

Green Line LRT

Green Line Board June 2021 Progress Report



Green Line Board June 2021 Progress Report

1 Executive Summary

This report is current to June 30, 2021. Since that date there have been significant advancements with the announcement from The Government of Alberta that they had approved the federal funding business case and submitted it to the federal government for review and approval on June 24, 2021. Additionally, on July 7, 2021, the Prime Minister was in Calgary to announce federal support for the Green Line Project. With the conclusion of the provincial review, and the confirmation of federal support, the project can now move forward with verbal confirmation from all three funding partners.

1.1 Project Status Dashboard

	Overall Program	Enabling Works	LRVs	Phase 1	Owner Activities	Comments
Health & Safety			N/A	N/A		Green Line safety continues to be well managed as COVID-19 decreases and return to work plans are moving forward. There was one first aid incident this month.
Environmental			N/A			Contaminated sites remediation and cleanup for several high risk properties has been identified and work is underway.
Stakeholder Relations			N/A			Overall red due to timing uncertainty of the provincial and federal governments reviewing and approving the federal funding business case. Until approvals are publicly announced, the uncertainty impacts stakeholder confidence in the project.
Schedule						The Program schedule is undergoing a baseline update to the schedule for the new Phase 1 procurement strategy. Schedule Performance Index for Enabling Works continues to be low but is expected to improve with the progress of the Beltline/Downtown Utility Relocation Project.



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Cost						Program budget has been updated to reflect execution of Phase 1. Work currently underway is performing well against the updated baseline. The current estimate is under pressure due to changes in escalation cost factor, functional design development and schedule delays.
Quality						Advancement of the ISO 9001 Program Quality Management Plan continued with revision to the draft plan to align with the revised procurement strategy. This item will move back on plan when the Quality Management Plan has been updated for the new procurement strategy.

LEGEND*:	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 – With the conclusion of the provincial review, the Green Line Board announced that the 2020 Council-approved alignment would now be constructed through a new phased procurement strategy.

Segment 1 LRT RFP was cancelled on June 2, 2021 and planning is underway for the Phase 1 Shepard to Eau Claire DBF including the preparation of the procurement documents and a second round of market sounding to inform Phase 1 project decisions. The LRV procurement is underway.

Planning and design for the relocation of utilities in the Beltline and downtown continues. The 60% design drawings will be circulated for review in July. Utility right of way requirements are being determined for the Beltline/Downtown Utility Relocation Project.

Health & Safety – The Project is on plan with safety management system compliance. There is a lag (pandemic precautions) in mandatory training for safety excellence certification due to in-person training risks for first aid and leadership. COVID-19 numbers dropped significantly this month with the stand down of the Local State of Emergency as of June 30. Plans are moving forward for a volunteer return to the Rocky Mountain Plaza office in July and August (within floor capacity limits) and a structured return to the office commencing September 15. There was no negative impact to the Green Line Program in June due to the ongoing pandemic. Review of contractor site specific safety plans prior to commencement of field work, monthly safety inspections and Green Line Joint OH&S inspection and meetings are all on track. Auditing of City, Consultant and Contractor compliance to respective Safety Management Systems and performance continues.

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Environmental - The overall Environmental Management program for Phase 1 remains on plan this month with the main focus still on contaminated sites activities in the southeast. Downtown and Beltline activities include ongoing 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. Final discussions with Alberta Environment regarding Green Line Soil Management Guidelines are well underway and approval should be forthcoming by early August.

Stakeholder Relations – The focus for June has been on updating stakeholders on the conclusion of the provincial review and on pre-construction planning for the Beltline/Downtown Utility Relocation Project anticipated to begin construction fall 2021 in parts of Victoria Park, Beltline and downtown. The team is reaching out to stakeholders, who live and work near the Green Line LRT alignment, to build the stakeholder database in support of planning for future construction. The project team presented a progress update on Business Support Program to the Green Line Board June 18, 2021. The approach and program objectives were informed by input from members of the Business Insights Panel and ongoing opportunities for input from impacted businesses will occur as the program is developed. While the announcement of the Construction Manager for the Beltline/Downtown Utility Relocation Project shows progress, the uncertainty around the outcome of the review and approval of the federal funding business case and corresponding lack of clarity in timelines and schedules for the project continued to impact all project stakeholders.

