



transportation
investment
corporation

Monthly Status Report

Reporting Period
November 2023

1. Introduction

1.1 Project Overview

The Broadway Subway Project (“BSP” or “the Project”) is a 5.7-kilometre Advanced Light Rapid Transit (ALRT or SkyTrain) extension to the existing Millennium Line SkyTrain system from its current terminus at VCC-Clark Station to a new western terminus station at Arbutus Street and West Broadway. The Project scope includes:

- 700m of elevated guideway extending west from the existing VCC-Clark Station
- 5 km of underground tunnel
- 6 new underground stations:
 - Great Northern Way-Emily Carr Station;
 - Mount Pleasant Station;
 - Broadway-City Hall Station – designed to integrate with the Canada Line Broadway-City Hall Station;
 - Oak-VGH Station;
 - South Granville Station;
 - Arbutus Station – designed to allow for a future phase of investment to connect rapid transit to UBC.

The Broadway Subway is scheduled to open in 2026.

Additional information and updates about the Project can be found on the Project’s website at <https://www.broadwaysubway.ca/>.

1.2 Project Delivery

Transportation Investment Corporation, a provincial Crown corporation, is delivering and overseeing this \$2.827 billion project. The Project is being delivered under B.C.’s Community Benefits Agreement and the skilled trades workforce will be provided by B.C. Infrastructure Benefits Inc.

Broadway Subway Project Corporation (BSPC) has been selected as the design-build contractor.







The Broadway Subway Project is a key part of the rapid transit program in Metro Vancouver’s Mayors’ Council 10-Year Vision. The Vision is funded by the governments of B.C. and Canada, TransLink, and City of Vancouver. Once constructed, the Broadway Subway will be integrated with the regional transit network and operated and maintained by TransLink.

1.3 Project Goals

Based on the mandate and results of consultation, seven primary goals have been identified for the Project:

- **Transportation:** Fast, reliable, and efficient service that meets current and future capacity needs and integrates with the regional transit network and other modes of transportation.
- **Financial:** Affordable and cost-effective.
- **Environment:** Attracts new riders and reduces vehicle kilometres travelled.
- **Urban Development:** Supports current and future land use development along the Broadway Corridor and integrates with the surrounding neighbourhoods through high-quality urban design.
- **Economic Development:** Creates jobs and facilitates the efficient movement of goods and services during operation.
- **Social and Community:** Safe, secure, and accessible service that improves access to rapid transit for all, while managing impacts on heritage and archaeology.
- **Deliverability:** Constructible and operable.

2. Project Dashboard

		Objectives	Project Status	Comments
Project Delivery	Scope	Project delivered within the approved scope.		<ul style="list-style-type: none"> The Project is being delivered within scope. The Project includes a primarily tunnelled extension of the existing Millennium Line SkyTrain system from VCC-Clark Station to a new station at Arbutus Street.
	Schedule	Project delivered within the approved schedule.		<ul style="list-style-type: none"> The start of piling activities was delayed at some construction locations. Recovery measures have been implemented by Broadway Subway Project Corporation and are being monitored closely. A five-week concrete supplier strike in June 2022 delayed the completion of the base slab at Great Northern Way, which impacted the start of tunnel boring. As a result, Project completion moved from late 2025 to 2026.
	Budget	Project delivered within the approved budget of \$2.827 billion.		<ul style="list-style-type: none"> The Project spending for the month of November 2023 was \$29.3 million and total Project spending to date is \$1.32 billion. Total Federal Recoveries to date are \$430.9 million and City of Vancouver contribution is \$100.3 million. The Project is forecast to be delivered within budget.
	Safety	Take every reasonable step to ensure that work is performed safely and in compliance with all applicable safety regulations, and in accordance with government policy.		<ul style="list-style-type: none"> The Project team monitored the implementation of the health and safety program and performed site visits. There have been four (4) lost time injuries on the Project to date. The Lost Time Injury Frequency Rate (LTIFR) for the Project is 0.22 which is less than the WorkSafeBC 2022 rate of 1.5* for heavy construction and 4.0* for mechanized tunnel. <p>*Injury rate data reflects <i>Large Employer 100+ Person Years</i> employer size.</p>
	Quality	Implement and maintain an effective Quality Management System.		<ul style="list-style-type: none"> Quality monitoring and auditing of select work activities and processes continues. Review of quality documentation submittals continues. Addressing reoccurring Non-Conformity Reports (NCR) and some quality classification issues.
	Environmental	Ensure work is performed in an environmentally responsible manner.		<ul style="list-style-type: none"> Site-specific environmental workplans are being implemented. Weekly environmental monitoring reports are being submitted. Work continues to mitigate/monitor construction noise at all stations. Monthly Province-led audit of environmental program was conducted.

