



transportation  
investment  
corporation

# Monthly Status Report

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Reporting Period: March 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:

- 700 m 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"> <li>The delivery is within scope. The Project includes the delivery of a primarily tunneled extension to the existing Millennium Line SkyTrain system from VCC-Clark Station to a new station at Arbutus Street and is on track.</li> </ul>
	Schedule	Project delivered within the approved schedule.		<ul style="list-style-type: none"> <li>The start of piling activities was delayed at some construction locations.</li> <li>Recovery measures have been implemented by Broadway Subway Project Corporation and is being monitored closely.</li> <li>A five-week concrete supplier strike in June 2022 delayed the completion of the base slab at Great Northern Way (GNW), which impacted the start of tunnel boring. As a result, Project completion has moved from late 2025 to early 2026.</li> </ul>
	Budget	Project delivered within the approved budget of \$2.827 billion.		<ul style="list-style-type: none"> <li>The Project spending for the month of March 2023 was \$35.8 million and total Project spending to date is \$1.09 billion. Total Federal Recoveries to date are \$344.6 million and City of Vancouver contribution is \$100.3 million. The Project is forecast to be delivered within budget.</li> </ul>
	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"> <li>Monitored the implementation of the health and safety program.</li> <li>Performed site visits to oversee health and safety performance.</li> <li>There has been three (3) lost time injuries on the Project to date.</li> <li>The Lost Time Injury Frequency Rate (LTIFR) for the Project is 0.28 which is less than the WorkSafeBC 2021 rate of 0.90 for heavy construction.</li> </ul>
	Quality	Implement and maintain an effective Quality Management System.		<ul style="list-style-type: none"> <li>Quality monitoring and auditing of select work activities and processes continues.</li> <li>Review of quality documents submittals, as they are received, continues.</li> </ul>
	Environmental	Ensure work is performed in an environmentally responsible manner.		<ul style="list-style-type: none"> <li>Site-specific environmental workplans are being followed.</li> <li>Weekly environmental monitoring reports are being submitted.</li> <li>Ongoing work to mitigate/monitor construction noise at all stations.</li> <li>Monthly Province led audits of environmental program.</li> </ul>
	Design and Construction	Provide design and technical oversight, coordinate and manage activities on site, and conduct compliance reviews.		<ul style="list-style-type: none"> <li>Continued progress on excavation, piling, utility work and traffic decking.</li> <li>Permanent works being constructed along the Elevated Guideway, at Great Northern Way Station, Mount Pleasant Station, and Broadway-City Hall Station.</li> </ul>
	Community Benefits	Work collaboratively with BC Infrastructure Benefits Inc. (BCIB) to		<ul style="list-style-type: none"> <li>Ongoing coordination with BCIB on permitting requirements.</li> </ul>

		successfully implement the Community Benefits Agreement (CBA).		<ul style="list-style-type: none"> <li>Discussions regarding current and future Project workforce requirements continue to progress.</li> </ul>
Partners / Stakeholders	Indigenous Groups	Continue to build and maintain a positive collaborative working relationship.	●	<ul style="list-style-type: none"> <li>Continued engagement with Indigenous Groups in relation to the Project and cultural recognition.</li> <li>Continued Project-specific agreement discussions with Indigenous Groups.</li> </ul>
	Third Parties	Continue to build and maintain positive relationships with Project Partners and other third parties.	●	<ul style="list-style-type: none"> <li>Ongoing third-party engagement for successful implementation.</li> <li>Discussions with TransLink regarding OCC integration.</li> </ul>
	Public and Stakeholder Engagement	Continue to build and maintain positive relationships with the community and other stakeholders.	●	<ul style="list-style-type: none"> <li>Continued engagement with local businesses, stakeholders, residents, and the public.</li> <li>Continue engagement relating to parking availability.</li> </ul>

Status	Description
●	Managing critical issues, negotiating resolution; action required immediately
●	Managing some issues, negotiating resolution; action required in the near term
●	On track; no action required

