
TO: CITY MANAGER **DATE:** 2015 November 18

FROM: DIRECTOR PLANNING AND BUILDING **FILE:** 90100 03
Reference: Bus Routes, Service, etc.

SUBJECT: 2016 TRANSIT SERVICE MODIFICATION PROPOSALS IN BURNABY

PURPOSE: To brief Council on the proposed bus network and service changes in Burnaby outlined in the 2016-2017 TransLink Service Change Program.

RECOMMENDATIONS:

1. **THAT** Council request that TransLink amend their proposal for Route 160 so that it originates at Kootenay Loop rather than Brentwood Mall, to provide more consistent local service on Hastings Street.
2. **THAT** Council authorize the use of Wilson Avenue, between Central Boulevard and Beresford Street by transit buses as outlined in this report.
3. **THAT** a copy of this report be sent to Mr. Dan Freeman, Manager, Transit Network Management, TransLink.

REPORT**1.0 INTRODUCTION**

TransLink, through its ongoing *Transit Network Management* initiative, has identified a number of service changes across the region proposed for implementation through 2016 and 2017. These proposed changes have been drawn from a variety of TransLink's programs and are aimed at meeting customer demand. The current suite of service change proposals include near-term modifications to bus routes aimed at improving the transit network with the existing resources available.

This report reviews the service improvement proposals in the 2016-2017 TransLink Service Change Program specific to Burnaby. When TransLink presented the proposed changes to Transportation Committee on 2015 October 7, the Committee was particularly interested in the long-term function of Hastings Street as a transit corridor. This is discussed in Section 5.2. As no Transportation Committee meetings are scheduled for the remainder of the year, this report is provided to Council so that comments can be conveyed to TransLink in advance of any modifications to transit service being made.

2.0 BACKGROUND

Under its *Transit Network Management* initiative, TransLink regularly and continuously monitors the effectiveness of the regional transit network to determine transit customer usage, and proposes adjustments to improve the efficiency and usefulness of the services it provides.

With the objective of maximizing ridership, providing transit options in growing areas and delivering a basic level of transit access across Metro Vancouver, TransLink designs and manages the transit network with input from a number of programs including:

- *Bus Service Performance Review*: an annual review which measures bus performance across the system including ridership metrics such as bus boardings per service hour and cost per boarded passenger.
- *Service Optimization*: an annual process which better matches service levels with customer demand by reallocating transit resources from routes or time periods of lower productivity to where it is needed most.
- *Area Transit Planning*: the development of individual area transit plans for each of the region's seven sub-regions to identify near-term priorities and long-term plans.
- *Infrastructure Changes*: bus routing and stopping procedures in some locations are impacted by transit infrastructure upgrade and road network changes. This can include minor improvements, such as localized construction, to large scale network modifications.

Proposed transit network changes in Burnaby for 2016 and beyond arising from these programs focus on:

- Integrating bus service to better connect to the SkyTrain Evergreen Extension;
- Decreasing travel time on busy routes and extending service to areas with high customer demand; and
- Responding to road and infrastructure changes at Metrotown Station and the conversion of certain one-way streets to two-way traffic at Simon Fraser University.

TransLink's proposed near-term changes to bus routes in Burnaby are aimed at improving the transit network with existing resources, and are detailed below.

3.0 PROPOSALS ARISING FROM INTEGRATION WITH EVERGREEN EXTENSION

The Evergreen Extension, expected to be in service in 2016, will extend the current Millennium Line to the North East Sector, integrate with West Coast Express and integrate with the regional bus network. As part of the service design, a comprehensive assessment of existing bus services in the surrounding area was undertaken with the aim of better serving customers and minimizing service redundancy. Proposed service changes in Burnaby related to the Evergreen Extension include the following:

3.1 SkyTrain Service Improvement Proposals

The existing SkyTrain Millennium Line operates in a loop between Waterfront Station and VCC-Clark passing through all Burnaby SkyTrain stations, and the Expo Line operates between Waterfront Station and King George (Figure 1). With the introduction of the Evergreen Extension, the Millennium Line will connect Coquitlam to Vancouver, operating between VCC-Clark and Lafarge Lake-Douglas Stations, via the Lougheed Town Centre (Figure 2).