Schedule – Development of a detailed Phase 1 procurement schedule is underway. Alignment with market expectations and consultant inputs is critical to the development of the detailed schedule. The downtown utility relocation team is working with the Construction Manager to develop a detailed execution schedule. This work will serve as the basis for the utility relocation scope of work over the coming construction seasons. Southeast enabling works projects are nearing completion but behind the original baseline schedule for the current scope of work. Schedule analysis is underway for potential opportunities to progress further critical work.

Cost – The current estimate is under pressure due to changes in escalation cost factor, functional design development and schedule delays. As work in the downtown for land acquisition, utility relocations, and design development progresses the team will forecast updated cost trends.

Quality - The focus for the overall quality program has been ensuring quality requirements are included or considered in all agreements and incorporating the requirements of ISO 9001, the international standard for quality management systems. Following issue of the program quality policy for review, advancement of the program quality management plan and procedures as a subplan to the Program Management Plan continued with revisions to align the plan with the revised procurement strategy. A follow-up Lessons Learned session was facilitated for Enabling Works Construction Manager Utility Relocation project to inform of potential issues and concerns and develop action plans for continuous improvement. Quality Management support for Enabling Works included final review of a contractor project quality plan and providing quality management oversight at project progress meetings.

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Development of the Green Line Project Quality Plan for Enabling Works Construction Manager Utilities Relocation project continued.

1.2 Financial Summary for June 2021

Category	Total Committed Costs	Expenditures Project to Date	Expenditures Project to Date Previous Month	Expenditures for 2021 to Date
Owner's Costs	\$ 60,215,169	\$ 60,150,714	\$ 58,418,455	\$ 8,318,670
Design & Engineering	\$ 275,639,595	\$ 221,774,041	\$ 219,847,235	\$ 15,518,012
Construction & Land	\$ 453,689,874	\$ 366,444,515	\$ 364,826,414	\$ 7,021,462
TOTAL	\$ 789,544,639	\$ 648,369,270	\$ 643,092,105	\$ 30,858,144

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 represent issued PO values only for design & engineering/construction. Land and Owner's costs are incurred to date and include some issued PO values.

1.3 Milestone Schedule

Milestone schedule is under development. Input from market sounding and Green Line consultants is underway to ensure a realistic schedule is set as the baseline.

Near term milestones:

- Fall 2021 - LRV procurement
- Fall 2021 – Beltline/Downtown Utility Relocation project construction start
- Fall 2021 – Baseline schedule

1.4 Risk Management

In June 2021 the project had a high amount of risk and uncertainty as described below. As noted in the opening, following the provincial and federal announcements in July 2021 there has been a significant

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change in the major risks which will need to be updated for future reports. Below are some of the primary risk items for the program as of the end of June 2021.

- Vacancies within the leadership team; recruitment is underway to fill these positions. CEO was announced in July and focus will be on COO and outstanding director positions.
- Competitive pressure in the marketplace in Canada may impact procurement competition. Market sounding is underway to evaluate and mitigate this risk
- 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. Updates to risk mitigations were completed this period with the mitigation owners. At the completion of market sounding a review and recalibration of commercial risks will be undertaken.

1.5 Project Highlights

Project	Summary of Status this Month	Next Month
Overall Program	Provincial review concluded and federal funding business case submitted to the Government of Canada for final review and approval. Segment 1 RFP cancelled, and Green Line Board approves new procurement strategy for Phase 1.	Awaiting approval from federal treasury board and project team focused on restructuring the procurement for Phase 1 from Shepard to Eau Claire.
Enabling Works	<p>Three projects within the Phase 1 area are on track for completion by July 2021 with project closeout underway where applicable. The Highfield pathway project to be completed in August. Supplementary early works in Phase 1 have been identified to de-risk main contract and are continuing in the design and resource allocation phase.</p> <p>Construction Manager has been working to become integrated into all the area construction coordination meetings and has been focused on Beltline east sequencing and scheduling. Owners Engineer working on 60% Deep Utility Design Package to finalize for issuance.</p>	<p>Develop additional Enabling Works contracts in Phase 1 area, assign resources, begin preparation of tender documents and utility notifications. Develop agreement on design and construction with CP for Enabling Works project at 78 Ave SE.</p> <p>60% Deep Utility Design packages will be issued for internal City review by Owners Engineer and comments received by all</p>

