































## Green Line LRT




### Green Line Board April 2021 Progress Report

# 1 Executive Summary

## 1.1 Project Status Dashboard

	Overall Program	Enabling Works	LRVs	Segment 1	Segment 2	Owner Activities	Comments
Health & Safety			N/A	N/A	N/A		Green Line safety continues to be well managed through COVID pandemic with associated safety incidents.
Environmental			N/A				Baseline environmental data collection for contaminated sites, biophysical, fisheries, trees, and noise is progressing well.
Stakeholder Relations			N/A				Overall red due to uncertainty of provincial review impacting how stakeholders view the project.
Schedule							Program is delayed pending the completion of the provincial review. Schedule performance in Enabling Works continues to be low. However, this is not impacting critical path.
Cost							Current estimate under review due to increased pressures around escalation cost factor, functional design development and schedule delays.
Quality					N/A		Program quality management plan in

										development with expected issue in May 2021.
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<b>LEGEND*:</b>	On Plan		At Risk		Off Plan		Not Started		Not Applicable	N/A
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\*Definition of legend for the dashboard in Appendix 1

**Overall** – Work with the province to address the recommendations brought forward through their project review continues to progress well. Procurement strategy and cost and risk estimates remained the focus of provincial discussion. Additional questions on design and geotechnical risk in the downtown were raised and reviewed.

Contract discussions with proponent for the downtown utility relocation Construction Manager procurement concluded.

LRV procurement is underway and the segment 1 LRT RFP remains paused.

Segment 2 Functional Plan design, planning and engagement concluded in April for the Beltline, Downtown/Eau Claire, Bow River Bridge and Centre Street. The functional plan will be brought to Green Line Committee in May 2021.

**Health & Safety** – The Project is on plan with safety management system compliance. There is a lag in mandatory training for safety excellence certification due to in-person training risks (pandemic precautions) for first aid and leadership. Review of contractor site specific safety plans prior to commencement of field work and maintaining monthly safety inspections and Green Line Joint OH&S inspection and meetings are all on track. Continue auditing City, Consultant and Contractor compliance to respective Safety Management Systems and performance.

**Environmental** - The overall Environmental Management program for Green Line segment 1 and segment 2 remains on plan this month with the main focus on segment 2 activities. segment 2 activities include specific baseline environmental discipline work for: contaminated sites, biophysical and fisheries assessments, tree surveys, noise assessments, Green House Gases/Climate Lens and Resilience, the Envision Sustainability program and other Permits, Licenses and Approvals support work. Discussions regarding contaminated sites Phase 2 assessments and clean up/ remediation work for segment 1 in advance of construction continue. Final discussions with Alberta Environment regarding Green Line Soil Management Guidelines are underway.

**Stakeholder Relations** – The uncertainty of the provincial review outcome and corresponding lack of clarity in timelines and schedules for the project continues to impact all project stakeholders. Feedback through segment 2 Functional Plan provided significant ongoing project support. The goal remains to provide an update to Calgarians by the end of May 2021.

**Schedule** - Procurement strategy and contracting is a key driver for the schedule and remains an outstanding item with the province. The team continues to work with the province through their review.

segment 1 Enabling Works is nearing completion. The ongoing Enabling Works program continues to be delayed in some areas and does not affect the overall program schedule.

**Cost** – Current estimate under review due to increased pressures around escalation cost factor, functional design development and schedule delays.

**Quality** - Quality Management of the Enabling Works continues with closeout of contracts. Completion of the Green Line Program Quality Management Plan and procedures continued with issue for review anticipated in May. A Green Line Project Quality Plan is under development for segment 2 Utilities Relocation project.