The Millennium Line's current loop configuration will discontinue and eastbound trains will provide through service northward to Coquitlam rather than southward to New Westminster. The Expo Line will operate with two branches: the southern branch will travel to King George Station in Surrey, and the northern branch will travel to Production Way / University.

The two lines will both operate between the Production Way / University and Lougheed Town Centre Stations, allowing transfers to either line at either station. Customers to Production Way / University Station (serving Simon Fraser University) on either line will not have to transfer. Planned service levels on the Millennium Line will increase and existing frequencies and capacities on the Expo Line will be maintained.

Figure 1 - Existing Millennium and Expo Lines

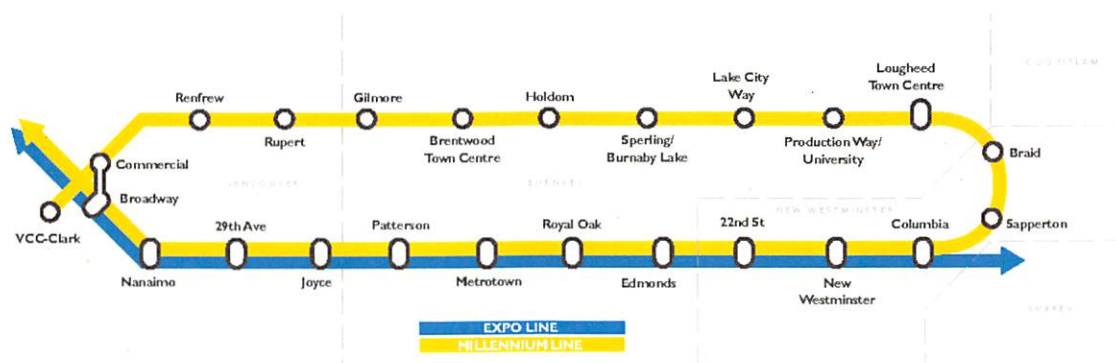


Figure 2 - Proposed Millennium and Expo Lines



Staff Comment: The proposal establishes the Millennium Line as the direct route to the Northeast Sector. Trains will provide more frequent service than exists today. However, customers wishing to travel between North and South Burnaby on SkyTrain will need to change trains. This is facilitated at Production Way/University, where the transfer can be made without changing platforms.

