

PUBLIC MEETING AGENDA

Revised: April 19, 2022

April 22, 2022, 9:00AM to 11:00AM

Via Videoconference (live streamed to [Mayors' Council YouTube Channel](#))

Chair: Mayor Jonathan X. Coté

Vice-Chair: Mayor Jack Froese

Note that times for each agenda item are estimates only. This meeting will be livestreamed and available afterwards on the [Mayors' Council's YouTube channel](#).

8:50AM *Technology Test: Members, please connect to the meeting early, by 8:50AM, to provide time to trouble-shoot any connection problems.*

9:00AM	1. PRELIMINARY MATTERS 1.1. Adoption of agenda Page 1 1.2. Approval of Minutes (February 24, 2022) 2
9:05AM	2. PUBLIC DELEGATES 5
9:35AM	3. REPORT OF TRANSLINK MANAGEMENT 3.1. CEO's Report ORAL 3.2. Update on the 2022 Investment Plan and Transport 2050 Ten Year Priorities ORAL
10:00AM	4. REPORT OF THE CHAIR 4.1. Millennium Line UBC Extension: Regional Base Scope 6 • ATTACHMENT: Staff Presentation slides 23
10:45AM	5. REPORT OF THE FINANCE AND GOVERNANCE COMMITTEE 5.1. Update to 2022 Meeting Policy 46
10:55AM	6. OTHER BUSINESS 6.1. Next Meeting (via videoconference) – May 26, 2022 (to be held jointly with the TransLink Board of Directors)
11:00AM	7. ADJOURN to closed session

Note that Mayors' Council members and Public Delegates will be participating via Zoom videoconferencing. Zoom connection information sent separately via e-mail.

MEETING OF THE MAYORS' COUNCIL ON REGIONAL TRANSPORTATION

DRAFT PUBLIC MEETING MINUTES

Minutes of the Public Meeting of the Mayors' Council on Regional Transportation (Mayors' Council) held Thursday, February 24, 2022 at 9:00 a.m. via videoconference.

PRESENT:

Mayor Jonathan Coté, New Westminster, Chair
Mayor Jack Froese, Langley Township,
Vice-Chair
Mayor Malcolm Brodie, Richmond
Mayor Linda Buchanan, North Vancouver City
Councillor Craig Cameron, West Vancouver
(arrived at 9:05 a.m.)
Mayor Bill Dingwall, Pitt Meadows
Mayor George Harvie, Delta
Mayor Mike Hurley, Burnaby
Mayor Mike Little, North Vancouver District
Mayor Doug McCallum, Surrey
Director Jen McCutcheon, Electoral Area A

Mayor John McEwen, Anmore
Mayor Ron McLaughlin, Lions Bay
Mayor Mike Morden, Maple Ridge (arrived at
9:05 a.m.)
Councillor Alison Morse, Bowen Island
Mayor Jamie Ross, Belcarra
Mayor Richard Stewart, Coquitlam (arrived at
9:12 a.m.)
Mayor Rob Vagramov, Port Moody
Mayor Val van den Broek, Langley City
Mayor Darryl Walker, White Rock
Mayor Brad West, Port Coquitlam

REGRETS:

Chief Ken Baird, Tsawwassen First Nation

Mayor Kennedy Stewart, Vancouver

ALSO PRESENT:

Michael Buda, Executive Director, Mayors' Council on Regional Transportation Secretariat
Kevin Quinn, Chief Executive Officer, TransLink

PREPARATION OF MINUTES:

Carol Lee, Recording Secretary, Mosaic Writing Group

CALL TO ORDER

Chair Jonathan Coté declared that a quorum was present and called the meeting to order at 9:01 a.m. Chair Coté acknowledged that the meeting is taking place on the traditional and unceded territories of the Halq'eméylem, Semiahmoo and Skwxwú7mesh speaking people. These refer to the language groups that more widely encompass the Indigenous people of many nations who use and continue to use the land on whose territories TransLink works, operates and serves.

1. PRELIMINARY MATTERS

1.1. Adoption of the Agenda

Draft agenda for the February 24, 2022 Public Meeting of the Mayors' Council on Regional Transportation, version dated February 18, 2022, was provided with the agenda material.

It was MOVED and SECONDED

That the agenda of the February 24, 2022 Public Meeting of the Mayors' Council on Regional Transportation be adopted, as presented.

CARRIED

1.2. Approval of Minutes (December 3, 2021)

Draft minutes of the December 3, 2021 Public Meeting of the Mayors' Council on Regional Transportation was provided with the agenda material.

It was MOVED and SECONDED

That the minutes of the December 3, 2021 Public Meeting of the Mayors' Council on Regional Transportation be adopted, as presented.

CARRIED

1.3. Approval of Minutes (January 27, 2022)

Draft minutes of the January 27, 2022 Joint Public Meeting of the Mayors' Council on Regional Transportation and TransLink Board of Directors was provided with the agenda material.

It was MOVED and SECONDED

That the minutes of the January 27, 2022 Joint Public Meeting of the Mayors' Council on Regional Transportation and TransLink Board of Directors be adopted, as presented.

CARRIED

2. PUBLIC DELEGATIONS

The following documents were provided with the agenda material:

- *Report titled "Item 2 – Public Delegate Presentations", dated February 16, 2022*
- *Report titled "Item 2 – Presentations from Public Delegates", dated February 24, 2022.*

Member Arrived

Councillor Craig Cameron and Mayor Mike Morden joined the meeting at 9:05 a.m.

2.1. Christine Cunningham

Ms. Cunningham, Forest Grove Transportation Task Force, expressed the opinion that there are better approaches to providing a good standard of clean public transportation to the Simon Fraser University campus than by building the Burnaby Mountain Gondola through two conservation areas and the Forest Grove community.

3. REPORT OF TRANSLINK MANAGEMENT

Presentation titled "TransLink Management Report", dated February 24, 2022, was provided with the agenda material.

Kevin Quinn, Chief Executive Officer, led the review of a presentation provided with the agenda material and highlighted:

- Transit ridership:
 - Ridership continues to trend upward week-over-week from a low of 50% in early January 2022
 - February 2022 boardings were up to 64.5% of pre-COVID levels, equivalent to over 285,000 people using transit daily
- Relief funding;
 - On February 17, 2022, the federal government announced funding of \$750 million to provinces to support transit operating shortfalls this year

Member Arrived

Mayor Richard Stewart arrived at 9:12 a.m.

- The need to continue the conversation about long-term funding solutions.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation receive this report.

CARRIED

4. OTHER BUSINESS

4.1. Next Meeting

The next Public Meeting of the Mayors' Council was scheduled for March 31, 2022 and will be held via videoconference.

5. ADJOURNMENT

There being no further business, the February 24, 2022 Public Meeting of the Mayors' Council on Regional Transportation was adjourned to a Closed Session at 9:15 a.m.

Certified Correct:

Mayor Jonathan X. Coté, Chair

Carol Lee, Recording Secretary
Mosaic Writing Group

TO: Mayors' Council on Regional Transportation
FROM: Gemma Lawrence, Coordinator, Mayors' Council Secretariat
DATE: April 20, 2022
SUBJECT: **ITEM 2 – Public Delegate Presentations**

RECOMMENDATION:

That the Mayors' Council on Regional Transportation receive this report.

PURPOSE:

To introduce the objectives and process for hearing from public delegates.

BACKGROUND:

Public participation at meetings is valued by the Mayors' Council, and 30 minutes is set aside at each open meeting to receive public delegations. The Mayors' Council will only receive public delegations who intend to speak on matters that are within the authority of the Mayors' Council.

Individuals can apply to be a delegate by completing the online [Application Form](#) up until 8:00AM, one business day prior to the meeting. In situations where there isn't enough time to hear from everyone wishing to speak, the Mayors' Council encourages written submissions be sent to mayorscouncil@translink.ca.

The webpage for public delegates includes a Protocol for Public Delegates that notes:

- the Mayors' Council Chair will exercise discretion in maintaining a reasonable level of order and decorum;
- delegates and all meeting participants are reminded that different points of view are respected, and discussions are kept above the level of personal confrontation, disruptive behaviour and profanity.

DISCUSSION:

The deadline to apply to speak to the Mayors' Council is 8:00am one day prior to the meeting. At the time of this report, not all prospective speakers will have had a chance to complete applications. Accordingly, the **list of approved speakers, as well as any written submissions or presentations, will be provided on table**. Any presentations provided by delegates will also be provided to Mayors' Council members only, on table (up to 10-pages maximum). Each delegation will be given a maximum of three minutes to address the Mayors' Council. As a general rule, there are no questions or discussion between Council and delegates. The policy governing Public Delegates can be [found online](#).

TO: Mayors' Council on Regional Transportation
FROM: Mayor Jonathan X. Côté, Chair
DATE: April 13, 2022
SUBJECT: **ITEM 4.1 – Millennium Line UBC Extension: Regional Base Scope**

CHAIR'S RECOMMENDATIONS:

The Chair recommends that the Mayors' Council:

1. Include the following station locations in the regional base project scope for the Millennium Line UBC Extension (UBC Extension):
 - a. Stations at Alma, Macdonald, Jericho, and at the UBC Trolley Bus Loop; and,
 - b. Passive provision for at least one potential future infill station within the UEL/Musqueam Lands area on or near the University Golf Course, planned and funded by third parties; and,
 - c. Designate a second station and any required rail connection to the station at UBC as outside of the regional base scope, requiring third-party funding; and,
 2. Defer decisions on vertical alignment pending local and third-party contribution agreements; and,
 3. Complete the UBC Extension in years 6-10 of the Transport 2050 Ten-Year Priorities, once Bus Rapid Transit (BRT) plan implementation has commenced, and subject to further planning and discussions and an approved business case that includes a new funding model and third-party payment and land value uplift contributions;
 4. Receive the report on this item considered at the March 11, 2022 meeting of the Regional Transportation Planning Committee as presented in Annex 1 below;
 5. Receive the report on this item considered at the April 13, 2022 meeting of the Finance and Governance Committee as presented in Annex 2 below;
 6. Receive this report.
-

PURPOSE

The purpose of this report from the Chair is to propose a unified set of recommendations for the UBC SkyTrain Extension Regional Base Scope based on the discussion and recommendations on this issue from meetings of the Regional Transportation Planning Committee on March 11, 2022, the Finance and Governance Committee meeting on April 13, 2022 and Joint Meeting of the Mayors' Council and TransLink Board on March 31, 2022.

