



PUBLIC MEETING AGENDA

Version: July 20, 2018

July 26, 2018, 10:00AM to 12:30PM

TransLink, Room 427/428, 400 – 287 Nelson’s Court, New Westminster, BC

Chair: Mayor Derek Corrigan

Vice-Chair: Mayor Richard Walton

10:00AM **1. PRELIMINARY MATTERS**
 1.1. Call to order
 1.2. Adoption of agenda Page 1
 1.3. [Approval of Minutes \(April 20, 2018\)](#) 2
 1.4. [Approval of Joint Meeting Minutes \(June 28, 2018\)](#) 7

10:10AM **2. REPORT OF THE JOINT PLANNING COMMITTEE**
 2.1. [Transit Fare Policy Review](#) 16
 2.2. [Regional Transportation Strategy](#) 37
 2.3. [B-Line Implementation Update](#) 43
 2.4. [Transit Service Guidelines](#) 66

11:10AM **3. REPORT OF TRANSLINK MANAGEMENT**
 3.1. Phase One and Two Implementation Update ORAL

11:30AM **4. PUBLIC DELEGATES..... ORAL**

11:45AM **5. OTHER BUSINESS**
 5.1. Upcoming meetings:
 • Mayors’ Council: September 21, 2018

12:30PM **6. ADJOURN**

MEETING OF THE MAYORS' COUNCIL ON REGIONAL TRANSPORTATION PUBLIC MEETING MINUTES

Minutes of the Public Meeting of the Mayors' Council on Regional Transportation (Mayors' Council) held on Friday, April 20, 2018 at 9:00 a.m. in Rooms 427/428, TransLink Offices, 287 Nelson's Court, New Westminster, BC.

PRESENT:

Mayor Derek Corrigan, Burnaby, Chair	Director Maria Harris, Electoral Area A
Mayor Richard Walton, North Vancouver District, Vice-Chair	Mayor Linda Hepner, Surrey
Mayor Wayne Baldwin, White Rock (arrived at 9:18 a.m.)	Mayor Lois Jackson, Delta
Mayor John Becker, Pitt Meadows	Mayor John McEwen, Anmore
Mayor Malcolm Brodie, Richmond	Mayor Greg Moore, Port Coquitlam
Mayor Karl Buhr, Lions Bay	Mayor Nicole Read, Maple Ridge
Mayor Mike Clay, Port Moody	Mayor Gregor Robertson, Vancouver (arrived at 9:15 a.m.)
Mayor Jonathan Coté, New Westminster	Mayor Ted Schaffer, Langley City
Mayor Ralph Drew, Belcarra	Mayor Murray Skeels, Bowen Island
Mayor Jack Froese, Langley Township	Mayor Michael Smith, West Vancouver
	Mayor Richard Stewart, Coquitlam

REGRETS:

Mayor Darrell Mussatto, North Vancouver City	Chief Bryce Williams, Tsawwassen First Nation
--	---

ALSO PRESENT:

Michael Buda, Executive Director, Mayors' Council on Regional Transportation Secretariat

PREPARATION OF MINUTES:

Carol Lee, Recording Secretary, Raincoast Ventures Ltd.

1. Preliminary Matters

1.1 Call to Order

The Chair called the meeting to order at 9:03 a.m.

1.2 Adoption of Agenda

Draft Agenda for the April 20, 2018 Public Meeting of the Mayors' Council on Regional Transportation, version dated April 13, 2018, was provided with the agenda material.

The Chair advised that there were no public delegations registered for the meeting.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation adopts the agenda for its Public meeting scheduled April 20, 2018, with an amendment to remove Item 5 – Public Delegates.

CARRIED

1.3 Approval of Minutes – March 23, 2018

Draft Minutes of the March 23, 2018 Public Meeting of the Mayors' Council on Regional Transportation, was provided with the agenda material.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation adopts the minutes of its Public Meeting held March 23, 2018, as circulated.

CARRIED

2. Report of the Joint Finance Committee

Related information provided with the agenda material:

- *Presentation titled "Item 2.1 Public Consultation on the Phase Two Investment Plan"*
- *Report dated April 13, 2018 from Geoff Cross, Vice-President, Transportation Policy and Planning, regarding "Item 2.1 – Proposed Phase Two Plan content for consultation"*

Geoff Cross, Vice-President, Transportation Planning and Policy, TransLink, referred to the presentation provided with the agenda material and highlighted:

- Scope of Phase Two of the 10-Year Vision for Metro Vancouver Transit and Transportation (Phase Two)
- Commencement of consultation on April 30, 2018:
 - The majority of the consultation will be conducted online
 - Eight in-person events throughout the region
- Outline of the Consultation Discussion Guide.

Discussion ensued on:

- Request that the reference to the design work on the Langley extension to the Surrey light rapid transit line (Surrey Line) commencing in 2020 be deleted as it does not accurately reflect work that will be undertaken in the interim
- Need to clarify the intention that the extension of the Millennium Line Broadway Extension (MLBE) to the University of British Columbia (UBC) would be a rail connection

Mayor Gregor Robertson arrived at the meeting 9:15 a.m.

- Suggestion to include clarification in the Consultation Discussion Guide that the MLBE would be constructed utilizing the tunnel boring methodology

Mayor Wayne Baldwin arrived at the meeting 9:18 a.m.

- Request for a chart of historical information on the actual dollar fare increases that have been levied on the average user over the past 10 years
- Suggestion to include additional Park and Ride lots south of the Fraser River in Phase Two.

Action (01): *TransLink staff to prepare a chart of historical information on the actual dollar value of the fare increases that have been levied on the average user over the past 10 years.*

Action (02): *TransLink staff to provide written confirmation that procurement will commence on the Surrey Line extension to Langley within Phase Two.*

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation:

- A. Endorses the proposed content of the Phase Two Plan for consultation; and
- B. Receives the supplementary fare increase application submitted by TransLink pursuant to Section 223 of the *South Coast British Columbia Transportation Authority Act*.

CARRIED

3. Report of the Joint Planning Committee

Presentation titled "Item 3 Update on Transit Fare Review Process" was provided with the agenda material.

Mr. Cross led the review of the presentation titled "Item 3: Report of the Joint Planning Committee" and highlighted:

- Update on the transit fare review process:
 - Phase 3 summary report will be released in May 2018
 - Phase 4 public and stakeholder consultation is currently scheduled for mid/late June 2018
- Planning for the update of the Regional Transportation Strategy (RTS) and its objectives.

Mayor Linda Hepner, Joint Planning Committee Co-Chair, advised that the Joint Planning Committee has requested that futurists be engaged to provide input on the evolution of transportation over the next 50 years. The need to temper public expectations regarding the transit fare review was also noted.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation receives the report.

CARRIED

4. Report of TransLink Management

Presentation titled "Item 4 Report of TransLink Management" was provided with the agenda material.

Kevin Desmond, Chief Executive Officer, TransLink, and Vivian King, President, BC Rapid Transit Company (BCRTC), jointly led a review of the presentation provided with the agenda material and highlighted:

- Potential strike at CP Rail would impact the West Coast Express:
 - Discussions with CP Rail regarding arrangements to manage the signals in order to allow the West Coast Express to continue to operate
 - A bus service option has been developed as a contingency plan
- Evaluation of late night service extension on Friday and Saturday nights:
 - Technical study of the maintenance changes required to ensure safety, reliability and state of good repair in the event of a service extension
 - Stakeholder consultation
- Transit ridership update.

Discussion ensued on:

- Suggestion to increase public awareness that the high and sustained rate of transit ridership growth is the result of the success of decades of land-use planning efforts in Metro Vancouver
- Vancouver's transit ridership growth is particularly noteworthy when compared to the ridership declines in many large urban centres
- Need to raise public awareness and promote the late night bus service that is currently available
- Need for a long term strategy to address fare evasion on buses
- Need to promote the under-utilized South Surrey Park and Ride.

Action Item (03): TransLink staff to report back on the progress of the late night service extension at the June 28, 2018 Mayors' Council meeting.

Action Item (04): TransLink staff to provide information on the transit ridership increase by sub-region.

Sarah Ross, Director of System Planning, TransLink, led a review of the presentation titled "B-Line or Better" and highlighted:

- New B-Lines included in each phase of the 10-Year Vision
- Consultation with municipalities, Ministry of Transportation and Infrastructure (MoTI) and the public
- B-Line or Better service attributes
- Transit priority measures to improve reliability
- Roadmap for B-Line product implementation
- Funding to support B-Line or Better service and transit priority measures
- Process to establish performance guidelines and objectives that would constitute successful B-Lines.

Discussion ensued on:

- Municipal government commitment is required to prioritize transit in their communities
- Suggestion to consider alternate routes available to drivers when comparing time savings of the B-Line routes
- Suggestion to document best practices that have been implemented in the past to support the effectiveness of B-Line routes
- Suggestion to utilize available corridors wherever possible
- Suggestion to expedite implementation of one route to demonstrate the speed and reliability of the B-Line service
- Municipalities that are unwilling to take transit priority measures should decline the B-Line service
- Provision of a service that is competitive or better than driving is required in order to attract new ridership
- Suggestion to consider re-branding the B-Line service to promote the package of services being offered
- Suggestion to consider improvements in speed and reliability on routes in addition to B-Line routes.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation receives the report.

CARRIED

6. Other Business

6.1 Upcoming Meeting

The Agenda noted the following upcoming meetings of the Mayors' Council and TransLink Board of Directors:

- May 24, 2018
- June 28, 2018

7. Termination

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation Public Meeting held April 20, 2018 be now terminated.

CARRIED

(Time: 10:32 a.m.)

Certified Correct:

Mayor Derek Corrigan, Chair

Carol Lee, Recording Secretary
Raincoast Ventures Ltd.

**JOINT MEETING OF THE MAYORS' COUNCIL ON REGIONAL TRANSPORTATION
AND TRANSLINK BOARD OF DIRECTORS
PUBLIC MEETING MINUTES**

Minutes of the Joint Public Meeting of the Mayors' Council on Regional Transportation (Mayors' Council) and TransLink Board of Directors (Board) scheduled on Thursday, June 28, 2018, 10:15 a.m. to 12:30 p.m. in Rooms 427/428, TransLink Offices, 287 Nelson's Court, New Westminster, BC.

PRESENT:

Mayors' Council on Regional Transportation

Mayor Derek Corrigan, Burnaby, Chair
Mayor Richard Walton,
North Vancouver District, Vice-Chair
Mayor Wayne Baldwin, White Rock
(departed 12:06 p.m.)
Mayor John Becker, Pitt Meadows
Mayor Malcolm Brodie, Richmond
(departed 12:06 p.m.)
Mayor Karl Buhr, Lions Bay
Mayor Mike Clay, Port Moody
Mayor Jonathan Coté, New Westminster
Mayor Ralph Drew, Belcarra
Mayor Jack Froese, Langley Township
Director Maria Harris, Electoral Area A
Mayor Linda Hepner, Surrey

Councillor Craig Keating, North Vancouver City
(departed 12:06 p.m.)
Mayor John McEwen Anmore
Mayor Greg Moore, Port Coquitlam
(departed 12:06 p.m.)
Mayor Gregor Robertson, Vancouver
Mayor Nicole Read, Maple Ridge
(departed 12:06 p.m.)
Mayor Ted Schaffer, Langley City
Mayor Murray Skeels, Bowen Island
Mayor Michael Smith, West Vancouver
Mayor Richard Stewart, Coquitlam
Chief Bryce Williams, Tsawwassen First Nation
(departed 12:06 p.m.)

TransLink Board of Directors

Lorraine Cunningham, Chair
Larry Beasley
Jim Chu
Sarah Clark
Murray Dinwoodie

Karen Horcher
Tony Gugliotta
Richard Walton
Derek Corrigan

REGRETS:

Mayors' Council on Regional Transportation

Mayor Lois Jackson, Delta

TransLink Board of Directors

Anne Giardini

Marcella Szel

ALSO PRESENT:

Councillor Tom Gill, Surrey
Mike Buda, Executive Director, Mayors' Council on Regional Transportation Secretariat
Gigi Chen-Kuo, General Counsel and Corporate Secretary, TransLink
Geoff Cross, Vice-President, Transportation Planning and Policy, TransLink
Kevin Desmond, Chief Executive Officer, TransLink
Councillor Raymond Louie, Vancouver

PREPARATION OF MINUTES:

Rae Ratslef, Recording Secretary, Raincoast Ventures Ltd.

1. Preliminary Matters

1.4 Call to Order

Co-Chair Cunningham called the meeting to order at 10:37 a.m. Due notice having been given and a quorum being present, the meeting was properly constituted. The Co-Chair acknowledged that the meeting was being held on the traditional territory of the Coast Salish peoples, and reviewed exit procedures in the event of an emergency.

Change in Chair

Co-Chair Corrigan assumed the Chair.

1.5 Adoption of Agenda

Draft Agenda for the Joint Public Meeting of the TransLink Board of Directors and Mayors' Council on Regional Transportation scheduled June 28, 2018, version dated June 25, 2018, was provided with the agenda material.

It was MOVED and SECONDED

That the agenda for the Joint Public meeting of the Mayors' Council on Regional Transportation and the TransLink Board of Directors scheduled June 28, 2018, version dated June 25, 2018, be amended to replace the cover report for Item 3.1 and annexes, with the revised version provided on-table.

CARRIED

It was MOVED and SECONDED

That the agenda for the Joint Public meeting of the Mayors' Council on Regional Transportation and the TransLink Board of Directors scheduled June 28, 2018 be adopted as amended.

CARRIED

1.6 Approval of Minutes

Draft Minutes of the Joint Public Meeting of the TransLink Board of Directors and Mayors' Council on Regional Transportation held May 24, 2018, was provided with the agenda material.

It was MOVED and SECONDED

That the Minutes of the Joint Public meeting of the Mayors' Council on Regional Transportation and TransLink Board of Directors held May 24, 2018, be adopted with amendment to page 1, to indicate that Board Director Jim Chu was in attendance.

CARRIED

2. Public Delegates

2.1 Peter Ladner

Peter Ladner, Better Transit and Transportation Coalition (BTTTC) Chair, referenced the mandate of the BTTTC to encourage better transit and transportation options in the region. He acknowledged that the Phase Two Plan has full funding commitments from all levels of government, and offered congratulations to all those who worked hard to arrive at this point. BTTTC fully endorses the 10-Year Vision and the Investment Plan and encourages the Mayors' Council and Board to proceed immediately with its implementation.

With regard to the Regional Transportation Strategy (RTS), Mr. Ladner suggested the need to consider some form of equitable mobility pricing, and adapting to the array of transportation technologies in future. BTTTC looks forward to working with others to move forward to meet the goal of reducing congestion and increasing mobility options in the region.

2.2 Daryl Dela Cruz

Daryl Dela Cruz, SkyTrain for Surrey (SFS), noted opposition to the 10-Year Phase Two Plan decision to proceed with Light Rail Transit (LRT) rather than SkyTrain for the Surrey-Newton Guildford (SNG) line. The SFS is calling for an audit of the 10-Year Vision, and suggests that SkyTrain combined with a rapid bus system would deliver the best option for the SNG. The SFS recommends that any further decision on the matter be deferred until following the 2018 municipal elections.

3. Report of the Joint Finance Committee

3.1 Phase Two Plan (2018-2027 Investment Plan)

Report dated June 25, 2018, from Kevin Desmond, Chief Executive Officer, TransLink, and Mike Buda, Executive Director, Mayors' Council Secretariat, regarding "Phase Two Plan (2018-27 Investment Plan)", was provided with the agenda material.

Co-Chair Corrigan shared that the Phase Two Plan is the next major step in delivering the 10-Year Vision for Metro Vancouver Transit and Transportation originally adopted by the Mayors' Council in 2014. The Phase Two Plan is a historic agreement that finalizes \$7.3 billion in transportation improvements across the region and builds on positive momentum sparked by last year's major boost to transit service through Phase One.

Co-Chair Corrigan commented on benefits of adding more service and making transit a better experience, and that this progress could not have been possible without all levels of government working together to finalize a funding plan.

Geoff Cross, Vice-President, Transportation Planning and Policy, TransLink, referred to a displayed presentation titled "Item 3: Report of the Joint Finance Committee" and highlighted:

- 10-Year Vision is our regional blueprint for multimodal transportation investments
- Phase Two Plan (2018-2027 Investment Plan) funds the next phase of the 10-Year Vision
- Phase One Plan delivered immediate benefits across the region
- We are seeing immediate results in transit ridership (changes between 2016-17)
- \$890 million for bus investments over the next 10 years of expansion
- Rail ridership is at an all time high as evidenced in growth in Rail Rapid Transit boardings (1990-2017)

- \$1.3 billion for Expo/Millennium Line Upgrades Program
- \$495 million for increased SkyTrain service
- Millennium Line Broadway Extension (MLBE)
- Surrey-Newton-Guildford (SNG) Light Rail Transit (LRT) replacing 96 B-line
- \$125 million for roads, cycling, walking upgrades
- Consultation on the Phase Two Plan between April 30-May 11, 2018
- Phase Two is a \$7.3 billion investment made possible by all levels of government
- How we are funding the region's share via Transit Fares, Property Tax, Development Cost Charge, and Parking Sales Tax
- Provincial commitments to funding – capital contribution and enabling new funding sources, including a 1.5 cent increase in the Regional Fuel Tax
- Provincial commitments to funding
 - An increase in the Regional Fuel Tax is stable funding in the short-term, but not sustainable in the long-term
 - The proposed 1.5 cent increase will generate \$30 million/year, beginning in 2019; however, by 2027 the share of revenue from motorists will be lower than it is today
- Changes in the Plan since it was originally posted on June 25, 2018 to reflect how the Province intends to fulfill its commitment
- Phase Two Plan – Fare Increase.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation and TransLink Board of Directors receives the report.

CARRIED

4. Mayors' Council Motions

4.1 Approval of Fare Increases Beyond Targeted Fares

The Chair read aloud the proposed motion.

In discussion, correction was noted to page 204, Appendix I regarding Fare Zones, to include reference to University of British Columbia as well as the University Endowment Lands, and in Zone 3 to refer to Electoral Area A rather than Electoral Area C.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation approve TransLink's application attached in Annex A to the June 28, 2018 report titled "*Phase Two Plan (2018-27 Investment Plan)*" for a "supplementary fare increase", meaning an increase in the short term fare for revenue transit service that will be greater than the targeted fare as defined in the *South Coast British Columbia Transportation Authority Act*.

CARRIED

(Mayor Stewart voting in the negative.)

Change in Chair

Co-Chair Cunningham assumed the Chair.

5. TransLink Board Motions
5.1 Approval of Phase Two Plan (2018-2027 Investment Plan)

It was MOVED and SECONDED

That the TransLink Board of Directors:

1. Approve the “Phase Two Plan (2018-27 Investment Plan)”, attached as Annex B appended to the June 28, 2018 report titled “Phase Two Plan (2018-27 Investment Plan)”;
2. Approve the Project Partnership Agreements, attached as Annex F to the June 28, 2018 report titled “Phase Two Plan (2018-27 Investment Plan)”;
3. Provide the “Phase Two Plan (2018-27 Investment Plan)”, and the associated bylaws and resolutions in relation to revenue measures and borrowing limits, attached as Annex C to the June 28, 2018 report titled “Phase Two Plan (2018-27 Investment Plan)”, to the Mayors’ Council on Regional Transportation, and
4. Receive this report.

CARRIED

Change in Chair

Co-Chair Corrigan assumed the Chair.

6. Mayors’ Council Motions
6.1 Approval of Phase Two Plan (2018-2027 Investment Plan)

Co-Chair Corrigan read aloud the proposed motion, which referred to the June 25, 2018 report. However, the motion projected on screen at the meeting indicated the corrected report date of June 28, 2018, which is reflected in the motion within these minutes.

During discussion, comments were offered regarding:

- Need for enabling legislation for the Mayors’ Council to control how the regional part of the Investment Plan is funded
- Opposition to the proposed increase in the Regional Fuel Tax, which does not affect the Electric Vehicles that are also contributing to congestion in the lower mainland
- Support for a Vehicle Levy as a more equitable funding option
- Opposition to the increase in Property Tax, which should be equal across the region rather than based on assessed home value
- Need for a fairer way to fund the regional portion of the Investment Plan
- Concern that the Regional Fuel Tax applies disproportionately to those that have to drive because of the lack of transit service in their area.

A motion was introduced to refer the Plan to staff to develop and report back with options for an alternate funding source(s).

In response to a query, Mr. Cross confirmed that a number of funding options were presented to the Mayors’ Council and Board in February 2018. Although the Regional Fuel Tax was not a

preferred revenue source at that time, it was identified as a tool for the Provincial Government's consideration.

During discussion, comments were offered regarding:

- Interest in an opportunity to discuss with the Province why the Regional Fuel Tax is not an ideal source of funding for the region given the significant inequity
- Need for the Mayors' Council and TransLink to have the tools in legislation to decide how to fund the regional part of the Plan
- Support for the overall Plan but with opposition to the proposed 1.5 cent increase in the Regional Fuel Tax
- Whether the Mayors' Council could forgo Phase Two work and do internal reallocations to address a funding shortfall.

On defeat of the motion to refer, discussion resumed on the main motion, during which comments were offered regarding:

- Recognition that many residents do not have access to rapid transit, or regular bus service
- Suggestion that fare increases are counter productive and that the Regional Fuel Tax has reached a point where it is no longer a reliable revenue source
- Need to ensure that funding from the Federal and Provincial governments is not jeopardized
- Concern about the reliance on Property Tax
- Concern about inequality in the application of Development Cost Charges
- Clarification that the Province has enabled the Regional Fuel Tax increase, which does not preclude looking for alternatives
- Concern that any further delays in implementation will increase costs of improvements

Main Motion

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation approve the "*Phase Two Plan (2018-27 Investment Plan)*", attached as Annex B as appended to the June 28, 2018 report titled "*Phase Two Plan (2018-27 Investment Plan)*".

Motion to Refer

It was MOVED and SECONDED

That the Main Motion be referred to staff to develop and report back with options for an alternate funding source(s).

DEFEATED

(Mayors Becker, Clay, Froese, McEwen, Read, Schaffer, Smith, Stewart and Chief Williams voting in favour)

QUESTION was then called on the Main Motion as originally put and it was

CARRIED BY WEIGHTED VOTE

(Mayors Clay, Froese, McEwan, Read, and Chief Williams voting in opposition)

Change in Chair

Co-Chair Cunningham assumed the Chair.

Mayors Baldwin, Brodie, Moore and Read, Councillor Keating, and Chief Williams departed the meeting at 12:06 p.m.

Co-Chair Cunningham confirmed with the Board a correction to the Board motion passed earlier in the meeting under Item 5.1, to clarify that the motion refers to the June 28, 2018 rather than the original June 25, 2018 report.

7. Report of the Joint Planning Committee

7.1 Regional Transportation Strategy

Report dated June 22, 2018, from Geoff Cross, Vice President, Transportation Planning and Policy, and Steve Vanagas, Vice President, Customer Communications and Public Affairs, regarding "Item 7.1 – Adoption of the Existing Regional Transportation Strategy (RTS)", was provided with the agenda material.

Joint Planning Committee Co-Chair Hepner provided comments on the work of the Committee. She noted the importance of transportation and planning being considered hand in hand, and acknowledged the need to work closely with Metro Vancouver on the RTS.

Mr. Cross presentation highlighted:

- Update on consultation to the Joint Planning Committee to be provided in July 2018
- Legislated requirement to update the RTS every five years, and proposal to adopt the current RTS until the new one can be updated
- RTS Process Update.

Change in Chair

Co-Chair Cunningham assumed the Chair.

8. TransLink Board Motions

8.1 Adoption of the Existing Regional Transportation Strategy

It was MOVED and SECONDED

That the TransLink Board of Directors approves the Regional Transportation Strategy, attached as Appendix 2 to the report dated June 22, 2018 titled "*Adoption of the existing Regional Transportation Strategy (RTS)*", as the long-term strategy under s. 193 of the *South Coast British Columbia Transportation Authority Act*.