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		parties. Construction Manager will initiate early procurement process of steel water feeder main.
LRV	The LRV procurement is proceeding as scheduled with award of a contract planned in the fall of 2021.	Proceed per schedule.
Phase 1	<p>The phasing of the project is revised to be one phase from Shepard to Eau Claire. Procurement documents for the previous Segment 1 are under review and the planning is underway for the preparation of requirements for the former Segment 2A to produce one set of procurement documents for Phase 1.</p> <p>The Station Integration Team is working with landowners to plan and design station entrances into their developments.</p>	<p>Development of the Reference Concept and Technical Performance Requirements for the downtown will commence.</p> <p>Station integration preparation work will continue.</p> <p>Land acquisition negotiations in the downtown will commence.</p>
Owners Activities	Work is underway to recruit for key positions including Chief Operating Officer (COO) with Delivery Director and Director of Business Services recruitment being staggered to support selection of COO.	Recruitment to continue for key positions.



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2 Health and Safety

	Overall Program	Enabling Works	LRVs	Phase 1	Owner Activities	Comments
Current Period			N/A	N/A		Green Line safety continues to be well managed as COVID-19 decreases and return to work plans are moving forward. There was one first aid incident this month.
Last Period			N/A	N/A		Green Line safety continues to be well managed through COVID-19 pandemic with no associated safety incidents.

LEGEND*:	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-19 risks.	Training companies are resuming in-person first aid and leadership for safety excellence training. GL will consider resuming in-person training post September 15

Milestones

Milestone	Plan	Forecast	Actual	Comment
2 Year Lost Time Accident Free with			May 4, 2019 was the last	Green Line personnel, Owner Engineer, consultants and

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over 1.5 million hours worked on the Green Line Program			observed Lost Time Accident on the Green Line Program.	contractors worked over 1.5 million person hours and 2 years since our last Lost Time Incident
City of Calgary Summer Re-Opening Response	2021/06/01	2021/09/15		City of Calgary Local State of Emergency stand down June 30. Volunteer return to office over July and August with scheduled office work commencing September 15.

Key accomplishments/status

The team continued auditing City, Consultant and Contractor compliance to respective Safety Management Systems and performance.

The team coordinated with Stakeholder Relations and Calgary Police Service (CPS) on securing and protecting abandoned houses along Ogden Street and Centre Street north while waiting for historical resources assessment before demolition contracts can be awarded.

Participated in an Emergency Response Planning workshop with Calgary Fire Department (CFD) and Green Line Engineering and Design. The purpose was to discuss scope differentiation between Operational Tunnel Safety (tasked to Engineering Design group) versus Construction Tunnel Safety and Interface with City EMS which is the focus of the Green Line Safety group and CFD.

Safety Culture: The Green Line's strong safety culture is reflected in the passion and quality of safety presentations delivered by Green Line personnel each week which is illustrated in the overall safety KPI metrics below.

The June 2021 Safety Focus was on Working During Extreme Heat Wave conditions including recognizing and reacting to heat exhaustion and heat stroke. Information was provided with referencing links that provide preventative measures against sun exposure including:

- SLIP (on a shirt)
- SLOP (on some sunscreen)
- SLAP (on a hat)
- SLIDE (on a pair of sunglasses)
- SEEK (shade especially during the heat of the day)

For COVID-19, a review of measures toward reducing the number of cases being observed in the City in June 2021 included staying home if you are unwell, wearing masks indoors, washing hands frequently, wiping down workspaces and especially getting vaccinated.

In addition, the Alberta OH&S June eNews Letter was forwarded and discussed with all Green Line personnel which provided guidelines to provincial staged re-opening, vaccinations and more.