OVERVIEW

The UBC Extension is a large and costly expansion of our SkyTrain network crossing multiple jurisdictions and serving a wide variety of land-uses and as such has generated significant discussion at the Mayors' Council and across the region. A report on the study to develop the "regional base case" for this project (a study that the Mayors' Council initiated in 2019) was considered by the Regional Transportation Planning Committee on March 11, 2022. That report and the committee's recommendations (see Annex 1) were approved by the committee for consideration by the Mayors' Council.

However, the committee raised a number of concerns about the potential timing and funding of the project given other regional priorities that were to be identified as part of the New Vision process that did not occur until March 31, 2022. Given these concerns, the Finance and Governance Committee asked to review the same report at its April 13, 2022 meeting to consider it in light of the outcomes of the March 31, 2022 meeting of the Mayors' Council and Board on the Transport 2050 Ten-Year Priorities. The Finance and Governance Committee proposed several amendments to the recommendations approved by the Regional Transportation Planning Committee to make them consistent with the language in the Transport 2050 Ten-Year Priorities.

PROPOSED RECOMMENDATIONS

Given two sets of recommendations on the same report, as Chair I would like to propose a single set of recommendations to streamline discussions at the Mayors' Council. My proposed recommendations are found at the top of this report and are based on the recommendations approved at the Finance and Governance Committee on April 13.

In my view, these recommendations reflect the discussion and decision of both the Regional Transportation Planning Committee on the UBC Extension report, as well as that of the March 31 meeting of the entire Mayors' Council on the Transport 2050 Ten-Year Priorities. Please see the report of the Finance and Governance Committee in Annex 2 for an outline of its rationale for amending the original recommendations of the Regional Transportation Planning Committee as well as answers to some of the questions raised by members about this project over the past several months.

ATTACHMENTS:

- **Annex 1:** Report on "Millennium Line UBC Extension: Regional Base Scope" considered at the Regional Transportation Planning Committee on March 11, 2022
- **Annex 2:** Report on "Millennium Line UBC Extension: Regional Base Scope" considered at the Regional Finance and Governance Committee meeting on April 13, 2022

TO: Regional Transportation Planning Committee (March 11, 2022 meeting)

FROM: Sarah Ross, Vice-President, Transportation Planning and Policy
Marisa Espinosa, Director of Major Studies, Transportation Planning and Policy

DATE: March 11, 2022

SUBJECT: **Millennium Line UBC Extension Regional Base Scope Recommendation**

COMMITTEE RECOMMENDATIONS:

The Regional Transportation Planning Committee recommends that the Mayors' Council:

1. Include the following station locations in the regional base project scope for the UBC Extension:
 - a. Stations at Alma, Macdonald, Jericho, and at the UBC Trolley Bus Loop;
 - b. Passive provision for at least one potential future infill station within the UEL/Musqueam Lands area on or near the University Golf Course, planned and funded in coordination with project partners; and
 - c. Designate a second station at UBC as outside of the regional base scope, requiring a partner contribution.
2. Include the following vertical alignments in the regional base project scope for the UBC Extension:
 - a. Below-grade in West Broadway segment, due to functional requirements;
 - b. Below-grade in Westside/Jericho Lands segment, due to functional and technical requirements (with below-grade West Broadway segment requirement);
 - c. Above grade for in UEL/Musqueam Lands segment;
 - i. Undertake value engineering for both elevated and below-grade options to optimize the interface with the underground UBC station; and
 - d. Below-grade in UBC segment due to functional requirements.
3. Receive this report

APPROVED, March 11, 2022

PURPOSE

The purpose of this report is to present the findings of the Millennium Line UBC Extension Design Development and Business Case Inputs Study (the Study) and seek an endorsement on the recommended Regional Base Scope, including horizontal and vertical alignment and station locations. An approved Regional Base Scope will guide the next steps in project development if the project is included in the new 10-Year Vision.

BACKGROUND

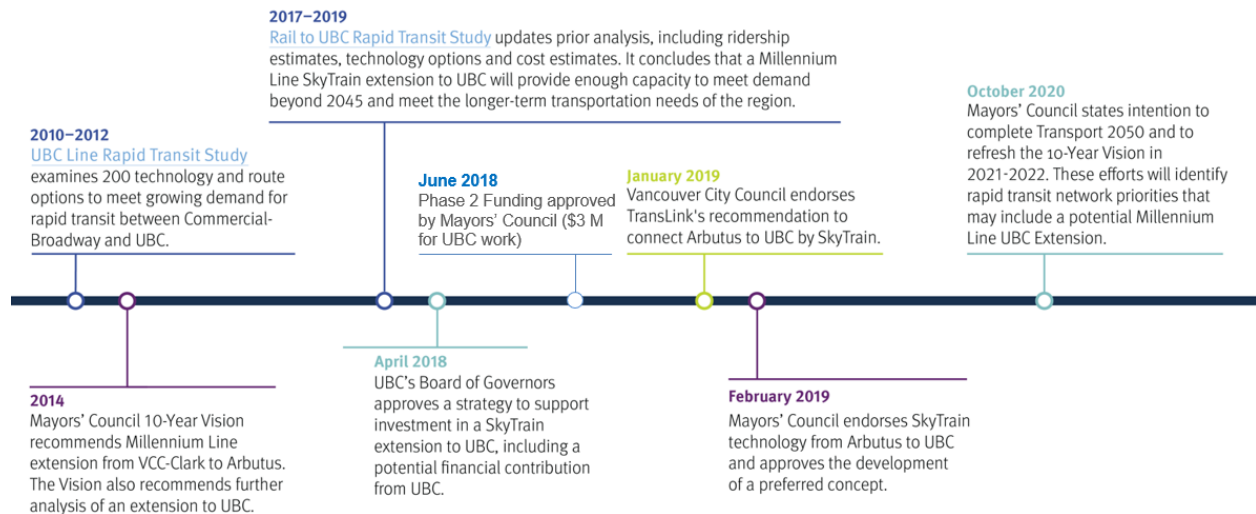
The Regional Base Scope is the scope that would be regionally funded and supported by the TransLink Board and Mayors' Council, per the Municipal Contribution Policy. The Regional Base Scope will inform creation of a preferred design alternative, which may include additional local or partnership scope elements negotiated during the next stages of design development with partners. While the intent of this step is to identify core scope that is regionally funded, this would not preclude local funding partners from

contributing towards local enhancements, or providing a financial contribution to the Regional Base Scope (e.g. to make the project more attractive to regional and senior government funders, by reducing their respective contributions).

The Millennium Line UBC Extension would extend SkyTrain west of the Arbutus station that is currently under construction as part of the Broadway Subway Project.

The Broadway Subway Project was advanced through the 2014 Mayors’ Council 10-year Vision, which also recommended studying a rapid transit connection to UBC. Figure 1 shows the history of planning work to advance a rapid transit connection to UBC. It began more than ten years ago as TransLink and the Province partnered with the City of Vancouver, UBC, University Endowment Lands, Metro Vancouver and Musqueam on the “UBC Line Rapid Transit Study”, which was completed in 2012. This work initially screened more than 200 combinations of technology (including best bus, Bus Rapid Transit, Light Rail Transit, and Rail Rapid Transit), routes and alignment that would connect Commercial/Broadway to UBC.

Figure 1: History of Planning for Rapid Transit to UBC



In 2014, the Mayors’ Council 10-year Vision recommended moving forward with the Broadway Subway Project, a SkyTrain extension from VCC-Clark to Arbutus. It also recommended that during the design process for the first phase, all stakeholders work together to conclude how and when to complete the rail extension to the Point Grey campus.

Between 2017 and 2019, TransLink collaborated with the City of Vancouver and UBC on updating the initial 2012 alternatives analysis with new information, including an assessment of technology options, ridership forecasts and capacity requirements, and options for a multiple corridor approach. The study found that with the expected increase in the number of jobs, residents, and students, it is estimated that in 2050, a Millennium Line UBC Extension could carry 130,000 people per day. This is more than double the number of passengers on the entire 99 B-Line corridor today. Grade-separated rail rapid transit is the only technology that can accommodate this level of transit ridership on the Broadway Corridor.

In February 2019, the Mayors’ Council endorsed SkyTrain as the preferred technology to connect to UBC—this led to beginning the current planning study analyzing SkyTrain options to connect between Arbutus and UBC.

In the summer of 2019, the Mayors’ Council directed TransLink to initiate the UBC Extension Design Development and Business Case Inputs Study (the Study). This report provides an update on this work. The Study provides direction for a recommendation of a preferred regional base scope to carry forward into the next phase of project development, with this subsequent phase of work entailing preparation of a concept plan, full business case, and reference concept design. Decisions to advance to successive phases of work, such as initiating a full business case, will be brought forward to the Board and Mayors’ Council as a separate decision.

The current Study includes the following technical development activities:

- Development of initial options for horizontal alignment (station locations), and vertical alignment (elevated or below-grade);
- Preliminary assessment of potential construction methods, environmental effects, multimodal transportation, and transit-oriented development opportunities;
- Analysis of Project benefits, including updated ridership forecasting; and
- Estimation of capital and operating costs.

To support development of the Study, TransLink has established an advisory governance structure to facilitate intensive engagement with Project partners throughout the Study. This governance structure includes executive and management level groups with representation from x^wməθk^wəyəm (Musqueam), Skwxw ú7mesh Úxwumíxw (Squamish Nation) and səilwətaʔ (Tsleil-Waututh Nation), City of Vancouver, UBC, Metro Vancouver, University Endowment Lands administration, the Ministry of Transportation and Infrastructure, and the Ministry of Municipal Affairs and Housing. Public and stakeholder engagement is part of the Study, with an initial round of engagement concluding on May 14, 2021.