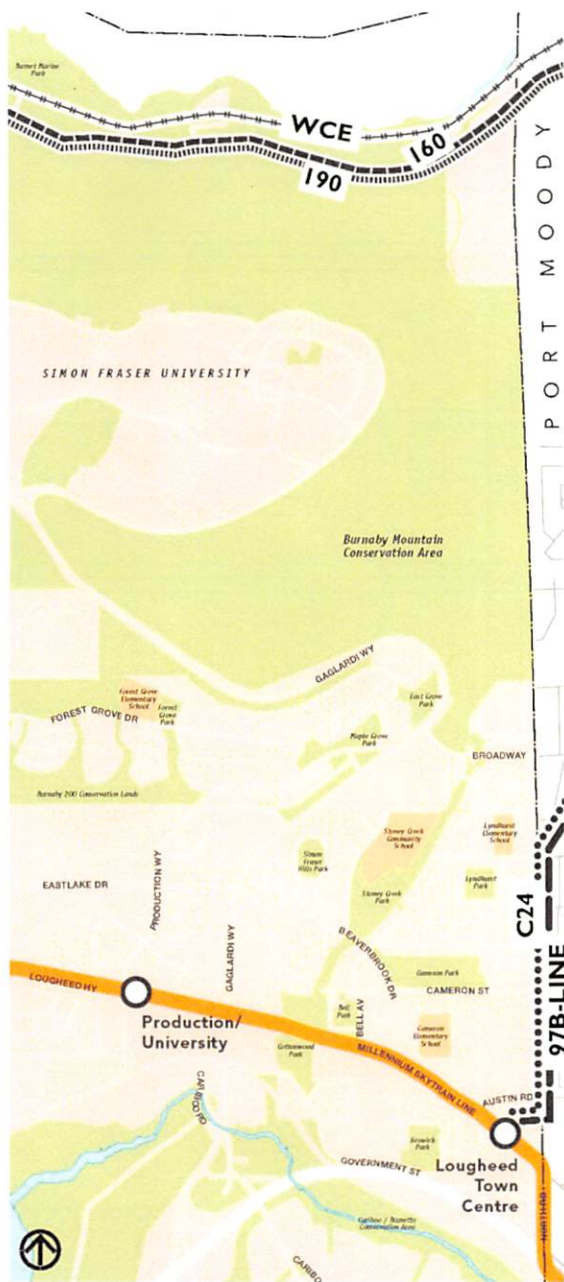
3.2 Bus Integration Proposals

The assessment of current bus service identified the need for local and regional buses to complement and integrate with the new rapid transit service in order to maximize network efficiency. The following bus service and network changes are proposed to provide better service in Burnaby, and are illustrated in **Figures 3 and 4**:

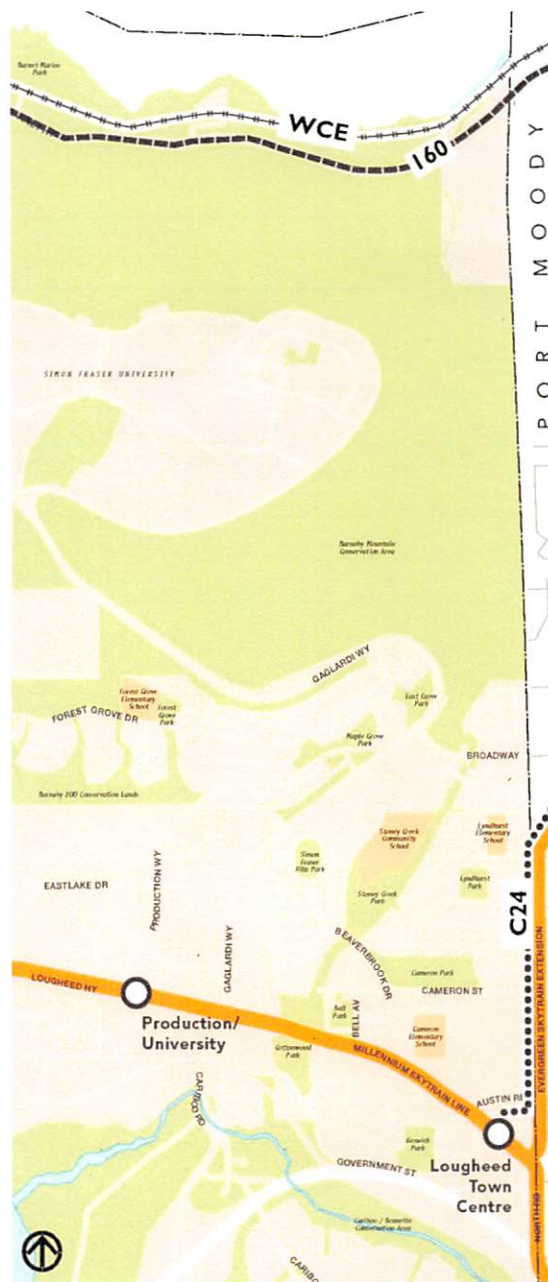
- **Discontinuation of 97 B-Line service:** The need for the current B-Line service on North Road between Lougheed Town Centre and Coquitlam Station will be replaced by the rapid transit service offered by the Evergreen Extension. Local bus service along North Road will be maintained by community shuttle Route C24 (Lougheed Station – Port Moody Station), with conventional (full-sized) bus service being provided on this route during peak periods to accommodate higher demand.
- **Discontinuation of Route 190 service:** This route currently provides peak-hour limited-stop service between Coquitlam and downtown Vancouver on Barnet Road and Hastings Street, with limited pickup and drop-off service in Burnaby. The Evergreen Extension will provide increased capacity and service frequency serving those destinations and, coupled with other Hastings Street service improvements discussed below, allow for the discontinuation of this service.
- **Adjustments to Route 160:** Currently, this route provides limited-stop express service between downtown Vancouver and Port Coquitlam operating on Hastings Street and Barnet Road within Burnaby. The current service is designed to primarily benefit the Northeast Sector: eastbound buses stop only for boardings and westbound buses stop only for alightings. The new proposal calls for this service to originate in Burnaby, at Brentwood Station, rather than downtown Vancouver. It is now proposed to serve all local stops, thus making it viable for trips that are internal to Burnaby. TransLink has confirmed there is sufficient stop capacity in close proximity to Brentwood Station for this service.