CARRIED

Change in Chair

Co-Chair Corrigan assumed the Chair.

9. Mayors' Council Motions

9.1 Adoption of the Existing Regional Transportation Strategy

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation approves the Regional Transportation Strategy, attached as Appendix 2 to the report dated June 22, 2018 titled "*Adoption of the existing Regional Transportation Strategy (RTS)*", as the long-term strategy under s. 193 of the *South Coast British Columbia Transportation Authority Act*.

CARRIED

10. Notice of Motion

Report dated June 21, 2018, from Mike Buda, Executive Director, Mayors' Council Secretariat, regarding "Item 10 – June 20, 2018 Notice of Motion by Mayor Robertson (Reducing TransLink's climate impact with clear GHG emissions targets and 100% renewable energy goal", was provided with the agenda material.

Mayor Robertson introduced the distributed Notice of Motion requesting that staff report back in September 2018 with a High-level Plan for TransLink to adopt clear Greenhouse Gas (GHG) emissions targets and a 100% renewable energy goal.

Point of Order

A Point of Order was raised suggesting that the Mayors' Council does not have authority to impose this motion on the TransLink Board, and requesting that it be ruled out of order. On reflection, the Chair ruled that the motion was in order as the Mayors' Council does have authority to request the Board to examine this issue.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation:

1. Consider the June 20, 2018 Notice of Motion from Mayor Robertson; and
2. Receive this report.

CARRIED

Co-Chair Cunningham indicated that the Board discussed the Notion of Motion earlier in the week and supported requesting staff do further work and report back in the fall of 2018.

It was MOVED and SECONDED

That the TransLink Board of Directors:

1. Consider the June 20, 2018 Notice of Motion from Mayor Robertson; and
2. Receive this report.

CARRIED

11. Adjourn

It was MOVED and SECONDED

That the Joint Public meeting of the Mayors' Council on Regional Transportation and TransLink Board of Directors held June 28, 2018, be now terminated.

CARRIED

(Time: 12:18 p.m.)

Certified Correct:

Mayor Derek Corrigan, Chair
Mayors' Council on Regional Transportation

Lorraine Cunningham, Chair
TransLink Board of Directors

Gigi Chen-Kuo, Corporate Secretary
TransLink

TO: Mayors' Council on Regional Transportation
FROM: Geoff Cross, Vice President Transportation Planning and Policy
DATE: July 26, 2018
SUBJECT: **ITEM 2.1 – Summary of Final Recommendations and Proposed Next Steps**

RECOMMENDATION:

That the Mayors' Council on Regional Transportation:

1. Endorse the policy recommendations proposed in the Transit Fare Review;
 2. Direct staff to develop an implementation plan consistent with the approach described in the final report;
 3. Receive this report.
-

PURPOSE

To seek Mayors' Council endorsement of the policy recommendations in the attached Transit Fare Review report as the basis for further engaging with partners and vendors to develop an implementation plan. This plan would include more detailed discussions with the Compass Card vendor, pilot studies, and further discussions with senior government on available funding and priorities.

BACKGROUND

Following the launch of the Compass card electronic fare collection system in mid-2016, TransLink launched the first comprehensive review of fare policy since 1984. The goal of the review was to recommend changes to fare policy that would promote an exceptional customer experience where paying for transit:

- Is simple;
- Is fair;
- Is affordable;
- helps grow ridership; and
- helps improve service by reducing overcrowding.

The attached report captures recommendations that are the result of extensive policy analysis and public and stakeholder engagement. The proposals each advance these objectives in ways that are broadly supported in regional policy and by residents of Metro Vancouver.

DISCUSSION

Summary of Phase 4 public and stakeholder engagement

The Phase 4 engagement period occurred between June 18 and 29 and included both on-line and in-person opportunities to provide input on the proposed recommendations. Overall, 11,000 survey

responses were received in Phase 4, bringing the total number of responses received through the entire project to over 66,000 – more than 5 times TransLink’s previously held record for public engagement responses.

Generally, the majority of responded favourably to the recommendations. A large majority of respondents support the key recommendation of replacing the existing 3-zone system on rapid transit with a structure that prices by kilometre would result in a system that is more fair than today. A portion of respondents did express concern, however, that the recommended system may be more difficult to understand and that their fare may be higher than under the current structure.

The Transit Fare Review has long dealt with the trade-off between fairness and simplicity in the fare structure; a system that prices precisely to a rider’s travel can easily become too complex for many people to understand. These findings suggest that the recommendations have struck a favourable balance between the objectives of fairness and simplicity. Most residents find the recommendations to be more fair than today and seem willing to accept some additional complexity for this improvement in fairness.

The findings highlight the importance of ensuring that any fare structure changes are clearly and simply communicated and that customers are provided support throughout the transition. Staff have concluded that the concern over the complexity of fares can be addressed by ensuring proper adjustments to wayfinding, trip planners, and Compass Vending Machines are in place to maximize the simplicity of purchasing a fare in the new system.

Policy Recommendations

The Transit Fare Review report outlining the policy recommendations is attached. These recommendations largely reflect those presented for consultation in Phase 4, with the following modification to reflect feedback received during consultation:

- **West Coast Express:** Replaced the draft recommendation to maintain the zone-based system on the WCE with a recommendation to explore distance-based pricing on WCE, based on feedback from partners, stakeholders and some riders that WCE should be communicated in the same way as the conventional system. This change would not impact the fare rates under the current system.

Proposed implementation approach

If these policy recommendations are endorsed, the Transit Fare Review will shift to implementation of the approved recommendations. An implementation plan will be provided to the Board along with final policy recommendations report. The implementation process will include the scoping, costing, additional technical work, developing a timeline and further components outlined below.

1. Work with Compass Card vendor to determine how best to implement recommendations in a cost effective manner.
2. Prioritize implementing changes that can be delivered with available funding.
3. Initiate research and pilot studies for recommendations requiring further study and/or funding, and work with the Board and Mayors’ Council for inclusion in future investment plans.
4. Work with the Provincial Government to identify potential funding and priorities for exploration of expanded discounts for low income residents, children and youth.

Transit Fare Review: Final Recommendations

July 2018

DRAFT – UNFORMATTED VERSION

Contents

<u>Contents</u>	1
<u>Summary of Key Recommendations</u>	2
<u>Detailed List of Recommendations</u>	3
<u>Introduction</u>	4
<u>Fares by Distance</u>	6
<u>Fare Products</u>	10
<u>Transfer Time</u>	14
<u>Service Type</u>	15
<u>Time of Travel</u>	16
<u>Discounts</u>	17
<u>Implementation Approach</u>	18

Summary of Key Recommendations

The Transit Fare Review was a comprehensive review of the policies guiding how we price transit in Metro Vancouver. Over the course of four major phases, we undertook extensive public and stakeholder consultation, technical analysis, ridership and revenue modelling, best practice research, and prototyping. The result, captured in this report, is a series of recommended policy changes intended to improve the customer experience by making the fare system fairer for more people, while maintaining affordability and ease of understanding for transit riders and while maintaining the same level of fare revenue.

A key policy recommendation from this Review is to eliminate zones and move to station-to-station pricing for rapid transit (e.g. SkyTrain and SeaBus). Pre-paid passes would be updated to reflect this change. Buses would remain a flat fare.

While not within the transportation-focused mandate of TransLink, the Review finds that expanding discounts for low-income residents is a worthwhile social policy objective. The Review recommends that TransLink and BC Transit work under the leadership of the Provincial Government in the context of the BC Poverty Reduction Strategy to explore available funding, priorities, and opportunities to expand discounts for low-income transit riders, as well as children and youth, across British Columbia.

Finally, the Review finds that expanded off-peak discounts have merit and can meaningfully help reduce overcrowding on the system. However, to be most effective these should be targeted to times and locations where overcrowding is most acute. This change would result in lost fare revenue and so would require new funding to implement. Accordingly, the Review recommends launching pilots to study where, when, and how to best implement this change and then to develop a costed business case for approval in a future Investment Plan.

Should the Mayors' Council on Regional Transportation and the TransLink Board endorse these policy recommendations, the project will move into the implementation planning phase. In this phase, TransLink will figure out how best to implement these changes in a way that is cost effective and effectively manages risk. This step includes additional technical work, pilot studies, scoping detailed Compass requirements, and developing a timeline that seeks to introduce any fare policy changes in ways that leverage and build on other concurrent initiatives.

Detailed List of Recommendations

		Current	Recommendation
DISTANCE	Rapid Transit	3 Zones	Station to station pricing (based on km)
	Bus	Flat	No change
	HandyDART	Flat	No change
	West Coast Express	5 Zones	Station to station pricing
FARE PRODUCTS	Single Tickets	Cash fares and discounted Stored Value fares	No change
	Fare products for frequent Users	Prepaid monthly pass by zone	Prepaid monthly pass by km and explore introducing new flexible products
TRANSFER TIME	Conventional system	Travel for 90 minutes on a single fare	No change
SERVICE TYPE	West Coast Express	Premium fares distinct from conventional system	No change
	HandyDART	Regular adult fare applies to all passengers	Accept concession fares for eligible customers
TIME OF DAY	Off-peak discounts	Discounted fares after 6:30pm on weekdays and all day on weekends	Develop a business case for targeted discounts to help reduce overcrowding
USER DISCOUNTS	Children (age 0-4)	Free	No change
	Youth (age 5-18)	Concession Discount	Explore expanded discounts through discussion with Provincial Government
	Seniors (age 65+)	Concession Discount	No change
	Low-Income	No discount	Explore expanded discounts through discussion with Provincial Government

Introduction

About the Transit Fare Review

In 2016 TransLink launched a comprehensive four phase review of the way we price transit. We heard that the majority of residents from Metro Vancouver think the current fare system does not work well. This desire for change combined with new technological capabilities offered by Compass set the stage for this comprehensive review of the way we price transit in Metro Vancouver to improve the overall customer experience.

What do we want to achieve?

The goal of the Transit Fare Review is to recommend changes to the fare structure that promote an exceptional customer experience where paying for transit:

- Is simple
- Is fair
- Is affordable
- Helps grow ridership
- Helps improve service by reducing overcrowding

As a result of the recommendations identified through the Transit Fare Review, fares for some trips may go up and fares for other trips may go down. However, the goal is not to increase or decrease TransLink's revenue. Rather, the approach is that any changes would be revenue neutral for TransLink.

How did we get here?

The Transit Fare Review focused on investigating six core components of the regional transit fare structure:

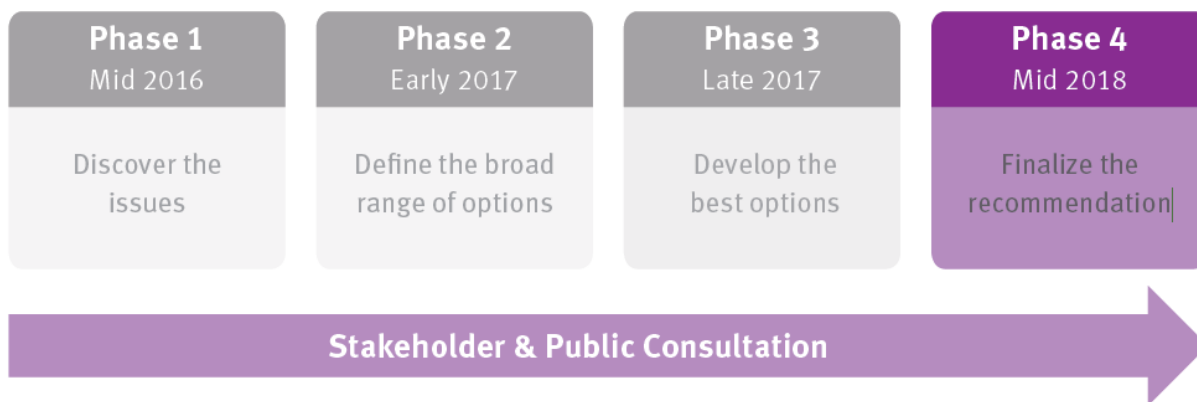
1. **Distance Travelled:** the price you pay depending on how far you travel
2. **Fare Products:** the type of ticket or pass you purchase based on frequency of travel
3. **Transfer Time:** how many minutes you can travel on a single fare
4. **Service Type:** the price you pay depending on what mode of transit you use
5. **Time of Day:** the price you pay depending on what time of day you travel
6. **Discounts:** the reduced fares available to riders based on defined eligibility criteria

Our work was informed by technical analysis, modelling, best practices research, and prototyping of different options, along with extensive consultation with the public, stakeholders, and elected officials through in-person workshops, on-line surveys, and on-line discussion forums. Throughout the process, we received over 66,000 responses from people across Metro Vancouver.

- In Phase 1, we heard about concerns, issues and ideas for ways to make the fare structure easier to use, fairer and more affordable.
- In Phase 2, we developed broad concepts and asked for input on how fares should vary by distance, time and service type.
- In Phase 3, we refined the options and asked about specific proposals for how to price by distance, which types of fare products to offer, and if changes should be made to customer discounts.
- In Phase 4 we shared our proposed recommendations with the public for input and feedback.

A full record of the public engagement activities of the Fare Review can be found at www.translink.ca/farereview

Timeline



Fares by Distance

CURRENT SYSTEM

Charging customers for the number of zones they travel through was designed in 1984 to roughly approximate distance travelled in a way that was simple to understand and manage without the assistance of a smart card. This three-zone fare structure has been a long-standing source of complaints from residents of Metro Vancouver. Today, about 20% of daily weekday trips pay an arbitrarily higher fare than trips of a similar distance just because they cross a zone boundary. In 2015, zones were eliminated for buses so that all bus trips are charged a one-zone fare regardless of the distance travelled.



Current fare zone system for SkyTrain and SeaBus

RECOMMENDATIONS

1.1 Eliminate zones and shift to pricing by distance between stations on SkyTrain, SeaBus, and future rapid transit. Maintain flat fare on bus.

How would it work?

Under this future system, bus fares would continue to be charged a flat regardless of the distance or number of transfers made within 90 minutes, the same as today. For SkyTrain and SeaBus trips, fares would be based on how many kilometres you travel. A base fare would cover travel up to five kilometres – or approximately three

to four stations. After this base distance, the fare would increase in small increments until a maximum fare is reached, which would occur at around 22 kilometres or 13 to 15 stations.

What's the same as today?

- **Minimum fare:** About the same as a 1-zone fare.
- **Maximum fare:** About the same as a 3-zone fare. People travelling the longest distance on SkyTrain would continue to pay about the same price as they do under the current system.
- **Tapping:** Same as today - tap in and out on SkyTrain and SeaBus, tap in only on bus.
- **Transfers:** No additional fee to transfer between bus, SkyTrain and SeaBus.
- **Bus only fares:** Flat fare similar to today's 1-zone fare for unlimited travel within the 90 minute transfer window.
- **Evening and weekend travel:** Similar to today - off-peak trips pay the equivalent of a 1-zone fare for travel system-wide.

What's different from today?

- **No more zones:** Rapid transit fares are based on the number of kilometres you travel, instead of how many zones you travel through.
- **More gradual price increments:** Prices vary for each pair of stations depending on the distance between them.

Why not price by distance on the bus, too?

Distance-based pricing on bus was considered through the Transit Fare Review but is not currently recommended. We heard that many residents think distance-based fares on buses would make it difficult to predict and calculate fares and might require tapping out, which could discourage bus use. Both of these concerns could be addressed with new technologies currently being tested and deployed in cities around the world. Should the transit network evolve in the future to include more on-demand or flexible bus services, our approach to pricing bus services could be re-evaluated.

Which trips would pay more than today?

- 1-zone trips on SkyTrain that travel long distances within a single zone, for example: trips between Marine Drive and Waterfront or between Sapperton and Gilmore.
- 2-zone trips on SkyTrain that travel long distances across two zones, for example: trips between New Westminster and Waterfront.

Which trips would pay less than today?

- 2-zone trips on SkyTrain that travel just a few stations but that happen to cross a zone boundary, for example: trips between Joyce-Collingwood and Metrotown, Surrey Central and Columbia, or Production Way-University and Burquitlam.
- 3-zone trips on SkyTrain that travel into zones 1 and 3 by only a few stations, for example: trips between Burquitlam and Commercial-Broadway or between Scott Road and Joyce-Collingwood.
- SeaBus trips.

Why are we recommending this?

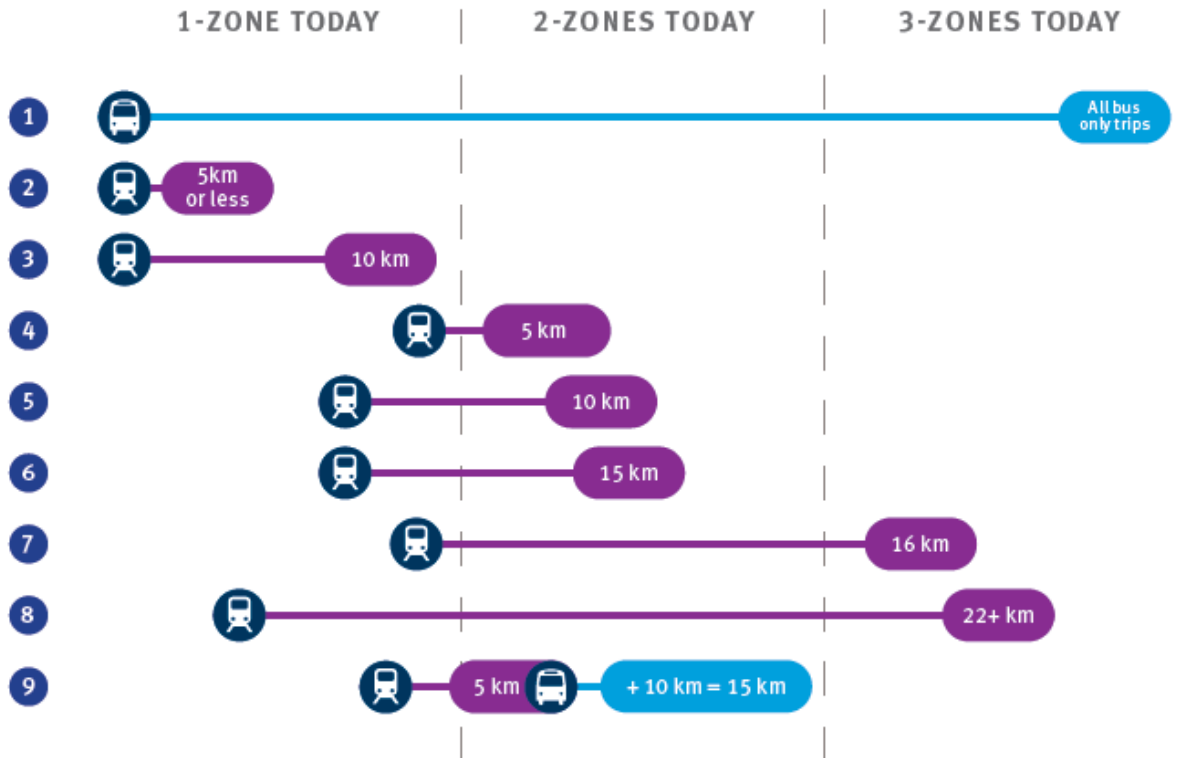
We heard during each phase of the Transit Fare Review that people find the current system unfair, with 73% of respondents saying they would prefer to see a system priced by distance travelled. A structure that prices trips more closely to the actual distance travelled helps address the most common complaints, including the high price of short trips across a zone boundary, steep price jumps across a zone boundary, and the arbitrariness of the zone boundaries.

Compared to the current system, pricing fares by kilometres travelled between stations on SkyTrain and SeaBus:

- Better reflects actual use: trips of the same length on the same mode of transit would pay the same price.
- Allows for more gradual pricing increments: steep jumps in fares across zone boundaries would be replaced by smaller station-by-station increases.

Impact of the distance-based fare structure on different trips

The table below illustrates how the price for various trips would change under the pricing by distance structure. Most fares will stay about the same, while some will increase and some will decrease. The illustrative prices below are for Adult Stored Value fares, and exact prices will be determined at the time of implementation.



SeaBus is considered rapid transit and fares are the same as SkyTrain

	Current Fare	Proposed fare structure change
1	\$2.20	About the same
2	\$2.20	About the same
3	\$2.20	▲ +\$0.75 to +\$1.00
4	\$3.25	▼ -\$1.00 to -\$1.25
5	\$3.25	▼ -\$0.10 to -\$0.25
6	\$3.25	▲ +\$0.25 to +\$0.50
7	\$4.30	▼ -\$0.25 to -\$0.50
8	\$4.30	About the same
9	\$3.25	▼ -\$1.00 to -\$1.25

▼ Decrease in price ▲ Increase in price

1.2 Eliminate zones and shift to station-to-station pricing on West Coast Express.

Today, fare prices on the West Coast Express are determined by a complex 5-zone fare structure that differs from the rest of the system. We heard from riders and stakeholders, that many find this structure confusing and that we should explore ways to align the way we price West Coast Express with other services.

In order to improve the simplicity of this structure, we recommend starting with communicating the structure of single trip fares and pre-paid passes as station-to-station prices, instead of zone-based pricing. Under this recommendation, prices for travel between stations would remain the same as today. We then recommend working with West Coast Express riders, stakeholders and partners to explore opportunities to refine this structure to align prices more closely with distance travelled, while ensuring fares remain affordable and help to grow ridership and effectively manage demand.

1.3 Maintain flat fare on HandyDART.

HandyDART fares would continue to be charged a flat fare regardless of distance travelled, the same as it is today.

Fare Products

CURRENT SYSTEM

Today, there are four ways to pay for single-trip fares which allow unlimited transfers for up to 90 minutes:

- You can pay cash on a bus;
- You can tap a contactless credit card or mobile wallet on card readers;
- You can buy a Compass Ticket from a Compass Vending Machine; or
- You can load Stored Value onto your Compass Card so you can pay-as-you-go at a discounted rate.

In addition to single fares, we also offer Day Passes and Monthly Passes: pre-paid passes that grant unlimited travel within the specified number of zones for a flat fee. Additional products and passes with specific and limited eligibility that are delivered as partnership programs between TransLink, the Province of BC, and/or other agencies are outside the scope of the Transit Fare Review¹.

¹ These partnership programs include the BC Bus Pass, U-Pass BC, and CNIB ID Pass.

RECOMMENDATIONS

2.1 Update pre-paid monthly passes to reflect distance-based pricing structure.

How would it work?

Under a fare by distance structure, monthly passes would continue to offer an unlimited number of trips just like today. Instead of being priced based on the number of zones you can travel, monthly passes would be priced based on the distance covered for each trip.

Each trip taken with a monthly pass could be any distance up to the length specified by the pass. For example, a 10km monthly pass would allow an unlimited number of trips that are each 10km in length or less. The passes can be used for trips up to the specified distance anywhere on the system, and are not specific to any particular stations or route. For the occasional trip that exceeds the distance covered by the pass, you would pay the difference for that individual trip using the Stored Value on your Compass Card, similar to today's AddFare for extra zones travelled. Unlimited bus travel is included in all passes.

Similar to today, if you are a frequent transit user you would choose the two rapid transit stations between which you most commonly travel and buy a Monthly Pass to cover that distance. Those who take many different trips during the month would have the option of buying a shorter distance pass and pay add fares for each longer trip taken on SkyTrain, or purchase a long distance pass that covers all their travel if they prefer the convenience and value of an unlimited use pass.

What's the same as today?

- **Unlimited SkyTrain and SeaBus trips:** Passes continue to offer unlimited trips on SkyTrain and SeaBus based on the distance purchased
- **Unlimited bus trips:** All passes continue to offer unlimited bus trips across the system
- **Pay in advance:** Customers pay up front for monthly travel
- **Predictable transit costs:** One monthly pass to cover all your most frequent transit needs

What's different from today?

- **No more zones:** Passes would be valid for all trips up to a certain distance rather than all trips within a specified zone. These distances between stations would be clearly marked on wayfinding maps at stations.
- **More options:** Choose from pass options that more closely match the distance you frequently travel.