		Objectives	Project Status	Comments
	Design and Construction	Provide design and technical oversight, coordinate and manage activities on site, and conduct compliance reviews.	●	<ul style="list-style-type: none"> Continued finalizing stations design, and progressing systems design. Continued progress on excavation, piling, and utility work. Both Tunnel Boring Machines (TBMs) arrived at Oak-VGH Station. Permanent works are being constructed along the Elevated Guideway and at all six stations.
	Community Benefits	Work collaboratively with BC Infrastructure Benefits Inc. (BCIB) to successfully implement the Community Benefits Agreement (CBA).	●	<ul style="list-style-type: none"> Ongoing coordination with BCIB on permitting requirements. Discussions regarding current and future Project workforce requirements continue.
Partners / Stakeholders	Indigenous Groups	Continue to build and maintain a positive collaborative working relationship.	●	<ul style="list-style-type: none"> Targets for Indigenous contracting opportunities have all been achieved and engagement continues with Indigenous Groups on further opportunities. Continued engagement with Indigenous Groups in relation to the Project and cultural recognition. Project-specific agreements with Indigenous Groups have been finalized.
	Third Parties	Continue to build and maintain positive relationships with Project Partners and other third parties.	●	<ul style="list-style-type: none"> Ongoing third-party engagement for successful Project implementation and integration. Discussions with TransLink regarding Operations and Control Centre (OCC2) integration. Discussions with Canada Line regarding integration with Broadway-City Hall Station.
	Public and Stakeholder Engagement	Continue to build and maintain positive relationships with the community and other stakeholders.	●	<ul style="list-style-type: none"> Ongoing engagement with local businesses, stakeholders, residents, and the public. Continued engagement relating to parking availability.

Status	Description
●	Managing critical issues, negotiating resolution; action required immediately
●	Managing some issues, negotiating resolution; action required in the near term
●	Managing day to day operations

3. Project Documents and Achievements to Date

Project Delivery	Project Planning and Development	<ul style="list-style-type: none"> • Business Case released (2018). • Cost Report released (2018). • Project Overview released (2018). • Risk Report released (2018). • Strategic Options Whitepaper released (2018). • Executed Design-Build-Finance Agreement (August 2020).
	Environmental	<ul style="list-style-type: none"> • Environmental technical studies complete (2017-2018). • Environmental Socio-Economic Report complete (2020). • Environmental Workplans complete (2022). • 2022 annual environmental report submitted (January 2023). • BSPC Construction Environmental Management Plan updated (2023).
	Design and Construction	<ul style="list-style-type: none"> • Geotechnical studies complete (2016-2017). • Reference concept design complete (2018). • Traffic modelling complete (2017-2019). • Geotechnical Subsurface Baseline Report complete (2019). • Geotechnical investigations commenced (2020). • Building abatement complete (2021). • Building demolitions at station sites complete (2021). • Piling for traffic decks complete at Mount Pleasant (2021), Broadway-City Hall (2021), Oak-VGH (2022), South Granville (2022), and Arbutus stations (2022). • Traffic deck installation complete at Mount Pleasant (2022), Broadway-City Hall (2022), Oak-VGH (2022), South Granville (2022) and Arbutus (2023) stations. • Station box excavation complete at Great Northern Way-Emily Carr (2022), Mount Pleasant (2022), Broadway-City Hall (2023), Oak-VGH (2023), South Granville (2023) and Arbutus (2023) stations. • Station box base slab complete at Great-Northern Way-Emily Carr (2022), Mount Pleasant (2022), Broadway-City Hall (2023), Oak-VGH (2023) and South Granville (2023) stations.