Staff Comment: The discontinuation of Routes 97 and 190, and shortening of Route 160, are logical changes arising from the construction of the Evergreen Extension. These changes move longer-distance trips to the faster, higher-capacity service offered by SkyTrain. Further comments on how to improve the efficiency of Route 160 is provided in Section 5.2 of this report.

**Figure 3 - Current Service Routes
 97, 160, 190 and C24**



**Figure 4 - Proposed Service Routes
 97, 160, 190 and C24**



4.0 PROPOSALS ARISING FROM METROTOWN STATION UPGRADE INTEGRATION

The current upgrades to Metrotown Station will change the way passengers access the station and transfer between buses and the SkyTrain. TransLink is proposing changes to several bus routes to better align services with the upgraded station.

- **Redesign and rerouting of Routes 49, 116, 130 and 430 to terminate and layover on Central Boulevard:** These routes serve a broad range of local and regional destinations (*Figure 5*). With the upgrade to the station, most bus service will stop eastbound on Central Boulevard beneath the guideway and adjacent to the new station plaza. This redesign will provide more convenience for customers transferring between buses and the SkyTrain with faster and better connections. This proposal, illustrated in *Figure 6*, includes buses looping clockwise around the outside of the Maywood neighbourhood using Willingdon Avenue, Central Boulevard, and Imperial Street.