Current Pre-paid Adult Monthly Pass System

Monthly Pass – Zones	1-zone	2-zone	3-zone
Unlimited SeaBus and SkyTrain trips within zone/s	\$93	\$126	\$172

Illustrative Pre-paid Adult Monthly Pass System under Proposed Distance-Based Pricing Structure*

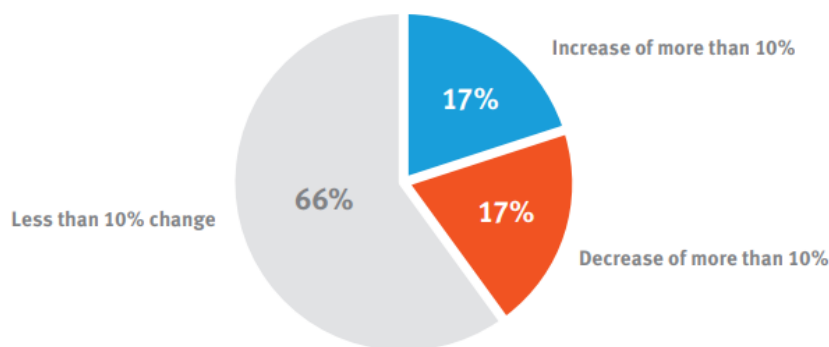
Monthly Pass – Distance	5 km	7 km	10 km	13 km	17 km	20 km or more
Unlimited SeaBus and SkyTrain trips up to the following distances	\$93	\$110	\$125	\$140	\$155	\$172

All passes include unlimited trips up to the specified number of kilometres on the SkyTrain and SeaBus, unlimited bus travel, and unlimited travel system wide on evenings and weekends.

* Pass distances and pricing are for illustration only and are subject to change. Further work will be done to determine the number of passes offered as well as the distance increments to ensure that they are convenient and provide good value to all customers.

How would monthly fare costs be impacted under the proposed structure?

Most riders take a variety of trips over the course of a month; some trips would cost more and some would cost less. Under the proposed system, we estimate that the majority of riders would spend about the same amount on fares overall. A minority of riders will see an increase or a decrease depending on which trips they do most often. Similar to today, frequent riders would choose their Monthly Pass based on their most common trip, which is the commute trip for the majority of riders. The change in price for this frequent trip would have the biggest impact on riders’ overall fare costs for a given month.



Why are we recommending this?

Adapting the current zone-based passes to the future fare by distance structure allows riders to continue using today's well-used and well-liked unlimited pre-paid passes. They offer unlimited travel, good value, predictability of monthly fare costs, and convenience.

What about fare capping?

Fare capping was considered through our review but is not currently being recommended. Fare capping offers a best price guarantee to all riders and does not require a decision to pre-purchase a pass at the beginning of a day or month. However, our analysis showed that the fare cap would need to be set at a higher price than today's pre-paid passes, effectively increasing costs for frequent riders. Given its potential benefits, we will continue to explore how fare capping could be introduced in a cost-effective way for both TransLink and our customers into the future, especially in the context of integrated, multi-modal payment platforms and the emergence of Mobility-as-a-Service (MaaS).

2.2 Increase the flexibility of pre-paid passes.

Currently, TransLink only offers day and monthly pre-paid passes that are currently valid from the beginning to the end of a calendar day or month. In order to provide riders with more choice and convenience, we recommend exploring ways to increase flexibility of prepaid passes, including rolling passes and weekly pre-paid pass options. Rolling passes could start on any day of the month, and last until the same day the following month. This would provide customers with additional flexibility to purchase passes at any time and would help alleviate the crowds at Compass Vending Machines at the beginning of the month when many customers renew their monthly passes. Rolling monthly passes and weekly passes will require additional financial and technical analyses to determine an appropriate rates and structure before implementation.

2.3 Align the Concession Monthly Pass structure with the distance-based pricing system.

Today, there is only one flat rate discounted Concession Monthly Passes that is valid for all zones, which means that all concession monthly pass holders are paying the same no matter how many zones they travel. This is a simple way to structure Concession Monthly Passes, but it does not fully capture the fairness benefits provided by the distance-based system. Moving forward, we propose exploring a pricing structure for Concession Monthly Passes that more closely reflect distance travelled, as we already do with Concession cash and Stored Value fares. More work is needed to identify specific discount rates and prices to ensure affordability for Concession riders is maintained.

Transfer Time

CURRENT SYSTEM

Metro Vancouver's transit system was designed as an integrated, connected network to transport you from your origin to your destination in the most efficient way possible. This means that trips often involve a connection—or transfer—from one route to another to complete a journey. Transfers allow people to move between and within areas of the region on one fare, and to complete their journeys by using the quickest and most convenient combination of transit service types.

Today, TransLink's fares include a 90-minute transfer period, which allows you to transfer onto other transit services within 90 minutes from the time of first tap in, and allows 120 minutes to complete your journey. Select services, such as West Coast Express, are granted exceptions to the 90-minute transfer time due to the longer travel time and distance.

RECOMMENDATIONS

3.1 Keep the principle of the 90-minute transfer window so riders can continue to transfer for 90 minutes without paying a new base fare on rapid transit. The total fare cost will include the base fare plus distance travelled during the 90-minute period.

Our analysis suggests that 90 minutes is sufficient time to complete the vast majority of one-way trips made in the region and therefore, we are proposing to keep the 90-minute transfer window. However, it's important to note that it will function differently for some trips under a distance-based system than it does today.

Under a distance-based structure, a fare will include a *base fare* plus a charge for *distance travelled*. Customers will be able to transfer without having to pay a new base fare if they complete all transfers within a 90-minute window, but the distance portion of their fare will continue to increase as they travel. This is in keeping with the fairness principle that Transit Fare Review respondents told us they'd like to see: a system in which people pay for what they use.

The base fare includes 90 minutes of unlimited transfers on bus, which could include multiple bus journeys or return trips by bus.

Service Type

CURRENT SYSTEM

Today, there is one integrated fare structure for bus, SkyTrain, and SeaBus. The West Coast Express is a premium service with higher fares and unique zone structure. HandyDART, which provides door-to-door service for customers who are unable to use other service types without assistance, is a flat fare system and does not accept Concession discounts.

RECOMMENDATIONS

4.1 Maintain premium pricing rates on the West Coast Express.

The West Coast Express is a high-speed, limited-stop, commuter-rail service with patterns of use that are distinct from the rest of the transit system. Moving forward, we recommend maintaining premium pricing – including a higher base and maximum fare – on the West Coast Express, recognizing that it is sufficiently fast, convenient, direct, and travels far enough to justify premium pricing relative to the rest of the transit system.

4.2. Recognize Concession discounts on HandyDART as part of on-going efforts to improve the HandyDART experience.

Throughout the Transit Fare Review, stakeholders have told us that fares should be consistent between HandyDART and the conventional transit system. To further align HandyDART fares with the other service types, we would consider recognizing TransLink-offered age-based discounts on HandyDART while implementing other changes outlined in the Custom Transit Service Delivery Review including HandyDART eligibility criteria.

Time of Travel

CURRENT SYSTEM

Today, if you travel outside of peak times (after 6:30pm on weekdays and all day weekends and holidays) you receive an off-peak discount where you can make any trip for the price of a one-zone fare.

RECOMMENDATIONS

5.1 Expand targeted off-peak discounts and/or rewards to help manage overcrowding on the system, subject to a transportation business case and near-term field study to determine feasibility

Off-peak discounts can encourage flexible riders to shift their time of travel and help to reduce overcrowding in peak periods. However, providing further discounts to all off-peak travellers results in decreased revenue that needs to be made up for through other funding.

In order to reduce crowding at peak times while having the least impact on peak fares, we recommend offering targeted off-peak discounts and/or rewards. These discounts would be specific to key times – like early morning and mid-day – in geographic areas where overcrowding is most acute.

To ensure that new targeted off-peak discounts are effective, efficient and fair, we require more information on how riders will shift their travel at different times, locations, and travel directions. Pilot projects and field studies should be launched to help build business case alternatives for expanded discounts, which would then be considered for inclusion in future investment plans based on their performance and efficacy.

TransLink is committed to maintaining our existing off-peak discounts until such time that expanded off-peak pricing can be implemented.

Discounts

CURRENT SYSTEM

Today, there are a range of discounts provided by TransLink and the Province, discussed in further detail in the Phase 3 Discussion Guide. Specific to this review, TransLink offers discounts for children and youth between the age of 5 and 18 and seniors over 65. These discounts were historically provided to customers who were outside traditional working years and assumed to have less ability to afford full-priced fares. Children under the age of 5 travel free.

RECOMMENDATIONS

6.1 Maintain existing age-based discounts.

TransLink recommends maintaining existing age-based discounts at this time. Scaling back or revoking these discounts could have negative impacts on those who depend on them.

6.2 Create separate rider classes for children, youth, and seniors.

Today, the same Concession fare product is valid for travel by children (aged 5-12), youth (aged 13-18) and seniors (aged 65+). In recognition that these different age categories often have different travel patterns, behaviours, and transit needs, we are proposing to ultimately move towards the creation of separate rider classes with distinct products to more directly target these different groups. This will allow greater flexibility to offer targeted discounts in the future.

6.3 Work with the Provincial Government to explore expanded discounts for low-income residents, children and youth.

TransLink acknowledges the societal benefits that these discounts would provide. However, social assistance is not within TransLink's mandate, which is to provide an efficient transportation system that is largely self-funded.

To support these benefits through discounts without raising fares for other riders and remaining revenue neutral, additional funding would be required. Recognizing that resources are limited at all levels of government, additional discussions with the Province in the context of the BC Poverty Reduction Strategy will help identify available funding and priorities.

Implementation Approach

Should the Mayors' Council on Regional Transportation and the TransLink Board endorse these policy recommendations, the project will move into the implementation planning phase. In this phase, TransLink will figure out how best to implement these changes in a way that is cost effective and effectively manages risk. This step includes additional technical work, pilot studies, scoping detailed Compass requirements, and developing a timeline that seeks to introduce any fare policy changes in ways that leverage and build on other concurrent initiatives. Once this implementation planning phase is complete, we would begin to implement the recommendations according to the timeline that is developed.

The following components will be considered as part of the approach to implementing the recommendations contained in this report:

1. Work with the Compass Card vendor to find cost efficiencies for implementation, including coordination with other organizational initiatives and technological changes to maintain an excellent customer experience and minimize complexity.
2. Prioritize implementing changes that can be delivered without impacting overall fare revenue. Many of the key recommendations identified through this review can be delivered without impacts to existing fare revenue, including transitioning to distance-based pricing on rapid transit.,
3. Initiate research and pilot studies for recommendations that require further analysis and/or funding, including expanded off-peak price incentives, and work with the Board and Mayors' Council for inclusion in future investment plans..
4. Work with the Provincial Government to identify potential funding and priorities for potential expansion of discounts for low income residents, children and youth.

2.2 Regional Transportation Strategy

TO: Mayors' Council on Regional Transportation
FROM: Geoff Cross, VP Transportation Planning and Policy
DATE: July 28, 2018
SUBJECT: **ITEM 2.3 – B-Line Program Update: Work with Municipalities**

RECOMMENDATION:

This item is provided as information to Mayors' Council on Regional Transportation.

PURPOSE

The purpose of this report is to provide the Mayors' Council with an update on the B-Line program and the work underway with municipalities on transit priority on four corridors to launch in Fall 2019.

BACKGROUND

As part of the Mayors' Council Ten Year Vision, TransLink is currently working to implement four new rapid-service B-Line routes in Fall 2019: Marine-Main, Fraser Highway, Lougheed Highway, and 41st Avenue.

Public consultation was held in March and April 2018 with results showing strong support for proposed B-Line services, associated changes to local routes and support for changes to streets to make the B-Lines fast and reliable.

The Mayors' Council has previously expressed a desire to see the municipalities and TransLink working together to improve the speed and reliability on these corridors to maximize the effectiveness of the investments. TransLink staff has been working closely with staff from municipalities and the Ministry of Transportation and Infrastructure (MoTI) on initial transit priority concepts for the four new B-Line corridors. Significant progress has been made toward identifying measures that can reduce travel time and improve reliability of the new B-Lines, on the order of 33% to 42%, as well as benefit the other bus routes that travel along those corridors.

DISCUSSION

Presentations to municipal councils began in June 2018 and will continue through July to seek support for the B-Lines and the associated transit priority concepts.

The following table outlines the Council presentations and outcomes by B-Line corridor:

B-Line Corridor	Municipality	Council meeting type and date	Outcome
Marine Main	Dist. of North Vancouver	Closed Council: June 18	Council Endorsement
	City of North Vancouver	Regular Council: June 25	Council Endorsement
	District of West Vancouver	Regular Council: June 11	Council Endorsement (July 9)
Fraser Highway	Township of Langley	Staff memo to Council: July 23	Pending
	City of Langley	Regular Council: July 9	Council Endorsement

B-Line Corridor	Municipality	Council meeting type and date	Outcome
	City of Surrey	Transportation & Infrastructure Committee: July 16	Verbal support
Lougheed Highway	City of Coquitlam	Council in Committee: July 9	Verbal support
	City of Maple Ridge	Regular Council: July 24	Pending
	City of Pitt Meadows	Regular Council: July 17	Verbal support
	City of Port Coquitlam	Community & Intergovernmental Committee: July 24	Pending
41st Avenue	City of Vancouver	Staff memo to Council: TBC	Pending
	UBC & UEL	Administration briefings	Verbal support

Included in the appendices are staff reports from the City of North Vancouver, District of West Vancouver and the City of Langley. Also included is an example of media coverage of the City of Coquitlam council presentation on the Lougheed B-Line.

CONCLUSION

TransLink staff will continue to work with partner agency staff to advance the development of B-Line transit priority measures, in preparation for procurement and construction to begin this winter. TransLink will continue to keep the Mayors' Council informed on the implementation of the B-Lines.

APPENDICES

1. June 14 2018 – District of West Vancouver Engineering Report to Council
B-Line Implementation – File:3210-01
2. June 20 2018 - City of North Vancouver Planning Report to Council
2019 Marine-Main B-Line Spring 2018 Update and Long-Term Transit Vision – File: 16-8330-10-0001/1
3. July 3 2018 – City of Langley Engineering Report to Council
Regional Transit B-Line Proposal (TransLink) – Report# 18-40
4. July 14 2018 - Tri-City News: New B-Line service will make trip to Maple Ridge 'competitive with driving' says TransLink



COUNCIL AGENDA

Date: July 9, 2018 Item: 7.

WV

DISTRICT OF WEST VANCOUVER
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

7.

COUNCIL REPORT

Date:	June 14, 2018
From:	Raymond Fung, Director, Engineering & Transportation
Subject:	B-Line Implementation
File:	3210 -01

RECOMMENDATION

THAT

1. The District support TransLink's proposed B-Line from Dunderave to Phibbs Exchange; and
2. Following the development and presentation of the detailed design to the public, staff be authorized to work with TransLink to implement B-Line transit priority measures as follows:
 - mitigate impacts to through traffic and parking, to the extent possible;
 - achieves B-Line or better standards for opening day service in September, 2019, provided that any efficiency gains resulting from transit priority measures are reinvested into additional local bus services;
 - takes advantage of available TransLink B-Line project funding to advance required upgrading/improvements; and
 - subsequent to opening day, make adjustments and implement further measures to improve transit priority and traffic functioning.

1.0 Purpose

The purpose of this report is to seek Council's endorsement of TransLink's B-Line service from Dunderave to Phibbs Exchange.

2.0 Legislation/Bylaw/Policy

The provincial *South Coast British Columbia Transportation Authority Act* is the enabling legislation that established TransLink in 1999. Marine Drive from Taylor Way to 21st Street is designated as part of the Major Road Network. As such, TransLink has some authority over the people-moving capacity of the corridor, although the municipality remains the road authority.

At a local level, prioritizing transit is supported by a number of policy documents:

- District's Strategic Transportation Plan, 2010
- District's Community Energy and Emissions Plan, 2016
- Metro Vancouver's/TransLink's Marine – Main Frequent Transit Corridor Study Final Report, 2017
- District's Official Community Plan (proposed), 2018
- Integrated North Shore Transportation Planning Project (draft), 2018

3.0 Background

In September, 2016, TransLink's Mayors Council approved Phase 1 of the 10 Year Investment Plan. Phase 1 funds the implementation of four new B-Line routes, including one from Dunderave to Phibbs Exchange running predominantly along Marine Drive in West Vancouver to Main Street in North Vancouver. Since that time, TransLink has been working with municipal staff to refine the service proposal and to move towards detailed design of the B-Line works to support this bus service, which is set to launch in September, 2019.

3.1 Previous Decisions

At the March 12, 2018 Regular Meeting, Council passed the following motion:

THAT the delegation from TransLink regarding B-Line or Better: Service Levels and Local Service Changes be received for information, with thanks.

At the June 11, 2018 Regular Meeting, Council passed the following motion:

THAT the presentation regarding B-Line Consultation be received for information, with thanks.

3.2 History

Not applicable.

4.0 Analysis

4.1 Discussion

Key information and messages provided by TransLink from the June 11, 2018 presentation to Council (**Appendix A**) can be summarized as follows.

Objectives emerging from the Integrated North Shore Transportation Planning Project are supportive of B-Line implementation including:

- improve person travel time reliability;
- improve transit customer experience and usability (e.g., reliability, efficiency and connections);
- enhance coordination of land use and transportation;
- encourage/facilitate shifts in sustainable travel modes and behaviour; and
- manage road demand to make best use of existing capacity for people and local goods movement.

Features of the B-Line (or better) service include:

- frequency of every 8 minutes during peak hours and 10 – 15 minutes at other times;
- limited stops through West Vancouver on Marine Drive at 24 Street, 21 Street, 14 Street, and at Park Royal.
- improved speed and reliability offered by high-capacity articulated buses, all-door boarding, and streets redesigned to improve travel time;
- distinct brand and identity with buses and stops having a different look, stops featuring Next Bus digital signage, and route information shown on bus interiors; and
- service all day, every day from 6:00am to 1:00am.

At present, the Marine Drive-Main Street route is one of the slowest transit corridors on the North Shore. Critical to the success of the B-Line is the need for speed and reliability measures related to re-configuration of the roadway. Conceptual at this point, transit priority measures being considered and assessed across the entire corridor include:

- Bus Priority Lanes, including Bus Only or Business Access & Transit lane configurations;
- queue jumpers, turn restrictions, and transit signal priority; and
- bus bulges.

Traffic modelling suggests that implementation of comprehensive transit priority measures would cut travel time along the corridor by 30 minutes or more each way. A more efficient corridor may also have benefit for through auto traffic. Further, all-day, Bus Priority lanes would have a significant benefit, not only for B-Line buses, but also local bus service provided by West Vancouver Transit that use the corridor.

The Phase 1 Investment Plan includes \$57 million for delivery of the four B-Lines. Supporting infrastructure investments will be made on a cost/benefit basis at 100% to be paid by TransLink. Staff from the District,

as well as the District and City of North Vancouver believe a strong business case can be made for significant upgrades/improvements along the Marine Drive-Main Street corridor to be funded by TransLink and implemented by September, 2019.

4.2 Sustainability

Amongst other policy documents, the proposed Official Community Plan (OCP) reflects the community's long-term sustainability vision and presents a framework for actions required to maintain and enhance quality of life. More specifically, policies in the proposed OCP (2018) that support transit mobility and regional connections include:

- work with partners, including TransLink, to improve transit infrastructure, service area, frequency and efficiency (Policy 2.4.7); and
- support the expansion of frequent transit services, prioritizing connections between Park Royal and Dundarave by expanding bus priority measures and transit-supportive road treatments along Marine Drive to improve reliability and speed of transit service, and to facilitate future rapid bus service (Policy 2.4.8).

4.3 Public Engagement and Outreach

During the spring of this year, TransLink conducted a public consultation process on the B-Lines, including the Dundarave to Phibbs Exchange route. Specific feedback on this route included over 100,000 reached through media, eight North Shore events held and 1,725 survey responses received. With respect to the stop locations, there was over 87% support (or strong support). Further, 79% support (or strongly support) changes to streets to make the B-Line faster and more reliable. Beyond engagement and outreach to the general public, TransLink is seeking municipal endorsement of the B-Line and associated transit priority concepts.

4.4 Other Communication, Consultation, and Research

Starting with the Marine-Main Frequent Transit Corridor Study initiated by Metro Vancouver, TransLink has been working closely with the District of West Vancouver, District of North Vancouver and City of North Vancouver through a staff working group on B-Line implementation. Further, municipal representation has comprised both Engineering & Transportation and Planning & Development Services Divisions. At present, the staff working group is supporting a consultant design team engaged by TransLink to deliver the B-Line service for September, 2019. Over the next several months, transit priority concepts will be further assessed and modelled, with specific measures being advanced to detailed design, including costing, project delivery considerations and procurement, as appropriate. This work will also include presentation of the detailed design to the public.

5.0 Options

5.1 Recommended Option

Supported by District policy and given the significant amount of work conducted to date involving staff from the three North Shore municipalities, confirmation of municipal Council support through the following resolution is recommended:

That the District endorses implementation of TransLink's B-Line from Dundarave to Phibbs Exchange.

At this point, while support is recommended, much work remains to be done to advance transit priority measures to detailed design. Certainly, streets redesigned to improve transit travel time is the objective, however transit priority measures, such as Bus Priority Lanes, queue jumpers, turn restrictions, transit signal priority and bus bulges all need to be carefully considered and balanced with potential impacts to through auto traffic and parking. While it is possible that transit person travel time reliability may necessarily result in auto person delay, through traffic and parking impacts should be mitigated to the extent possible. In this regard, continuation of TransLink's consultation process will include presentation of the detailed design to the public and Council.

While generally supportive of the east-west B-Line, Council expressed a need to further support north-south transit movements. Therefore, it is proposed that efficiency gains resulting from transit priority measures are reinvested into additional local bus services, which predominately run in the north-south direction.

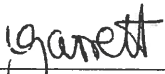
Further, as Phase 1 of the Mayors Investment Plan is fully funded, it is recommended that the District take advantage of this funding to advance required upgrading/improvements required to support B-Line implementation.

Finally, given the relatively short time to implement the B-Line service in September 2019, it is recommended that an adaptive approach be taken to monitor the effectiveness of transit priority measures. Adjustments and further measures should be undertaken to address transit priority and through traffic and parking impacts, as necessary.

5.2 Considered Options

A stronger resolution of support regarding specific implementation measures was considered by staff but is not recommended. Staff are of the opinion that at this point, there is a lack of detail regarding analysis, design and costing of specific transit priority measures to justify an unqualified resolution of support from Council. While an initial reach out has been made to the local merchant community regarding the B-Line proposal, more specific consultation, for example, with ADBIA as a stakeholder, should be made to address concerns regarding impacts to through traffic and parking.

Author:


Raymond Fung, M.Eng., P.Eng., Director, Engineering & Transportation




Concurrence


Jim Bailey, Director, Planning & Development Services

Appendices:

Appendix A, Marine-Main B-Line: Consultation Results & Transit Priority,
June 11, 2018



 Division Manager	 Director	 CAO
--	---	--

The Corporation of **THE CITY OF NORTH VANCOUVER**
PLANNING DEPARTMENT

REPORT

To: Mayor Darrell R. Mussatto and Members of Council

From: Liliana Vargas, Transportation Engineer

SUBJECT: 2019 MARINE – MAIN B-LINE SPRING 2018 UPDATE AND LONG-TERM TRANSIT VISION

Date: June 20, 2018 File No: 16-8330-10-0001/1

The following is a suggested recommendation only. Refer to Council Minutes for adopted resolution.

RECOMMENDATION:

PURSUANT to the report of the Transportation Engineer, dated June 20, 2018, entitled "2019 Marine-Main B-Line Spring 2018 Update and Long-Term Transit Vision":

THAT Council receive the preliminary results of the Spring 2018 B-Line consultation process for information;

THAT Council endorse the 2019 B-Line and transit priority concept in the City of North Vancouver;

THAT staff be directed to:

- continue to work collaboratively with neighbouring communities and stakeholders to maximize the opportunities for transit priority and address concerns arising from the implementation of the project; and
- report back with further details of recommended transit priority measures and the implications for all transportation users along the corridor.