DISCUSSION

The Discussion portion of this report includes analysis of key scope decisions presented in prior meetings as well as findings and recommendations through the lens of the Partner Contribution Policy to establish partner contribution requirements by defining what scope is “regional” and what scope is “partnership” or “local” to determine the Regional Base Scope for advancing a potential future project.

Key scope decisions related to station locations and horizontal and vertical alignment were assessed using the Municipal Contribution Policy to guide analysis in defining the Regional Base Scope. The Partner Contribution Policy was approved in April 2021 by the Board and Mayors’ Council, providing guidance to consistently allocate project costs for major transit projects between regional and local partners. A primary intent of the policy is to provide for transparency to decision-makers and the public and set expectations for partners. The Mayors’ Council report on the Partner Contribution Policy was approved on April 29, 2021 and is available to [download here](#).

While the intent of this work is to identify scope that is regionally funded, this would not preclude local funding partners from contributing to the Regional Base Scope, for example to improve project feasibility for regional and senior government funding. Funding partnership agreements will be determined as the project advances and after a Regional Base Scope is established.

The following key scope decisions were analyzed and are presented in the following sections.

Horizontal Alignment and Station Locations

1. Jericho Station via 8th Avenue, or Sasamat Station via 10th Avenue
2. Include both Jericho *and* Sasamat-10th Avenue Stations
3. Station location options at UBC
4. Second station at UBC
5. Potential future infill station within the UEL/Musqueam lands

Vertical Alignment

6. Elevated technical and functional feasibility

Guidance within the Partner Contribution Policy was used to establish an assessment for horizontal alignment and station locations.

The measures used in the assessment were informed by regional standards, policies, and guidelines containing directional statements and guidance on the attributes of transit alignment and station location that advance regional interests.

Table 1: Horizontal Alignment and Station Location Measures

Regional Interest	Relevant regional standards, policies, and guidelines	Measures
Ridership and Travel time	<ul style="list-style-type: none"> • Regional Growth Strategy (RGS) Frequent Transit Development Areas • TransLink Transit Service Guidelines 	<ul style="list-style-type: none"> - <i>Daily boardings</i> - <i>Travel time savings</i>
Urban Form and Development	<ul style="list-style-type: none"> • Transit Oriented Communities Design Guidelines • TransLink Transit Service Guidelines 	<ul style="list-style-type: none"> - <i>Catchment job and population</i> - <i>Potential and plans to support transit-oriented community development</i>
Network Connectivity	<ul style="list-style-type: none"> • Transit Passenger Facilities Design Guidelines 	<ul style="list-style-type: none"> - <i>Connecting routes</i>
Reconciliation and Equity	<ul style="list-style-type: none"> • Indigenous Relations Framework • Transport 2050 	<ul style="list-style-type: none"> - <i>First Nations landholdings or interest</i>
Cost	<ul style="list-style-type: none"> • TransLink Investment Plan 	<ul style="list-style-type: none"> - <i>Incremental cost of the improvement</i>

Guidance within the Partner Contribution Policy was also used to assess the vertical alignment and assess technical and functional feasibility. This assessment is described in greater detail in section 6.

Additional background information and details are included within Attachment 1: Slide Presentation. Station locations shown in the Figures that follow are schematic (conceptual and approximate).

1. Jericho Station via 8th Avenue or Sasamat Station via 10th Avenue

Three stations have been contemplated within the City of Vancouver segment of the corridor, including at Alma street, Macdonald Street, and either at Sasamat Street or Jericho lands. Intermediate stations at Alma Street and Macdonald Street would generate strong ridership (between 8,000 and 10,000 daily riders), provide connection to projected new development, provide system connectivity to the regional bus network, and have costs that are aligned with typical station costs. For these reasons stations at Alma and Macdonald are recommended to be part of the Regional Base Scope.

A third station within Vancouver was analyzed because developed areas exist west of Alma that would not be within the catchment of other either Alma or Macdonald stations. Analysis showed that a third station within Vancouver would add ridership and project benefits. The study considered two potential locations that could be served. One potential location considered was the existing 99 B-Line stop at Sasamat and 10th Avenue. The other potential location considered was an alignment connecting to the Jericho Lands site, because it provided an opportunity to connect to a future master-planned development site with strong transit-oriented development potential and the opportunity to use a portion of the site for construction staging.

Analysis was conducted to evaluate elevated and below-grade alignments for both stations.

Figure 2: Sasamat station alignment

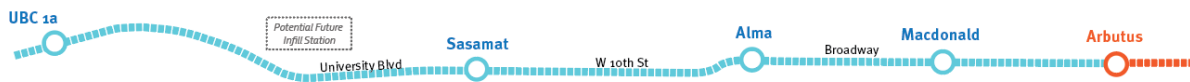
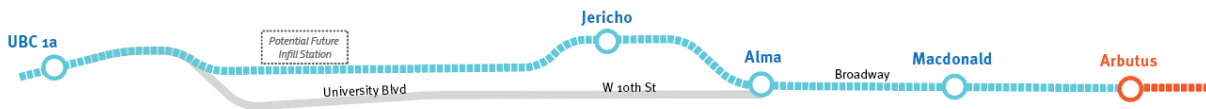


Figure 3: Jericho station alignment



Using analysis criteria developed to inform implementation of the Partner Contribution Policy, either station could be considered part of the Regional Base Scope. Similarities and trade-offs were analyzed between the stations as presented in prior meetings with the Board and Mayors’ Council—this comparison was presented and discussed at the July 6th Joint Regional Planning Committee. To summarize Staff’s findings, both options advance similar travel time savings benefits, but alternatives that serve Jericho maximize criteria across the project objectives by: (1) better serving and integrating with proposed development, including higher estimated ridership; (2) providing opportunities that serve First Nations interests for Indigenous economic development and cultural recognition opportunities (Jericho Lands); and (3) reducing construction risks and improving operating benefits (in a below-grade scenario).

The cost for the two stations are similar, while a Sasamat station alignment does not advance as many project objectives compared to a Jericho station.

Summary of analysis:

- Stations at Alma and Macdonald are part of the Regional Base Scope and either a Jericho or a Sasamat station could be considered Regional Base Scope
- Choose a Jericho station and alignment

2. Include both Jericho and Sasamat-10th Avenue Stations

Connecting to both a Jericho and Sasamat station was considered in earlier phases of work and was removed from consideration due to the proximity of the two locations with additional cost and limited benefit, such as overlapping ridership catchment area. Based on feedback received from the Joint Regional Planning Committee on July 6, 2021, further consideration was given to including both stations.

The analysis considered an alignment with a below-grade Jericho station along 8th Avenue and a station at Sasamat and 10th Avenue.

Figure 4: Jericho + Sasamat station alignment



Using analysis criteria informed by the Partner Contribution Policy, an option with both Jericho and Sasamat stations was assessed. Jericho would be technically feasible with the station at Jericho sited along 8th Avenue. However, the analysis revealed that adding a Sasamat station west of a Jericho station added significant costs and modest project benefits. The overlapping catchment resulted in incremental regional benefits which did not exceed the incremental costs of adding the station. Sasamat Station with Jericho Station overlapping its catchment, with little planned new development near Sasamat Station, means that it does not satisfy the criteria for inclusion in the Regional Base Scope.

Summary of analysis:

- A Sasamat Station located west of Jericho Station is not part of the Regional Base Scope

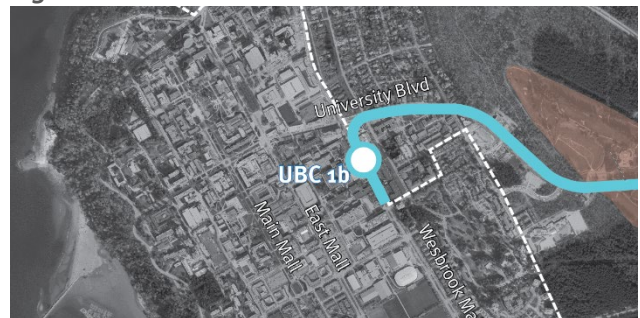
3. Station Location Options at UBC: University Trolley Bus Loop or Wesbrook Avenue

Two potential station locations were analyzed for the UBC central campus area: one at the University Trolley Bus Loop (UBC 1a), which was assumed to be below-grade and the other is located on Wesbrook Mall (UBC 1b), which was assumed to be elevated. While either option could potentially be elevated or below-grade, the Wesbrook Mall location was identified because it was a more viable station location if there is an elevated alignment in this area with fewer potential impacts.

Figure 5: UBC 1a - University Trolley Bus Loop



Figure 6: UBC 1b - Westbrook



Using analysis criteria developed to inform implementation of the Municipal Contribution Policy, either station could be considered part of the Regional Base Scope. Further study was undertaken to assess each of the potential station locations and key trade-offs between the stations are highlighted in the bullets below.

- UBC 1a - University Trolley Bus Loop
 - Increases annual travel time savings by 20 percent
 - Supports better connections to the destinations on campus, resulting in more people within a 45 or 60-minute transit trip of UBC

- An elevated station in this location would result in more negative impacts, primarily due to the proximity of the elevated station and guideway to recently constructed adjacent buildings with sensitive uses and technical equipment and circulation of pedestrians, buses and other vehicles at grade
- UBC 1b - Wesbrook
 - Less overall daily ridership (6-8 percent reduction)
 - Additional five- or six-minute walk to majority of on-campus destinations, decreasing annual travel time savings and access to destinations
 - An elevated option in this location would result in fewer negative impacts

The station location on the UBC campus influences project benefits—the closer the station gets to the key destinations on campus the greater the benefits for travel time savings. The analysis shows that the regional benefits of a University Trolley Bus Loop station are expected to exceed those of a Wesbrook station and are an important driver of project benefits.