### 3. Project Documents and Achievements to Date

Project Delivery	Project Planning and Development	<ul style="list-style-type: none"> <li>• Business Case released (2018).</li> <li>• Cost Report released (2018).</li> <li>• Project Overview released (2018).</li> <li>• Risk Report released (2018).</li> <li>• Strategic Options Whitepaper released (2018).</li> <li>• Executed Design-Build-Finance Agreement (August 2020).</li> </ul>
	Environmental	<ul style="list-style-type: none"> <li>• Environmental technical studies complete (2017-2018).</li> <li>• Environmental Socio-Economic Report complete (2020).</li> <li>• BSPC Construction Environmental Management Plan finalized (2021).</li> <li>• Environmental Workplans complete (2022).</li> <li>• 2022 annual environmental report submitted (January 2023).</li> </ul>
	Design and Construction	<ul style="list-style-type: none"> <li>• Geotechnical studies complete (2016-2017).</li> <li>• Reference concept design complete (2018).</li> <li>• Traffic modelling complete (2017-2019).</li> <li>• Geotechnical Subsurface Baseline Report complete (2019).</li> <li>• Geotechnical investigations commenced (2020).</li> <li>• Building abatement complete (2021).</li> <li>• Building demolitions at station sites complete (2021).</li> <li>• Piling complete at Mount Pleasant Station and Broadway City Hall (2021).</li> <li>• Piling complete at Oak-VGH, Granville station, and Arbutus station (2022).</li> <li>• Traffic deck installation complete on Mount Pleasant station, Broadway City Hall, Oak-VGH, South Granville (2022).</li> <li>• Excavation at Great Northern Way and Mount Pleasant complete (2022).</li> <li>• Station base slab at Great-Northern Way complete (2022).</li> <li>• Both Tunnel Boring Machines (TBM) launched (2022).</li> <li>• Base slab at Mount Pleasant Station complete, excluding Headhouse (2022).</li> </ul>
	Province/Other Works	<ul style="list-style-type: none"> <li>• Tunnel Boring Machine (TBM) power – BC Hydro (2019).</li> </ul>

Partners / Stakeholders		<ul style="list-style-type: none"> <li>• Propulsion Power Substations including upgrade to dedicated power at VCC-Clark Station – BC Hydro (2019).</li> <li>• Utility relocate at Main Street – TELUS (2019).</li> <li>• Utility relocate at Great Northern Way – TELUS/FortisBC/BC Hydro (2019).</li> <li>• Civil construction and utility relocate at Arbutus and Cambie – TELUS (2020).</li> <li>• Trolley overhead relocations of bus routes 14, 16, and 17 – Coast Mountain Bus Company (2020).</li> <li>• Trolley overhead removals of trolley infrastructure on Broadway – Coast Mountain Bus Company (2020).</li> <li>• Utility relocate at Cambie – FortisBC (2020).</li> <li>• Electrical duct utility relocate at South Granville and Arbutus – City of Vancouver (2021).</li> <li>• 901 Great Northern Way building modification completed (2021).</li> </ul>
	Community Benefits	<ul style="list-style-type: none"> <li>• BCIB Contractor and BCIB Subcontractor Agreements in the RFP (2019).</li> <li>• Received BSP appendix to CBA (2019/2020).</li> <li>• Execution of the BCIB Contractor Agreement (2020).</li> <li>• Granted subcontractor permits (2020-2021).</li> <li>• BCIB labour supply ongoing for the Project (2022).</li> </ul>
	Third Parties	<ul style="list-style-type: none"> <li>• Memorandum of Understanding – City of Vancouver (2017).</li> <li>• Memorandum of Understanding – TransLink (2018).</li> <li>• Canada Line Amending Agreement – InTransit BC Phase 1 (2019).</li> <li>• South Granville Station Integration Agreement – PCI (2019).</li> <li>• Vancouver Municipal Agreement – City of Vancouver (2020).</li> <li>• Metro Vancouver Accommodation Agreement (2020).</li> <li>• Broadway Subway Project Support Agreement – TransLink (2020).</li> <li>• Canada Line Amending Agreement – InTransit BC Phase 2 (2020).</li> <li>• Integration Agreement – TransLink (2020).</li> <li>• Great Northern Way Station Integration Agreement – PCI (2020).</li> </ul>