AND THAT staff be directed to prepare analyses and concept for a longer term vision for the corridor to balance the needs of all users and support fast, frequent and reliable transit service including a dedicated road right-of-way for transit vehicles.

ATTACHMENTS:

1. Marine-Main Frequent Transit Corridor Study and 2019 B-Line updates Information Report (Document [#1667216](#))
2. Current East-West Routes in the North Shore (Document [#1667231](#))
3. Proposed Changes to NS Transit Routes Amended to Incorporate Feedback from Survey Respondents (Document [#1667241](#))
4. Marine-Main B-LINE Transit Priority Concept (Document [#1666939](#))

PURPOSE

The purpose of this report is to inform Council about the preliminary results of the B-Line consultation process that took place in spring 2018 and to seek endorsement of the transit priority concept. As well, staff are requesting Council direction to continue working with TransLink and the Districts of North and West Vancouver to further develop the required level of detail to inform the procurement process that is required to achieve a successful service launch in fall 2019.

Furthermore, staff is seeking direction to continue working in the development and analysis of further longer term transit priority measures and changes to the transportation network to support the long-term vision of a fast, frequent and reliable transit service with segregated lanes or dedicated right-of-ways while supporting growth and improved mobility for all transportation users along the corridor.

BACKGROUND

A delegation from TransLink will appear before City Council on June 25 to present the preliminary results of the B-Line spring consultation process and the transit priority concept required to support a successful service launch in fall 2019. TransLink delivered a similar presentation to the District of West Vancouver and District of North Vancouver Councils on June 11 and 18 respectively.

The Marine-Main corridor is identified as a priority area for compact growth and development in conjunction with a vision of fast, frequent and reliable transit service. The corridor stretches from Dunderave to Maplewood, through three municipalities and Squamish Nation Reserves (Figure 1).

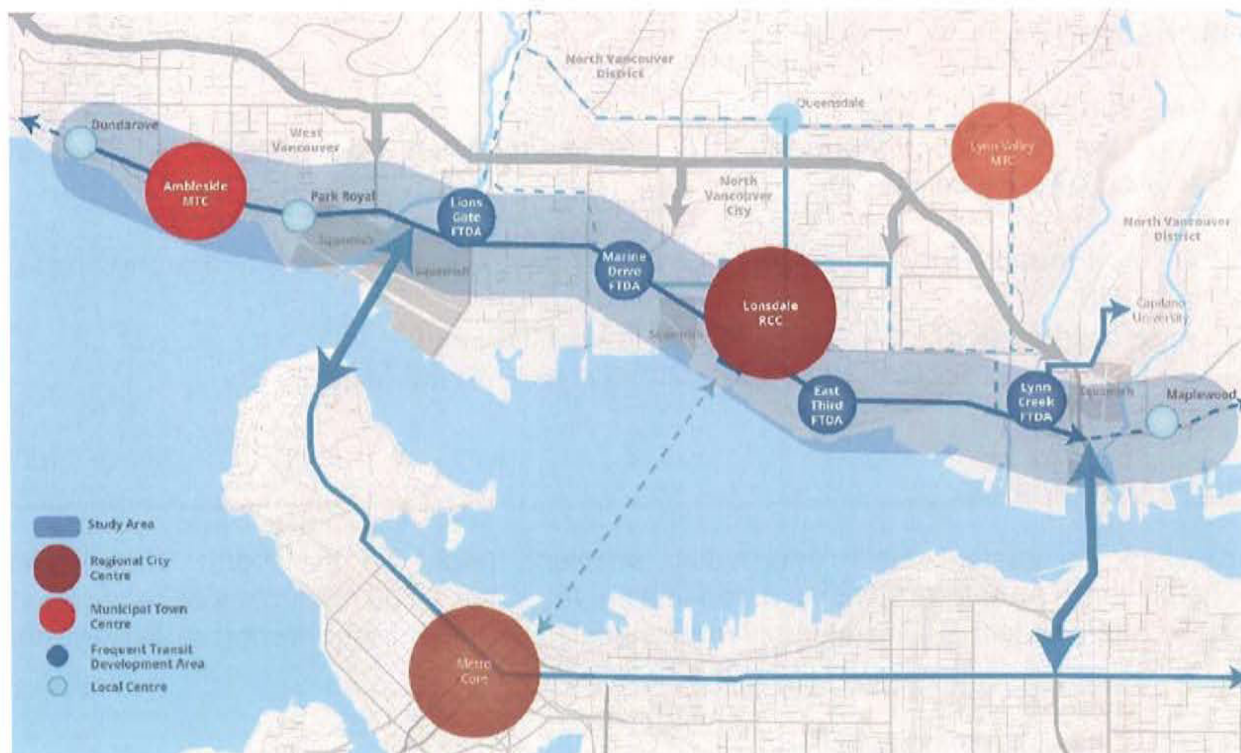


Figure 1 Marine-Main Study Area Map

The Mayor's Vision includes upgrades to a network of frequent transit corridors as identified in the 2040 North Shore Transit Network Vision to support future land uses, as anticipated in the municipal Official Community Plans (OCPs). In the City, the Marine-Main and Lonsdale corridors are part of this frequent transit network.

The 2019 Marine-Main B-Line is the initial phase towards achieving the vision of fast, frequent and reliable transit service along the corridor. Phase 1 of the Mayor's vision provides funding for implementation of the 2019 Marine-Main B-Line. Phase 2 of the Mayor's Vision (2020 - 2027) will deliver resources in a cost-shared model (TransLink and municipalities) for further enhancement of the B-Line service. In the City, several infrastructure projects that are in the design stage or that soon will start construction support the 2019 B-Line and all other users. In addition, annual capital works such as the new sidewalk program will focus on providing barrier free access to support the ability of pedestrians to safely and conveniently access the bus stops along the corridor.

Recently, representatives from the Integrated North Shore Transportation Planning Project (INSTPP) presented a report to Council. The B-Line is an example of a committed project by municipal, regional and provincial government that aligns with the objectives of improving person travel time reliability and transit customer experience, supports coordination of land use and transportation, encourages a shift to sustainable travel modes and supports the demand management of existing road capacity for the movement of people and goods.

DISCUSSION:

Project Timing

Work on the 2019 B-line started in 2017. Service launch is scheduled for fall 2019. In order to achieve the target date:

- the transit priority concept is to be further developed over the summer months in 2018;
- procurement of the works is to start in fall 2018, and;
- the latest possible start of construction is early winter 2018-2019.

Public Consultation

TransLink completed public information sessions (eight on the North Shore) and consultation in April-May 2018 via an on-line survey. Over 1,700 responses were received for the Marine-Main B-Line alone. TransLink will release a formal report in September 2018.

Results of the survey indicate that:

- 87% of the respondents support or strongly support the proposed B-Line stops;
- 79% of the respondents support or strongly support transit priority in favour of speed and reliability of the B-Line;
- 75% of the respondents support or strongly support dedicated bus lanes for buses compared to 14% who oppose or strongly oppose. 11% expressed a neutral position on this topic;
- 69% of the respondents support or strongly support changes to local routes. The majority of feedback asked to maintain connections to Capilano University, retain local service on 3rd Street/Chesterfield (currently served by route 239) and maintain frequency of route 255;
- 50% support a bus stop at Lonsdale Quay compared to 36% that support for a stop on Esplanade.

At the municipal level, City staff will prepare a communications plan to engage residents and businesses. The message will be coordinated with the other North Shore municipalities. As the project progresses and further details are available, City staff will communicate the benefits, changes and implications resulting from implementation of the B-Line. The City will collect feedback and will work to address any questions and/or concerns that may arise.

2019 B-Line

Working Group

The 2019 B-line Working Group (WG) consists of staff from the City, the Districts of North and West Vancouver, the Ministry of Transportation, CMBC, TransLink and a design consultant.

The WG has worked to identify opportunities and challenges to provide transit priority within each municipality in a manner that is coordinated with the other municipalities and collaborating agencies.

Service levels, parameters, principles, design guides to support transit priority and stop locations have been established to frame the outcome of the deliverables of the project.

Route and Stop Locations

As shown in Figure 2, The Marine-Main B-Line will run east-west on Marine Drive from 24th Avenue in West Vancouver to Phibbs Exchange. In the future, the B-Line may extend to the Maplewood area in the District of North Vancouver. In the City, the route includes Marine Drive, Forbes Street, Esplanade/Lonsdale Quay, Lonsdale Avenue, 3rd Street and Cotton Road.

The route is anticipated to have 13 stops, out of which six are in the City at Hanes Avenue, Bewicke Avenue, Lonsdale Quay (or Esplanade), 3rd Street, St Andrew's (future stop), Ridgeway and Brooksbank.



Figure 2 Marine-Main B-Line Route and stops

There is support in principle to locate the B-Line stop at Lonsdale Quay. The B-Line working group will complete the required analyses and design to ensure that this decision meets the intent of both connecting to the SeaBus while maintaining reliability for the B-Line users.

B-Line Service Levels

The service will be provided with a fleet of articulated buses with limited stops spaced anywhere from 800 - 1,200 metres. The limited number of stops ensures that the service is faster than a local route. Passengers will be able to board at all doors. The frequency of service will be 8 minutes at peak periods and 10-15 minutes in the off-peak periods. The hours of service will be from 6 am to 1 am. The service will have a distinctive brand name that will be common to the four new corridors planned in the Lower Mainland. Through implementing the B-Line, the predicted travel time between Dundarave and Phibbs Exchange could improve from 68 to 42 minutes during the peak. More and

enhanced transit priority will result in more frequent and reliable service that in turn will both retain and attract ridership.

Changes to Existing Local Transit Service

The new B-Line service will complement local service. Attachments 2 and 3 illustrate the existing east-west routes in the North Shore and the proposed changes to local routes.

Changes proposed for the routes were amended in response to the feedback received during the survey. Route 255 will serve West 3rd Street, shift to Keith Road to provide direct service from Central Lonsdale to CapU, and will keep its frequency. A fast and frequent shuttle along Highway 1 is also proposed to serve CapU. As per the original concept, Route 239 will be discontinued and route 240 will be extended to Lynn Valley.

Chokepoint Locations and Transit Priority Concept

TransLink has indicated that on the North Shore, transit customer delay is concentrated on the Marine-Main corridor. Thirty to forty percent of people on Marine-Main are transit users during peak periods for much of the corridor.

A reliability study was completed to identify the problem areas along the corridor. The results were shared and validated by the working group. Generally, congestion, delays, operations and safety/access are the four main categories of issues that affect the reliability of bus services. This information has been used to select the candidate locations for transit priority.

TransLink has identified common solutions that may be applicable to the B-Line and that can counter the issues noted earlier. Such solutions can be grouped under policies, practices, bus stop/route location, bus stop design, intersection controls and roadway design. Possible priority measures include turn restrictions, transit signal priority, separate bus lanes and queue jumps, among others.

Attachment 4 illustrates the recommended transit priority concept. This concept requires analysis to confirm the impact on other transportation users, detailed design, project development, and cost.

Transit priority measures in the City may include:

- Transit signal priority;
- BAT (Business Access and Transit) lanes; and
- New signals to facilitate transit movements.

The Working Group will advance the transit priority concept to the detail design stage. In the fall of 2018 it will be determined what projects will proceed to delivery and who will procure and deliver the works (TransLink or municipalities). Construction and implementation will take place between winter 2018 and summer 2019.

The Marine-Main B-Line corridor is part of a road network that accommodates all modes of transportation (i.e., pedestrians, bikes, transit, goods movement, vehicular traffic). As

such, parallel routes and nearby intersections will be analysed to identify the impact that transit priority measures may have on other users and to identify potential mitigation measures where feasible.

The majority of North Shore bus routes travel along Marine-Main. The latest figure accounts for 59,000 passengers per day. Transit priority measures introduced along the corridor will not only support the B-Line, but will also benefit passengers of other bus routes.

Vision of fast, frequent and reliable transit service along the Marine-Main Corridor

The Marine-Main corridor is identified as a priority area for compact growth and development in conjunction with a vision of fast, frequent and reliable transit service. The corridor stretches from Dundarave to Maplewood, through three municipalities and Squamish Nation Reserves.

Metro Vancouver and TransLink co-led the Marine-Main Frequent Transit Corridor study, in partnership with the City of North Vancouver, the District of North Vancouver, the District of West Vancouver, Squamish Nation, and the Ministry of Transportation and Infrastructure.

The study included a review of transit service options ranging from B-Line to light rail. Findings suggest that by 2030 planned and projected growth on the corridor could support a “BRT Light” transit service level, characterized by high-frequency bus that utilizes lane segregation, transit signal priority, and high-quality stop amenities to improve journey time and customer experience.

Corridor growth beyond the current projections, complemented with a transportation demand management strategy would be required to build the ridership to support a rail service in the future. Further analyses of the corridor and concept development are required to identify next phases of service and in order to support the long-term vision of a fast, frequent and reliable transit service that utilizes lane segregation or exclusive right-of-way while balancing the needs of all transportation users along the corridor and on parallel routes.

FINANCIAL IMPLICATIONS

External Funding

Funding for the 2019 Marine-Main B-Line is included in Phase 1 of the Mayor's Vision. A total of \$57 million is available for infrastructure for four B-Lines across the region. TransLink will fund 100% of opening day infrastructure. Funding is not allocated by corridor. Instead, projects will be funded in a manner that achieves the greatest benefit.

Considerations for project funding include cost effectiveness in terms of transit travel time savings, benefits and impacts (e.g., safety, traffic operations, public realm and other as applicable to each B-Line), the ability to deliver for opening day and municipal support.

Internal Funding

The following projects support implementation and improvements for the launch of the 2019 B-Line and for the corridor in subsequent years. These projects are included in the approved 2018-2027 Project Plan:

Project	2018	2019	2020-2027
Mosquito Creek Bridge Replacement and Ancillary Improvements	\$5,050,000		
Marine Drive Bridge Replacement over Mackay Creek			\$4,600,000
3rd Street – Widening for Transit & Active Transportation Improvements (Queensbury Avenue to Kennard Avenue)	\$200,000	\$2,200,000*	
Moodyville Neighbourhood Transportation Improvements (City funding to coordinate 3 rd Street widening between St. Patrick's and Queensbury with private development works)	\$1,500,000		
Marine-Main – Transit and Active Transportation Improvements (MacKay to Brooksbank)	\$150,000	\$150,000	\$5,500,000**

*Includes \$200,000 required outside funding

**Includes \$1,000,000 required outside funding

Additional developer funding includes \$150,000 to complete the Marine Drive/Bewicke Avenue/Keith Road Intersection Study. The scope of the study includes assessment and development of a set of short-term measures and long-term changes for this intersection and the surrounding streets and intersections.

As the design for the 2019 B-Line progresses, staff will report to Council about any financial implications resulting from required changes or ancillary improvements to the City's network to support the B-Line.

INTER-DEPARTMENTAL IMPLICATIONS

Staff from both the Planning and Engineering departments are working on the transit priority concept and will continue working on the detailed design and subsequent stages of the 2019 B-Line. Staff from the Community Services department also provides input that informs about the opportunities and challenges resulting from development along the corridor.

Given the pace of the project, the opportunity to move transit priority forward to improve mobility of citizens, other projects identified in the work plan may have to be deferred to future years to support delivery of the B-Line and the long-term transit vision for the corridor.

CORPORATE PLAN AND/OR POLICY IMPLICATIONS

The B-Line project aligns with the objectives of multiple initiatives and policies such as:

1. The Integrated North Shore Transportation Planning Project
2. The Official Community Plan (OCP) GHG emissions reduction targets:

Fifteen percent GHG emissions reductions, below 2007 levels, by 2020; and
Fifty percent GHG emissions reductions, below 2007 levels, by 2050.

3. The transportation objectives of the OCP:

Objective 2.1.5: Work with TransLink to improve accessibility to transit, complete projects identified in the 2040 North Shore Area Transit Plan, expand the Frequent Transit Network, provide rapid transit services on Marine Drive/3rd Street and Lonsdale/29th Street, and increase SeaBus frequency.

Objective 2.1.6: Implement transit priority treatments such as signal coordination, bus bulges, intersection queue jumpers and dedicated bus lanes to reduce transit travel times and improve transit reliability.

Objective 2.1.8: Work with partners, including TransLink, employers in the City and their labour representatives on transportation demand management measures that encourage walking, cycling, and the use of public transit

Objective 2.1.9: Work to improve the integration of different transit services (e.g. local and rapid bus, SeaBus, Skytrain, West Coast Express, BC Ferries) between the North Shore and the region to provide convenient transit connections within and through the community;

Objective 2.1.10: Collaborate with neighbouring municipalities and other levels of government to optimize the transportation system to support goods movements to and

through the community and to the Port lands, a vital economic asset to the community and the region.

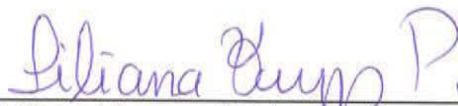
Objective 2.2.5: Optimize the use of the existing road network and consider roadway expansion only if it furthers the objectives of increasing sustainable means of transportation, or contributes to the overall livability of the neighbourhood.

Objective 2.3.5: Collaborate with neighbouring municipalities and other levels of government to improve the safety, security, accessibility and connectivity of the transportation system within the City and the North Shore.

Objective 2.3.8: Encourage transportation options that reduce fossil fuel use, such as walking, cycling, transit, carpooling, and low-emission vehicles;

Objective 2.3.10: Coordinate with neighbouring municipalities and other levels of government on key road network improvements to facilitate pedestrian, cycling, transit, goods, emergency and vehicle movements in the City and the North Shore.

RESPECTFULLY SUBMITTED:



Liliana Vargas, M.Eng., P.Eng.
Transportation Engineer

LV:eb



REPORT TO COUNCIL

To: **Mayor Schaffer and Councillors**

Subject **Regional Transit B-Line Proposal (Translink)**

Report #: 18-40

File #:

From: Rick Bomhof, P.Eng,
Director of Engineering, Parks & Environment

Doc #:

Date: July 3, 2018

RECOMMENDATION:

1. THAT Council receive the Translink presentation (delegation at July 9 meeting), 'Fraser Highway B-Line Consultation Results & Transit Priority'; and
 2. THAT Council endorse the Fraser Highway B-Line & Transit Priority concept in the City of Langley; and
 3. THAT staff be directed to continue to work collaboratively with Translink and stakeholders to maximize B-Line opportunities for transit priority, assess traffic and possible parking impacts, and address concerns arising from the implementation of the project; and
 4. THAT staff report back with further details of recommended transit priority measures and the implications for all transportation users along the corridor.
-

PURPOSE:

The purpose of this report is to provide an update, and request Council's endorsement and direction, regarding the proposed Fraser Highway B-Line & Transit Priority project scheduled for implementation in the Fall of 2019.

POLICY:

N/A

COMMENTS/ANALYSIS:

Translink will appear as a delegation at the July 9, 2018 Council meeting to provide an update on the proposed new transit B-Line route is being planned along Fraser Highway for implementation in the Fall of 2019. This project is identified within Translink's 10-year Transit Vision.

The new B-Line route will:

- provide additional service
- improve passenger experience
- provide faster and more reliable service
- Build up ridership in support of the future Rapid Transit Corridor along this same route

A high level overview of the project progress to date is provided in the Translink presentation.

The proposed B-Line includes the use of queue jumper lanes at intersection approaches within the City of Langley and bus only or high occupancy vehicles (HOV). In this case the queue jumper lanes would typically be combined with right turn lanes. These changes would provide the opportunity for transit or HOV's to pass by congestion thereby improving speed and reliability of service. The challenge to adding the B-line service to an already busy corridor is that the bus only or HOV lanes would be converted from existing through lanes, and would potentially impact to parking and other turning movements at the intersections. Therefore, staff will be carrying out further analysis and additional traffic count information at high traffic locations and parking impacts is recommended to ensure an acceptable level of service is maintained for all traffic along the corridor.

Staff supports the Fraser Highway B-Line Consultation & Transit Priority results and recommends that the City continue to work with Translink and stakeholders for transit priority opportunities, to assess traffic and parking impacts, and address concerns arising from the implementation of the project, and to report back to Council with the findings in the Fall.

BUDGET IMPLICATIONS:

None

ALTERNATIVES:

Not approve B-Line service in the City (not recommended)

Respectfully Submitted,



Rick Bomhof, P.Eng
Director of Engineering, Parks & Environment

CHIEF ADMINISTRATIVE OFFICER'S COMMENTS:

I support the recommendation.



Francis Cheung, P. Eng.
Chief Administrative Officer

New B-Line service will make trip to Maple Ridge 'competitive with driving,' says TransLink

The route will reduce travel time between Coquitlam and Maple Ridge from one hour to 37 minutes

[Gary McKenna](#) / Tri-City News

JULY 14, 2018 05:46 PM



A new B-Line bus service is expected to reduce travel times between Maple Ridge and Coquitlam from the current one-hour trip to 37 minutes, according to TransLink.
Photograph By FILE PHOTO

A new B-Line bus service is expected to reduce travel times between Maple Ridge and Coquitlam from the current one-hour trip to 37 minutes, according to TransLink.

Daniel Freeman, the manager of rapid bus service, said some infrastructure upgrades, like an HOV bus lane and queue-jumping pullouts for transit vehicles at major intersections, would help speed up the route.

"That means it starts becoming competitive with driving," he said during a presentation to Coquitlam council July 9. "People will have a better option for their journey."

But Freeman acknowledged that road construction does not fall under TransLink's jurisdiction and he said it is looking for buy-in and support from municipalities to assist with the B-Line rollout.

He noted that one of the most congested choke points along the future route, which is expected to follow Lougheed Highway between Haney Place and Coquitlam Central Station, is between Westwood Street and the Coquitlam bus loop. That short distance, he said, can take bus drivers currently routed through the area more than 11 minutes to cover.

"It can be very slow and unreliable," Freeman said.

Joszeff Dioszeghy, Coquitlam's general manager of engineering and public works, said city staff have been in discussions with TransLink about improvements in connection with the new B-Line. But he noted that while the B-Line mainly benefits residents in Port Coquitlam, Pitt Meadows and Maple Ridge, road improvements to accommodate the bus route would also improve traffic congestion for local transit users and automobile commuters as well.

"To be honest, the benefits to Coquitlam residents are far less than the other communities impacted by this B-Line," he said. "All the improvement and changes... will on the one hand benefit not only the B-Line, but other transit lines and transit users without negatively impacting the general traffic. That is where our focus is currently."

Most city councillors were receptive to TransLink's request for support.

Coun. Terry O'Neill said residents are increasingly drawn eastward and would benefit from shorter transit trips to neighbouring municipalities while Coun. Chris Wilson noted improved B-Line service is important for the regional transportation network.

"We have benefitted from TransLink and we have an obligation to help those east of us to help with improved transportation," Wilson said, later adding: "It will hopefully take a whole bunch of cars off the road."

Meanwhile, Freeman said the new B-Line service has the support of the community. He pointed to a survey conducted during the first phase of consultation, which found that 81% of respondents approved of the new route and its location.

In March, TransLink announced it would be introducing 58 new large-capacity buses that would add four new B-Line routes — including one through the Tri-Cities — to its regional transit network. A press release at the time said the service expansion would put 207,000 people within walking distance of transit that will run every 10 minutes or better during peak periods and 15 minutes or better during off-peak periods, with the service available 18 hours a day. The service is expected to be operational in the fall of 2019.

gmckenna@tricitynews.com

@gmckennaTC

© Copyright 2018 Tri-City News

TO: Mayors' Council on Regional Transportation
FROM: Geoff Cross, Vice President, Transportation Planning & Policy
DATE: July 26, 2018
SUBJECT: **ITEM 2.4 – 2018 Transit Service Guidelines**

RECOMMENDATION:

This item is provided as information to Mayors' Council on Regional Transportation.