		<ul style="list-style-type: none"> Elevated guideway pier and girder installation complete (2023). Both TBMs launched (2022) and have completed more than 50% of the total alignment (2023).
	Province/Other Works	<ul style="list-style-type: none"> TBM power – BC Hydro (2019). Propulsion Power Substations including upgrade to dedicated power at VCC-Clark Station – BC Hydro (2019). Utility relocate at Main Street – TELUS (2019). Utility relocate at Great Northern Way – TELUS/FortisBC/BC Hydro (2019). Civil construction and utility relocate at Arbutus and Cambie – TELUS (2020). Trolley overhead relocations of bus routes 14, 16, and 17 – Coast Mountain Bus Company (2020). Trolley overhead removals of trolley infrastructure on Broadway – Coast Mountain Bus Company (2020). Utility relocate at Cambie – FortisBC (2020). Electrical duct utility relocate at South Granville and Arbutus – City of Vancouver (2021). 901 Great Northern Way building modification completed (2021).
	Community Benefits	<ul style="list-style-type: none"> Community Benefits Agreement (July 2018) BCIB-AIRCC Enabling Agreement (July 2019) Project Definition: Broadway Subway Project (July 2019) BCIB Health and Safety Program (March 2020) BCIB-Contractor Agreement (August 2020) BCIB-Subcontractor Agreement (August 2020)
Partners / Stakeholders	Third Parties	<ul style="list-style-type: none"> Memorandum of Understanding – City of Vancouver (2017). Memorandum of Understanding – TransLink (2018). Canada–British Columbia Integrated Bilateral Agreement for the Investing in Canada Infrastructure Program – Government of Canada (2018) Canada Line Amending Agreement – InTransit BC Phase 1 (2019). South Granville Station Integration Agreement – PCI (2019).

		<ul style="list-style-type: none"> • Vancouver Municipal Agreement – City of Vancouver (2020). • Metro Vancouver Accommodation Agreement (2020). • Broadway Subway Project Support Agreement – TransLink (2020). • Canada Line Amending Agreement – InTransit BC Phase 2 (2020). • Integration Agreement – TransLink (2020). • Great Northern Way-Emily Carr Station Integration Agreement – PCI (2020).
	Indigenous Groups	<ul style="list-style-type: none"> • Capacity Agreement for the Environmental and Socio-Economic Review (2018). • Contracting and employment requirements finalized (2020). • Cultural recognition opportunities selected by Indigenous Groups (2021).
	Public and Stakeholder Engagement	<ul style="list-style-type: none"> • Phase 1 and 2 engagements (led by TransLink and City of Vancouver) <ul style="list-style-type: none"> ○ Phase 1 engagement (December 2016 – February 2017). ○ Phase 2 engagement (May 2017 – July 2017). • Broadway Subway Project Engagement (Province-led) <ul style="list-style-type: none"> ○ Local business survey (July 2019 – December 2019). ○ Community engagement (October 2019 – December 2019). ○ Opened Community Office (Fall 2019). ○ Established 24/7 construction information line (December 2019). • Station Design Advisory Process (BSPC-led) <ul style="list-style-type: none"> ○ First engagement occurred (November – December 2020). ○ First engagement summary report released (2021). ○ Second engagement (April – May 2021).