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Overall Program Metrics

The following chart contains the recorded incidents for the 12-month rolling average (June 2020 - June 2021).

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.

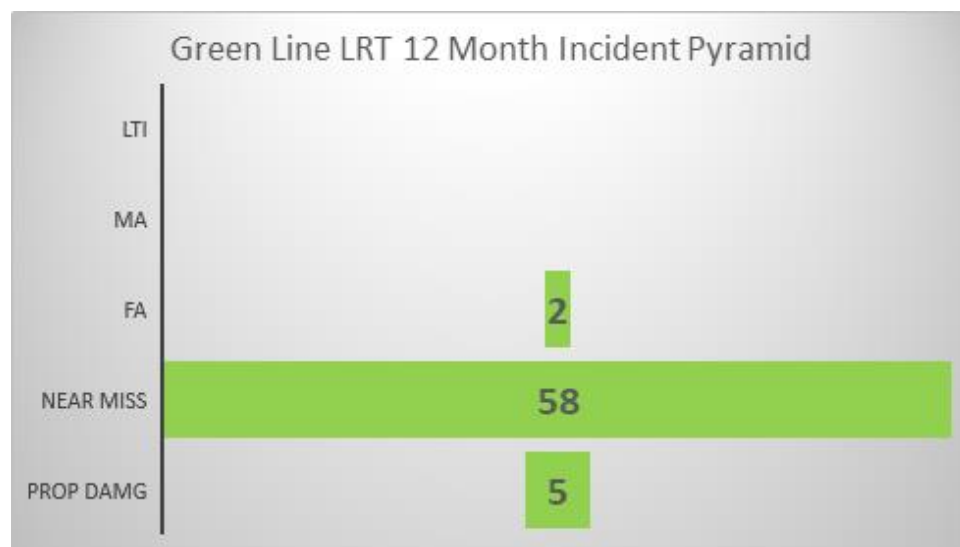


Table 1: Overview of June Safety Metrics for the Program

Metric	Current Month	2021 YTD Incidents	Days since Last incident
Lost Time Incident	0	0	790
Medical Aids	0	0	463
First Aids	1	1	20
Near Misses	0	24	32
Property Damage/Theft Incidents	0	4	38

The first aid incident occurred on June 11 when a soils consultant pinched his finger while conducting a soil density test. First aid was administered and the person returned to work.

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.

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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 May 31, 2020 to May 31, 2021**

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2.2 Enabling Works

The team continued safety oversight and rail safety support on CN Track 'n Tunnel project with the CN Track and Tunnel construction winding down. Emphasized keeping mind on task until all work is completed; project completion is anticipated in July.

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-19 out of Green Line work areas. No Enabling Works were stopped due to suspected or actual positive COVID-19 cases.

The team commenced safety oversight of Ruby Rock contractor for Chemtron utility relocates and access paving work adjacent to South Hill station.

The team continued safety oversight of CM utilities hydrovac and relocations in the downtown area.

Upcoming deliverables/activities and Major Milestones

The team plans to continue safety oversight of CN Track 'n Tunnel construction, Chemtron access paving and CM hydrovac work in downtown area.

The team will ensure 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 all Green Line active work sites.

The team plans to continue developing the Phase 1 Construction Tunnel Rescue Interface and Response Plan with CFD.

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Near-term Risks and Issues

No.	Detail	Action / Mitigation
1	Lifting COVID-19 activity and travel restrictions may see a spike in COVID-19 cases depending on vaccination rate and efficacy.	Monitor COVID-19 number trends and respond as advised by City Manager.

2.3 LRVs

Nothing to report this period.

2.4 Phase 1

Near-term Risks and Issues

No.	Detail	Action / Mitigation
1	None	

Nothing to report this period.

2.5 Owner Activities

Risks to in-person first aid and Leadership for Safety Excellence training remain due to COVID-19 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 due to COVID-19 protocols; training will resume when COVID-19 risk is low and personnel return to RMP which is anticipated mid-September.
2	COVID-19 status based on Federal Guidelines and Alberta Health Services Recommendations	Monitor City of Calgary Summer Re-Opening Response numbers based on lifting some COVID-19 restrictions this summer.