	<b>Indigenous Groups</b>	<ul style="list-style-type: none"> <li>• Capacity Agreement for the Environmental and Socio-Economic Review (2018).</li> <li>• Contracting and employment requirements finalized (2020).</li> <li>• Cultural recognition opportunities selected by Indigenous Groups (2021).</li> </ul>
	<b>Public and Stakeholder Engagement</b>	<ul style="list-style-type: none"> <li>• Phase 1 and 2 engagements (led by TransLink and City of Vancouver) <ul style="list-style-type: none"> <li>○ Phase 1 engagement (December 2016 – February 2017).</li> <li>○ Phase 2 engagement (May 2017 – July 2017).</li> </ul> </li> <li>• Broadway Subway Project Engagement (Province-led) <ul style="list-style-type: none"> <li>○ Local business survey (July 2019 – December 2019).</li> <li>○ Community engagement (October 2019 – December 2019).</li> <li>○ Opened Community Office (Fall 2019).</li> <li>○ Established 24/7 construction information line (December 2019).</li> </ul> </li> <li>• Station Design Advisory Process (BSPC-led) <ul style="list-style-type: none"> <li>○ First engagement occurred (November-December 2020).</li> <li>○ First engagement summary report released (2021).</li> <li>○ Second engagement (April 29-May 12, 2021).</li> </ul> </li> </ul>



## 4. March Highlights and Three Month Lookahead

### 4.1 Safety

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Oversee and monitor health and safety:<ul style="list-style-type: none"><li>○ Management plans and systems.</li><li>○ Goals, objectives, and performance metrics.</li><li>○ Roles and responsibilities.</li><li>○ Planning and coordination of major Project activities.</li><li>○ Compliance with WorkSafeBC, municipalities, and government agencies.</li><li>○ Continual improvement process.</li><li>○ Risk management.</li><li>○ Statistics and trends.</li></ul></li></ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"><li>• Performed weekly site visits to observe compliance and areas of improvement.</li><li>• Focused on monitoring the management of public safety.</li><li>• Monitored compliance with the tunnelling work activities.</li><li>• Received the reported Lost Time Injury Frequency Rate (LTIFR):<ul style="list-style-type: none"><li>○ The Project to date LTIFR is 0.28, which is less than the 2021 WorkSafe BC rate of 0.90 for heavy construction.</li></ul></li></ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"><li>• Continue to monitor changes to COVID-19 safety requirements.</li><li>• Continue to provide health and safety support to involved parties.</li><li>• Continue to perform regular health and safety inspections at Project sites.</li><li>• Continue to oversee the health and safety planning and performance for tunnelling.</li><li>• Continue to monitor the management of public safety.</li><li>• Perform a health and safety audit of tunnelling operations</li></ul>

### 4.2 Quality

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Establish quality management Project objectives and performance measures.</li><li>• Manage Project quality management activities.</li><li>• Monitor relevant quality management performance metrics.</li><li>• Outline relevant quality management processes and activities.</li></ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"><li>• Completed quality audits of BSPC's activities related to structural and waterproofing works and the manufacturing of elevated guideway concrete girders.</li><li>• 10 Non-conformity Reports (NCR) were initiated this month related to health and safety, construction, and environmental quality processes. To date there has been a total of 299 NCRs (27 open and 272 closed).</li></ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"><li>• Continue regular monitoring of quality activities by means of discipline specific field visits, meetings, and other review and communication processes.</li><li>• Continue scheduled quality system audits and surveillances.</li><li>• Continue to review quality documentation submissions.</li></ul>