4. Monthly Highlights and Three Month Lookahead

4.1 Safety

Scope:	<ul style="list-style-type: none">• Oversee and monitor health and safety:<ul style="list-style-type: none">○ Management plans and systems.○ Goals, objectives, and performance metrics.○ Roles and responsibilities.○ Planning and coordination of major Project activities.○ Compliance with WorkSafeBC, municipalities, and government agencies.○ Continual improvement process.○ Risk management.○ Statistics and trends.
Monthly Highlights:	<ul style="list-style-type: none">• Performed weekly site visits to observe compliance and areas of improvement.• Focused on monitoring the management of public safety.• Monitored compliance with the tunnelling work activities.• Received the reported Lost Time Injury Frequency Rate (LTIFR):<ul style="list-style-type: none">○ The Project to date LTIFR is 0.22, which is less than the 2022 WorkSafeBC rate of 1.5* for heavy construction and 4.0* for mechanized tunnel. <p>*Injury rate data reflects <i>Large Employer 100+ Person Years</i> employer size.</p>
Three Month Lookahead:	<ul style="list-style-type: none">• Continue to:<ul style="list-style-type: none">○ Provide health and safety support to involved parties.○ Perform regular health and safety inspections at Project sites.○ Oversee the health and safety planning and performance for tunnelling.○ Monitor the management of public safety.• Perform regular health and safety spot audits on specific activities or elements of BSPC's safety plan.

4.2 Quality

Scope:	<ul style="list-style-type: none">• Establish quality management Project objectives and performance measures.• Manage Project quality management activities.• Monitor relevant quality management performance metrics.• Outline relevant quality management processes and activities.
Monthly Highlights:	<ul style="list-style-type: none">• Completed three quality audits related to BSPC's construction management processes and completed six quality observation field visits related to BSPC's quality activities at Elevated Guideway, Great Northern Way-Emily Carr Station, Broadway-City Hall Station, Mount Pleasant Station, South Granville Station, and Arbutus Station.• Initiated eleven NCRs this month related to construction processes. To date there have been a total of 362 NCRs (26 open and 336 closed).• Working to address reoccurring NCRs and some quality classification issues.

Three Month Lookahead:	<ul style="list-style-type: none"> • Continue regular monitoring of quality activities by means of discipline specific field visits, meetings, and other review and communication processes. • Continue scheduled quality system audits and surveillances. • Continue to review quality documentation submissions.
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4.3 Environmental

Scope:	<ul style="list-style-type: none"> • Oversee BSPC's measures to manage risk identified in the Environmental and Socio-Economic Review (ESR). • Review environmental submissions including the Construction Environmental Management Plan (CEMP) and Environmental Work Plans (EWPs). • Monitor CEMP implementation through review of weekly environmental monitoring. • Support engagement with Indigenous Groups on CEMP implementation.
Monthly Highlights:	<ul style="list-style-type: none"> • Continued weekly/monthly reporting to support implementation of Construction Environmental Management Plan. • Continued focus on monitoring and mitigation of construction noise. • Conducted the monthly Province-led audit of environmental program. • Completed a quality audit related to BSPC's soil management.
Three Month Lookahead:	<ul style="list-style-type: none"> • Continue monthly on-site environmental surveillance during construction. • Refine noise mitigation/monitoring programs to align with future anticipated construction works.

4.4 Design and Construction

Scope:	<ul style="list-style-type: none"> • Provide technical input to the procurement processes. • Develop a design concept, technical requirements/specifications, and related technical studies for the Project. • Conduct Project-related traffic operations modelling, data collection, and other related engineering services. • Conduct compliance reviews of work by BSPC. • BSPC design and construction activities include: <ul style="list-style-type: none"> ○ Non-design ○ Systems design ○ Enabling works including site preparation, building demolitions and utility relocations ○ Construction of 6 stations ○ Elevated Guideway construction ○ Underground guideway construction by TBM ○ Systems installation ○ Testing and commissioning
Monthly Highlights:	<p><u>Design:</u></p> <ul style="list-style-type: none"> • Finalizing mechanical, electrical, and architectural designs for all stations. • Finalizing tunnel fit-out (mechanical) design.