PURPOSE:

The purpose of this informational item is to provide the Mayors Council with an overview of the new Transit Service Guidelines.

BACKGROUND:

Originally developed in 1991 and updated in 2004, the 2018 Transit Service Guidelines provide new and refreshed guidelines that bring clarity and consistency to the process of adjusting and improving transit services to meet changing customer needs.

The new guidelines were developed in consultation with an internal TransLink working group, local government stakeholders through a series of workshops, and focus groups made up of transit customers from across the region. The guidelines were approved by TransLink's Service Change Approvals Committee, and were shared with the TransLink Board at the June 21, 2018 meeting.

The guidelines define the targets, thresholds, and conditions that correspond with high quality transit service. They are intended to be one tool in the toolbox for transit service planning and will be used to analyze service performance, recommend how to allocate transit resources, and work with communities to plan for new or changing services.

DISCUSSION:

The Transit Service Guidelines are designed to provide flexibility in response to customer needs and community expectations in an accountable, equitable, and efficient manner. They also communicate expectations for service delivery to partner agencies and local governments, as well as to TransLink's customers and the public. The guidelines typically define minimum thresholds, which are often surpassed when applied to actual service.

The guidelines apply to conventional transit services, which include bus, ferry (SeaBus), and rail (SkyTrain, Canada Line, and West Coast Express). Other services, such as Access Transit services, are not included. Other key components of transit service—e.g., safety, accessibility, facility design, and fleet design—are covered in separate standards and guidelines documents developed by TransLink.

Transit Service Guideline Organization and Themes

The Transit Service Guidelines are intended to remain a flexible tool to plan and manage the transit system. This flexible approach—rather than a standards/policy-based approach—aligns with best practices for service guidelines. It also recognizes the role of the Regional Transportation Strategy and future Investment Plans in establishing priorities for transit resources. These guidelines are one tool available to inform service planning decisions.

The Transit Service Guidelines are organized around three key themes: Demand-oriented Service, Useful Service, and Productive and Efficient Service. The guidelines within each theme outline service performance, quality thresholds, and targets that strike a balance between being aspirational and achievable. These guidelines were developed based on transit performance in the region, and are backed with best practices in developing service guidelines from other major metro regions.

Demand-oriented Service

- TransLink coordinates with local and regional partners to align the transit network with existing and planned growth and development to ensure services meet demand and grow ridership. Guidelines under this theme help TransLink provide appropriate access across the region, including connectivity to local and regional destinations, and opportunities for added service in growing areas.
- Guidelines: Transit-supportive Land Use and Demand

Useful Service

- To make transit a convenient, reliable, and comfortable choice for customers, the guidelines under this theme help to deliver service with reliable travel times, convenient points of connection, and appropriate time spans and frequencies. Focusing on the customer, TransLink's services should be useful to as many people as possible.
- Guidelines: Passenger Load, Stop Spacing, Service Frequency, Span of Service, Punctuality and Regularity, Route Design

Productive and Efficient Service

- To ensure delivery of productive and cost-effective transit services to the region, guidelines under this theme help TransLink balance agency and regional goals related to equity, efficiency, and effectiveness.
- Guidelines: Boardings per Revenue Hour, Capacity Utilization, Passenger Turnover, Cost per Boarded Passenger

Guideline values are subject to periodic updates, as the values are derived from actual performance of routes within each of the service types which change from time to time.

NEXT STEPS:

TransLink will use the Transit Service Guidelines to support decision making related to adding, adjusting, or eliminating transit service. Application of the guidelines and resulting changes to transit service planning and delivery are supported by the Transit Service Performance Review, a regular monitoring program on the performance of individual transit lines and services. The Transit Service Guidelines will

be used in close coordination with other guideline documents, including *Managing the Transit Network* and the *Transit-Oriented Communities Design Guidelines*.

The Transit Service Guidelines will be made available for the general public on the TransLink website. Additional communication to the public may include a post on TransLink’s Buzzer Blog and “Planning 101” informational videos.



2018 TRANSIT SERVICE GUIDELINES

June 2018



TABLE OF CONTENTS

1	INTRODUCTION	2	3	REFERENCE INFORMATION	48
1.1	What are the Transit Service Guidelines?	3	3.1	Vehicle Capacity Reference Table	49
1.2	Using the Transit Service Guidelines	5	3.2	Service Productivity Reference Tables	50
1.3	Understanding Service Types	7			
2	TRANSIT SERVICE GUIDELINES	10		APPENDIX	54
2.1	Overview	11	A	Glossary	55
2.2	Layout and Organization	12	B	References	59
D	Demand-oriented Service	14	C	Acknowledgements	60
D.1	Transit-supportive Land Use and Demand	16			
U	Useful Service	20			
U.1	Passenger Load	21			
U.2	Stop Spacing	24			
U.3	Service Frequency	26			
U.4	Span of Service	28			
U.5	Punctuality and Regularity	30			
U.6	Route Design	34			
PE	Productive and Efficient Service	38			
PE.1	Boardings per Revenue Hour	40			
PE.2	Capacity Utilization	42			
PE.3	Passenger Turnover	44			
PE.4	Cost per Boarded Passenger	46			

1

Introduction

1. Introduction

1.1 What are the Transit Service Guidelines?

1.2 Using the Transit Service Guidelines

1.3 Understanding Service Types

TransLink is the transportation authority for the Vancouver metropolitan area. It has responsibility for planning, managing, and delivering an integrated regional transit network—including rapid transit, commuter rail, and bus services—to provide access and mobility for people across the region.

In consultation with stakeholders and customers, TransLink determines where demand is greatest, what types of service are most appropriate, and how resources are prioritized.

The Transit Service Guidelines provide a framework for achieving these objectives and delivering a transit network useful to the greatest number of people.



1.1 What are the Transit Service Guidelines?

The Transit Service Guidelines bring clarity and consistency to the process of adjusting and improving transit services to meet changing customer needs. They are founded on the principles of being:

- » **Accountable.** Has clear expectations for performance, demand, service quality, and customer expectations.
- » **Balanced.** Considers customers first, along with the needs of local communities, while ensuring the efficient and appropriate use of resources.
- » **Collaborative.** Builds upon partnerships with the public, local government partners, and stakeholders to identify and address issues and opportunities proactively and collaboratively.

The Transit Service Guidelines are designed to provide flexibility in response to customer needs and community expectations in an accountable, equitable, and efficient manner. They also communicate expectations for service delivery to partner agencies and local governments, as well as to TransLink’s customers and the public. The guidelines typically define minimum thresholds, which are often exceeded when applied to actual service.

The guidelines apply to conventional transit services, which include bus, ferry (SeaBus), and rail (SkyTrain, Canada Line, and West Coast Express). Other services, such as Access Transit services, are not included. Key components of transit service—e.g., safety, accessibility, facility design, and fleet design—are covered in separate standards and guidelines documents developed by TransLink.

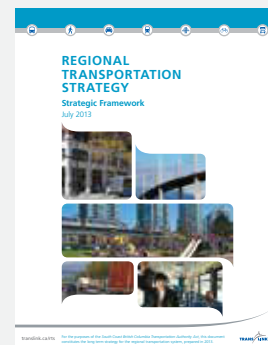
HOW ARE THE GUIDELINES USED?

The guidelines are used to:

- » determine where service should be provided
- » design service characteristics
- » determine appropriate service levels
- » measure and establish minimum levels of service performance

TransLink’s ability to provide services consistent with the Transit Service Guidelines is influenced by available resources (in particular, available funding for transit operations), and by the investment priorities set out in the Regional Transportation Strategy and 10-year investment plans. If resources become constrained, TransLink will meet these guidelines as closely as possible and will work to achieve consistency as resources permit.

The guidelines can also help local governments make decisions about land use, which has a significant impact on the success of transit services. These and other guidelines, such as the Transit-Oriented Communities Design Guidelines, can assist local government partners to develop land use plans that support the type of transit they envision for their communities.



REFERENCE: REGIONAL TRANSPORTATION STRATEGY

The Regional Transportation Strategy (RTS) sets the vision, goals, principles, strategies, and key initiatives to help guide transportation decisions in the Vancouver metropolitan area over the next 30 years. It integrates TransLink’s strategies for investing in system expansion, managing travel demand, and coordinating land use and transportation. The RTS also commits TransLink to advance performance-based transportation solutions that best serve the region and its citizens.

The 2013 RTS identifies the Transit Service Guidelines as the tool used to “develop and communicate meaningful, manageable, and measurable transit service performance guidelines to clarify the conditions under which different levels of transit will be provided.”

1.2 Using the Transit Service Guidelines

TransLink uses the Transit Service Guidelines to support decision-making related to adding, adjusting, or eliminating transit service. Application of the guidelines and resulting changes to transit service planning and delivery are supported by the Transit Service Performance Review, a regular monitoring program on the performance of individual transit lines and services.

The TransLink publication *Managing the Network Primer* explains how TransLink makes transit service decisions to respond to service requests and evaluate potential new services. Changes may be considered to improve performance on routes that do not meet minimum performance guidelines. These changes could include a variety of options, depending on the reason(s) for not meeting the guidelines, such as reconfiguring the route alignment to attract more passengers, adding more trips or using a larger vehicle to alleviate overcrowding, considering how to provide an appropriate level of service on unproductive segments, or more closely matching service levels to demand.



REFERENCE: MANAGING THE NETWORK PRIMER

TransLink regularly monitors the transit network to see how people use the various services available to them. Based on what is seen, adjustments are made to improve both the efficiency and usefulness of the network. This task is called managing the transit network. It involves overseeing the service planning process and developing policy guidelines and performance indicators for transit service in the interest of maximizing personal mobility. This primer deals mostly with the management of bus services in the region, but many of the concepts can be applied to other forms of transit as well.

Processes to Plan and Manage the Network

The Transit Service Guidelines are applied during TransLink’s regular transit service performance reviews, transportation investment plans, and ongoing community-based area plans.



TRANSIT SERVICE PERFORMANCE REVIEWS

To help manage the transit network, TransLink regularly reviews and modifies its transit services to increase efficiency and effectiveness. Each year, TransLink analyzes all transit routes in the system and publishes the Transit Service Performance Review. This review helps identify trends and opportunities for improvement by looking at the performance of the transit system and its components. TransLink tracks several performance indicators, including those contained in the Transit Service Guidelines. This analysis informs TransLink’s annual service change process to improve service across the region and to match service levels with demand.



TRANSPORTATION INVESTMENT PLANS

Every three years (or more frequently, as needed), TransLink creates a 10-Year Investment Plan, which outlines the key initiatives, capital investments, and transportation services to be delivered. The plan details projected revenues and program expenditures on transit services, as well as on capital, operating, financing, and administration expenses for transit, roads, bridges, and cycling facilities across the region. The Transit Service Guidelines play a role in shaping expenditures for future transit services.



AREA PLANS

TransLink works with its municipal partners and consults with the public to develop geographically-focused, sub-regional, and community-based area plans. They provide a blueprint for aligning the local transit network with existing and expected land use and travel patterns. They also guide future investment in, and changes to, the regional transit network. To develop an area plan, the range of local issues, opportunities, needs, and constraints are balanced against the regional transit network priorities detailed in TransLink’s Regional Transportation Strategy. Area plans work toward achieving the performance objectives articulated in the Transit Service Guidelines.

1.3 Understanding Service Types

TransLink provides a range of transit service types designed to meet different purposes, markets, travel demand levels, and objectives.

These service types are organized into seven categories: Rapid, All Day Frequent, Peak Frequent, Standard, Basic, Peak Only – Limited, and Special. All routes in TransLink’s network are categorized based on purpose, frequency, and hours of operation.

Service types are defined independent of specifications for vehicle type (e.g., standard bus or articulated bus) and mode (e.g., bus, rail, or ferry). These characteristics are not defined because different vehicle types and transit modes could be used for different service types.

Transit Service Typology

SERVICE TYPE	SERVICE CHARACTERISTICS
Rapid	10 minutes or better frequency throughout the day, every day Evening service provided Exclusive, or predominantly exclusive, right-of-way like a bus-only lane or rail corridor; could be rail or bus
All Day Frequent	15 minutes or better frequency throughout the day, every day Evening service provided
Peak Frequent	15 minutes or better frequency in peak period and/ or in peak direction; less frequent at other times
Standard	15 to 30 minutes' frequency throughout the day, every day Evening service provided
Basic	30 to 60 minutes' frequency on weekdays; may or may not operate throughout the entire day or 7 days per week
Peak Only – Limited	Service offered only in peak periods and only on weekdays; service frequency may vary
Special	Special services that perform unique purposes; covers NightBus, SeaBus, and West Coast Express

WHAT ARE “SPECIAL” SERVICES?

Special services are planned and designed to leverage unique circumstances in the region. The three types of special services include:

- » NightBus – basic overnight service provided after regular transit service has ended
- » SeaBus – passenger ferry connecting Downtown Vancouver (Waterfront Station) with the North Shore (Lonsdale Quay Station)
- » West Coast Express – commuter rail service operating between Mission and Downtown Vancouver

Frequent Transit

Frequent transit means customers can expect reliable, convenient, easy-to-use services that are frequent enough to eliminate the need to refer to a schedule. Three key transit network elements provide frequent transit and, though they are not service types listed in the Transit Service Guidelines, the terms are used publicly to describe lines or corridors with frequent service.



FREQUENT TRANSIT NETWORK

TransLink’s Frequent Transit Network (FTN) is a network of corridors where daily transit service runs at least every 15 minutes in both directions until 9:00 pm, every day. FTN service may be provided by one or more types of transit along the same corridor as long as the combined services provide 15-minute or better service.



SKYTRAIN

The SkyTrain network provides fast, convenient service within an exclusive right-of-way with high levels of frequency and reliability throughout the day and evening. SkyTrain services act as the backbone of the transit network, connecting key destinations across the region.



B-LINE

TransLink’s B-Lines provide limited-stop bus services that run every 15 minutes or more often, throughout the day, every day of the week. To improve bus speed and reliability, streets with B-Line service may include enhanced service features, such as transit priority and customer amenities. B-Line service branding is currently being updated.

2

Transit Service Guidelines

2. Transit Service Guidelines

2.1 Overview

2.2 Layout and Organization

D Demand-oriented Service

D.1 Transit-supportive Land Use and Demand

U Useful Service

U.1 Passenger Load

U.2 Stop Spacing

U.3 Service Frequency

U.4 Span of Service

U.5 Punctuality and Regularity

U.6 Route Design

PE Productive and Efficient Service

PE.1 Boardings per Revenue Hour

PE.2 Capacity Utilization

PE.3 Passenger Turnover

PE.4 Cost per Boarded Passenger

The Transit Service Guidelines are intended to remain a flexible tool to plan and manage the transit system. This flexible approach—rather than a standards/policy-based approach—aligns with best practices for service guidelines. It also recognizes the role of the Regional Transportation Strategy and future Investment Plans in establishing priorities for transit resources. These guidelines are one tool available to inform service planning decisions.



2.1 Overview

The Transit Service Guidelines are organized around three key themes:



Demand-oriented Service

TransLink coordinates with municipal and regional partners to align the transit network with existing and planned growth and development to ensure services meet demand and grow ridership. Guidelines under this theme help TransLink provide access across the region, including connectivity to local and regional destinations, and opportunities for added service in growing areas.



Useful Service

To make transit a convenient, reliable, and comfortable choice for customers, the guidelines under this theme help to deliver service with reliable travel times, convenient points of connection, and appropriate time spans and frequencies. Focusing on the customer, TransLink’s services should be useful to as many people as possible.



Productive and Efficient Service

To ensure delivery of productive and cost-effective transit services to the region, guidelines under this theme help TransLink balance agency and regional goals related to equity, efficiency, and effectiveness.

OVERVIEW TO THE DESIGN GUIDELINES

The guidelines within each theme outline service performance, quality thresholds, and targets that strike a balance between being aspirational and achievable. These guidelines were developed based on transit performance in the region, and are backed with best practices in developing service guidelines from other major metro regions.

Guideline values are subject to periodic updates, as the values are derived from actual performance of routes within each of the service types which change from time to time.

2.2 Layout and Organization

Section Title: presents the theme title with colour-coded label

Section Introduction: provides an overview of the theme and important considerations

20 TransLink Transit Service Guidelines

U

Useful Service



TransLink strives to make its services useful for as many people as possible. By making transit a reliable, convenient, and comfortable choice, TransLink provides more options for its customers, alongside high-quality transportation services to as many people as possible.

Providing useful service relates to TransLink adapting services to meet the region's travel and mobility needs in ways that maximize ridership, provide basic coverage, and/or support long-term ridership growth. While the design of service will not be the same in every part of the region, TransLink's approach to providing service will be consistent. TransLink has a variety of policy, planning, and design guideline documents that identify approaches to improving access to transit and accessibility, including the Transit-Oriented Communities Design Guidelines.

There are many elements of a transit trip—on the website or looking at a map, at the stop or station, on the bus or train—that impact a person's perception and experience of the quality of service. While it is important for TransLink to measure as many elements of the customer experience as possible, many of these factors fall outside of the realm of service planning and decision-making.

Such passenger amenities as good lighting, covered bicycle parking, and real-time bus arrival information are addressed in TransLink's Transit Passenger Facility Design Guidelines.

TIME PERIODS FOR SERVICE PLANNING

Because service levels and demand vary throughout the day, many guidelines have different targets and thresholds for different time periods:

Peak Weekdays:
6:00 – 9:00 am and 3:00 – 6:00 pm

Midday Weekdays:
9:00 am – 3:00 pm

Evenings (all days):
6:00 pm – 12:00 midnight

Saturday:
8:00 am – 6:00 pm

Sunday:
9:00 am – 6:00 pm

21 TransLink Transit Service Guidelines

U.1

Passenger Load



What is it?

Passenger load is a measure of how full a transit vehicle is, on average, at its busiest point or peak on a route.

Why does it matter?

Passenger load helps TransLink determine how full or crowded our services become while in service. If a bus or train only ever has a low passenger load, it could mean either there is too much service on a route for current demand or a lower-capacity transit vehicle should be used.

If a bus or train has a high passenger load, it could mean there is not enough service or a higher capacity transit vehicle is needed. A high passenger load can contribute to a negative riding experience, such as standing for an uncomfortable amount of time, struggling to get on or off the vehicle, or being passed up, which can lead to customers being late or missing an important connection.

How is it measured?

Passenger load is measured using the peak load factor. The peak load factor is the ratio of average passengers carried versus the capacity or space available on a vehicle, expressed as a percentage. A passenger load factor of 100% means the vehicle is at capacity.

The peak load factor is calculated by dividing the average load on a transit vehicle at its busiest point by the number of spaces (seats plus standing space) provided on each trip.

The capacity of TransLink's various transit vehicles is provided in [U.3 Vehicle Capacity Reference Table](#). These capacities account for a reasonable amount of space for both seated and standing passengers.

REFERENCE: TRANSIT PASSENGER FACILITY DESIGN GUIDELINES

Responsibility for delivering effective transit facilities is often shared between local jurisdictions, developers, and TransLink and its many project partners. With so many potential players involved in the delivery of transit passenger environments, the Transit Passenger Facility Design Guidelines serve as a principal reference for ensuring design consistency and excellence across all modes, projects, and environments. The Guidelines are intended for all parties involved in the planning, design, implementation, and operation of transit passenger facilities.

Context Sidebar: offers useful context for the information provided in the section

Reference Sidebar: identifies other supporting guidelines or standards

Guideline Title:
identifies the
guideline

Guidelines:
provides the
guideline
details for each
service type

24 TransLink Transit Service Guidelines

U.2 Stop Spacing

What is it?

Stop spacing is the distance between stops along a route.

Why does it matter?

Stop spacing has an impact on the speed and reliability of a service, as well as on a customer's ability to access a service. Too many stops make travel slow and transit less useful and convenient. Too few stops mean less opportunity to access a service, even if it travels close by. The need for fast and reliable transit service is balanced with providing convenient access to the system when considering where stops should be placed.

How is it measured?

Stop spacing is measured by dividing the total distance of a given route by the total number of stops on the route minus 1. This measure provides average stop spacing in metres.

While the average stop spacing on a line should fall between the ranges provided in the guidelines, the actual distance between any two stops on a route can vary, depending on such factors as:

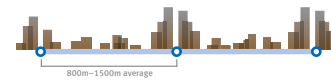
- » topography
- » road design
- » land use
- » location of sidewalks

Useful Service

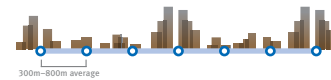
25 TransLink Transit Service Guidelines

Guideline: Stop Spacing

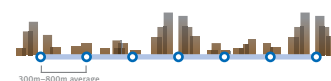
Rapid



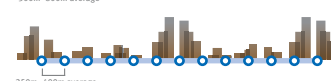
All Day Frequent



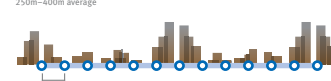
Peak Frequent



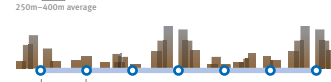
Standard



Basic



Peak Only-Limited



Notes:

- » B-Lines or routes operating on highways will have wider stop spacing.
- » For areas where existing land uses will not generate passenger trips—e.g., agricultural, heavy industrial, or low-density areas—exceptions to the stop spacing guidelines may be applied.
- » **Special:** stop spacing for these services is provided on a case by case basis.
- » **Standard & Basic** stops in areas with high concentrations of seniors, people with disabilities, and other special needs may be spaced closer together to facilitate easier access to transit.

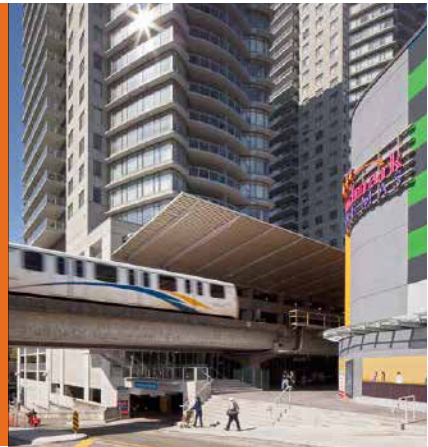
Useful Service

Theme Tab:
identifies the
relevant theme
related to the
guideline

Description:
explains what
is it, why
it matters,
and how it is
measured

D

Demand-oriented Service



Transit and land use work hand-in-hand to support strong, sustainable communities. The design of the transit network should meet different levels of demand across the region to support an effective transit system that benefits the most people. Though TransLink provides service throughout the region, different types of land use and neighbourhood design support different levels of transit service. TransLink works together with the region’s municipalities and other key partner agencies towards the alignment of land use and transportation investments, and to proactively address new opportunities to increase demand, seek efficiencies, and align plans to meet shared goals.

TransLink’s Transit-Oriented Communities Design Guidelines provides context for this theme. The 6 Ds—destinations, distance, design, density, diversity, and demand management—are described in the guidelines as important to framing land use considerations.

Guidelines in this section are not intended to be used as a formula for providing transit. Coordinating service with land use is, however, an ongoing and evolving effort between TransLink and local partners. The Vancouver metropolitan area is a diverse region, and local context is an integral part of the decision-making process. The guidelines help to strike a balance between providing a basic level of service across the region and providing faster and more frequent service in areas where demand is higher. These guidelines are intended to be a resource in framing this discussion among TransLink, local government partners, other key partner agencies, developers, and the public about where different types of services may be most appropriate.

TransLink applies different guidelines for appropriate types of service, based on the characteristics of the areas within walking distance of such service. These guidelines come into consideration when providing new service or changing existing service.



REFERENCE: TRANSIT-ORIENTED COMMUNITIES DESIGN GUIDELINES

Transit-oriented communities are places that, by their design, allow people to drive less and to walk, cycle, and take transit more. In practice, this means they concentrate higher-density, mixed-use, human-scale development around frequent transit stops and stations. Transit-oriented communities also make it possible to operate efficient, cost-effective transit service. The Transit-Oriented Communities Design Guidelines provide a more detailed resource for municipalities and other stakeholders involved in community planning processes across the region to further the development of more transit-oriented communities in Metro Vancouver.