Summary of analysis:

- Either station could be considered Regional Base Scope
- Choose a station located at the University Trolley Bus Loop location (UBC 1a)

4. Second Station at UBC

In July 2019 staff brought this concept to the Mayors' Council for consideration to include within the scope of this study and was subsequently included. The rationale for undertaking the investigation includes potential issues that a SkyTrain extension may address including:

- Is a rapid or frequent transit connection to south campus needed to support higher density, transit-oriented development?
- Would an additional SkyTrain station connect more regional trips to UBC's job centres?
- Would significant planned population growth on campus generate additional regional travel demand?
- Could other solutions serve the areas of campus beyond the 800-metre catchment of a single UBC station?

Using analysis criteria developed to inform implementation of the Partner Contribution Policy, a second station at UBC performs well within the Ridership & Travel Time and Urban Form & Development criteria. UBC has a large population located in the southern portion of campus which generates travel demand (approximately 9,300 daily boardings). To be recommended for inclusion in the Regional Base Scope, the incremental benefit of adding the station should be at least comparable to the estimated cost of adding the station. For the second UBC Station the cost of construction of the station and extended guideway is more than the incremental regional benefits of ridership, travel time, and connecting to future development areas.

Alternative transit technology was also assessed to examine benefits and trade-offs of providing a second station, or serving demand with surface transportation alternatives, including either bus or other surface transit options. The analysis tested the rationale and case for a potential second station at UBC. Key findings from this assessment include:

- A second UBC station provides additional net new ridership (3,100 additional new transit riders). A south campus station generates more transit demand than options without a second station.

- A large percentage of the additional demand is diversion from active modes, including walking and cycling, and 25 to 45 percent of trips would be on-campus trips.
- Draws more auto users onto transit, reducing regional Vehicle Kilometres Traveled (VKT).
- A second SkyTrain station creates surplus capacity.
- When considering inter-campus travel, surface alternatives, including bus or streetcar, are less costly to provide in both capital and operating costs than SkyTrain Station alternatives, even with the inclusion of a separate Operations & Maintenance Facility for streetcar vehicles. However, these alternatives generate less transit demand.

Staff's finding from this work is that a second station on the UBC Campus is not required to meet the original problem statement of connecting to UBC. While there are transportation and other benefits of a second station, it should not be part of the Regional Base Scope and further study would be required.

Summary of analysis:

- Do not include within regional base scope, but do not preclude possible future extension in design
- On-going consideration either as a partnership scope alternative or separate project
- More study needed on overall approach to serving UBC: analyze alternative future network opportunities when study is undertaken for the 41st/49th rapid transit corridor

5. Potential future infill station within the UEL/Musqueam lands

A potential future infill station has been considered through the UBC Extension Study within the University Endowment Lands (UEL) and Musqueam lands. The UEL is an unincorporated area, separate from the City of Vancouver and the University of British Columbia (UBC). The area borders UBC to the north and to the east. The existing land use includes residential, recreation, open space and protected natural areas. The UEL Golf Course Lands, totalling approximately 145 acres, are located within the UEL and ownership was returned to the x̣ṃəθḳəỵəm [Musqueam] in 2008. An existing covenant on the land presumes that a golf course will remain until 2083. Certainty of future development within the University Endowment Lands golf course area is low, and the current population and jobs are not expected to generate meaningful ridership. Therefore, only a potential future infill station has been contemplated along this portion of the alignment at this time.

Provision for a potential future infill station was considered based on feedback from partner engagement meetings and reflected back to the Mayors' Council and Board at the Joint Regional Planning Committee. A potential future infill station has been considered as part of this study, but there has not been any significant design development.

Technical work to date considered potential locations and assumed passive provision of a potential future infill station within this phase of study and early concept design. This analysis considered locations that are a sufficient distance from other station catchments, potential future land use, and technical feasibility (a flat and straight section of track). The exact location remains flexible, and no additional infrastructure has been determined during this phase of work. The inclusion and location of a potential future infill station was not a decision driver as alternative locations were not assessed in the alternatives evaluation. Multiple locations could be identified based on the geometric and technical feasibility as described above, but specific provision of station infrastructure would be negotiated in a future phase of work.

Based on station spacing and potential travel time implications, more than one infill station from Blanca to UBC may not be appropriate in the future depending on the outcome of future land use and

development planning decisions but should not be completely removed from consideration in future stages of work.

Using analysis criteria developed to inform implementation of the Partner Contribution Policy, a station in the UEL does not meet the requirement for inclusion in the Regional Base Scope as it performs poorly against regional transportation criteria. However, if potential development were to occur within the golf course area to a similar density as the proposed Jericho development, an infill station would perform well on urban form and development criteria, and would likely meet the test for inclusion as part of the Regional Base Scope. For this reason, it is recommended that a potential future infill station for further study be included within the Regional Base Scope.

Provision for an infill station can range from passive provision (ensuring a flat and straight portion of track) to moderate provision (e.g. building a station box), with a range of cost implications. Past experiences indicates that if the alignment is below-grade, the cost and complexity of adding an underground station on an operating line can be technically difficult and prohibitively costly if only passive provision is provided.

With the information available today, certainty of future development within the University Endowment Lands is low and only passive provision is contemplated for inclusion within the Regional Base Scope, regardless of vertical alignment. However, future phases of work should consider additional provision for a potential future infill station if: future land use certainty changes and the cost of accommodating station provisions in the initial design is deemed to be reasonable compared against the probability that the potential future level of density were to be built; or if partnership funding can be secured to advance additional investment.

Summary of analysis:

- Consider the implications within the context of an elevated or below-grade vertical alignment in the UEL (see Section 6 below).
- Include passive provision for a potential infill station within the UEL/Musqueam lands area. Future phase of project development to determine exact location of potential future infill station.
- Advance discussions with potential funding partners to include additional infrastructure beyond passive provision, extent to be identified as partnership or local scope.

6. Elevated or below-grade vertical alignment analysis

The 2014 Mayors' Vision articulated a policy principle that SkyTrain projects are expected to be constructed above-grade for cost-efficiency, except where tunnelling is required to meet technical and/or functional requirements. If tunneling is not required but requested by a municipality or a partner agency, then they are responsible for the net incremental costs.

Furthering this commitment, a new formal policy for partner contributions to rapid transit projects was approved by the Mayors' Council in April 2021. A component of this policy relates to this issue of defining the regionally preferred project and how to allocate costs and benefits for partner-requested scope elements that go beyond the regionally-preferred project. For elevated or tunnelled SkyTrain, the policy states that the regional scope is above grade except where tunnelling is required for technical requirements or functional feasibility, or where tunneling is more cost-effective. The policy guidelines apply for all major transit projects henceforth, including the UBC Extension.

Applying this approach to the UBC Extension study entails a three-step process:

1. Technical assessment of what segments of the different alignments can technically be elevated, below-grade, or at-grade;
2. Screening of options that are unreasonable from an extent of cost impacts and/or resulting operational deficits; and
3. Functional feasibility assessment of the relative costs, impacts, and benefits of the remaining options against the established objective accounts.

Technical feasibility assessment

Work on the UBC Extension Study has established the technical and geometric feasibility of elevated and below-grade alternatives along the corridor. Elements that drive the technical feasibility, include geotechnical ground conditions, potential location for a transition from below-grade to above-grade (portal), track geometry and station locations, elevation gain and topography along the alignments, and civil requirements such as conflicts with existing utilities. The work to-date proposed locations that optimize the geometry by maximizing the length of elevated guideway and minimizes portal/ramp lengths.

Technical feasibility for the vertical alignment was dictated by two driving factors for this corridor: elevation/topography and existing utilities. Between Arbutus and Alma the topography slopes down from east to west making a transition from below-grade to elevated technically feasible. West of Alma to Blanca the topography slopes up. Additionally, there is a sewer main located at Alma resulting in a lower depth of a below-grade alignment and transitioning from below-grade to elevated between Alma and Blanca is technically infeasible. West of Blanca the topography flattens and the opportunity for a portal is technically feasible. Based on these factors, there are two locations where the line could transition from being below-grade (coming out of the Arbutus terminus of the Broadway Subway Project) to elevated: one is three blocks west of Arbutus Street at Balsam Street and the other is near Blanca Street. Three options for vertical alignment were analyzed:

- a) Below-grade: Below-grade the entire length
- b) Mixed vertical: Elevated west of Blanca along University and Wesbrook
- c) Elevated: Elevated west of Balsam along Broadway, 10th Avenue, University and Wesbrook

Functional Feasibility Assessment

Functional feasibility was determined by using a set of measures to examine the performance of elevated alignments in their ability to meet the project's objectives. Project alternatives were analyzed with a multiple account evaluation (MAE), which is an evaluation process across a range of performance measures linked directly to the project objectives to identify benefits and negative impacts of each alternative. Elevated SkyTrain and below-grade SkyTrain would share many of the benefits for transit users compared to business as usual (99-B-Line). An elevated SkyTrain would contribute to benefits related to transportation performance, attracting new riders, and environmental sustainability through reductions in greenhouse gas emissions. However, key differentiators for vertical alignment options also exist and are used to frame the basis for the functional feasibility assessment. These differentiating criteria includes impacts to other modes of travel, urban development, neighborhood and environmental considerations, risk and deliverability, and costs.

Table 2: Functional Feasibility Measures

Objective	Sub-objective	Measures
Customer Service and Experience	Minimize Impacts to Multi-Modal Travel (Non-Transit)	Impacts to access and severing community connections
		Impacts to surface modes: road space and Sidewalk/Pedestrian crossings
Urban Development	Integrates with and Supports a Vibrant Streetscape and Urban Realm	Proportion of zero-lot-line development in close proximity to guideway
		Anticipated change to quality and amount of active frontage over time
Social, Community and Environment	Minimizes Neighbourhood Impacts	Number of residents and businesses immediately adjacent properties potentially impacted by noise or vibration
		Qualitative assessment of impacts to visual intrusion given the height and proximity of the guideway on neighborhood condition
	Minimizes natural environment impacts	Impact on tree canopy / vegetation / wildlife
Deliverability & Acceptability	A Service that Minimizes Risk and is Deliverable & Operable	Probability that major risks will materialize during construction.