	<ul style="list-style-type: none"> Continued systems design. <p><u>Traffic:</u></p> <ul style="list-style-type: none"> Continued to implement temporary traffic diversions throughout the corridor to accommodate construction. <p><u>Tunnel:</u></p> <ul style="list-style-type: none"> Inbound TBM (Phyllis) resumed tunnelling from Oak-VGH Station towards South Granville Station on November 16. <p><u>Elevated Guideway:</u></p> <ul style="list-style-type: none"> Continued cast-in-place concrete deck construction. Continued abutment foundation construction. Continued pier cap construction. Continued construction of the transition box. Commenced VCC-Clark Station tail track tie-in works. <p><u>Great Northern Way-Emily Carr:</u></p> <ul style="list-style-type: none"> Continued headhouse construction. Continued wall construction. Completed headhouse invert slab construction. Commenced concourse slab construction in the station. <p><u>Mount Pleasant:</u></p> <ul style="list-style-type: none"> Continued column and wall construction. Completed concourse slab construction at headhouse. Continued concourse slab construction in the station. <p><u>Broadway-City Hall:</u></p> <ul style="list-style-type: none"> Continued construction of circulation shaft (escalator box) structure. Continued construction of underpasses. Continued wall construction in station box. <p><u>Oak-VGH:</u></p> <ul style="list-style-type: none"> Continued wall construction at the station box. Completed micropile drilling at the headhouse. Continued headhouse slab and wall construction. <u>South Granville:</u> Continued wall construction. <p><u>Arbutus:</u></p> <ul style="list-style-type: none"> Completed excavation of crossover section. Continued base slab and commenced wall construction at station box. Completed micropile drilling at headhouse.
Three Month Lookahead:	<p><u>Design:</u></p> <ul style="list-style-type: none"> Continue finalizing Non-Systems design. Progressing Systems design. <p><u>Traffic:</u></p> <ul style="list-style-type: none"> Continue to implement temporary traffic diversions throughout the corridor to accommodate construction. Together with the City of Vancouver and TransLink, implement temporary parking reinstatement trial at select locations on Broadway outside of peak periods. <p><u>Tunnel:</u></p> <ul style="list-style-type: none"> Relaunch Outbound TBM (Elsie) from Oak-VGH Station towards South Granville Station. <p><u>Elevated Guideway:</u></p>

	<ul style="list-style-type: none"> • Complete construction of the abutment. • Complete construction of pier caps. • Complete cast-in-place concrete deck. • Complete VCC-Clark Station tail track tie-in works. <p><u>Great Northern Way-Emily Carr:</u></p> <ul style="list-style-type: none"> • Commence base slab at U-Channel. • Continue construction of the transition box. • Complete lower wall construction in the station. • Continue concourse slab construction in the station. <p><u>Mount Pleasant:</u></p> <ul style="list-style-type: none"> • Continue column and wall construction. • Continue concourse slab construction in the station. <p><u>Broadway-City Hall:</u></p> <ul style="list-style-type: none"> • Continue construction of the escalator box, underpasses, and station walls. • Commence surface excavation at Cambie Street sidewalk for underpass construction. • Commence construction of concourse slab. <p><u>Oak-VGH:</u></p> <ul style="list-style-type: none"> • Continue wall and column construction in the station box. • Complete slab and wall construction in the headhouse. • Commence concourse construction in the station box. <p><u>South Granville:</u></p> <ul style="list-style-type: none"> • Continue wall and column construction in the station box. • Commence concourse construction in the station box. <p><u>Arbutus:</u></p> <ul style="list-style-type: none"> • Commence base slab construction of crossover section. • Complete base slab construction and continue wall construction in the station. • Commence tail track mining.
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4.5 Indigenous Groups

Scope:	<ul style="list-style-type: none"> • Consultation and engagement with Indigenous Groups on Project materials and cultural recognition at stations.
Monthly Highlights:	<ul style="list-style-type: none"> • Shared Project updates and materials with Indigenous Groups, including environmental management plans and reports, archaeological reports, and construction updates. • Held discussions with Indigenous Groups on art and cultural recognition, including calls for artists and confirmation of selected opportunities. • All Project-specific agreements with Indigenous Groups have been finalized.
Three Month Lookahead:	<ul style="list-style-type: none"> • Continue sharing information, identifying, and resolving issues, and identifying Project-related opportunities for Indigenous Groups. • Continue engagement with Indigenous Groups related to art and cultural recognition at stations, including supporting the selection of artists by Indigenous Groups. • Work with Indigenous Groups to identify training programs that support Project employment and update labour forecasting.