Figure 5 - Existing Service Routes 49, 116, 130 and 430

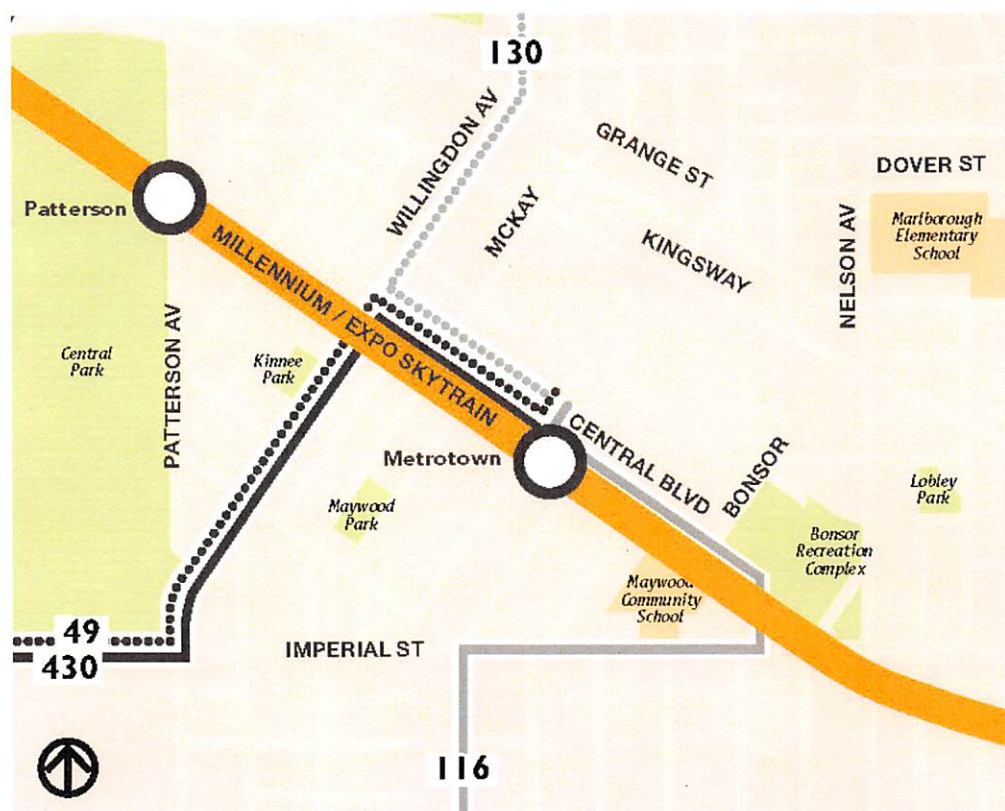
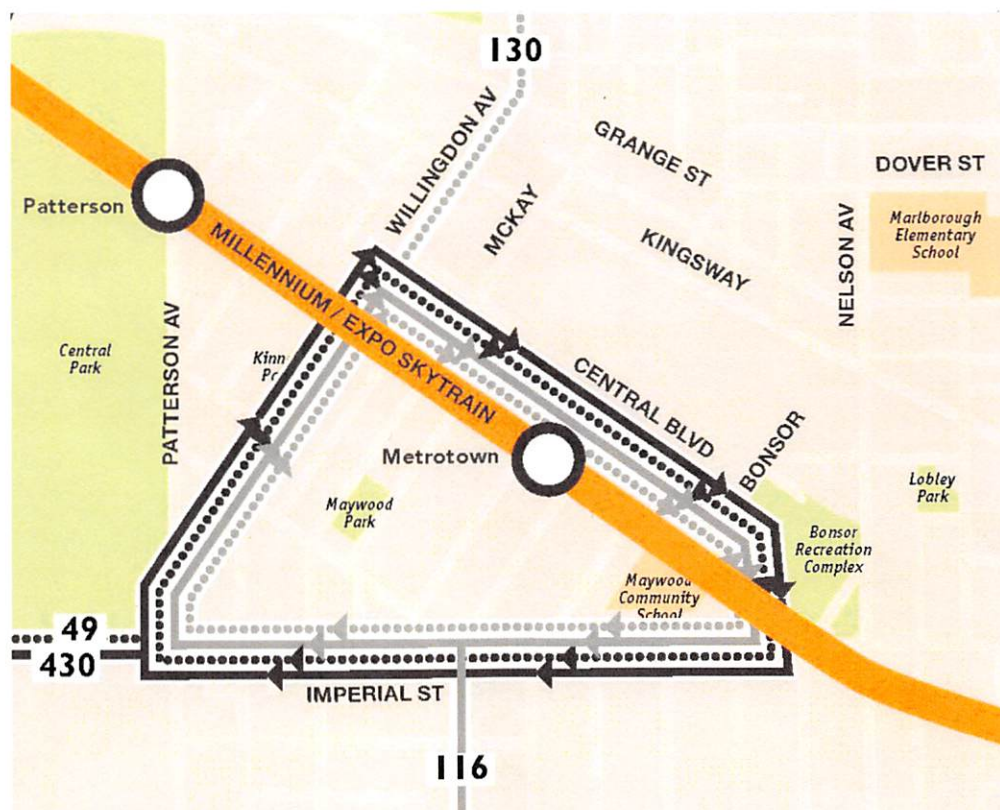