The alignment has been separated into four segments for this assessment. The four segments were selected based on their distinct and consistent neighbourhood environments related to stakeholder/partner interest, transportation context, and land use setting.

- UBC: Includes area through the University west of Wesbrook Mall
- UEL/Musqueam Lands: Includes diagonal crossing through golf course and University Boulevard arterial roadway between Blanca and Wesbrook Mall
- West Broadway: Includes arterial roadway part of Broadway between Balsam and Alma.
- Westside/Jericho: Includes local roadway part of Broadway and 8th Avenue (also a local street), between Alma and Blanca
- West Broadway: Includes arterial roadway part of Broadway between Balsam and Alma.

Figure 7: Corridor Segments for Vertical Alignment Analysis

UBC	UEL/Musqueam Lands	Westside/Jericho	West Broadway
<ul style="list-style-type: none"> • Gateway to campus • Trolley bus loop • Retail, mixed-use residential, and academic uses 	<ul style="list-style-type: none"> • Wide median boulevard/golf course environment. • Multi-family residential development at lelən̓ village • Single-family homes and local retail 	<ul style="list-style-type: none"> • Neighborhood characterized by low-density residential uses • Tree-lined, narrow streets • Retail node at Sasamat and 10th 	<ul style="list-style-type: none"> • Contiguous street fronting retail with little to no building setback • Low to midrise residential uses • Regular signalized crossings

The functional feasibility assessment considers a track alignment that connects to a Jericho station with alignment along Broadway, 8th Avenue, and University Boulevard. This assessment is presented within this chapter because it reflects the horizontal alignment recommendations presented earlier in this report. Some adjustments to alignment were incorporated into the study of functional feasibility to optimize the alignment and improve technical performance.

Benefits of an Elevated Guideway

As stated earlier in this section, an elevated SkyTrain would include many of the benefits for transit users compared to business as usual (99-B-Line). An elevated SkyTrain would contribute to benefits related to

transportation performance, attracting new riders, and environmental sustainability through reductions in greenhouse gas emissions. Typically, an elevated guideway alignment offers a more economical solution in terms of construction costs. However, impacts of an elevated guideway within a corridor must be considered and weighed against the net potential construction cost savings when determining an optimal solution. Previously, on the Broadway Subway, the Expo line, and the Canada Line, the benefits provided by tunneling in an existing dense urban environment, outweighed the additional costs and impacts associated with that construction methodology. Work has been completed to analyze the potential impacts.

Multimodal Impacts

Within the West Broadway segment of the corridor, the columns and offsets to travel lanes for a new centre median would take up 5 metres of the approximately 17 metre curb-to-curb width within the arterial street right of way.¹ This would permanently eliminate two of six lanes used as available travel lanes or street parking. In addition to the removal of lanes, the elevated alignment introduces sight distance restrictions around the columns, which will require dedicated turn lanes to accommodate protected turn phases at major intersections. These turn lanes may not be able to be accommodated at some locations without further land or building acquisition, however, insufficient space exists for these movements at many intersections. As a result, left turns at up to 9 of 15 intersections may no longer be permitted. With fewer left turn opportunities along Broadway, there would be impacts to business access and increased traffic on local streets.

Within the Westside/Jericho segment of the corridor, the local street curb to curb width is narrower and varies between 8 to 11 metres. This neighborhood street has parking on both sides and 8th Avenue services as an east-west cycling route connecting central Broadway and UBC. An elevated SkyTrain at this location would require reconstruction and widening of the street and relocation of the cycling route.

Within the University Endowment Lands segment of the corridor, the University Boulevard arterial street has a wide median with generally one travel lane in each direction with no parking. The wider ROW width in this section and existing median that could generally accommodate SkyTrain columns without any significant additional widening, means that there are likely to be minimal impacts to vehicle traffic and active modes of transportation in this segment.

Within the University segment of the corridor, the tail tracks and station would be in the median where space is constrained due to the width available as existing buildings constructed immediately adjacent to the sidewalk. Widening the median to accommodate space for a station would have impacts on the sidewalk space that is used for pedestrians queueing for buses on the south side and café and dining space on both sides of the street—both uses would be impacted and may need to be relocated due to a reduction in pedestrian space. Other road uses, including pick up/drop off, trolley bus access, parkade access and street parking would also be impacted, but with additional mitigation most of these functions may be retained.

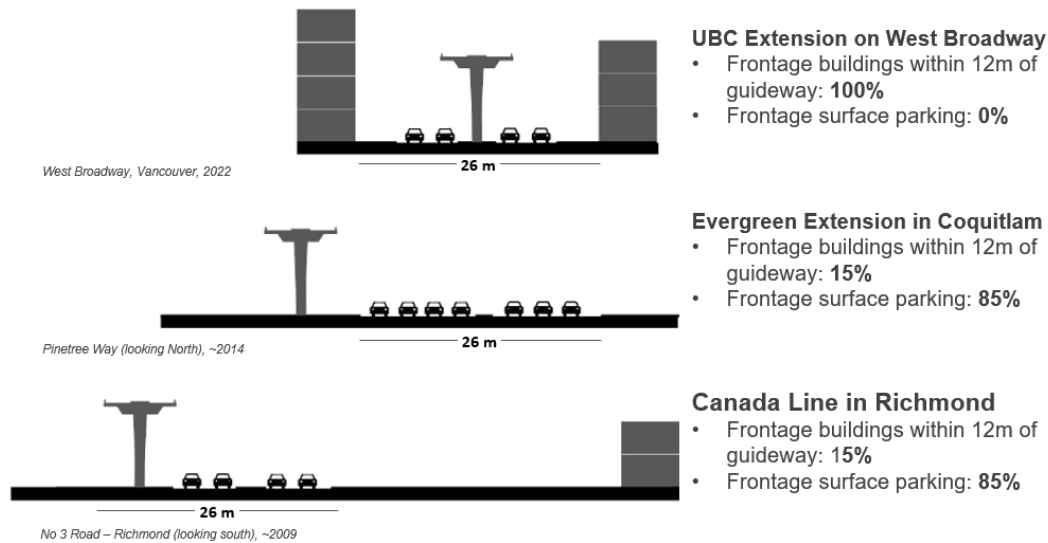
Streetscape and Urban Realm Impacts

There are potential impacts of an elevated SkyTrain to the streetscape and urban realm. Depending on the urban form, width of roadway, surrounding land uses, and pedestrian activity, an elevated guideway

¹ Using a similar street design as the Evergreen Line elevated guideway.

would have varying levels of impact on the streetscape and urban realm. The West Broadway and University segments of the corridor are walkable, urban environments with buildings constructed at the property line, street trees, active storefronts, and high pedestrian activity. In these segments of the corridor an elevated guideway would alter the urban realm and significantly change the streetscape, impacting business activity, pedestrian activity, and street character. This contrasts with other recent SkyTrain projects where elevated guideway impacts were deemed manageable, due to wider corridors with lower density development setback from lot lines, and in some cases buffered by surface parking lots.

Figure 8: Streetscape comparison of other elevated SkyTrain Extensions



Most elevated SkyTrain alignments have run along legacy rail corridors, or in a side running configuration with large setbacks fronted by buffers such as surface parking. In many instances on the Canada Line and Millennium Line, properties have been redeveloped after SkyTrain was constructed. Although this new development is within close proximity to the guideway, many of the new buildings have been constructed in a manner that responds to the elevated guideway and minimizes potential impacts through building design considerations.

Overall, there are no comparable sections of elevated guideway in the region that run through an urban setting with a comparable level of density with no building setbacks.

Neighborhood and Environmental Impacts

Impacts that undermine project objectives were identified in two segments of the corridor within this category, including West Broadway and Westside/Jericho segments. Due to most buildings having no setbacks and located immediately adjacent to the sidewalk, the guideway on West Broadway from Balsam to Alma would need to be located in the middle of the street to maximize the distance from existing buildings. An elevated SkyTrain along this section of Broadway would likely introduce noise and/or vibration issues for existing buildings that are in close proximity to the guideway and were not designed to mitigate these issues. These impacts would be experienced by the residential and mixed-use buildings that are located along West Broadway.

Similar impacts would be experienced along the Westside/Jericho segment, which is a local neighborhood street with residential uses on both sides of a narrow street.

While Canada does not have guidance for grade separated light rail adjacency to sensitive uses, the U.S. Federal Transit Authority (FTA) guidance describes that sensitive uses, including residential, could be severely impacted within 30 metres of a guideway. In the West Broadway and Westside/Jericho segments this could result in significant impacts and additional risks and costs to the project (such as mitigation requirements, additional property acquisition, and/or litigation).

Through the UEL/Musqueam segment, an elevated guideway has limited impacts on a short portion of this corridor. The scope and scale of these impacts are limited compared to other portions of the corridor and would therefore be more manageable.

Deliverability and Risk

A metric related to deliverability and risk was assessed for each segment as part of this analysis.

Generally, when compared against below-grade construction, the construction of elevated guideway is relatively less risky. Although both elevated and underground construction techniques are subject to geotechnical risks, the risk is continuous for underground. Also, once a risk materializes (i.e. unexpected ground conditions) in underground construction, the impact of that risk may be greater as site access is limited by the nature of underground construction. Across all the segments studied in this analysis, no major risks were identified related to elevated construction that were not expected to be mitigatable. And while below-grade construction carries a greater risk, those risks are minimized through further study as the design development and geotechnical investigations advance.

Although deliverability was considered as a metric in this analysis, it was not selected for further analysis as any deliverability risks associated with either elevated or underground construction were expected to be mitigatable through additional design and planning of construction methods. Accordingly, deliverability did not help to differentiate between options.