## 1.2 Financial Summary for April 2021

Category	Total Committed Costs	Expenditures Project to Date	Expenditures Project to Date Previous Month	Expenditures for 2021 to Date
<b>Owner's Costs</b>	\$ 56,812,537	\$ 56,658,490	\$ 55,340,778	\$ 4,950,957
<b>Land</b>	\$ 219,228,391	\$ 219,178,031	\$ 219,094,196	\$ 1,333,736
<b>Design &amp; Engineering</b>	\$ 276,400,474	\$ 217,757,563	\$ 214,834,864	\$ 11,457,189
<b>Construction</b>	\$ 167,723,060	\$ 144,054,046	\$ 142,534,360	\$ 2,395,121
<b>TOTAL</b>	<b>\$ 720,164,462</b>	<b>\$ 637,648,130</b>	<b>\$ 631,804,198</b>	<b>\$ 20,137,003</b>

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

*Design & Engineering: Includes all Owner's Engineer costs as well as general Project Consultants.*

*Construction: Includes Enabling Works and Quick Win build costs*

*Committed Costs present issued PO values only for design & engineering/construction. Land and Owner's costs are incurred to date only.*

*2021 Green Line Forecast is in progress.*

## 1.3 Milestone Schedule

Milestone schedule to be included after completion of provincial review.

## 1.4 Risk Management

Project currently has a high amount of risk and uncertainty. Below are some of the primary risk items for the program right now.

- Finalization of the provincial review, including approval of the business case, which will confirm the funding, updates to the funding agreement and the path forward.
- Vacancies within the leadership team and recruitment is underway to fill these positions.
- Competitive pressure in the marketplace in Canada creates limited available capacity for the proponent expertise required. Procurement strategies are under development to address this risk.
- Time delays and anticipated cost escalation result in increased budget pressure. Further refinement of cost estimates and risk understanding is underway to address these risks.
- Continued delays in moving the program forward has eroded stakeholder and market confidence. Green Line is in regular communication with stakeholders and the market to provide updated information as it becomes available.




There is a detailed risk register and risk management strategies that are regularly reviewed and updated by the team. In addition to internal risk work, a preliminary independent due diligence review of the Risk Management process was conducted this period.




## 1.5 Project Highlights





Project	Summary of Status this Month	Next Month
Overall Program	Work with the province to address the recommendations brought forward through their project review continues to progress well. Review of cost estimates due to COVID related escalation underway.	Work with the province to resolve outstanding items raised during their review and prepare business case submission.
Enabling Works	Four projects within the segment 1 area are on track for completion by July 2021 with project closeout underway where applicable. Identified opportunities for some additional early works that can be completed to de-risk main contract.	Confirm additional Enabling Work Contracts in segment 1 area.  Public announcement of CM contract. Onboarding CM with kickoff meetings

	Contract negotiations with Construction Management (CM) for Utilities Relocation Beltline/Downtown concluded.	and review of 30% Design Report.
LRV	The LRV procurement is proceeding as scheduled, with award of a contract planned in the fall of 2021.	Proceed per schedule.
Segment 1	Segment 1 is currently paused to allow The City to work collaboratively with the province to address concerns raised for the overall procurement and contracting strategy.	Work to complete provincial review including agreement on procurement and contracting strategy.
Segment 2	The segment 2 functional plan and associated reports were completed and presented to the planning sub-committee. Segment 2 public engagement related to the functional plan was concluded.	Segment 2 functional plan and associated reports will be presented to the Green Line Board and Green Line Committee.
Owners Activities	Work is underway to recruit for key positions including Chief Executive Officer (CEO), Chief Operating Officer (COO) with Delivery Director and Director of Business Services recruitment being staggered to support selection of CEO/COO. Board set-up activities continue in support of all Committees and the Board itself.	Recruitment to continue for key positions.

## 2 Health and Safety

	Overall Program	Enabling Works	LRVs	Segment 1	Segment 2	Owner Activities	Comments
Current Period			N/A	N/A	N/A		Green Line safety continues to be well managed through COVID pandemic with associated safety incidents.