Figure 6 - Proposed Service Routes 49, 116, 130 and 430



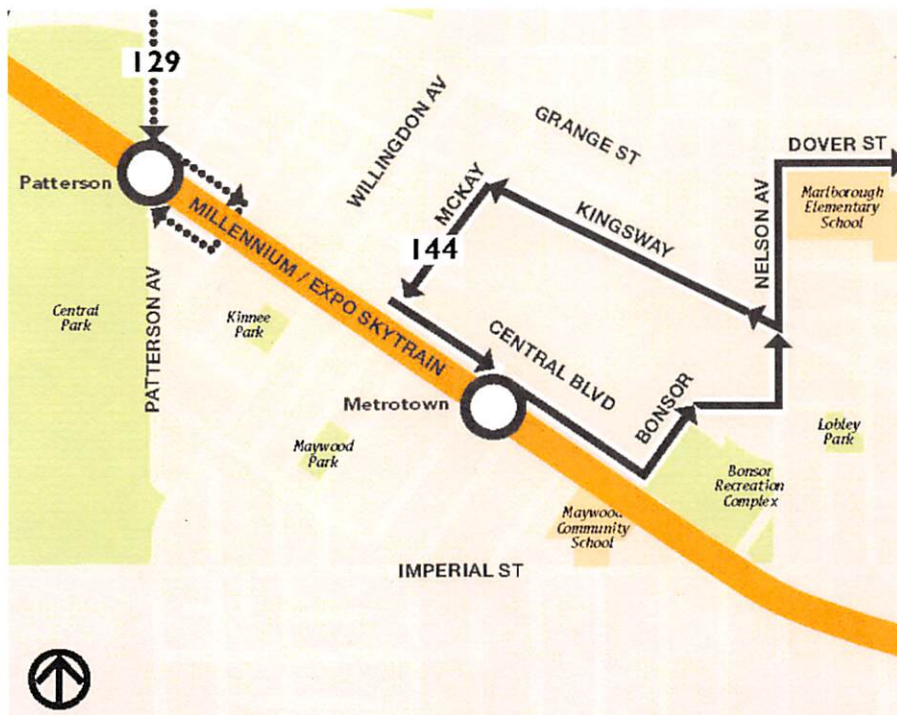
- **Redesign of Route 144:** Service between Simon Fraser University and Metrotown Station is provided by Route 144 (**Figure 7**). In the Metrotown area, it offers bi-directional service via Nelson Avenue, Bennett Street, Bonsor Avenue and Central Boulevard terminating at the existing exchange. The proposed change, illustrated in **Figure 8** creates a one-way loop counter-clockwise along Kingsway, McKay Avenue, Central Boulevard, Bonsor Avenue, Bennett Street, and Nelson Avenue. This allows for stopping westbound on a portion of Kingsway, next to shops and service, and eastbound on Central Boulevard, right beside the SkyTrain station.
- **Terminate Route 129 at Patterson Station:** Bus Route 129 is the longest route entirely within Burnaby. From Edmonds Station, it runs north to Burnaby Heights and then south via Patterson Station to Metrotown Station. The proposed change (illustrated in **Figure 8**) eases congestion at Metrotown Station by terminating this route at Patterson Station. It would loop under the guideway using Wilson Avenue, between Central Boulevard and Beresford Street. This short section is the only road segment where new transit operations are proposed, and for which Council authorization is sought if the proposal advances.

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Figure 7 - Existing Service Routes 129 & 144



Figure 8 - Proposed Service Routes 129 & 144



Staff Comment: Local changes in the Metrotown area are necessary for integration with the concept that Council has supported for Metrotown Station (rezoning #13-12, adopted 2015 September 14). The redesign of routes allows for stopping right beside the SkyTrain station and plaza. It is recommended that Council authorize transit service on Wilson Avenue, between Central Boulevard and Beresford Street.