Cost Considerations

The study's design process focused on refining the preliminary design of alternatives to inform more certainty around system performance, cost, risk, constructability, and overall acceptability. For example, the team advanced the approximate alignment and station locations, which identified potential temporary and permanent property requirements, which in turn enables the development of an estimated property cost. Development for each of the alternatives was advanced in close collaboration with partners and BCRTC and using existing design manuals as the basis for design.

Key assumptions for the design included:

1. Design headway of 90 seconds.
2. Intermediate station platforms assumed to be consistent with typical SkyTrain stations in terms of width and length.
3. Terminus station at UBC central campus would include a wider centre platform to accommodate increased passenger flows.
4. Due to distance from an Operations and Maintenance Centre (OMC) and to allow for the efficient turnaround of trains, the terminus station requires front and rear crossovers and reversing tail track and side storage tail tracks. This will allow for up to five trains to be stored overnight.

5. Design included functional elements, including train storage tracks, crossovers, power stations, emergency egress, ventilation, equipment storage, and a contribution to an OMC (the network will require additional OMC capacity to support this project; a further study is required to determine location and detailed OMC requirements).
6. Stations incorporates learnings from Broadway Subway Project and are designed to allow for development above future stations.

While capital costs for mixed vertical and fully elevated options are lower compared to below-grade options, there are potential impacts that would cause additional cost considerations, including: impacts of reduced economic activity on the corridor; loss of quantifiable development rights; relocation of sensitive uses; and compensation, mitigation, or litigation costs from constructing and operating an elevated guideway. These costs will be estimated in future work, should a full business case proceed.

Summary of Analysis

- Below-grade in West Broadway segment, due to functional requirements;
- Below-grade in Westside/Jericho Lands segment, due to functional and technical requirements (with below-grade West Broadway segment requirement);
- Above grade for in UEL/Musqueam Lands segment;
 - Undertake value engineering for both elevated and below-grade options to optimize the interface with the underground UBC station; and
- Below-grade in UBC segment due to functional requirements.

CONCLUSIONS

Within this report and attached slide presentation, analysis work and recommendations are presented related to key horizontal and vertical alignment scope decisions for advancing to a Regional Base Scope, including City of Vancouver station locations, UBC station locations, a second station at UBC, and vertical alignment. We have also summarized how the Partner Contribution Policy was used to analyze scope decisions assessed through the lens of partner contributions. Direction from the Mayors' Council and Board on these key decisions will be used to focus future work related to a UBC Extension.

Endorsing a Regional Base Scope as recommended in this report will not define the project's prioritization against other regional projects nor timeline for construction—this project will be considered together with other unfunded regional priorities as part of the 10-year Vision update process currently underway. This report recommends that a Regional Base Scope be endorsed as a step to defining the preferred alignment and station locations as outlined in the Phase Two Investment Plan, this work will inform future decisions about project sequencing, funding, and timelines.

NEXT STEPS

Next steps will include further discussion and direction from the Mayors' Council and TransLink Board related to alignment and station alternatives, to inform the regional base project scope as a framework for partner contribution. If and when the Board and Mayors' Council decide on a priority for the UBC extension project within the T2050 Ten-Year Priorities, work would advance into the next stage of project development, including reference concept design and full business case.

ATTACHMENT – Millennium Line UBC Extension Staff Presentation

Millennium Line UBC Extension

Regional Base Scope

Mayors' Council

April 22, 2022



Together all the way

Presentation Overview

1. Project Background
2. Staff Analysis and Recommendation
3. Next Steps

Purpose of this presentation

Present recommendations for the Regional Base Scope, including proposed station locations and direction on vertical alignment

1. PROJECT BACKGROUND

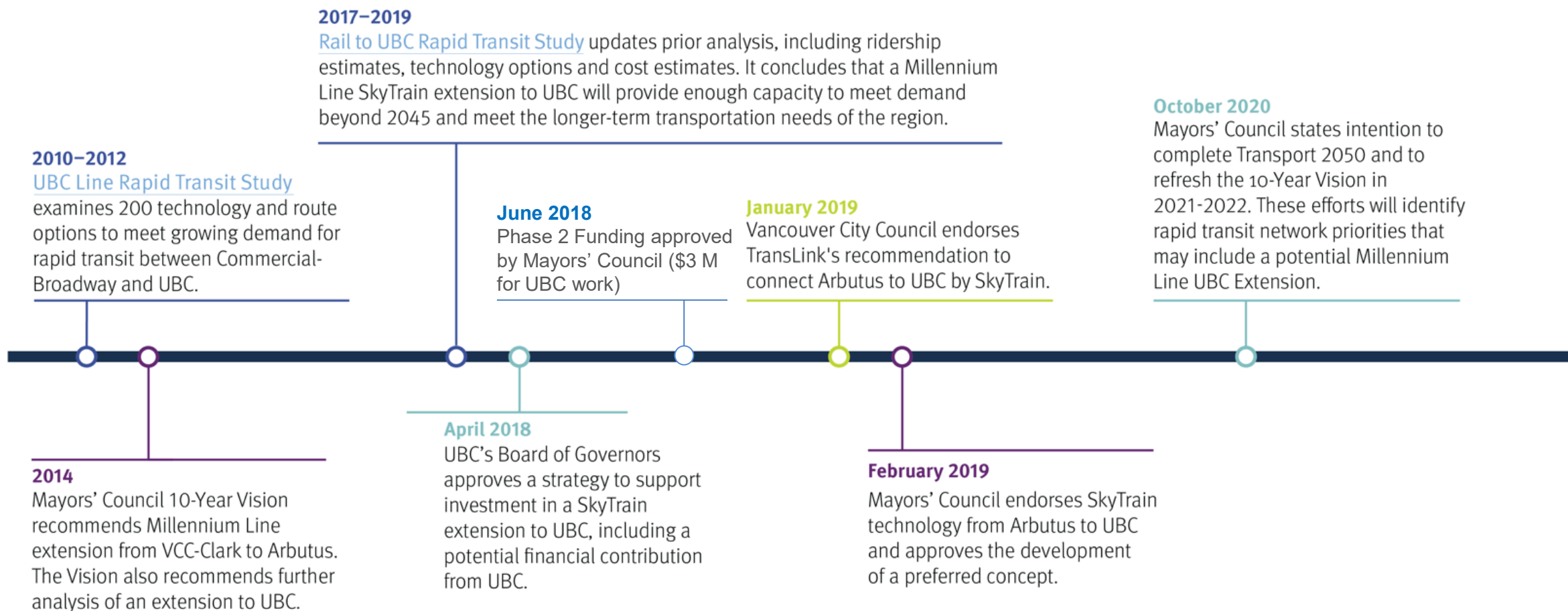


Transit Along the Broadway Corridor

- In 2019 (pre-COVID), the 99 B-Line service to UBC moved up to **60,000 customers per day** on articulated buses along the Broadway Corridor
- Buses run every **two to three minutes** at peak times
- This is the **busiest and the most consistently overcrowded bus route** in our region's network



The History of Planning for Rapid Transit to UBC

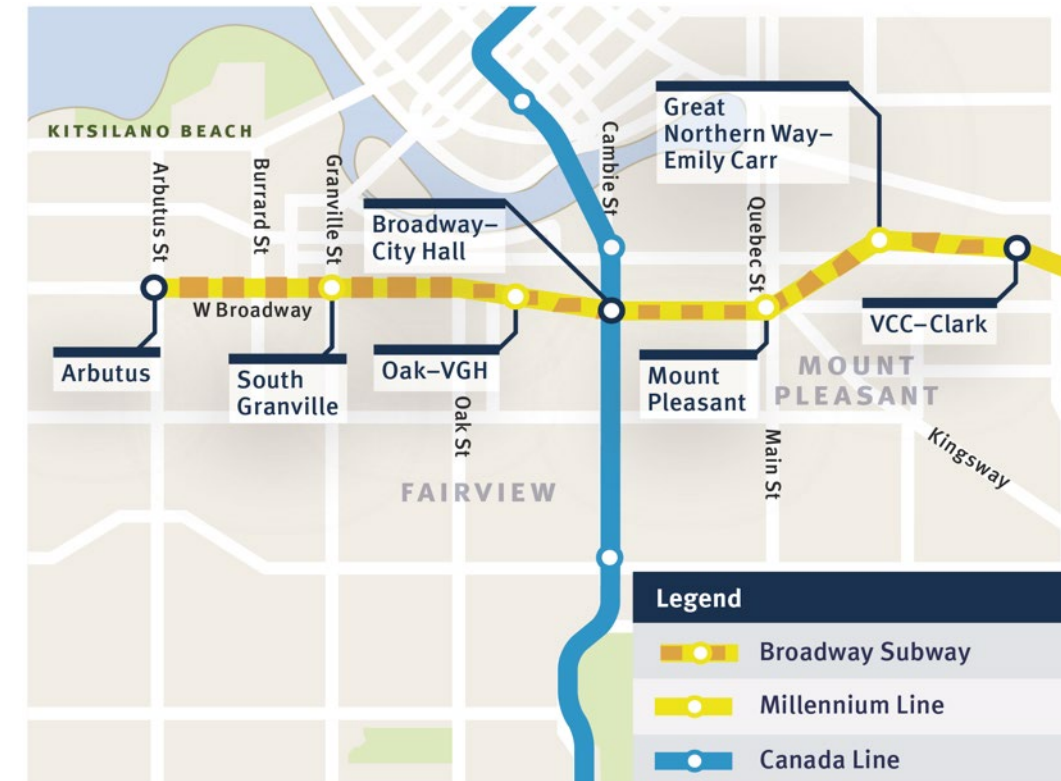


Broadway Subway Project

The Broadway Subway Project is currently under construction.

- Will extend the Millennium Line by 5.7 kilometres from VCC-Clark SkyTrain Station to Broadway and Arbutus Street
- 0.7 km of elevated guideway and 5 km of tunnel
- Will have the capacity to move three times as many people as the 99 B-Line

B-Line bus service will continue to operate between Arbutus and UBC after this extension opens in 2025.