The 6 Ds of Transit-Oriented Community Design

The Transit-Oriented Communities Design Guidelines are organized around the 6 Ds, characteristics that describe the land use and built environment elements that influence demand for transit.



DESTINATIONS

Coordinate land use and transportation

When land use and transportation are well coordinated, transit can provide fast, direct, and cost-effective access to more destinations for more people. Proximity to regional destinations provides an anchor for routes, and also influences transit ridership.



DISTANCE

Create a well-connected street network

A well-connected street network shortens travel distances, making it possible for people to quickly and conveniently connect with transit en route to their destination.



DESIGN

Create places for people

Transit-oriented communities are carefully designed with the needs of people in mind. Multi-modal streets and great public spaces enable people of all ages and abilities to access and enjoy a comfortable, safe, delightful, and inviting public realm.



DENSITY

Concentrate and intensify activities near frequent transit

Transit-oriented communities concentrate most growth and development within a short walk of frequent transit stops and stations. A higher density of homes, jobs, and other activities creates a market for transit, allowing frequent service to operate efficiently.



DIVERSITY

Encourage a mix of uses

A vibrant mix of land uses helps to create complete, walkable neighbourhoods around transit stations and stops, and supports a transit system that is well-utilized throughout the day.



DEMAND MANAGEMENT

Discourage unnecessary driving

Transit-oriented communities use transportation demand management strategies, such as parking management, to discourage unnecessary driving and to promote walking, cycling, and transit.

D.1 Transit-supportive Land Use and Demand

What is it?

The 6 Ds describe land use and built environment elements that influence demand for transit. Interactions among these six characteristics help to estimate potential demand for transit. Transit-supportive land use and demand guidelines indicate the characteristics of adjoining land uses that will allow transit to be productive and effective in meeting the needs of the community.

Land use characteristics help shape demand for transit, which in turn shapes the level of service provided. No single land use characteristic, or combination of characteristics, provides an accurate indicator of how transit service will perform in a given land use setting; rather, it is often the combination of all six indicators that determines which particular service type is the best match for an area.

Passenger demand is the level of consumer demand for transit services in a community or area. It can be thought of as the output of these land use and built environment characteristics. Demographic factors also shape passenger responses to varying levels of transit service and must be accounted for in any decision process. These distinctions explain why some routes with nearly identical land use characteristics can have widely differing performance, and why a simple formula cannot be applied to forecast ridership response to a particular type of service for a given set of land use characteristics.







Why does it matter?

Land use guidelines provide one indication to assist TransLink in matching the right service to the potential level of demand for transit service in a given area. Different land use and built environment elements provide one indicator of the potential demand for transit. Passenger demand is a key outcome of these land use indicators, which drives many decisions made by TransLink about where and what kinds of transit service to provide. Once service is provided, changes in the level of demand or ridership provide the impetus for a change in service type.

Land use characteristics alone will not always predict transit ridership response to a given level of service. When considering deploying transit service in new markets, additional factors are important in addition to land use, such as route and network connectivity, other mobility options, built environment characteristics, and demographics.

How is it measured?

There are many ways to measure and describe the 6 Ds. Some are easy to measure (e.g., the density of people living in an area), while others are more subjective and difficult to capture in a single measure. These guidelines use definitions of the 6 Ds identified in TransLink's Transit Oriented Communities Design Guidelines:

- 
Destinations. The number and type(s) of route anchors and major destinations along a corridor. Major destinations include rapid transit stations, post-secondary education institutions, regional shopping malls, and regional and municipal town centres.
- 
Distance. The number of intersections per hectare within walking distance of a transit corridor.
- 
Design. How people-friendly urban design is, such as sidewalks on both sides of the street, buildings oriented toward the street, and parking tucked behind buildings.
- 
Density. The number of people and jobs per hectare within walking distance of a transit corridor.
- 
Diversity. The mix and variation of land uses along a corridor, such as the mix of residential, employment, and/or retail land uses.
- 
Demand Management. The number and types of demand management programs in place along a given route, such as paid parking and parking availability.

Passenger demand is a key outcome of the 6 Ds. For this guideline, the potential for passenger demand is measured by weekday boardings, which are indexed by service revenue hour. Passenger demand is also used as an efficiency guideline (see **PE.1** Boardings Per Revenue Hour).

Because the 6 Ds are indicators of demand, the service types also relate to the level of demand experienced along a corridor. Land use characteristics and transit service characteristics build off of each other. A high-frequency service is unlikely to produce significant ridership in an area with characteristics that are not transit-supportive.

If both service and land use characteristics are in harmony, the ridership and productivity will likely follow from the appropriate level of service.

WHAT INFLUENCES TRANSIT RIDERSHIP?

The 6 Ds are one influence on how effective a service might be in meeting regional objectives. Equally as influential is the demographic make-up of potential riders. Transit ridership is influenced by such demographic characteristics as age, income level, employment type and level, auto-ownership, household size, housing tenure, and cultural identity.

Similar to the physical characteristics of an area, no one or two combinations of these factors is an absolute indicator of a successful transit service. But, taken together, physical and demographic characteristics can explain why transit ridership is more responsive to a given service type in one area over another.

Guideline: Transit-Supportive Land Use

SERVICE TYPE	DESTINATIONS	DISTANCE	DESIGN	DENSITY	DIVERSITY	DEMAND MGMT	MIN AVG PASSENGER DEMAND/REVENUE HOUR
Rapid	Rapid transit investments have been, and will continue to be, the result of specialized studies focused primarily on high-performing All Day Frequent routes. Investment decisions on these corridors will be reached regionally on a corridor-by-corridor basis.						
All Day Frequent	High number of anchors along corridor, connection with Rapid stops and stations are key	0.6–0.9 intersections/hectare	Generally operates in highly walkable and bikeable environments	40–100 people and jobs/hectare (median)	High level of land use mix, high levels of retail activity	Moderate to high parking cost with low to moderate supply	50–60*
Peak Frequent	High number of anchors along corridor, connection with Rapid stops and stations are key	0.3–0.9 intersections/hectare	Moderately walkable and bikeable environments	35–80 people and job/hectare (median)	Medium-high level of land use mix along corridors, often dominated by high employment not related to retail	Low to moderate parking cost with moderate supply	35–40*
Standard	Medium number of anchors along corridor	0.5–0.9 intersections/hectare	Generally operates in moderately walkable and bikeable environments	30–70 people and jobs/hectare (median)	Medium level of land use mix along corridor; often has a dominant land use form, such as housing or office/industrial type employment	Low to no parking cost, with moderate to high supply	27–32*
Basic	Low number of anchors along corridor	0.2–0.7 intersections/hectare	Generally operates in moderate-low walkable and bikeable environments	30–60 people and jobs/hectare (median)	Lower level of land use diversity along corridor, often	No parking cost, with high supply	15–20*
Peak Only – Limited	This specialized service type is directed to assist in accommodating peak loads in particular locations. It generally supplements regular service, based more on exhibited passenger demand than on surrounding land use characteristics. As such, no land use criteria have been established for this service type.						
Special	NightBus, SeaBus and West Coast Express are specialized services that have unique characteristics and transit planning contexts; therefore, no land use criteria have been established for this service type.						

*Weekday boardings per service revenue hour in peak and midday periods.

U

Useful Service



TransLink strives to make its services useful for as many people as possible. By making transit a reliable, convenient, and comfortable choice, TransLink provides more options for its customers, alongside high-quality transportation services to as many people as possible.

Providing useful service relates to TransLink adapting services to meet the region's travel and mobility needs in ways that maximize ridership, provide basic coverage, and/or support long-term ridership growth. While the design of service will not be the same in every part of the region, TransLink's approach to providing service will be consistent. TransLink has a variety of policy, planning, and design guideline documents that identify approaches to improving access to transit and accessibility, including the Transit-Oriented Communities Design Guidelines.

There are many elements of a transit trip—on the website or looking at a map, at the stop or station, on the bus or train—that impact a person's perception and experience of the quality of service. While it is important for TransLink to measure as many elements of the customer experience as possible, many of these factors fall outside of the realm of service planning and decision-making.

Such passenger amenities as good lighting, covered bicycle parking, and real-time bus arrival information are addressed in TransLink's Transit Passenger Facility Design Guidelines.

TIME PERIODS FOR SERVICE PLANNING

Because service levels and demand vary throughout the day, many guidelines have different targets and thresholds for different time periods:

Peak Weekday:

6:00 – 9:00 am and
3:00 – 6:00 pm

Midday Weekday:

9:00 am – 3:00 pm

Evenings (all days):

6:00 pm – 12:00 midnight

Saturday:

8:00 am – 6:00 pm

Sunday/Holiday:

9:00 am – 6:00 pm

U.1 Passenger Load

What is it?

Passenger load is a measure of how full a transit vehicle is, on average, at its busiest point or peak on a route.

Why does it matter?

Passenger load helps TransLink determine how full or crowded our services become while in service. If a bus or train only ever has a low passenger load, it could mean either there is too much service on a route for current demand or a lower-capacity transit vehicle should be used.

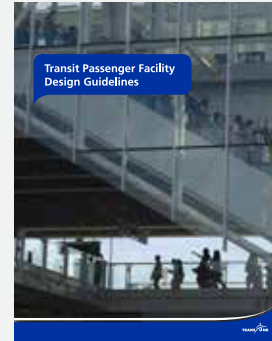
If a bus or train has a high passenger load, it could mean there is not enough service or a higher capacity transit vehicle is needed. A high passenger load can contribute to a negative riding experience, such as standing for an uncomfortable amount of time, struggling to get on or off the vehicle, or being passed up, which can lead to customers being late or missing an important connection.

How is it measured?

Passenger load is measured using the peak load factor. The peak load factor is the ratio of average passengers carried versus the capacity or space available on a vehicle, expressed as a percentage. A passenger load factor of 100% means the vehicle is at capacity.

The peak load factor is calculated by dividing the average load on a transit vehicle at its busiest point by the number of spaces (seats plus standing space) provided on each trip.

The capacity of TransLink's various transit vehicles is provided in [3.1 Vehicle Capacity Reference Table](#). These capacities account for a reasonable amount of space for both seated and standing passengers.









REFERENCE: TRANSIT PASSENGER FACILITY DESIGN GUIDELINES

Responsibility for delivering effective transit facilities is often shared between local jurisdictions, developers, and TransLink and its many project partners. With so many potential players involved in the delivery of transit passenger environments, the Transit Passenger Facility Design Guidelines serve as a principal reference for ensuring design consistency and excellence across all modes, projects, and environments. The Guidelines are intended for all parties involved in the planning, design, implementation, and operation of transit passenger facilities.

Passenger load is a key indicator of a passenger’s level of comfort. Passengers who have a choice between sitting or standing or, if required to stand, have enough space to move freely through the vehicle and will feel more comfortable during their journey.

Definition of Load Factors for Passenger Comfort

LOAD FACTOR (% OF CAPACITY UTILIZED)	RAPID SERVICE TYPE	ALL OTHER SERVICE TYPES
 <p>100% or higher</p>	<ul style="list-style-type: none"> » All seats are full and all standing space is occupied. » The vehicle is overcrowded, and accessing the doors may be difficult for many passengers. » Standing passengers will need to step off the bus to let others exit. » Pass-ups are likely at some stops. 	
 <p>84% to 99%</p>	<ul style="list-style-type: none"> » All seats are full and most standing space is occupied. » The vehicle is crowded, and accessing the doors may be difficult for some passengers. » Standing passengers will need to shift position as other passengers board/exit. 	
 <p>67% to 83%</p>	<ul style="list-style-type: none"> » All seats are occupied, and half of the passengers are standing. » Some passengers will have to move around for others to board or exit the train. 	<ul style="list-style-type: none"> » All seats are occupied, and several passengers are standing. » Some passengers may have to move around for others to board or exit the bus.
 <p>51% to 66%</p>	<ul style="list-style-type: none"> » All seats are occupied, and about one-third of all passengers are standing. » Boarding or exiting the train occurs without difficulty. 	<ul style="list-style-type: none"> » Most seats are occupied, and a few passengers are standing. » Boarding or exiting the bus occurs without difficulty.
 <p>34% to 50%</p>	<ul style="list-style-type: none"> » All seats are occupied, and about one-quarter of all passengers are standing. » Boarding or exiting the train occurs without difficulty. 	<ul style="list-style-type: none"> » Most seats are occupied, and people need to sit next to each other if they want a seat. » Passengers standing are doing so by choice, not necessity.
 <p>0% to 33%</p>	<ul style="list-style-type: none"> » Seats may be available for some boarding passengers. » A few passengers will choose to stand. 	<ul style="list-style-type: none"> » Half of the seats (or less) are occupied, and no passengers are standing. » Few passengers need to sit next to someone. » Passengers have some freedom in where they can sit.

Note: The load factor range may change as the number of seats on a vehicle changes. Descriptions of load factors for passenger comfort are adapted from the Transit Capacity and Quality of Service Manual.

Acceptable average peak load factors vary by service type and time of day. Most customers expect transit to be busier (with fewer seats available) during peak commute periods, and acceptable load factors are set higher during these periods.

Guideline: Maximum Acceptable Average Passenger Load Factor

SERVICE TYPE	PEAK WEEKDAY	MIDDAY, SATURDAY, SUNDAY	EVENING	Load factor
Rapid	No more than 15% of trips.	No more than 25% of trips.	No more than 5% of trips.	100% or higher
	No more than 50% of trips.		No more than 25% of trips.	84% to 99%
All Day Frequent*	No more than 10% of trips.	No more than 15% of trips.	No more than 5% of trips.	67% to 83%
	No more than 50% of trips.		No more than 25% of trips.	51% to 66%
Peak Frequent	No more than 10% of trips.	No more than 15% of trips.	No more than 5% of trips.	*For services operated with vehicles designed for highway operation, the load factor guideline remains the same as the load factor guideline for the service type; these vehicles are designed to have a higher seated capacity and lower standing capacity.
	No more than 50% of trips.		No more than 25% of trips.	
Standard	No more than 10% of trips.	No more than 5% of trips.	No more than 5% of trips.	
	No more than 50% of trips.	No more than 25% of trips.	No more than 10% of trips.	
Basic	No more than 10% of trips.	No more than 5% of trips.	No more than 5% of trips.	
	No more than 50% of trips.	No more than 25% of trips.	No more than 10% of trips.	
Peak Only – Limited	No more than 10% of trips.	No more than 15% of trips.	No more than 5% of trips.	
	No more than 50% of trips.		No more than 25% of trips.	
Special	NightBus In recognition of the different type of service that NightBus provides, TransLink has different expectations for crowding on NightBus which are addressed through a separate strategy.			
	SeaBus SeaBus, by regulation, has a fixed capacity that cannot be exceeded, and measures of its usability will vary from other service types.			
	West Coast Express West Coast Express does not conform to load factor guidelines, but rather responds to passenger capacity levels.			

U.2 Stop Spacing

What is it?

Stop spacing is the distance between stops along a route.

Why does it matter?

Stop spacing has an impact on the speed and reliability of a service, as well as on a customer's ability to access a service. Too many stops make travel slow and transit less useful and convenient. Too few stops mean less opportunity to access a service, even if it travels close by. The need for fast and reliable transit service is balanced with providing convenient access to the system when considering where stops should be placed.

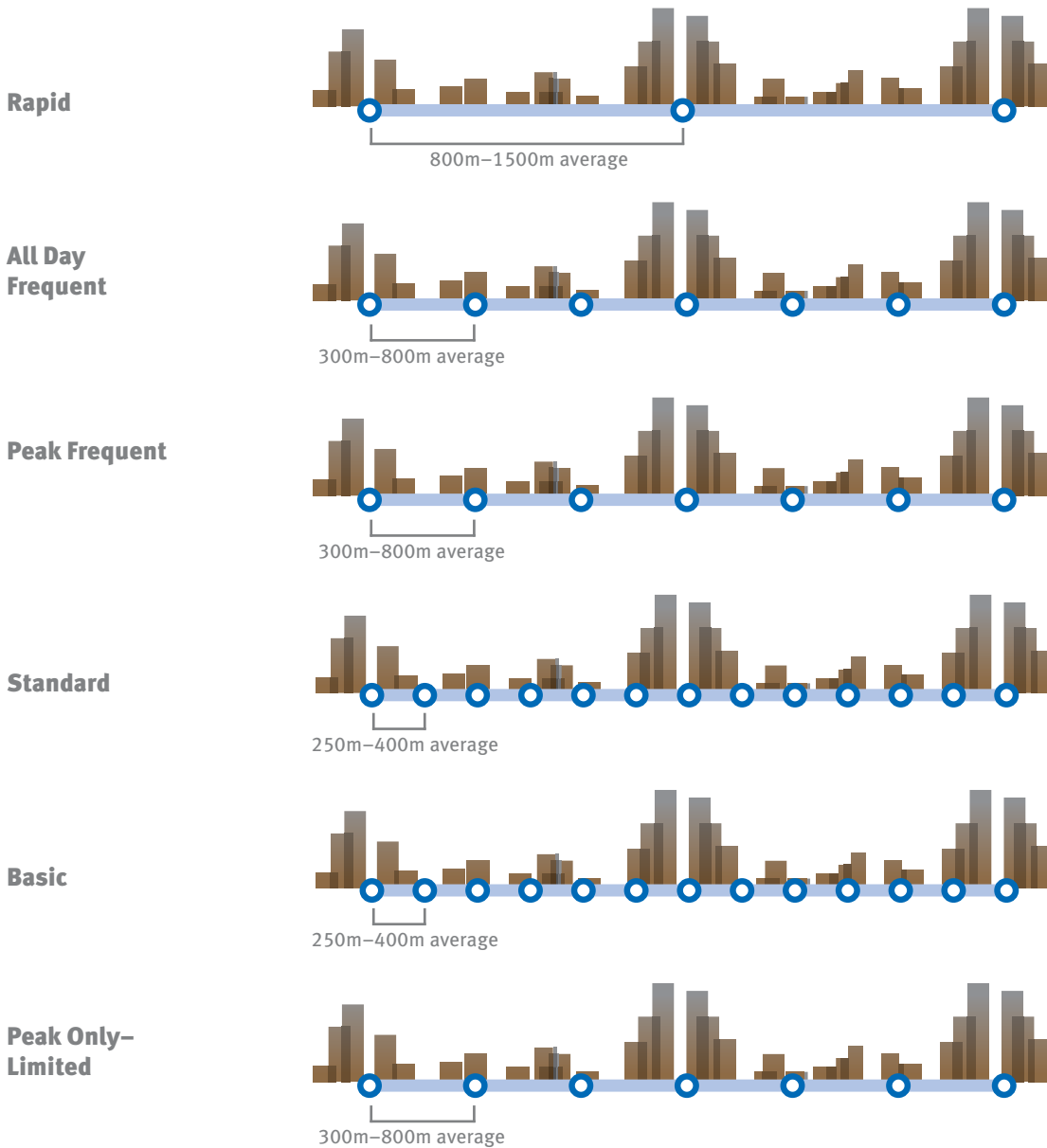
How is it measured?

Stop spacing is measured by dividing the total distance of a given route by the total number of stops on the route minus 1. This measure provides average stop spacing in metres.

While the average stop spacing on a line should fall between the ranges provided in the guidelines, the actual distance between any two stops on a route can vary, depending on such factors as:

- » topography
- » road design
- » land use
- » location of sidewalks

Guideline: Stop Spacing



Notes:

- » B-Lines or routes operating on highways will have wider stop spacing.
- » For areas where existing land uses will not generate passenger trips—e.g., agricultural, heavy industrial, or low-density areas—exceptions to the stop spacing guidelines may be applied.
- » **Special:** stop spacing for these services is provided on a case by case basis.
- » **Standard & Basic:** stops in areas with high concentrations of seniors, people with disabilities, and other special needs may be spaced closer together to facilitate easier access to transit.

U.3 Service Frequency

What is it?

Service frequency is how often a transit vehicle picks up passengers at a stop; for example, a bus might arrive every 10 minutes during peak commute periods, while a West Coast Express train might arrive every 30 minutes.

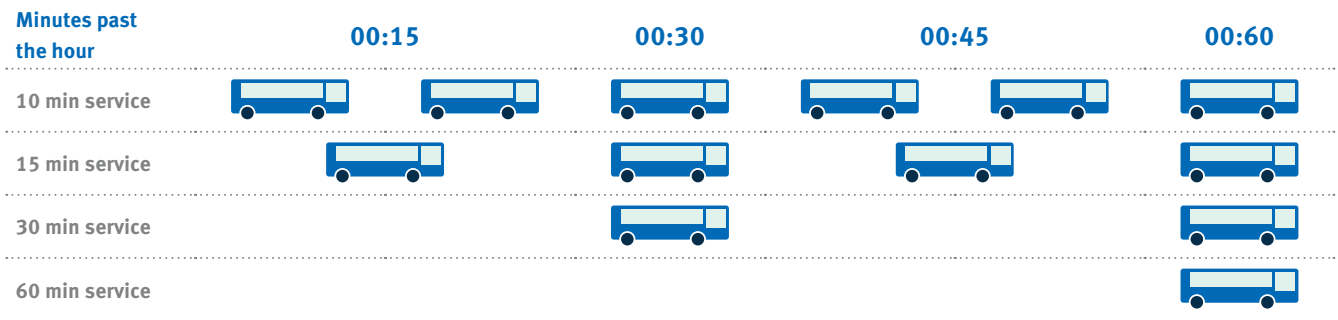
Why does it matter?

The higher the frequency and the more attractive and useful the service, the less coordination is required to time connections between routes. TransLink balances needs for frequency across the network and allocates resources to provide the most efficient service to the most riders.

How is it measured?

Service frequency is measured by how often, on average, a trip occurs on a given transit line. Guidelines include minimum and target frequencies that vary depending on type of service, time of day (e.g., peak, midday, evening, night), and direction of travel.

Overview of Service Frequency



Guideline: Service Frequency

SERVICE TYPE	PEAK WEEKDAY	MIDDAY WEEKDAY	EVENING	WEEKEND/HOLIDAY															
Rapid	Every 10 minutes or better in both directions.	Every 10 minutes or better in both directions.	Every 15 minutes or better in both directions.	Every 10 minutes or better in both directions.															
All Day Frequent	Every 15 minutes or better in both directions.	Every 15 minutes or better in both directions.	Every 15 minutes or better in both directions, dropping to every 30 minutes or better in late evening.	Every 15 minutes or better in both directions.															
Peak Frequent	Every 15 minutes or better in peak direction. Every 30 minutes or better in non-peak direction.	Service frequency during other time periods will vary.																	
Standard	Every 15 to 30 minutes in both directions.	Every 15 to 30 minutes in both directions.	Every 15 to 30 minutes in both directions, dropping to every 60 minutes or better in late evening.	Every 15 to 30 minutes in both directions.															
Basic*	Every 30 to 60 minutes in both directions.	Every 30 to 60 minutes in both directions (if provided).	Every 30 to 60 minutes in both directions (if provided).	Every 30 to 60 minutes in both directions (if provided).															
Peak Only – Limited	Every 15 to 30 minutes in the peak direction.	No service provided.	No service provided.	No service provided.															
Special	<table border="0"> <tr> <td>NightBus</td> <td colspan="4">Every 15 to 60 minutes during late night period only, depending on demand.</td> </tr> <tr> <td>SeaBus</td> <td>Every 15 minutes or better in both directions.</td> <td>Every 15 minutes in both directions.</td> <td>Every 15 to 30 minutes in both directions.</td> <td>Every 15 to 30 minutes in both directions.</td> </tr> <tr> <td>West Coast Express</td> <td>Every 30 minutes.</td> <td>No service provided.</td> <td>No service provided.</td> <td>No service provided.</td> </tr> </table>				NightBus	Every 15 to 60 minutes during late night period only, depending on demand.				SeaBus	Every 15 minutes or better in both directions.	Every 15 minutes in both directions.	Every 15 to 30 minutes in both directions.	Every 15 to 30 minutes in both directions.	West Coast Express	Every 30 minutes.	No service provided.	No service provided.	No service provided.
NightBus	Every 15 to 60 minutes during late night period only, depending on demand.																		
SeaBus	Every 15 minutes or better in both directions.	Every 15 minutes in both directions.	Every 15 to 30 minutes in both directions.	Every 15 to 30 minutes in both directions.															
West Coast Express	Every 30 minutes.	No service provided.	No service provided.	No service provided.															