### 4.3 Environmental

<b>Scope:</b>	<ul style="list-style-type: none"> <li>Oversee delivery of measures to manage risk identified in the Environmental and Socio-Economic Review (ESR).</li> <li>Review environmental submissions including the Construction Environmental Management Plan (CEMP) and Environmental Work Plans (EWPs).</li> <li>Monitor CEMP implementation through review of weekly environmental monitoring.</li> <li>Support engagement with Indigenous Groups on CEMP implementation.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>Weekly/monthly reporting to support implementation of Construction Environmental Management Plan.</li> <li>Continued enhanced focus on monitoring and mitigation of construction noise.</li> <li>Undertook monthly environmental site audit.</li> <li>Monitoring implementation of recommendations from February Quality Audit which focused on noise management.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>Continue monthly on-site environmental surveillance during construction.</li> <li>Obtain Disposal-at-Sea permit for Arbutus station.</li> <li>Complete archaeological monitoring program.</li> <li>Continue focus on noise mitigation/monitoring to address construction noise.</li> </ul>

### 4.4 Design and Construction

<b>Scope:</b>	<ul style="list-style-type: none"> <li>Provide technical input to the procurement processes.</li> <li>Develop a design concept, technical requirements/specifications, and related technical studies for the Project.</li> <li>Conduct Project related traffic operations modelling, data collection, and other related engineering services.</li> <li>Conduct compliance reviews of work by BSPC.</li> <li>BSPC Design and Construction Activities include: <ul style="list-style-type: none"> <li>Non-Systems Design</li> <li>Systems Design</li> <li>Enabling Works including site preparation, building demolitions and utility relocations</li> <li>Construction of 6 Stations</li> <li>Elevated Guideway Construction</li> <li>Underground Guideway Construction by tunnel boring machine</li> <li>Systems Installation</li> <li>Testing and Commissioning</li> </ul> </li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>Continued Non-Systems and Systems Design.</li> <li>Continued to implement numerous traffic diversions throughout the corridor to accommodate construction.</li> <li>Continued utility work at Arbutus station.</li> <li>Continued pier cap construction at the Elevated Guideway.</li> <li>Continued girder installation along Elevated Guideway.</li> <li>Continued repair of piles at Great Northern Way transition box.</li> </ul>

	<ul style="list-style-type: none"> <li>Continued construction of walls in transition box at Great Northern Way.</li> <li>Continued station wall construction at Great Northern Way.</li> <li>Continued column construction at Mount Pleasant station.</li> <li>Continued slab construction at the headhouse of Mount Pleasant station.</li> <li>Ongoing excavation at Broadway-City Hall (BCH) station.</li> <li>Continued slab construction at BCH.</li> <li>Continued excavation of the circulation shaft (escalator box) at BCH.</li> <li>Ongoing excavation and strut placement at Oak-VGH station.</li> <li>Ongoing excavation at South Granville station.</li> <li>Ongoing excavation and girder, strut, and traffic deck placement at Arbutus Station.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>Continue Non-Systems and Systems design.</li> </ul> <p><u>Elevated Guideway:</u></p> <ul style="list-style-type: none"> <li>Finish construction of pier caps for Elevated Guideway.</li> <li>Continue erecting concrete girders.</li> <li>Begin erection of precast deck.</li> </ul> <p><u>Great Northern Way – Emily Carr:</u></p> <ul style="list-style-type: none"> <li>Resume piling for U-Channel at Great Northern Way.</li> <li>Continue wall construction in the transition box.</li> <li>Continue wall construction in the station.</li> </ul> <p><u>Mt. Pleasant:</u></p> <ul style="list-style-type: none"> <li>Continue column construction.</li> <li>Begin wall construction.</li> </ul> <p><u>Broadway - City Hall:</u></p> <ul style="list-style-type: none"> <li>Continue slab construction.</li> <li>Continue excavation of the circulation shaft (escalator box).</li> <li>Finish bulk excavation in the Station and Crossover.</li> <li>Commence excavation for the BCH headhouse underpass.</li> </ul> <p><u>Oak – VGH:</u></p> <ul style="list-style-type: none"> <li>Continue bulk excavation.</li> <li>Continue strut installation.</li> <li>Begin slab construction.</li> </ul> <p><u>South Granville:</u></p> <ul style="list-style-type: none"> <li>Continue bulk excavation.</li> <li>Continue strut installation.</li> <li>Begin slab construction.</li> </ul> <p><u>Arbutus:</u></p> <ul style="list-style-type: none"> <li>Install remaining girders, struts, and traffic deck.</li> <li>Continue bulk excavation.</li> </ul> <p><u>Tunnel:</u></p> <ul style="list-style-type: none"> <li>Inbound and Outbound TBM breakthrough at Broadway - City Hall.</li> </ul>