Why are we studying a potential Millennium Line UBC Extension?

When the Broadway Subway Project opens, even the shortened 99 B-Line route, from Arbutus Street to UBC, is expected to be at capacity at peak times.

- With expected increases in jobs, housing, and educational opportunities, transit demand will continue to grow along the Broadway Corridor to and from UBC
- SkyTrain is the only form of rapid transit that could meet future ridership demand from Arbutus Street to UBC beyond 2050
- This sustainable travel option would better connect the region to:
 - Higher education, jobs, housing, and recreational opportunities
 - Cultural amenities and health and technology precincts along the Broadway Corridor

2. STAFF ANALYSIS AND RECOMMENDATIONS



Current work program

- Confirm project scope and objectives
- Undertake technical planning work to evaluate possible route options and station locations, including:
 - Station options within the City, University Endowment Lands and at UBC
 - Identification of potential future infill station/s
 - Potential for a second station on the UBC Campus
 - Potential for where the guideway could be elevated

Study partners include:

- x^wməθk^wəyəm (Musqueam)
- Sḵwxw̓ ú7mesh Úxwumixw (Squamish Nation)
- səlilwətał (Tseil-Waututh Nation)
- City of Vancouver, UBC, Metro Vancouver
- University Endowment Lands administration
- Province of BC Ministry of Transportation and Infrastructure
- Province of BC Ministry of Municipal Affairs and Housing.

Public Engagement Undertaken Last Spring

Public Engagement Topics: Sought feedback on the **values** and **criteria to assess potential route and station location options**



39,100 visits to translink.ca/ubcextension



19 online open house attendees (51 registrants)



15,550 completed public surveys



22 attendees at the Electoral Area A engagement session



238 discussion guide downloads
195 Rail to UBC report downloads
160 UBC Line Rapid Transit Study report downloads










11 inquiries or feedback submissions via email



1,006 people polled for the research poll

Objectives

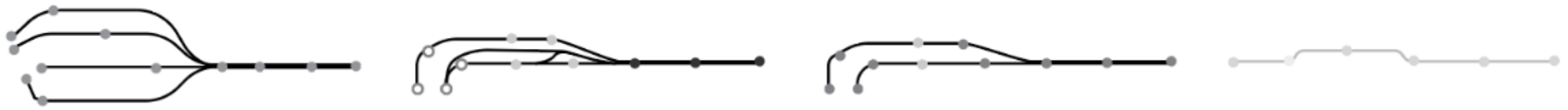
- Seven strategic project objectives form the basis for evaluation measures
- Developed with input from study partners, TransLink Board and Mayors' Council, and the public

	Customer Service & Experience: Provide convenient transit that is fast, frequent, reliable, safe, and accessible while providing a great customer experience.
	Transportation: Increase transit options to meet current and future transportation needs, attract new riders, and connect people to where they want to go.
	Urban Development: Support and integrate with existing and future land uses and development
	Social, Community & Environment: Support healthy and resilient communities by providing sustainable transportation options and minimizing project impacts to the human and natural environments.
	Economic Development: Advance local and regional economic well-being by enabling the movement of people and goods
	Financial: Use public funds efficiently
	Deliverability & Acceptability: Deliver a constructible and operable Project that is acceptable to the public

Alternatives Analysis

Study began in
Fall 2019

We are here



1. Initial long list and viable long list of options

- Fatal flaw analysis
- Considered multiple corridors and potential stations



2. Working short list by segment

- Scope options and trade-offs assessment
- Narrowed list of potential corridor and stations options



3. Shortlist of Alternatives

- Multiple Account Evaluation of station and vertical alignment options



Preferred Concept

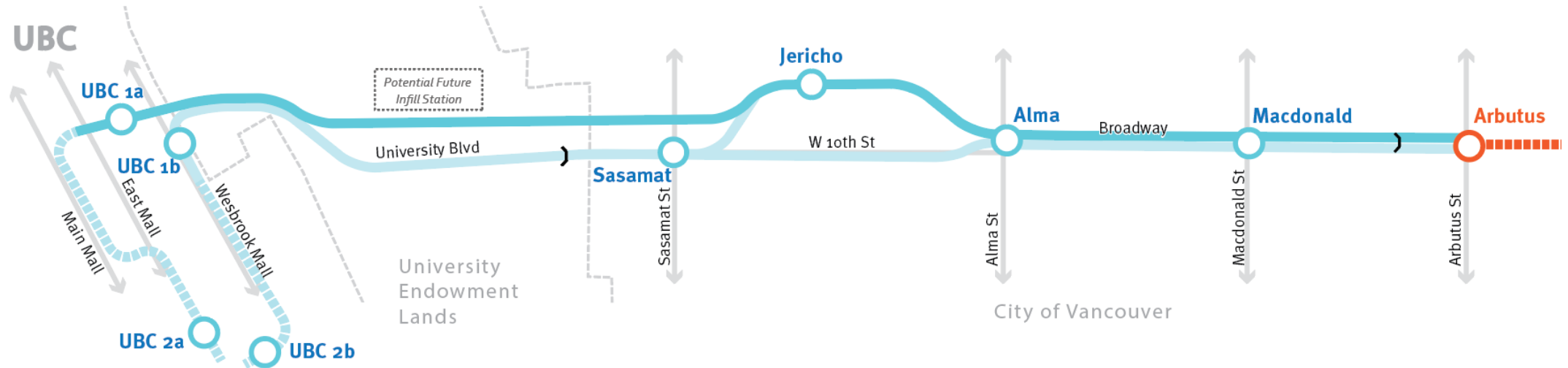
- To be determined and assessed as regional base scope

Analysis question and approach

Define what scope is “regional” and what scope is “partnership” or “local” to assess potential partner contribution.



Horizontal Alignment and Stations – Options Considered for Regional Base Scope



Station locations at UBC

- Consider station location Options 1a and 1b
- Consider opportunity for a second station

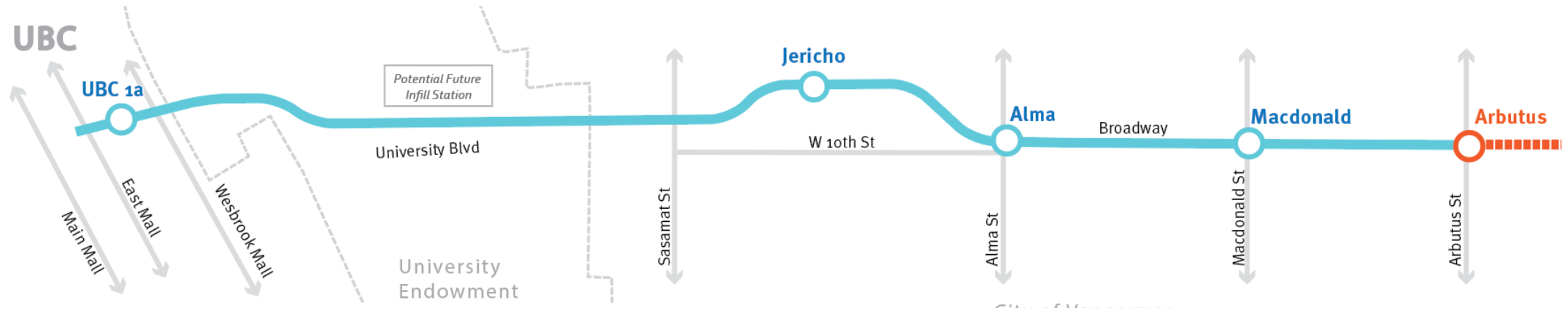
Within the University Endowment Lands/Musqueam Lands

- Consider opportunity for a potential future infill station

Station locations within Vancouver

- Confirm stations at:
 - Macdonald
 - Alma
 - Sasamat and/or Jericho

Horizontal Alignment and Stations – Recommendations for Regional Base Scope



Recommended Regional Base Scope - Stations

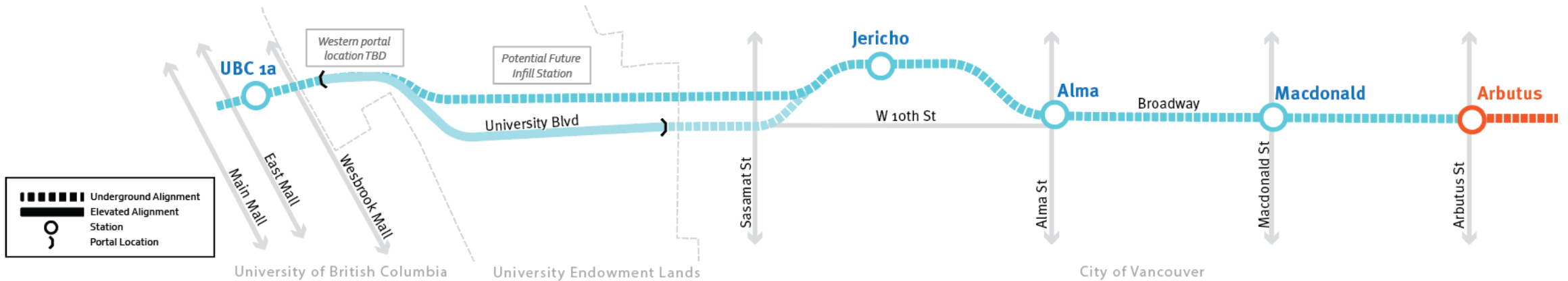
- Stations: **Macdonald, Alma, Jericho, UBC 1a**
- Potential Future Stations:
 - Passive provision for at least one potential future infill station within the UEL/Musqueam Lands area (Next Phase: Further define location and determine possible partnership scope for potential future infill station infrastructure)
 - Passive provision to allow for possible future extension in design

Vertical Alignment – Analyze where the guideway can be elevated

- Purpose of this analysis was to **establish partner contribution requirements** by defining if below-grade vertical alignments should be considered within the Regional Base Scope and what is “partnership” or “local” scope
- Municipal Contribution Policy Guidance:
 - *Regional scope is above grade for SkyTrain **except where tunnelling is required for technical or functional requirements** or where tunnelling is more cost-effective*
- Elevated alternatives were analyzed to consider if tunnelling is necessary for technical or functional feasibility