*Basic services are tailored based on community needs; they may not offer service for all day or time periods.

U.4 Span of Service

What is it?

Span of service is the hours of operation for a specific transit service, from the time of departure of the first trip of the day at the first stop, to the time of arrival of the last trip of the day at the last stop.

Some services run only during weekday commute times, some services operate all day, and others run all day and late into the night.

Why does it matter?

Span of service, like frequency, is influenced by demand and travel patterns along a route. The more passenger demand is spread out over an entire day and into the evening, the longer the span of service.

How is it measured?

Span of service is measured as the minimum time period service is provided. Minimum span of service guidelines define the earliest and latest times different types of service should operate. Higher ridership services will have longer spans of service, and lower ridership services will have shorter spans of service.

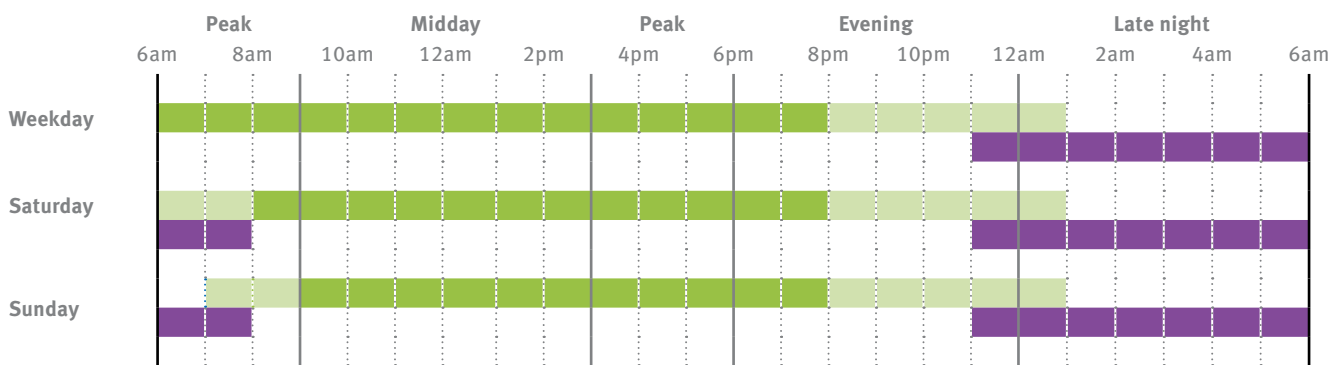
Span of service guidelines vary depending on service type, current travel patterns—as indicated by ridership levels during different times of day—and expected travel demand patterns, such as service to new employment centres.

KEY CONSIDERATIONS

Span of service decisions consider several factors, including:

- » performance of the earliest and latest trips on the route
- » demographic or land use changes to an area served by the route
- » service to connecting rapid transit stations to meet the first or last train

Minimum Span of Service for all services types



Note: West Coast Express service is a specialized commuter service and does not conform to these Span of Service coverage periods.

■ All services ■ Some services ■ NightBus

Guideline: Span of Service

SERVICE TYPE	WEEKDAY	SATURDAY	SUNDAY/HOLIDAY
Rapid	5:00 am to 1:00 am	6:00 am to 1:00 am	7:00 am to 1:00 am
All Day Frequent	5:00 am to midnight	6:00 am to midnight	7:00 am to midnight
Peak Frequent	5:00 am to midnight	6:00 am to midnight, if provided	7:00 am to midnight, if provided
Standard	6:00 am to 9:00 pm	7:00 am to 9:00 pm	8:00 am to 9:00 pm
Basic*	6:00 am to 8:00 pm	8:00 am to 8:00 pm	9:00 am to 8:00 pm
Peak Only – Limited	6:00 am to 9:00 am and/or 3:00 pm to 6:00 pm	No service provided	No service provided
NightBus	Span may vary greatly between 11:00 pm and 8:00 am depending on route and day, but core hours are 1:00 am to 5:00 am		
Special SeaBus	6:00 am to 1:00 am	6:00 am to 1:00 am	8:00 am to 11:00 pm
Special West Coast Express	Westbound: 5:00 am to 9:00 am Eastbound: 3:00 pm to 8:00 pm	No service provided	No service provided; holiday service varies

*Basic services are tailored based on community needs; they may not offer service for all day or time periods.

U.5 Punctuality and Regularity

What is it?

Punctuality means the transit service will arrive and leave on schedule and is also referred to as on-time performance or schedule adherence. Regularity refers to a consistent time between transit vehicles along the same route.

Punctuality and regularity are factors of reliability. Reliable services arrive on time, or close to it, every day or arrive within consistent headways between vehicles (e.g. every 15 minutes). Reliability is one of the most important qualities of great transit service.

Why does it matter?

Inconsistent services that arrive late or depart early result in unreliable service and longer, inconsistent wait times for passengers. Unreliable service can also lead to overcrowded buses followed closely by near-empty ones—called “bus bunching.” As buses get delayed, there will be more passengers than normal waiting at the next stop. The extra boarding time will make the bus even later, and the delays greater.

Many factors can delay transit and impact punctuality and regularity, such as traffic, construction, collisions, detours, volume of passengers, and weather.

As service becomes more frequent there is a reduced dependence on the punctuality of any single transit vehicle. In these instances, a consistent headway, or regularity, between vehicles is an important factor in measuring reliability.

CONNECTIONS BETWEEN SERVICES

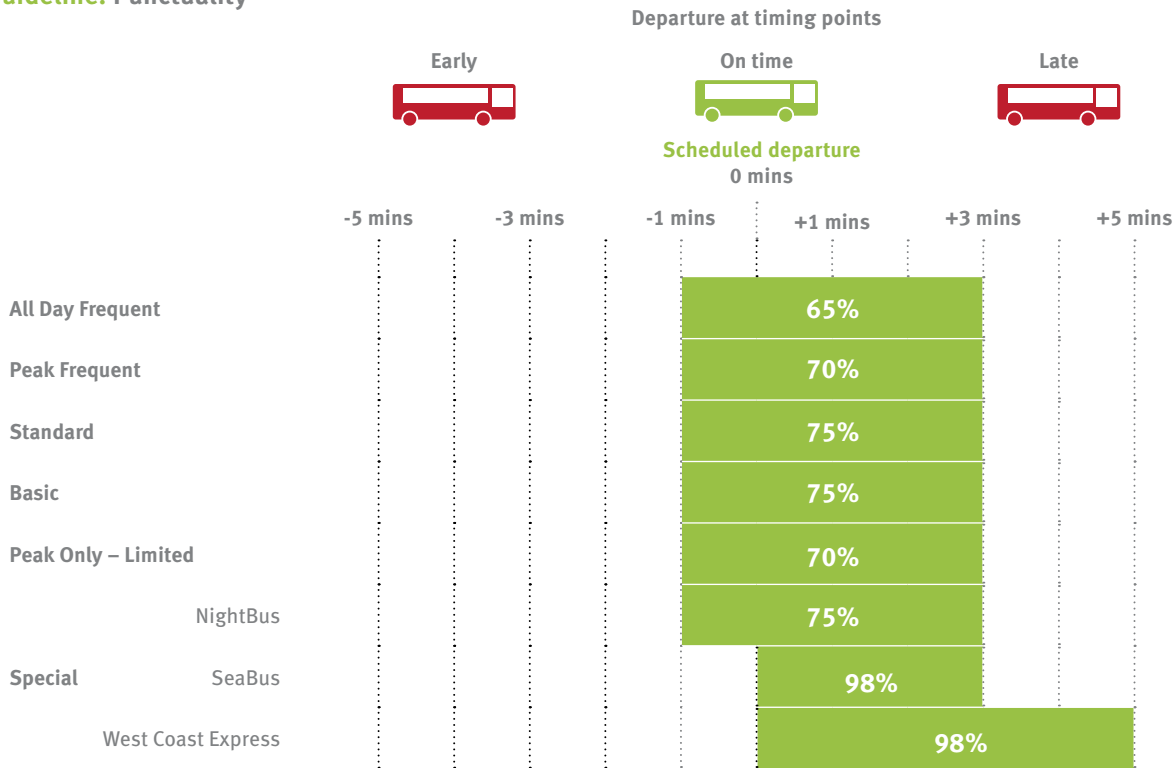
TransLink plans for timed-transfers between low frequency services (basic and standard types) and other low frequency or special service types. Timed connections between low frequency services should continue to be established, when appropriate, at transit exchanges, bus loops, rapid transit stations, and other key locations to allow safe and convenient transfers. Un-timed transfers/connections are expected for trips on, or between, more frequent services.

How is it measured?

Punctuality is measured by comparing the number of on-time trips leaving at timing points along a route to the total number of trips for the route.¹ A trip is considered on time if it leaves a timing point between one minute earlier and three minutes later than the scheduled time (this definition is adopted from the International Bus Benchmarking Group, which provides industry standards).

Punctuality is largely driven by location or corridor served (not service type), which can be impacted by unavoidable factors such as traffic, construction, congestion, weather, and other road events; therefore, guidelines for punctuality of services sharing rights-of-way with automobiles are set well below 100%.

Guideline: Punctuality



Note: SeaBus trips must also arrive no more than 3 min late; West Coast Express trips must arrive at the terminus station no more than 5 mins late.

¹ In this document, punctuality is measured using departure times, but we recognize that there are other ways to measure this criteria, including using arrival times.

Regularity is measured by determining whether a consistent headway (i.e., the number of minutes between transit vehicles) is maintained.²

This measure is used only for high-frequency services, when transit vehicles are scheduled along a route to run a consistent number of minutes apart, such as service every 15 minutes or better.

Guideline: Regularity

SERVICE TYPE	SERVICE CHARACTERISTICS
Rapid	Vehicle will arrive within 3 minutes of the scheduled headway, 95% of the time.
All Day Frequent	Service will operate at no more than 120% of scheduled headway (gapping), 80% of the time. Service will operate at no less than 25% of headway (bunching), 95% of the time.

TRAVEL TIME COMPETITIVENESS

Travel time is the amount of time a customer spends completing a journey, from start point to end point. Transit services competitive with single-occupant vehicle (SOV) travel times are attractive to customers and can encourage transit use. Significantly slower transit trips than the SOV alternative are less attractive to customers and, without other demand management factors such as priced parking, can discourage people from using transit, especially those with other travel options.

Many factors play into how competitive a transit service is, and these factors must be balanced with customer access to destinations. As development occurs in busy areas, travel time competitiveness can be maintained by, among other measures, providing transit service priority and reducing or combining bus stops.

² In this document, regularity is measured by evaluating headway consistency. This measures the same data and characteristics as excess wait time, another tool for evaluating regularity.

Transit Priority

Making transit faster and more reliable, by giving it priority over regular traffic, can be done through various interventions to increase reliability. Strategies to enhance bus service can be implemented by improving speed and reliability along specific corridors. Implementing these measures requires coordination and partnership with local municipalities.

Transit priority measures include:



DEDICATED LANES

Allocating road space exclusively for public transit vehicles (e.g., bus lanes, queue jump lanes, and shoulder bus service on highways).



INFRASTRUCTURE AND POLICY CHANGES

Changes to infrastructure and policies to improve bus speeds and reduce dwell times at stops (e.g., bus-bulbs and in-lane stops, all-door boarding, bus stop locations, bus turn exemptions).



TRAFFIC CONTROL AND SIGNAL PRIORITY

Giving public transit vehicles preferential treatment in the general traffic flow (e.g., transit signal priority and bus only signals).

U.6 Route Design

What is it?

Route design refers to how long and direct a service is, and whether the service uses a consistent path or adjusts its path, depending on demand. A direct route follows a straight, logical path. A circuitous route meanders and curves to serve many different places between its starting and end points. A deviating route will have one or two offshoots from an otherwise direct route.

Why does it matter?

The design of a transit route can influence its usefulness, and TransLink considers various elements of physical design when planning to create high-quality service for riders. The influence of land use is a critical element of service design, and helps to determine where a service is needed. Design choices are then made to ensure an easier route and more desirable service for customers.

SERVICE DESIGN PRINCIPLES

TransLink's services are intended to meet the basic transportation needs of residents who cannot drive, and to provide compelling transportation options for those who can drive. For both types of riders—and those in between—certain design principles will improve service for nearly all riders:

- » make service simple
- » operate routes along a direct path
- » minimize route deviations
- » operate major transit routes along arterials
- » make routes symmetrical
- » serve well-defined markets
- » coordinate services effectively
- » provide consistent service
- » space stops appropriately
- » maximize ridership through service design

How is it measured?

Route design is measured by three elements of physical routing: route directness, route deviations, and fixed and variable routing.



Route Directness. The straightness of a route between key destinations. The straighter the route, the more customers can understand and use the line; conversely, circuitous alignments are disorienting and difficult to remember. Directness also reduces opportunities for service disruption. Routes operating as directly as possible can maximize average service speeds. Even if a trip requires a connection between two routes, it is likely to be faster than a route with a circuitous alignment.



Route Deviations. When a route leaves its typical path, most often to serve a special destination. In general, routes should not deviate from the most direct alignment without a compelling reason. Adding deviations to an existing route can have a negative impact on customers and increase the cost of operating the service. Potential destinations appropriate for a route deviation include schools, employment sites, and major shopping centres. In these cases, the benefits of operating the service off the main route are weighed against the inconvenience caused to customers already on board. Additional considerations include impact on overall productivity, increased time added as a result of the deviation, and coordination with connecting service schedules. In most cases, route deviations, where provided, should be provided throughout the service period. Exceptions include early-morning and late-night trips to schools or employment sites with limited hours.



Fixed and Variable Routing: Whether a route is always the same, or changes during times of the day or days of the week. Fixed routing is generally appropriate in higher-density areas, while variable routing can accommodate travel demand in areas with lower population density and/or areas that only require service during peak commuting.

Guideline: Route Design

SERVICE TYPE	ROUTE DESIGN CHARACTERISTICS
Rapid	
All Day Frequent	Route maintains a consistent and legible path.
Peak Frequent	Route is the same on every trip, every day, with no variation in the route path. Based on demand, however, a trip may not serve the entire length of the route.
Standard	Route maintains a consistent and legible path, with no more than one deviation in the length of the route. If deviated, passengers per service hour served on the deviation must meet the minimum standard of productivity for this type (see Service Productivity) Variations in routing may be considered, provided each variation meets the minimum productivity standard for the type.
Basic*	Route may be designed to serve activity centres not on a straight-line path; however, route should only deviate from the most direct alignment when there is a compelling reason. Compelling reasons include major local destinations that would otherwise be missed or topography that prevents access to a line by other means, such as walking or cycling. If a passenger experiences a deviation away from their intuitive pathway, for example, they would still expect to see passenger activity. The deviation then makes more sense to the passenger, and there is a reduced risk of feeling disconnected from their desired path of travel. Route design should avoid re-routing passengers away from an intuitive path toward their destination, or where a passenger perceives the bus to be travelling in circles. If deviated from a legible path, the passengers per service hour served on the deviation must meet the minimum standard of productivity for this type (see Service Productivity). Variations in routing may be considered, provided each variation meets the minimum productivity standard for the type.
Peak Only – Limited	Route is designed to meet special needs of commuters during peak hours and might, therefore, have design needs different from other all-day services.
NightBus	Route provides limited service during late night hours, and is designed based on connectivity between key destinations and resource availability.
Special	
SeaBus	
West Coast Express	Services are operated on segregated, fixed routes, with no opportunity to change route design.

Network Design Principles

As defined in Managing the Network Primer, the issues TransLink considers when designing transit networks, regardless of service type, include:



CORRIDOR/ROUTE DUPLICATION

A best practice in network design, to facilitate high and sustained ridership, is to avoid duplication or competition between transit services. Duplication occurs when route spacing enables customers to easily walk between parallel routes serving several common destinations. Transit services should be far enough apart to not be competing for passengers. Services close together or overlapping will reduce ridership on both lines. Guidelines for route spacing should account for population and employment density, along with time of day and day of week (for service that varies based on demand). TransLink aims to space out parallel transit corridors by about 800 metres, so locations in between are within walking distance but avoid competition.



ROUTE CONSISTENCY

Routes should operate along the same alignment in both directions to make it easy for riders to return to their origin location. Exceptions can be made in cases where such operation is not possible, due to one-way streets or turn restrictions or near the end of a route where the bus must turn around. In these cases, routes should be designed so the opposite directions parallel each other as closely as possible. While routes with large loops or several deviations maximize transit coverage, they also result in out-of-direction travel that is not intuitive or attractive to potential customers.

PE

Productive and Efficient Service



TransLink’s strategic financial objectives are to provide a cost-efficient transit service and to ensure the most effective service is delivered within the available resources to the appropriate level of customer demand. Cost-efficiency and effectiveness are driven by many factors, including route and network performance.

To both serve its customers and ensure financial accountability, TransLink strives to plan and design the most useful services to the most people. There is a strong relationship between efficient service and the characteristics of good transit service, as described in the themes above. For customers, efficient transit service means an adequate level of service is being provided. For the public, efficiency guidelines ensure TransLink is deploying public resources effectively.

While productivity is important, it is balanced with opportunities to support long-term ridership growth and the need to provide coverage services. A more efficient system will help maximize the amount of service provided throughout the region, which is beneficial for TransLink’s customers and partner municipalities.

3.2 Service Productivity Reference Tables provides transit service performance from TransLink’s annual service performance reporting, as a reference point against the service guidelines. The data is intended to provide context against guideline thresholds and does not reflect recommended future conditions.

PRODUCTIVITY AND EFFICIENCY GUIDELINES

Rather than establish specific guidelines, the efficiency guidelines are intended to provide thresholds for each service type group, highlighting routes with exceptional or poor performance. This approach ensures that similar routes are compared against one another, and that the guidelines can respond to changing conditions over time. Comparing all lines to each other would not be appropriate, as different services have different objectives.

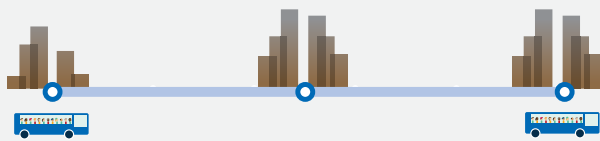
A line far above the maximum or below the minimum in an efficiency guideline indicates adjustments to such factors as service levels, vehicle size, stop spacing, and routing may be warranted.

Evaluating Productivity and Efficiency on Transit

To address the fact that one productivity measure does not provide a full picture of how well a service is performing, the Transit Service Guidelines use several factors to measure productivity and efficiency. TransLink will consider each of these factors when assessing routes. Similarly, TransLink understands that new or recently changed services may also take time to meet productivity thresholds.

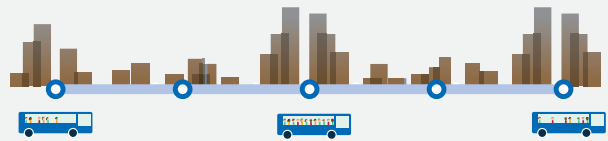
These examples illustrate that different types of services may have high levels of productivity in one measure, but low levels in another, so it is important to assess the range of measures against similar types of services.

Highway Context



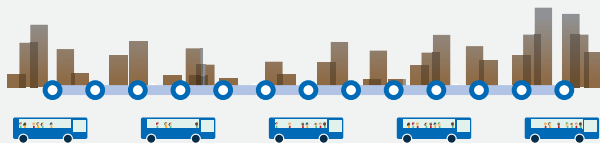
- Boardings/ Revenue Hour** (Low) Few stops to board; passengers ride long distances
- Capacity Utilization** (High) Buses are full from end to end
- Passenger Turnover** (Low) Few stops to board/alight; passenger ride long distances
- Cost/ Boarded Passenger** (Low) Full buses operating but low turnover results in higher costs

Urban Context (wider stop spacing, higher frequencies)



- Boardings/ Revenue Hour** (High) Higher frequencies respond to more passengers demand
- Capacity Utilization** (Low) Buses aren't as full due to higher frequencies
- Passenger Turnover** (Low) Wider stop spacing results in less turnover
- Cost/ Boarded Passenger** (High) Higher ridership provide lower costs

Urban Context (closer stop spacing, Standard/Basic service)



- Boardings/ Revenue Hour** (Moderate) Lower demand for these routes but turnover means more boardings
- Capacity Utilization** (Low) Lower demand results in less full buses
- Passenger Turnover** (High) More stops allows easier access and passengers take shorter trips
- Cost/ Boarded Passenger** (High) Lower demand so fewer passengers, but higher turnover results in lower costs

Productivity and Efficiency

- Low
- Moderate
- High

PE.1 Boardings per Revenue Hour

What is it?

Boardings per revenue hour is an industry-standard key performance indicator that measures the volume of riders compared to the supply of transit service.

Why does it matter?

Boardings per revenue hour helps TransLink determine how well a route is being used relative to the amount of service being provided. It provides a snapshot of a transit route's overall performance. It does not take into consideration the size of different transit vehicles; for example, articulated buses can hold more passengers than standard buses or mini-buses. As such, boardings per revenue hour should be used in conjunction with other criteria to give a more holistic view of service performance.

How is it measured?

Boardings per revenue hour is measured as the average number of passengers who board a route during a given hour of service provided. It accounts for total passenger activity, and considers the length of time a vehicle is in revenue-generating service. With limited exceptions, all routes should attract a minimum number of passengers for each hour of bus service. Guidelines are based on how specific routes perform in comparison to all routes in the service type for each time period.

Guideline: Boardings per Revenue Hour

SERVICE TYPE	MEET GUIDELINE	EXCEED GUIDELINE
Rapid	Rapid services provide a unique, high-capacity role in the transit network and are not compared to other services.	
All Day Frequent		
Peak Frequent	Perform better than the lowest 15% of all routes in the service type.	
Standard		Perform better than 90% of all routes in the service type.
Basic	Perform better than the lowest 20% of all routes in the service type.	
Peak Only – Limited		
Special	Special services fill unique gaps in the transit network and are not compared to other services.	

Note: These values are subject to periodic updates, as the values are derived from actual performance of the type and the constituent route. See Section 3.2 for additional detail on reported performance values.

PE.2 Capacity Utilization

What is it?

Capacity utilization measures the percentage of delivered capacity (seats and spaces) utilized by customers along an entire route.

Why does it matter?

Capacity utilization helps TransLink understand how efficiently passenger space or capacity is used. In some instances, a bus route may have full buses, but they might travel long distances between stops; if efficiency is only measured by passengers per revenue hour, it would appear quite low. Capacity utilization is another way to look at efficiency that could be more representative of routes carrying passengers over longer distances. It is a perfect partner to passengers per revenue hour as another way to consider the performance of a route from an efficiency perspective.

How is it measured?

Capacity utilization is measured as a ratio of passenger-kilometres per space-kilometre (total vehicle capacity). Passenger-kilometres measure how many kilometres passengers travel on a particular route. If stops are one kilometre apart, for example, and a vehicle has 10 passengers on board between those two stops, it is 10 passenger-kilometres.

Space-kilometres are measured by taking the length of each trip and multiplying it by the number of passenger spaces on each vehicle (seats and standing spaces). A trip that is 10 kilometres in length, for example, and has a capacity of 50 spaces, is measured as 500 space-kilometres.

The hypothetical maximum is a trip with a measure of one passenger-kilometre per space-kilometre, indicating that every space on the bus is full for the length of the trip.



COMPASS CARD DATA

Compass Card data is a more recent source of information on ridership patterns and allows a more substantial and dynamic review of the performance of the Rapid service type.

A measure comparable to passenger-kilometres per train space kilometre, for example, will be possible as Compass data becomes available.