4.6 Third Parties

Scope:	<ul style="list-style-type: none"> Engage with TransLink, the City of Vancouver, PCI, InTransit BC, and other third parties during the Project implementation phase. TransLink Agreement. <ul style="list-style-type: none"> Broadway Subway Project Support Agreement. Municipal Agreement. <ul style="list-style-type: none"> Vancouver Municipal Agreement with the City of Vancouver. Agreements with InTransit BC and TransLink for technical integration of the new Millennium Line Broadway-City Hall Station with the existing Canada Line Broadway-City Hall Station. <ul style="list-style-type: none"> Canada Line Amending Agreement – InTransit BC Phase 1 (between TransLink and InTransit BC). Canada Line Amending Agreement - InTransit BC Phase 2 (between TransLink and InTransit BC). Integration Agreement with TransLink. PCI Agreements. <ul style="list-style-type: none"> South Granville Station Integration Agreement with PCI. Great Northern Way-Emily Carr Station Integration Agreement with PCI. Accommodation Agreement with Metro Vancouver.
Monthly Highlights:	<ul style="list-style-type: none"> Continued to engage third parties to ensure successful implementation of executed agreements. Held ongoing discussions with TransLink regarding OCC2 implementation. Continued collaboration with Canada Line regarding design and construction integration with Broadway-City Hall Station; including construction activities for both underpasses and advancement of design deliverables and review. Together with the City of Vancouver and TransLink, completed feasibility review of a temporary parking reinstatement trial at select locations on Broadway outside of peak periods.
Three Month Lookahead:	<ul style="list-style-type: none"> Oversee implementation phase of executed agreements. Coordinate design and construction interface between BSPP and third parties.

