business-focused brochure to raise awareness about the BDURP project and potential construction impacts, and to introduce members of Green Line’s community and business relations team. Targeted stakeholder meetings were held in both Beltline East and West and Downtown to share specific construction plans and to discuss potential business continuity opportunities for upcoming utility works.



Key stakeholder and partner meetings focused on coordination of upcoming works in Eau Claire and Chinatown as well as ensuring that construction activity in the Beltline East area was wrapped up in time for Calgary Stampede as committed.

## 2 Health and Safety

### 2.1 Overall Program

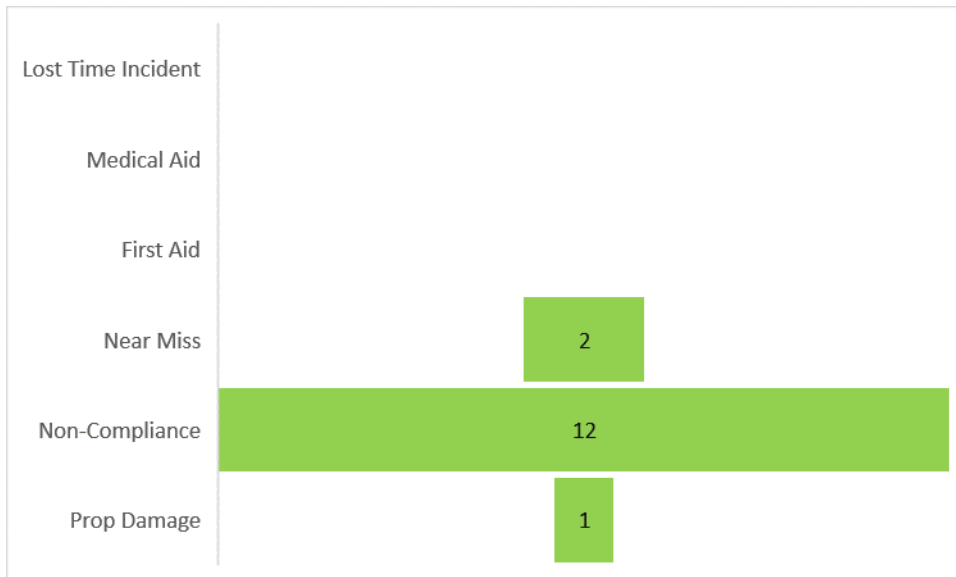
There were no safety incidents on Green Line for the month of June 2022.

Green Line continued to provide oversight to ensure safety compliance by Green Line staff, consultants, and contractors at the Beltline/Downtown utility relocation construction and Lilydale drilling sites.

#### Overall Program Metrics

The following chart contains the recorded incidents for the rolling 12-month period as of June 30, 2022:

#### Green Line LRT 12 Month Incident Pyramid



NOTE: Non-Compliance incidents will continue to be reviewed and monitored with applicable lessons-learned being incorporated into safety plans.

Table 1 and Table 2 provide additional information on safety incidents and safety metrics.

**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	●	●	●

\* Statistics based on a rolling 12-month period from June 30, 2021, to June 30, 2022



**Table 2: Overview of Safety Metrics for the 2022 Calendar Year as of June 30, 2022**

Metric	June	2022 YTD Incidents	Days since Last incident
Lost Time Incident	0	0	1156
Medical Aids	0	0	828
First Aids	0	0	384
Near Misses	0	2	30
Safety Non-Compliance	3	6	6
Property Damages	0	1	70

One of the three instances of safety non-compliance in June was related to a safety chain not in place for an open man-hole and was addressed immediately by putting the chain back in place. Other non-compliance items included a person not wearing safety glasses which was quickly addressed and cell phone use at work. The cell phone policy use was clarified with the contractor during a subsequent discussion.

Positive observations were also noticed at work sites including workers in confined space wearing gas detectors with spotter in place at surface, flag persons present at gate accesses and slings and chains tagged with lifting capacities.

Safety targets continue to be met and safety will continue to be a focus for Green Line as BDURP construction activity increases in Beltline East.



## 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.