5.0 PROPOSALS ARISING FROM TRANSIT NETWORK AND SERVICE CHANGES

TransLink has also proposed a number of service changes arising from street modifications and through the *Service Optimization* process. Proposed service changes in Burnaby include the following:

5.1 Proposals Arising from Road Modifications

Upgrades and modifications to the road network can have an impact on bus routing and stopping procedures. At Simon Fraser University, the previous network of one-way streets limited bus routing to an inefficient figure eight loop, as shown in **Figure 9**. The proposed bus route changes would take advantage of the recent conversion of all campus roads to two-way traffic. This would provide more efficient, direct and faster service for the campus and UniverCity. Specifically, as shown in **Figure 10**, the proposals include:

- ***Eliminating circuitous routing*** for Routes 135, 143, and 145: the new roadway infrastructure provides an opportunity for more direct routing of the major services.
- ***Providing service to the northwest and southeast sectors of campus:*** Routes 144 and N35 (a late-night service) would serve lower-demand areas of the campus, including the student residences.

Figure 9 - Current Service at SFU Burnaby Mountain

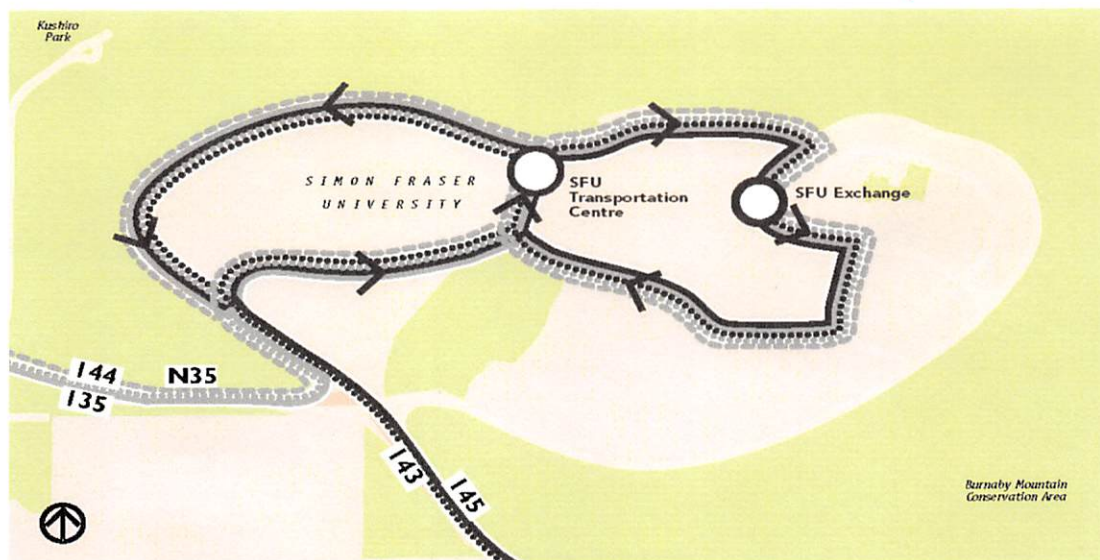
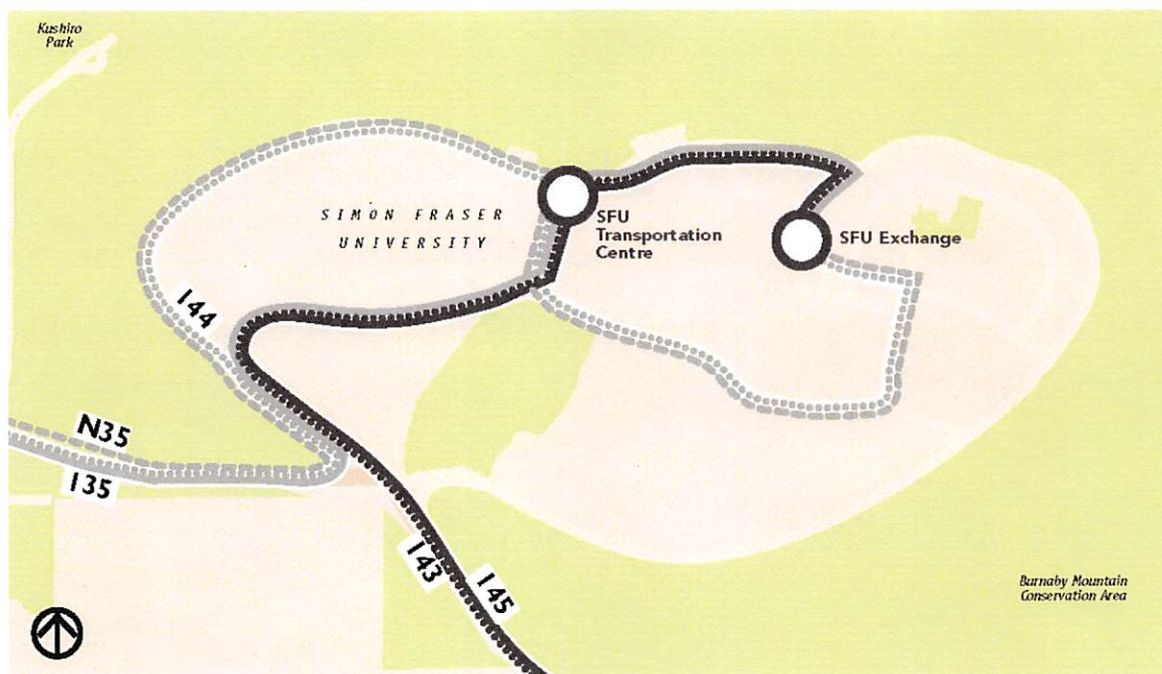