Guideline: Capacity Utilization

SERVICE TYPE	MEET GUIDELINE	EXCEED GUIDELINE
Rapid	Rapid services provide a unique, high-capacity role in the transit network and are not compared to other services.	
All Day Frequent		
Peak Frequent	Perform better than the lowest 15% of all routes in the service type.	
Standard		Perform better than 90% of all routes in the service type.
Basic	Perform better than the lowest 20% of all routes in the service type.	
Peak Only – Limited		
Special	Special services fill unique gaps in the transit network and are not compared to other services.	

Note: These values are subject to periodic updates, as the values are derived from actual performance of the type and the constituent route. See Section 3.2 for additional detail on reported performance values.

PE.3 Passenger Turnover

What is it?

Passenger turnover is a measure of the degree to which passengers are using the number of seats and spaces provided on a given route or service.

Why does it matter?

Passenger turnover tells TransLink how well its services are being used, how efficiently it fills seats and, by extension, how much revenue is being generated by full-fare customers. The optimal amount of use depends on the type of service. A disadvantage of passenger turnover is that it does not consider the length of time a vehicle is on the road. As such, it favours longer services with a greater number of stops and a greater opportunity to generate boardings.

How is it measured?

Passenger turnover is measured as the ratio, expressed as a percentage, of the total number of passengers boarding compared to the total number of spaces provided by transit vehicles. In many cases it is possible for passenger turnover to be greater than 100%. This indicates a service that is generating multiple passenger boardings and alightings using the same number of spaces. These guidelines are expressed as a percentage of how each route performs, relative to all other routes in the service type. The guidelines are designed to highlight exceptional and poor performance.

Guideline: Passenger Turnover

SERVICE TYPE	MEET GUIDELINE	EXCEED GUIDELINE
Rapid	Rapid services provide a unique, high-capacity role in the transit network and are not compared to other services.	
All Day Frequent	Routes in this type are expected to exhibit high passenger turnover in each direction in all time periods.	
Peak Frequent	Routes meeting the guideline will exceed the lowest 15% of all routes in this type in all time periods.	
Standard		Perform better than 90% of the routes in this type in both directions in all time periods.
Basic	Routes meeting the guideline will exceed the lowest 20% of all routes in this type in all time periods.	
Peak Only – Limited	Routes in this type are expected to exhibit high passenger turnover in each direction in all time periods.	
Special	Special services fill unique gaps in the transit network and are not compared to other services.	

Note: These values are subject to periodic updates, as the values are derived from actual performance of the type and the constituent route. See Section 3.2 for additional detail on reported performance values.

PE.4 Cost per Boarded Passenger

What is it?

Cost per boarded passenger measures the cost of providing revenue service compared to the total number of boardings generated by that service.

Why does it matter?

Analyzing the cost of providing service to each passenger is a way to evaluate the cost-effectiveness of TransLink's services. Having efficient and productive ridership-generating services helps to offset the costs of providing service in other areas, while contributing to the overall usefulness of the network to all customers.

How is it measured?

Cost per boarded passenger is measured by taking the average cost per service hour divided by the average number of passenger boardings per service hour on a given route. Costs per service hour can vary by vehicle and time of day, and often change each year due to inflation, fluctuating fuel prices, and other considerations. In general, the cost to provide one hour of service using a conventional bus—such as a 12-metre standard bus or an 18-metre articulated bus—is greater than providing the same hour of service using a minibus.

Like boardings per revenue hour, these guidelines are expressed as a percentage of how each route performs, relative to all other routes in the type. The guidelines are designed to highlight exceptional and poor performance. For this measure, a relative threshold is important because an absolute threshold—such as actual cost per boarded passenger—will change over time, relative to economic factors and cost of operations. In this case, using a relative threshold based on an assessment of all routes in a service type avoids the issue of accounting for those factors, as all service types will experience increased or decreased costs in the same manner.

Guideline: Cost per Boarded Passenger

SERVICE TYPE	MEET GUIDELINE	EXCEED GUIDELINE
Rapid	Rapid services provide a unique, high-capacity role in the transit network and are not compared to other services.	
All Day Frequent	Routes in each service type are expected to exhibit low cost per boarded passenger in each direction in all time periods.	
Peak Frequent	Routes meeting the guideline will have lower cost per boarded passenger than the highest 15% of all routes in their same type in all time periods.	Routes exceeding the guideline will perform better than 90% of the routes in their same type in both directions in all time periods.
Standard		
Basic		
Peak Only – Limited		
Special	Special services fill unique gaps in the transit network and are not compared to other services.	

Note: These values are subject to periodic updates, as the values are derived from actual performance of the type and the constituent route. See Section 3.2 for additional detail on reported performance values.

3

Reference Information

3. Reference Information

3.1 Vehicle Capacity Reference Table

3.2 Service Productivity Reference Tables

Section 3.1 provides information on passenger capacity for each of the vehicle types TransLink utilizes, including seated and total capacity.

The tables in Section 3.2 provide service productivity data from TransLink’s annual Transit Service Performance Review, which relates to the guidelines provided in **PE** Provide Productive and Efficient Service. The tables are intended to provide a snapshot of performance and are not indicative of current circumstances or recommended future conditions. This section may be updated as new performance data becomes available.



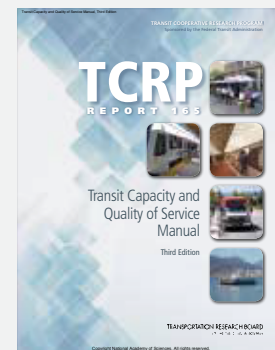
3.1 Vehicle Capacity Reference Table

Vehicle Capacity Reference Table

VEHICLE/CAR TYPE	AVERAGE SEATED CAPACITY	AVERAGE PRACTICAL CAPACITY
Standard Trolley	31	47
Articulated Trolley	49	70
Standard Bus	35	50
Articulated Bus	48	75
Highway Coach	47	50
Mini-Bus	20	24
SkyTrain Mark I Car	35	68
SkyTrain Mark II Car	33	111
SkyTrain Mark III Car	30	111
Canada Line Car	44	144

Notes

- » Averages provided are due to differences in internal vehicle layouts and seating configurations within the same vehicle/car type.
- » Assumes available space per standing passenger to estimate total capacity; e.g., for buses it is 0.35 m², and for rail vehicles it is 0.25 m², including what each available space assumption feels like (from the TRB's Transit Capacity and Quality of Service Manual).
- » Differences between vehicles are based on service characteristics; e.g., as buses have more stops that require more passenger circulation, more space for standing passengers allows for better circulation.
- » All transit vehicles can, and often do, hold more passengers than capacity, and passengers may experience higher loads than these values.



REFERENCE: TRANSIT CAPACITY AND QUALITY OF SERVICE MANUAL


The Transportation Research Board's Transit Cooperative Research Program (TCRP) Report 165: Transit Capacity and Quality of Service Manual provides "guidance on transit capacity and quality of service issues and the factors influencing both, as well as a framework for measuring transit availability, comfort, and convenience from the passenger and transit provider points of view."

3.2 Service Productivity Reference Tables

Boardings per Revenue Hour – 2016 Minimum Levels

SERVICE TYPE	2016 DATA	
Rapid	Not applicable	
All Day Frequent	Weekday Peak	56 boardings per revenue hour
	Weekday Midday	49 boardings per revenue hour
	Nights (7 days per week)	37 boardings per revenue hour
	Saturday	50 boardings per revenue hour
	Sunday	47 boardings per revenue hour
Peak Frequent	Weekday Peak	34 boardings per revenue hour
	Weekday Midday	31 boardings per revenue hour
	Nights (7 days per week)	22 boardings per revenue hour
	Saturday	29 boardings per revenue hour
	Sunday	24 boardings per revenue hour
Standard	Weekday Peak	31 boardings per revenue hour
	Weekday Midday	23 boardings per revenue hour
	Nights (7 days per week)	16 boardings per revenue hour
	Saturday	19 boardings per revenue hour
	Sunday	19 boardings per revenue hour
Basic	Weekday Peak	11 boardings per revenue hour
	Weekday Midday	11 boardings per revenue hour
	Nights (7 days per week)	6 boardings per revenue hour
	Saturday	9 boardings per revenue hour
	Sunday	7 boardings per revenue hour
Peak Only – Limited	Weekday Peak	22 boardings per revenue hour

Note: This reference data shows the minimum threshold of services in each type to meet the guideline in 2016.



REFERENCE: 2016 TRANSIT SERVICE PERFORMANCE REVIEW

TransLink regularly reviews and modifies the transit network to promote system efficiency, effectiveness and productivity. Our focus is on improving the customer experience and increasing ridership by maximizing the use of available resources. The 2016 Transit Service Performance Review is a comprehensive review of ridership and service productivity for bus, SeaBus, SkyTrain and West Coast Express measured from January to December 2016. It informs the management of our integrated regional transit network and guides decision-making regarding the allocation of transit service resources.

Passenger-Kilometres per Space-Kilometre – 2016 Minimum Levels

SERVICE TYPE	2016 DATA	
Rapid	Not applicable	
All Day Frequent	Weekday Peak	0.25 passenger km per space km
	Weekday Midday	0.22 passenger km per space km
	Nights (7 days per week)	0.17 passenger km per space km
	Saturday	0.22 passenger km per space km
	Sunday	0.21 passenger km per space km
Peak Frequent	Weekday Peak	0.20 passenger km per space km
	Weekday Midday	0.17 passenger km per space km
	Nights (7 days per week)	0.12 passenger km per space km
	Saturday	0.15 passenger km per space km
	Sunday	0.14 passenger km per space km
Standard	Weekday Peak	0.15 passenger km per space km
	Weekday Midday	0.10 passenger km per space km
	Nights (7 days per week)	0.08 passenger km per space km
	Saturday	0.10 passenger km per space km
	Sunday	0.11 passenger km per space km
Basic	Weekday Peak	0.05 passenger km per space km
	Weekday Midday	0.06 passenger km per space km
	Nights (7 days per week)	0.03 passenger km per space km
	Saturday	0.03 passenger km per space km
	Sunday	0.03 passenger km per space km
Peak Only – Limited	Weekday Peak	0.21 passenger km per space km

Note: This reference data shows the minimum threshold of services in each type to meet the guideline in 2016.

Passenger Turnover – 2016 Minimum Levels

SERVICE TYPE	2016 DATA	
Rapid	Not applicable	
All Day Frequent	Weekday Peak	0.70
	Weekday Midday	0.60
	Nights (7 days per week)	0.40
	Saturday	0.60
	Sunday	0.50
Peak Frequent	Weekday Peak	0.40
	Weekday Midday	0.30
	Nights (7 days per week)	0.20
	Saturday	0.30
	Sunday	0.20
Standard	Weekday Peak	0.40
	Weekday Midday	0.30
	Nights (7 days per week)	0.20
	Saturday	0.30
	Sunday	0.20
Basic	Weekday Peak	0.10
	Weekday Midday	0.10
	Nights (7 days per week)	0.10
	Saturday	0.10
	Sunday	0.10
Peak Only – Limited	Weekday Peak	0.30

Note: This reference data shows the minimum threshold of services in each type to meet the guideline in 2016.

Cost per Boarded Passenger – 2016 Maximum Levels

SERVICE TYPE	2016 DATA	
Rapid	Not applicable	
All Day Frequent	Weekday Peak	\$1.56
	Weekday Midday	\$1.65
	Nights (7 days per week)	\$2.23
	Saturday	\$1.84
	Sunday	\$2.63
Peak Frequent	Weekday Peak	\$2.02
	Weekday Midday	\$2.28
	Nights (7 days per week)	\$3.62
	Saturday	\$3.02
	Sunday	\$3.59
Standard	Weekday Peak	\$2.82
	Weekday Midday	\$3.16
	Nights (7 days per week)	\$11.75
	Saturday	\$9.27
	Sunday	\$4.08
Basic	Weekday Peak	\$5.53
	Weekday Midday	\$5.18
	Nights (7 days per week)	\$25.00
	Saturday	\$24.11
	Sunday	\$10.62
Peak Only – Limited	Weekday Peak	\$4.50

Note: This reference data shows the maximum threshold of services in each type to meet the guideline in 2016.

Appendix

A. Glossary

B. References

C. Acknowledgements

A Glossary

A

Accessibility (to destinations)

– the ease of obtaining desired goods, services, and activities from a particular location; usually related to the time and/or distance required to access destinations.

Area Plans – TransLink works with its municipal partners and consults with the public to develop geographically-focused, sub-regional, and community-based area plans. They provide a blueprint for aligning the local transit network with existing and expected land use and travel patterns. They also guide future investment in, and changes to, the regional transit network.

B

B-Line Service – bus routes that provide frequent, fast, limited-stop service from early morning through late evening.

Boardings per revenue hour – an industry-standard key performance indicator that measures the volume of riders compared to the supply of transit service.

C

Capacity – the amount of space on a transit vehicle that can carry passengers. Available space not occupied by passengers is called unused capacity.

Capacity utilization – measures the percentage of delivered capacity (seats and spaces) utilized by customers along an entire route.

Commuter – a person who travels regularly between home and work or school.

Cost per boarded passenger – measures the cost of providing revenue service compared to the total number of boardings generated by that service.

D

Dedicated lanes – reserving or reallocating road space exclusively for public transit vehicles (e.g., bus lanes, queue jump lanes, and shoulder bus service on highways). See Transit Priority.

Demand management – strategies that discourage unnecessary driving and promote sustainable modes of travel to make the most effective use of the transportation network, thereby shifting travel by mode and time of day to take advantage of available capacity and reduce crowding and congestion. Strategies can include hard measures (e.g., transit improvements and parking measures) and soft measures (e.g., incentives, education, and marketing).

Density – the amount of a given characteristic (e.g., jobs, people, and housing units) present within a given geographic area (usually hectares in Canada and acres in the USA).

E

Efficiency – maximizing output with minimum waste. For transit customers, efficient transit service means an adequate level of service is being provided. For the public, efficiency guidelines ensure TransLink is deploying public resources effectively.

Effectiveness – producing an optimal outcome that successfully achieves predetermined goals.

A Glossary

F

Frequent Transit – see Frequent Transit Network.

Frequent Transit Network (FTN) – a network of corridors in Metro Vancouver along which transit service is provided at least every 15 minutes in both directions, throughout the day and into the evening, every day of the week; a high frequency and span of transit service within a corridor, which may be provided by a single route or by a combination of routes and/or technologies within the same corridor (the FTN does not refer to specific routes, technologies, or vehicle types).

L

Load factor – the ratio of passengers actually carried versus the capacity of a vehicle expressed as a decimal number, where a factor of 1.0 means that the vehicle is full. Minimum levels of service performance.

M

Mobility – the movement of people or goods; one of several means of gaining access (see Accessibility) to destinations.

Mode – refers to method of transportation. Examples include walking, cycling, transit and driving. Transit mode may also be disaggregated further; for example, train, bus, single occupant vehicle, and rideshare.

Multi-modal – activities that involve more than one mode of transportation, including transportation connections, choices, cooperation, and coordination of various modes.

P

Passenger demand – the level of consumer demand for transit services in a community or area. It can be thought of as the output of land use and built environment characteristics. Demographic factors also shape passenger responses to varying levels of transit service.

Passenger-kilometres – a measure of how many kilometres passengers travel on a particular route. If stops are one kilometre apart, for example, and a vehicle has 10 passengers on board between those two stops, it is 10 passenger-kilometres.

Passenger load – a measure of how full a transit vehicle is, on average, at its busiest point or peak on a route.

Passenger turnover – a measure of the degree to which passengers are using the number of seats and spaces provided on a given route or service.

Peak – refers to peak period(s) – times during the day when demand for transit services are highest. The morning peak is generally 6:00 – 9:00 am and the afternoon peak is generally 3:00 – 6:00 pm, though these periods may vary.

Peak load factor – the ratio of average passengers carried versus the capacity or space available on a vehicle, expressed as a percentage. A passenger load factor of 100% means the vehicle is at capacity. The peak load factor is calculated by dividing the average load on a transit vehicle at its busiest point by the number of spaces (seats plus standing space) provided on each trip.

A Glossary

R

Rapid transit – an urban transit service characterized by high carrying capacity and by speed, frequency, and reliability (high speed and reliability are usually achieved by separation from other modes of travel); typically provided by transit technologies such as rail rapid transit, light rail transit, and bus rapid transit.

Regional Transportation Strategy (RTS) – defines and outlines the overall transportation plan for a given region. In Metro Vancouver, the RTS is prepared by TransLink in consultation with the stakeholders in the region and the public and covers a period of at least 30 years. The RTS sets out the goals, directions, and key initiatives for the regional transportation system.

Route Design – how long and direct a service is, and whether the service uses a consistent path or adjusts its path, depending on demand. A direct route follows a straight, logical path. A circuitous route meanders and curves to serve many different places between its starting and end points. A deviating route will have one or two offshoots from an otherwise direct route.

S

Safety – the condition of being protected against any type of non-criminal harm.

Service frequency – how often a transit vehicle picks up passengers at a stop; for example, a bus might arrive every 10 minutes during peak commute periods, while a West Coast Express train might arrive every 30 minutes.

Service types – designed to meet a range of different purposes, markets, travel demand levels, and objectives. The service types are organized into seven categories: Rapid, All Day Frequent, Peak Frequent, Standard, Basic, Peak Only – Limited, and Special.

Service reliability – how consistently services operate according to schedule. A reliable service arrives on time, or close to it, every day. Reliability for more frequent service can also be evaluated based on regularity, or a consistent headway between vehicles. Unreliable service has poor on-time performance and inconsistent gaps between vehicles.

Service revenue hours – represents the time that transit vehicles are in revenue service, from the time they leave the trip start terminus to the time they arrive at the trip end terminus, and exclude recovery (layover) time at terminuses and deadheading times (i.e., time used by vehicles to travel from a depot to a service start point and to return to the depot from a service end point).

Single-occupant vehicle (SOV) – a private vehicle operated by a single person.

Space-kilometres – measured by taking the length of each trip and multiplying it by the number of passenger spaces on each vehicle (seats and standing spaces). A trip that is 10 kilometres in length, for example, and has a capacity of 50 spaces, is measured as 500 space-kilometres.

Span of service – the hours of operation for a specific transit service, from the time of departure of the first trip of the day at the first stop, to the time of arrival of the last trip of the day at the last stop. Some services run only during weekday commute times, some services operate all day, and others run all day and late into the night.

A Glossary

Station – broadly defined as passenger facilities serving high-capacity and rapid transit services, including SkyTrain, West Coast Express, SeaBus, future Bus Rapid Transit, and light rail.

Stop – a transit passenger facility service by bus-based transit.

Stop spacing – the distance between stops along a route. Stop spacing has an impact on the speed and reliability of a service, as well as on a customer’s ability to access a service.

T

The 6 Ds – the 6 Ds are characteristics that describe the land use and built environment elements that influence demand for transit. The 6 Ds are destinations, distance, design, density, diversity, and demand management.

Traffic Control Measures – giving public transit vehicles preferential treatment in the general traffic flow (e.g., transit signal priority and bus only signals). See Transit Priority.

Transit-oriented-community (TOC) – a place (neighbourhood, corridor, municipality, or region) that, by design, facilitates decreased reliance on driving and higher levels of walking, cycling, and transit use. In practice, it means concentrating higher-density, mixed-use, human-scale development around frequent transit stops and stations—in combination with parking management and TDM measures—to discourage unnecessary driving.

Transit priority – an infrastructure measure that gives transit vehicles priority over other road users to improve the speed, efficiency, and reliability of the service. Such measures include dedicated lanes, traffic control measures, and regulatory measures.

Transit ridership – the number of customer trips, or revenue rides, taken on transit services every month. Ridership is measured separately for each of the main transit modes.

Transit-supportive land use – together with demand guidelines, indicate the characteristics of adjoining land uses that will allow transit to be productive and effective in meeting the needs of the community.

Travel time competitiveness – the amount of time a customer spends completing a journey, from start point to end point. Transit service travel times that compete with single-occupant vehicle (SOV) travel times are attractive to customers and can encourage transit use. Significantly slower transit trips than the SOV alternative are less attractive to customers and—without other demand management factors—can discourage people from using transit, especially those with other travel options.

W

Wayfinding – how people orient themselves and navigate their movements from place to place. The design, coordination, and location of information (e.g., signs, maps, and diagrams), in conjunction with the architectural and interior design, all serve to aid wayfinding and help travellers plan and execute their journeys.

B References

TransLink Reference Documents

Regional Transportation Strategy: Strategic Framework (2013). <https://www.translink.ca/Plans-and-Projects/Regional-Transportation-Strategy>

Transit-Oriented Communities Design Guidelines (2012). https://www.translink.ca/-/media/Documents/plans_and_projects/transit_oriented_communities/Transit_Oriented_Communities_Design_Guidelines.pdf?la=en&hash=8E80E1695DEE1C932294CFEB31503A04CF2DBA7D

Transit Passenger Facility Design Guidelines (2011). https://www.translink.ca/-/media/Documents/plans_and_projects/transit_oriented_communities/TPFDG-Print-Version.pdf

TransLink Wayfinding Standards Manual (2014).

Transit Infrastructure Design Guidelines (2002).

Universal Accessibility Guidelines for TransLink Fleet and Facilities (2007). https://www.translink.ca/-/media/Documents/rider_guide/access_transit/Universal-Accessibility-Guidelines-for-TransLink-Fleet-and-Facilities.pdf

Managing the Transit Network: A Primer on Key Concepts (2012). <https://www.translink.ca/networkmanagement>

Bus Service Performance Review (2013). https://www.translink.ca/-/media/Documents/plans_and_projects/managing_the_transit_network/2013-BSPR/2013_bus_service_performance_review.pdf

Transit Service Performance Review (2016). <https://www.translink.ca/Plans-and-Projects/Managing-the-Transit-Network/Transit-Service-Performance-Review.aspx>

C Acknowledgements

Development of the Transit Service Guidelines was the result of a multi-disciplinary effort among staff from numerous departments within TransLink and a consultant team in consultation with our municipal partners and Metro Vancouver. The TransLink team led the development of the guidelines, and the Internal and External Stakeholder teams provided input and recommendations at key points in the process. We appreciate the time and effort each individual committed to the development of this document to make it a useful resource for TransLink and our municipal partners.

TransLink Project Team

- » Matt Craig – Manager, System Planning
- » Andrew Devlin – Senior Planner
- » Brian Soland – Senior Planner
- » Mary Riemer – Planner
- » Paul Cheng – Planner

External Stakeholder Review Team

- » Emma Chow – Island Community Planner, Bowen Island Municipality
- » Leah Libsekul – Transportation Planner, City of Burnaby
- » Sean O’Sullivan – Traffic Operations Engineer, City of Coquitlam
- » Raymond Kan – Senior Regional Planner, Metro Vancouver
- » Jerry Behl – Transportation Engineer, City of New Westminster
- » Iona Bonamis – Transportation Planner, City of North Vancouver
- » Donna Chan – Manager, Transportation Planning, City of Richmond
- » Megan Fitzgerald – Transportation Planner, City of Surrey
- » Ian MacPhee – Transportation Planner, City of Vancouver
- » Neal Peacocke – Senior Project Engineer, City of Vancouver
- » David Hawkins – Manager, Community Planning & Sustainability, District of West Vancouver

C Acknowledgements

TransLink Stakeholder Review Team

- » System Planning and Operations:
 - » Pieter Agneessens
 - » Michelle Babiuk
 - » Jeff Busby
 - » Geoffrey Chum
 - » Tom Fink
 - » Ian Fisher
 - » Ray Hamilton
 - » Shezana Hassko
 - » Katherine McCune
 - » Mia Pears
 - » Sarah Ross
 - » Harjit Sidhu-Kambo
 - » Margaret Wittgens
- » Communications and Marketing:
 - » Angela Salehi
 - » Patricia Lucy
 - » Samantha Deane
- » Strategic Planning and Policy:
 - » Adrian Bell
 - » Geoff Cross
 - » Jesse Koehler
 - » Andrew McCurran
 - » Sarah Tseng
 - » Lyle Walker

Consultant Team

- » Steer Davies Gleave
- » Nelson\Nygaard
- » Sheila Martineau