Last Period			N/A	N/A	N/A		Green Line safety continues to be well managed through COVID pandemic with associated safety incidents.
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<b>LEGEND*:</b>	On Plan		At Risk		Off Plan		Not Started		Not Applicable	N/A
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\*Definition of legend for the dashboard in Appendix 1

## 2.1 Overall Program

### Near-term Risks and Issues

No.	Detail	Action / Mitigation
1	In-person training unsafe and deferred due to COVID risks.	Resume first aid and leadership for safety excellence training once COVID risks have been overcome.

### Milestones

Milestone	Plan	Forecast	Actual	Comment
	YYYY/MM/DD	YYYY/MM/DD	YYYY/MM/DD	

### Key accomplishments/status

Continued auditing City, Consultant and Contractor compliance to respective Safety Management Systems and performance.

**Safety Culture:** The Green Line’s strong safety culture is reflected in the passion and quality of safety presentations by delivered by Green Line personnel each week which is illustrated in the overall safety KPI metrics below. No Enabling Works were stopped due to suspected or actual positive COVID cases. Protocols for self-health checks prior to going to the office or out to construction sites combined with temperature checks upon arrival at site have worked well with additional on site and in-office protocols to keep COVID out of Green Line work areas.

**The April Safety Focus** was on reporting concerns and incidents and included a “Tip Sheet” as a guide to help properly report an incident. Reporting concerns and doing acts of safety are preventative approaches to eliminate hazardous conditions or actions before a potential injury is realized. Reporting incidents correctly allows for more effective mitigative measures as well as sharing of lessons learned.



In addition, the Alberta OH&S April eNewsletter was forwarded and discussed with all Green Line personnel which provided links to comment on proposed Alberta OH&S Code changes, proactive inspections and April 28 National Day of Mourning to recognize those workers who have been injured or died at their workplace.

**Enabling Works:** Ensuring Green Line, Owner’s Engineer, Consultant and Contractor personnel are executing work in accordance with their safety management systems and Alberta OH&S regulations on CN Track ‘n Tunnel project.

Coordinating with Stakeholder Relations and Calgary Police Service (CPS) on securing and protecting abandoned houses along Ogden Street and Centre Street north while waiting for demolition contracts to be awarded.

Continued review of Site-Specific Safety Plan (SSSP) for South Hill paving work adjacent to Chemtron property. Reviewed CM contractor SSSP and contractor compliance to City safety requirements.

**Upcoming deliverables/activities and Major Milestones**

**Enabling Works:** Continued safety oversight of CN Track ‘n Tunnel construction and hydrovac work along segment 2 in downtown area. Final review of SSSP for South Hill paving work adjacent to Chemtron property. Provide safety support for CM contract in preparation for spring work start.

**Overall Program Metrics**

The following chart contains the recorded incidents for the 12-month rolling average.

Note that no Lost Time Incidents (LTI) nor Medical Aid Incidents (MA) have occurred in the past 12 months which is why the TRIFR and LTIFR numbers at the bottom of this section are all zeros.