## 4.5 Indigenous Groups

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

## 4.6 Third Parties

<b>Scope:</b>	<ul style="list-style-type: none"> <li>• Engage with TransLink, the City of Vancouver, PCI, InTransit BC, and other third parties during the Project implementation phase.</li> <li>• TransLink Agreement. <ul style="list-style-type: none"> <li>◦ Broadway Subway Project Support Agreement.</li> </ul> </li> <li>• Municipal Agreement. <ul style="list-style-type: none"> <li>◦ Vancouver Municipal Agreement with the City of Vancouver.</li> </ul> </li> <li>• 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"> <li>◦ Canada Line Amending Agreement – InTransit BC Phase 1 (between TransLink and InTransit BC).</li> <li>◦ Canada Line Amending Agreement - InTransit BC Phase 2 (between TransLink and InTransit BC).</li> <li>◦ Integration Agreement with TransLink.</li> </ul> </li> <li>• PCI Agreements. <ul style="list-style-type: none"> <li>◦ South Granville station Integration Agreement with PCI.</li> <li>◦ Great Northern Way station Integration Agreement with PCI.</li> </ul> </li> <li>• Accommodation Agreement with Metro Vancouver.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>• Continued to engage third parties to ensure successful implementation of executed agreements.</li> <li>• Ongoing discussions with TransLink regarding OCC2 implementation and interim measures.</li> <li>• Completed construction of the Metro Vancouver Cambie combined sewer relocation works.</li> </ul>

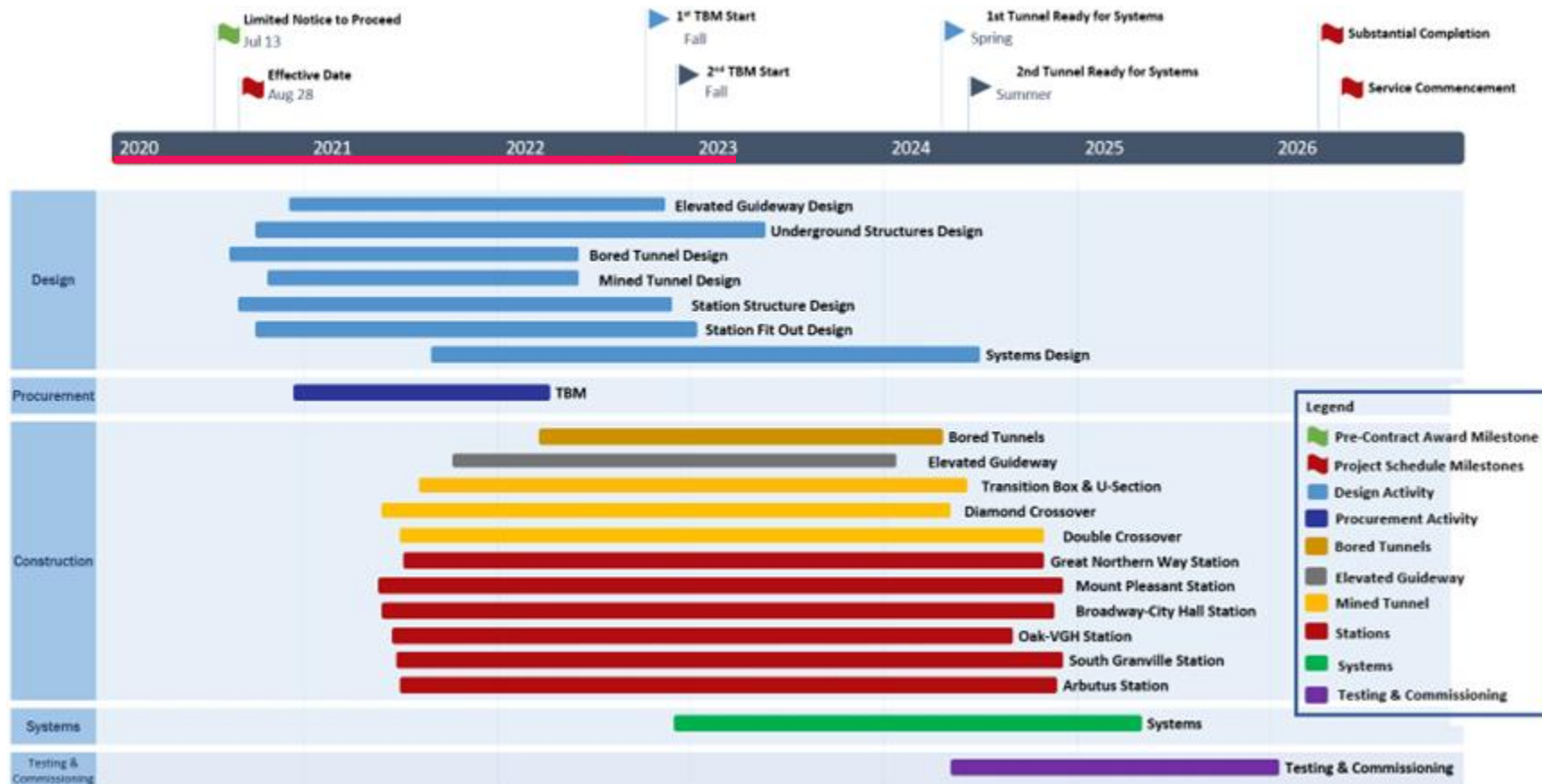
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>• Oversee implementation phase of executed agreements.</li> <li>• Coordinate design and construction interface between BSPC and third parties.</li> </ul>
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## 4.7 Public and Stakeholder Engagement