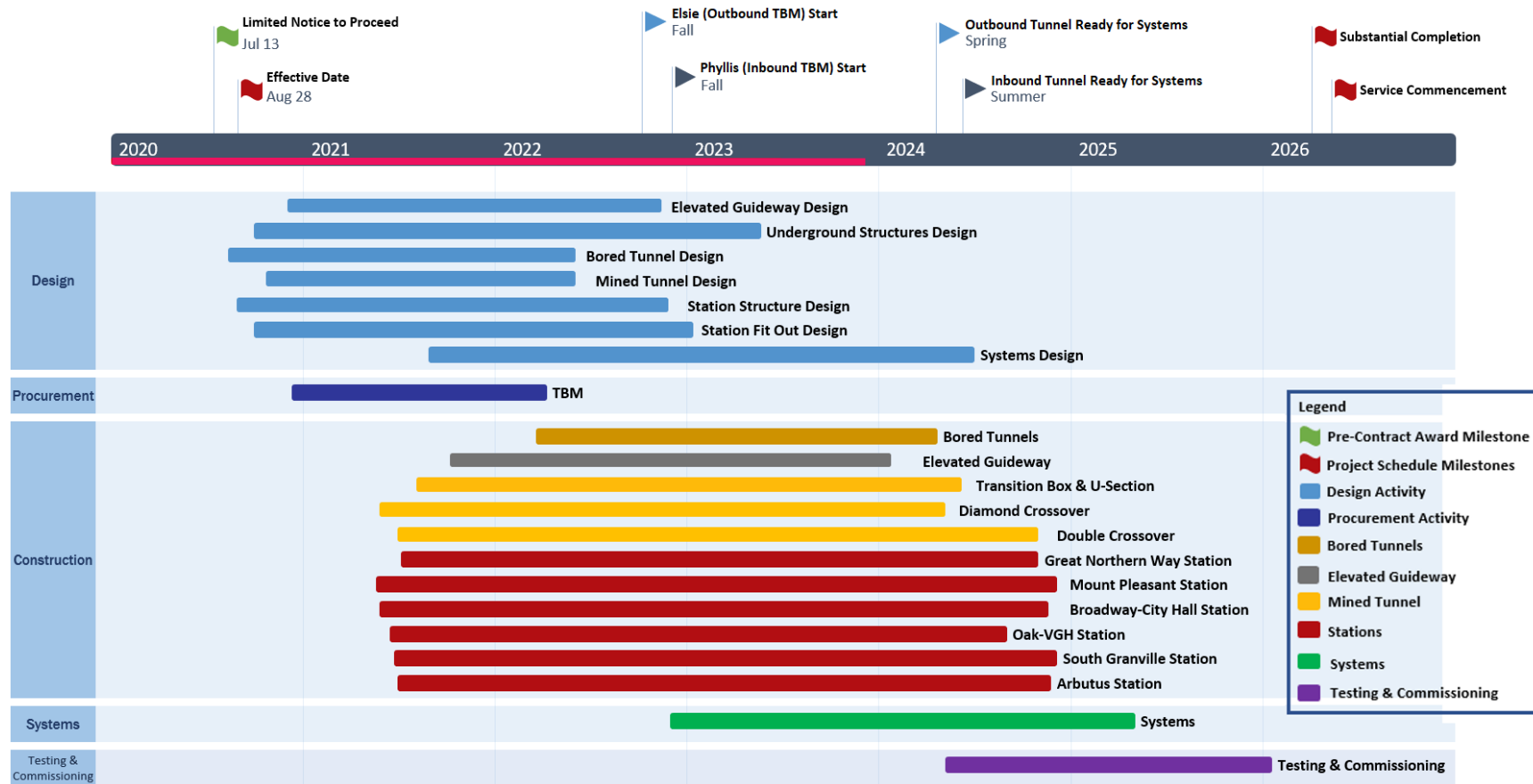
4.7 Public and Stakeholder Engagement

Scope:	<ul style="list-style-type: none"> Manage ongoing public and stakeholder communications, and community and business relations.
Monthly Highlights:	<ul style="list-style-type: none"> Communicated departure of Inbound TBM (Phyllis) from Oak-VGH Station. Direct outreach to BIAs and businesses in advance of temporary parking reinstatement trial on Broadway. Distributed construction notifications including night work for road repairs, traffic pattern changes and Arbutus Station construction. Released 3D animation video showing how the TBMs install tunnel liner rings as the tunnels are excavated as part of ongoing tunnel boring information campaign.

	<ul style="list-style-type: none"> Featured progress being made at the elevated guideway and station construction, including the first concourse floor construction at Mount Pleasant Station on social channels.
Three Month Lookahead:	<ul style="list-style-type: none"> Communicate departure of Outbound TBM (Elsie) from Oak-VGH Station and arrival of Inbound TBM (Phyllis) at South Granville Station. Install mural on construction fencing at Broadway-City Hall Station site. Continue weekly business outreach walks and other frequent direct contact with businesses. Conduct ongoing regular meetings with the Business Improvement Associations, Traffic Advisory and Arbutus Schools Traffic Liaison groups. Continue regular outreach with residents and key stakeholders, and engagement with the community via pop-up neighbourhood information kiosks. Provide progress updates on the elevated guideway, tunnelling, and excavation and construction of stations. Continue to distribute construction notifications and respond to public enquiries. Continue engagement relating to parking availability.

5. Schedule

The following schedule depicts the estimated deliverables, milestones, and timelines from the design to commissioning phase of the Project.



6. Project Photos



Figure 1: Elevated Guideway: Progressing with concrete pours to construct the parapets.



Figure 2: Great Northern Way-Emily Carr Station: Progressing with installation of rebar for the headhouse base slab.



Figure 3: Mount Pleasant Station: Progressing with the installation of the concourse slab in the station area.



Figure 4: Broadway-City Hall Station: Progressing with the removal of temporary tunnel liner segments and infilling the TBM cradle slab.



Figure 5: Oak-VGH Station: Progressing with the installation of rebar for the headhouse base slab.



Figure 6: South Granville Station: Progressing with the installation of rebar and concrete for the station walls.



Figure 7: Arbutus Station: Excavation completed in the crossover area.