Rail Extensions or New Rail Lines: <i>Vertical Alignment (Tunnelling)</i>	Where is tunnelling required to meet technical or functional requirements?	Regional Scope is above grade for SkyTrain (or at grade if a fully separated right of way exists there) except where tunnelling is required for technical or functional requirements or where tunneling is more cost-effective. For LRT and BRT, Regional Scope is at grade except where tunnelling is required for technical or functional requirements or where tunneling is more cost-effective.
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Vertical Alignment - Considerations for Regional Base Scope



Findings

- Transitioning from below grade to elevated is technically feasible at Arbutus or at Blanca
- Elevated alignment is functionally feasible for UEL/Musqueam Lands segment
- Elevated alignment is not functionally feasible for UBC, Westside/Jericho, and West Broadway segments

3. NEXT STEPS



Next Steps

- Finalize T2050 Ten-Year Priorities, which includes the UBC Extension
- Advance funding assumptions with partners
- Next stage of project development and technical work

Millennium Line UBC Extension

Regional Base Scope

Mayors' Council

April 22, 2022



Together all the way

TO: Finance and Governance Committee (April 13, 2022 meeting)
FROM: Mike Buda, Executive Director
DATE: April 13, 2022
SUBJECT: **Funding considerations for the Millennium Line UBC Extension Regional Base Scope**

COMMITTEE RECOMMENDATIONS:

The Finance and Governance Committee recommends that the Mayors' Council:

1. Replace the recommendations of the Regional Transportation Planning Committee made at its March 11, 2022 meeting with the following recommendations:
 - a. Include the following station locations in the regional base project scope for the UBC Extension:
 - i. Stations at Alma, Macdonald, Jericho, and at the UBC Trolley Bus Loop;
 - ii. Passive provision for at least one potential future infill station within the UEL/Musqueam Lands area on or near the University Golf Course, planned and funded by third-parties; and,
 - iii. Designate a second station and the rail connection at UBC as outside of the regional base scope, requiring third-party funding;
 - b. Defer decisions on vertical alignment pending local and third party contribution agreements;
2. Construction can only proceed in years 6-10 of the Transport 2050 Ten-Year Priorities, once the Bus Rapid Transit (BRT) plan implementation has commenced, subject to further planning and discussions, and an approved business case that includes a new funding model and third-party payment and land value uplift contributions;
3. Receive this report

APPROVED, April 13, 2022

PURPOSE

The purpose of this report is to propose revised recommendations for the UBC SkyTrain Extension (UBCx) Regional Base Scope to those approved by the Regional Transportation Planning Committee on March 11, 2022, based on discussion and feedback at that committee, as well as the Joint Workshop and Joint Meeting of the Mayors' Council and Board on March 30 and 31, 2022 respectively.

BACKGROUND

At its March 9, 2022 meeting, Finance and Governance Committee directed staff to "report back regarding the financial analysis for the UBCx project and the justification for the extent of the recommended below ground alignment." At the meeting, number of questions were raised about the rationale, funding and alignment options for UBCx.

On March 11, 2022 the Regional Transportation Planning Committee considered a report on the findings of the Millennium Line UBC Extension Design Development and Business Case Inputs Study and proposed

a recommended Regional Base Scope, including horizontal and vertical alignment and station locations (see Annex 1 above for full report). The Committee approved the recommendations as proposed but raised a number of concerns about the potential timing and funding of the project given other regional priorities to be identified as part of the then upcoming New Vision process.

At the March 30 Joint Workshop on the New Vision, and the follow-up Joint Meeting on March 31, the UBCx project was considered alongside other regional Major Transit Investments.

On March 29, City of Vancouver Council considered a [city staff report](#) that recommended “endorsement of a preferred alignment and station locations to demonstrate municipal support for the Project, which the Mayor can relay to the TransLink Mayors’ Council and senior government, reinforcing the overall commitment to the project and its objectives.” The report did not make recommendations on vertical alignment, noting that this analysis is still underway by TransLink, and that elevated vertical alignments are considered the baseline for regional base project scope unless it can be demonstrated that it is not technically or functionally possible to do so. Following discussion, Vancouver City Council [endorsed a resolution](#) in support of the UBCx project, including the same station locations within the city as proposed in the Regional Base Scope.

DISCUSSION

Direction provided at the March 31, 2022 Joint Meeting of the Mayors’ Council and Board has established that UBCx will be included in public consultation for the New Vision with the following provisos:

- Subject to further planning and discussions, and an approved business case that includes a new funding model and partner and land value uplift contributions, UBCx will proceed in years 6-10.
- Project will only proceed after the BRT plan has already begun implementation.
- Vertical alignment is assumed to be above-grade except with partner contributions or where not technically or functionally feasible [as defined in the Partner Contribution Policy].

The relative prioritization and potential timing of UBCx has been established in the New Vision – the “why” and “when” of the project. The report presented to the Regional Transportation Planning Committee on March 11, 2022 recommended a “Regional Base Scope,” which is essentially a more detailed description of the project (the preferred horizontal and vertical alignments and station locations) – the “what” and “where” of the project.

Although these two processes – New Vision priority setting, and establishing a Regional Base Scope – have been considered separately, the reality is that they are linked:

- The extent of partner and senior government contributions to UBCx will help inform how much of the potential project scope is affordable to the region; and,
- Likewise, the proposed scope will inform the contribution considerations by possible project partners.

Given these linkages, and in particular the strong link between vertical alignment decisions and potential partner contributions, it is recommended that the decision on vertical alignment be deferred pending confirmation of partner contributions to this project. It is recommended, however, that station locations be confirmed now as part of the Regional Base Scope to give potential project partners assurance on where the future project will provide service. Confirmation of station locations (i.e. horizontal

alignment) will help secure commitment for project partner contributions and help inform the funding model. Vertical alignment options can be reviewed and refined in later stages of project development.

NEXT STEPS

It is proposed that the UBCx Regional Base Scope recommendations be considered as part of the Public Meeting of the Mayors' Council on April 22, 2022. If approved, the Regional Base Scope will inform further discussions with project partners around potential contributions, as well as the next stages of project development (based on the timing described in the New Vision) to inform future decision milestones by the Mayors' Council.

TO: Mayors' Council on Regional Transportation

FROM: Mike Buda, Executive Director, Mayors' Council Secretariat

DATE: April 13, 2022

SUBJECT: **ITEM 5.1 – Revised 2022 Meeting Policy**

COMMITTEE RECOMMENDATIONS:

The Finance and Governance Committee recommends that the Mayors' Council:

1. Delay consideration of returning to in-person Mayors' Council and committee meetings until the adoption of a 2023 Meeting Policy by the new Mayors' Council on December 8, 2022; and,
 2. Ask TransLink to report back on the necessary technical and staff capacity to enable hybrid meetings of the Mayors' Council at TransLink's offices as part of the 2023 Meeting Policy; and,
 3. Plan for an in-person Inaugural Meeting of the Mayors' Council on November 17, 2022, with hybrid videoconferencing capability if required; and
 4. Receive this report.
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PURPOSE:

To propose a format for meetings of the Mayors' Council and its committees for the remainder of 2022.

BACKGROUND

At its October 22, 2021 meeting, the Mayors' Council delayed the return to in-person meetings, and asked staff to investigate and report back on the requirements to enable hybrid meetings of the Mayors' Council and its committees in the future.

At the October 22, 2021, Mayors' Council meeting, a number of members noted they may not feel comfortable meeting in person in the future, regardless of future public health restrictions, either due to health-related considerations, or because virtual meetings have proven to be an efficient and effective alternative for facilitating good decision-making at the same time as being more accessible to the public. Given these concerns, some members commented that any plan to return to in-person meetings should include a "hybrid" opportunity to participate electronically for those who are not attending in-person. It was also noted that hybrid meetings must be organized in a manner which provide similar quality of participation regardless of whether a member is attending in-person or virtually.

TransLink has not yet finished equipping its conference centre meeting rooms with videoconferencing technology with the extensive capacity needed to enable full-featured hybrid meetings for larger numbers.

DISCUSSION

Many of the same questions about returning to in-person meetings raised by members in October 2021 remain:

- Uncertainty over future public health restrictions.
- The relative effectiveness of in-person versus virtual meetings for facilitating good decision-making and public accessibility and transparency.
- The readiness of on-premise facilities at TransLink to accommodate full-featured hybrid meetings.

There are several meetings that may benefit from in-person or hybrid meeting opportunities:

- The approval of the 2022 Investment Plan or updates to Transport 2050 in Spring, 2022.
- The Inaugural Meeting of the new Mayors' Council on November 17, 2022.

Given the uncertainty over changes in public health guidelines, and the still-to-be-installed and untested hybrid public meeting capacity at TransLink, it will not be possible to plan for in-person meetings of the Mayors' Council at TransLink until late-Fall 2022 at the earliest. Two alternatives are possible:

1. Continue all Mayors' Council and committee meetings by videoconference until the 2023 Meeting Policy is adopted by the new Mayors' Council on December 8, 2022, but as an interim step plan for an in-person Inaugural Meeting of the Mayors' Council (subject to COVID-19 requirements), with hybrid videoconferencing capability, at an offsite location if required.
2. Organize select Mayors' Council meetings at Metro Vancouver's Boardroom (also subject to COVID-19 requirements), utilizing its hybrid meeting technology, with remaining Mayors' Council meetings and all committee meetings held via videoconference.

Organizing Mayors' Council meetings in another agency's venue presents a steep learning curve and is likely to result initially in technical or meeting flow challenges. Accordingly, Alternative #1 is recommended. The development of the 2023 Meeting Policy will be an opportunity to revisit the role and importance of hybrid meeting capability, and work with TransLink to install that capacity at TransLink meeting rooms if appropriate or secure off-site meeting space with the needed capacity.