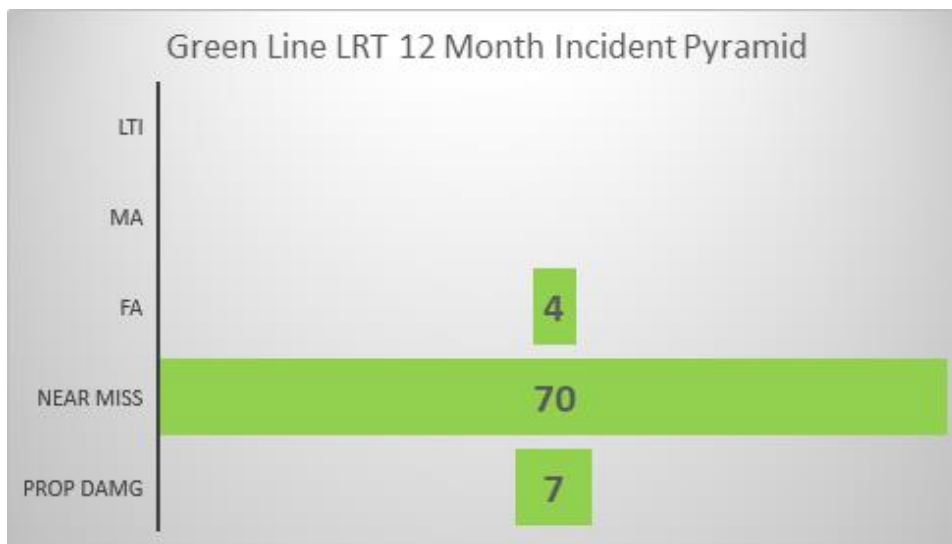


Table 1: Overview of Safety Metrics for the Program



Metric	Current Month	YTD Incidents	Days since Last incident
Lost Time Incident	0	0	726
Medical Aids	0	0	399
First Aids	0	0	189
Property Damage/ Theft Incidents	2	3	23
Near Misses	5	21	10

The two property damages included a broken old sanitary pipe from Hood Industries when contacted by the earthworks excavator on April 1 and the second occurred on April 7 when vandals stole copper cables from site equipment.

Table 2: Lost Time Incidents for Reporting Month Details





Date of Injury	Site/Employer	Lost Time Days	Area of Injury	Incident Description
YYYY/MM/DD	N/A			

There have been no lost time incidents nor medical aids year to date on the Green Line program.

Table 3: Green Line Safety Statistics

Performance Indicator		GL City Staff	Contractors	GL 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 are based on 12 month rolling period April 30, 2020 to April 30, 2021

<b>LEGEND*:</b>	On Plan		At Risk		Off Plan		Not Started		Not Applicable	N/A
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\*Definition of legend for the dashboard in Appendix 1

## 2.2 Enabling Works

Safety oversight and rail safety support on CN Track ‘n Tunnel project with the CN Track and Tunnel construction winding down. Emphasizing keeping mind on task until all work is completed. No Enabling Works were stopped due to suspected or actual positive COVID cases.

**Near-term Risks and Issues**

No.	Detail	Action / Mitigation
1	Rising lumber prices shifting on site theft from copper cables to lumber.	Clean up and demoblization of lumber not in use or anticipated to be needed.

## 2.3 LRVs

## 2.4 Segment 1

**Near-term Risks and Issues**

No.	Detail	Action / Mitigation
1		

## 2.5 Segment 2

**Near-term Risks and Issues**

No.	Detail	Action / Mitigation
1		

## 2.6 Owner Activities

Risks to in-person first aid and Leadership for Safety Excellence training remain due to COVID pandemic. Virtual orientation and safety training ongoing.

**Near-term Risks and Issues**

No.	Detail	Action / Mitigation
1	Expired FA certification for supervisors.	No/limited in office supervision at this time dues to COVID protocols; therefore, risk is low and mitigative plan is at the ready once COVID restrictions are lifted.

## Appendix 1 – Dashboards Legends

	On Plan	At Risk	Off Plan
<b>Health and Safety</b>	Zero LTIs or Scheduled monthly site inspections completed with < 2 missed or Joint OH&S committee meetings and inspections on track or GL 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 GL 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 GL COR Internal Maintenance Audit failed or less than 75% mandatory training complete
<b>TRIFR: Total Recordable Injury Frequency Rate (MA +LTI)</b>	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
<b>LTIFR: Lost Time Injury Frequency Rate</b>	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
<b>Environmental</b>	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

<b>Stakeholder Relations</b>	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
<b>Schedule</b>	SPI $\geq$ 1.0 or No change to critical activities/milestones	SPI 0.9-0.99 or Delay of critical milestones by less than 4 weeks	SPI $<$ 0.9 or Critical activities delayed by more than 4 weeks
<b>Cost</b>	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
<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 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

## Appendix 2 –Stakeholder Engagement Activities

### Summary

During the month of April stakeholder outreach and engagement occurred through general communications, enquiry responses and through a series of virtual information sessions open to the public.