<b>Scope:</b>	<ul style="list-style-type: none"> <li>• Manage ongoing public and stakeholder communications, and community and business relations.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>• Announced the breakthrough of the Inbound TBM at Mount Pleasant Station and the departure of the Outbound TBM from Mount Pleasant Station.</li> <li>• Communicated the start of girder installation as the next phase of work at the Elevated Guideway.</li> <li>• Distributed construction notifications (available on website), shared Project information and updates on social channels, responded to public and stakeholder enquiries, and met with businesses and stakeholders.</li> <li>• Responded to 43 public inquiries.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>• Communicate breakthrough of the Outbound TBM at Broadway-City Hall Station, and completion of final traffic deck at Arbutus.</li> <li>• Install murals on construction fencing at Great Northern Way-Emily Carr, Broadway-City Hall and Arbutus sites.</li> <li>• Continue weekly business outreach walks and other frequent direct contact with businesses.</li> <li>• Ongoing regular meetings with the Business Improvement Associations, Traffic Advisory and Arbutus Schools Traffic Liaison groups.</li> <li>• Continue regular outreach with residents and key stakeholders, and engagement with the community via pop-up neighbourhood information kiosks.</li> <li>• Provide progress updates on the elevated guideway, tunneling, and excavation and construction of stations.</li> <li>• Continue to distribute construction notifications and respond to public enquiries.</li> <li>• Continue engagement relating to parking availability.</li> </ul>

## 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 the installation of girders for the elevated guideway structure.



Figure 2: Great Northern Way-Emily Carr Station: Progressing with the installation of rebar and wall forms for the transition box.





Figure 3: Mount Pleasant Station: With the base slab poured, the installation of waterproofing, rebar, and wall forms was in progress within the headhouse.





Figure 4: Broadway-City Hall Station: Within the Crossover, preparation to receive Outbound TBM Elsie was in progress.





Figure 5: Oak-VGH Station: Progressing with the excavation and shoring of the station box.



Figure 6: South Granville Station: Progressing with the excavation and shoring of the station box.





Figure 7: Arbutus Station: Progressing with the excavation and shoring for the station box.