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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 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
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



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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 \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
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



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Appendix 2 –Stakeholder Engagement Activities

Summary

During the month of June, stakeholder outreach and engagement occurred through general communications, enquiry responses, direct stakeholder outreach and a variety of stakeholder meetings and activities.

A project update was communicated through the Green Line newsletter on June 2, 2021 announcing the completion of the Provincial Review, Phase 1 procurement strategy from Shepard to Eau Claire, and the CM contractor and utility relocation project in Beltline and Downtown starting this fall.

A progress update on Green Line's Business Support Program was presented to the Green Line Board on June 18, 2021. The project team met with Councillor Farrell, who authored the Notice of Motion to review the approach, she was supportive. The report was also shared with Council in advance of the Board meeting, no questions or comments were received. Following the Board Meeting, a presentation was made to members of the Business Insights Panel (BIP), who expressed support for the approach and were positive about the opportunities to be able to provide ongoing input as the program develops. BIP meetings will transition to quarterly, with direct outreach focused on areas impacted by upcoming or ongoing construction.

The City of Calgary Spring Survey affirmed that 90% of Calgarians rate the Green Line as important to the City of Calgary, 10 years down the road and later. 91% of Calgarians agree that Green Line LRT will enable Calgarians to better connect people, places and services and 89% agree that the Green Line will be an important addition to Calgary's transit network.

While the general public sentiment is very positive, with direct stakeholders there is concern about the impacts of the change to procurement strategy, particularly around timing of future phases. Direct meetings are being planned for stakeholders in these areas to ensure current discussions are well documented and can be resumed when future phases are advanced. Ongoing stakeholder communications continues with businesses currently operating in proximity to Green Line Enabling Works construction in the communities of Ramsay, Highfield and South Hill.

All 311 service requests have been addressed and closed.

Stakeholder Events / Communications

Event	Purpose	Date/Time	Method	Attendance
Direct stakeholder connection	Responded to individual landowner questions regarding Business Support Program in the Beltline	2021/06/01 to 21/06/22	4 meetings and phone calls	Individual landowners

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Event	Purpose	Date/Time	Method	Attendance
Project Update	Green Line Project Update re: completion of provincial review, Phase 1 procurement strategy and CM contractor	2021/06/02	Green Line Newsletter	All subscribed
Direct stakeholder connection	Responded to Community Association concerns over status of 7044 Ogden Road	2021/06/04	Phone	Community Association (MOCA)
Communication (signage & wayfinding)	Provided proactive signage to alert customers to affected business in South Hill area to road detour and confirm that the business was open during construction	2021/06/08	Initiative	Alberta Cheese Ltd.
Communication (signage & wayfinding)	Provided access brochure for real estate purposes to owner of building located at future South Hill station location	2021/06/18	Initiative	Vacant Industrial property (currently for lease)
Construction impact	Contacted re: deficiency near the hydrovac work that had occurred. Investigation showed it was not Green Line-related, but it was fixed at our expense to ensure good relationship with stakeholder.	2021/05/23	Phone	Bow Parkade
Direct stakeholder outreach	Provided an overview of utility relocation plans. Confirmed that no tunneling would be	2021/06/24	Email	University of Saskatchewan Alumni Hub



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Event	Purpose	Date/Time	Method	Attendance
	happening over the next year.			
Inglewood/Ramsay Combined Stakeholder Meeting	Discussed recent announcements of procurement and utility relocation, as well as the wrap-up of enabling works	2021/06/30	Virtual meeting	Inglewood BIA, Inglewood CA, Ramsay CA

Stakeholder Enquiries / 311 Service Requests

Type	Themes	Quantity
311 Service Requests	<ul style="list-style-type: none"> – Future Phase – Property maintenance (vandalism) (2) – Program (business case) 	4 service requests
GL Enquiries/ Comments	<ul style="list-style-type: none"> – Project scope (2) – Compensation for disruption – Procurement (3) 	5 emails