Meetings were held with Community Associations and BIAs, as well as the Bow River Bridge Stakeholder Advisory Group and key project stakeholders. In large part, the focus of engagement activities for the month of April was on the Final Inform Phase of the public engagement and included multiple virtual public information sessions to share progress and recommendations associated with the various project focus areas. Stakeholder sentiment varies with both positive and negative sentiment expressed during the public sessions and there is a desire for more detailed information about impacts and changes anticipated. More opportunities for engagement and ongoing conversations have been offered.

Ongoing stakeholder communications continues with businesses currently operating in proximity to Green Line Enabling Works construction in the communities of Ramsay, Highfield, Ogden and South Hill.

All 311 service requests have been addressed and closed.

### Stakeholder Events / Outreach

Event	Purpose	Date/Time	Method	Attendance
Community Association Meeting (Crescent Heights)	To share progress update on Crescent Heights Planning	2021/04/07	Virtual meeting	Community Association board
Direct stakeholder outreach	Provide project update	2021/04/09	Virtual meeting	Beltline Neighbourhood Association
Direct stakeholder outreach	To share update and contact information with potentially impacted stakeholders	2021/04/11 to 2021/04/13	Letter/ email	Multiple stakeholders
Bow River LRT bridge Stakeholder Working Group (SWG)	To provide project updates including bridge forms being carried forward, and first showing of the Eau Claire/Promenade interface renderings	2021/04/14 11am-1pm	Virtual meeting	SWG members

Green Line Board April 2021 Progress Report

Event	Purpose	Date/Time	Method	Attendance
Final Inform Session	To share overview of Final Inform phase	2021/04/14	Virtual Meeting	CA/BIA
Direct stakeholder outreach	Advise key stakeholders in Inglewood and Ramsay of Elbow River crossing inclusion in upcoming engagement	2021/04/14	Email	Inglewood/Ramsay Standing Stakeholder Committee
Direct stakeholder outreach	To discuss potential GL impacts	2021/04/15	Virtual Meeting	Business owner
Final Inform Session	To share overview of Final Inform phase	2021/04/15	Virtual Meeting	CA/BIA
Downtown/Beltline (segment 2A) virtual presentation	To share Green Line LRT segment 2A, including tunnel alignment	2021/04/15	Virtual Info session	143 registered / 71 at peak attendance
Virtual information session (Drop In)	Self-guided session and public Q & A	2021/04/19	Virtual Info session	8 in attendance
Planning in Crescent Heights virtual presentation	To share updated streetscape and Crescent Heights mobility study	2021/04/19	Virtual Info session	145 registered / 71 at peak attendance
Bow River LRT bridge virtual presentation	To learn about progress on bridge and pathways	2021/04/20	Virtual Info session	146 registered / 70 at peak attendance
Direct stakeholder outreach	Advise key stakeholders in Inglewood and Ramsay that live presentation is posted on web. Show commitment to open communications.	2021/04/20	Email	Inglewood/Ramsay Standing Stakeholder Committee
North Central Mobility & Bus Rapid Transit (BRT) Studies virtual presentation	To share final recommendations	2021/04/21	Virtual Info session	55~ registered / 14 at peak attendance

Event	Purpose	Date/Time	Method	Attendance
Virtual information session (Drop In)	Self-guided session and public Q & A	2021/04/22		19 in attendance

### Stakeholder Enquiries / 311 Service Requests

Type	Themes	Quantity
311 Service Requests	<ul style="list-style-type: none"> <li>– Property impact enquiry</li> <li>– Planning feedback/enquiry</li> <li>– Construction Impact (street cleaning)</li> <li>– Property maintenance</li> <li>– Other</li> </ul>	7 service requests
GL Enquiries/ Comments	<ul style="list-style-type: none"> <li>– Questioning segment 1 alignment in Ogden</li> <li>– Opposition to bridge</li> <li>– CH design suggestions</li> <li>– Bridge design suggestions</li> </ul>	4 emails