Figure 10 - Proposed Service at SFU Burnaby Mountain



Staff Comment: The proposed service changes at Simon Fraser University make the routes more direct and provide for more efficient and faster service. Less busy stops will have less frequent service than today, but all bus stops at SFU will continue to be served.

5.2 Network Change Proposals

The *Annual Bus Performance Review* helps to manage resources and improve bus service across the region by reviewing key performance indicators for all bus routes. This provides input to the annual *Service Optimization* process which identifies candidate improvements, including the reinvestment and reallocation of resources to provide better service on routes with growing demand and to reduce overcrowding. The following candidate proposals are specific to Burnaby:

- **Hastings Street Service:** This proposal is to convert the existing Route 135 to B-Line express service on Hastings Street as illustrated in **Figure 11**, and to improve Route 160 services. The Hastings corridor between Downtown Vancouver and Simon Fraser University is one of the busiest within the network with both local and regional bus service. During the morning peak period (6:30-9:00 AM) a total of 71 buses operate in the westbound direction and during the afternoon peak period (3:30-6:00PM) a total of 74 buses operate in the eastbound direction. In recent years, Route 135, which operates 100 buses during the peak periods (both directions) has experienced chronic overcrowding, making it a priority route for service optimization. This route primarily serves Burnaby, with 71% of corridor boardings in the westbound direction and 72% of eastbound alightings occurring at Burnaby stops.

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- The proposed B-Line service would serve major stops (shown in **Figure 11**) and benefit from all-door boarding. The re-designed B-Line would provide faster, more reliable and direct service linking North Burnaby eastward to Simon Fraser University and westward to downtown Vancouver. The Hastings Street portion of the limited-stop buses from Routes 160 and 190 (discussed previously) would in effect be replaced by this B-Line service, with the re-designed Route 160 converted into service that benefits Burnaby. Local stops on Hastings Street in Burnaby would continue to be served by Route 130 west of Willingdon, 160 east of Willingdon, 129 between Gilmore and Holdom, and two community shuttle routes in Burnaby Heights. Longer local trips would thus require a transfer.

Staff Comment: The Hastings corridor will be enhanced using resources freed up from the changes to Routes 160 and/or 190, thus taking regional express services and converting them into services that benefit Burnaby. The proposed B-Line will enhance service to major stops along Hastings and at SFU, which account for 70% of eastbound alighting and 67% of westbound boarding volumes in Burnaby. The Evergreen Extension will change how people access Simon Fraser University from the Northeast Sector, but not from northern Burnaby, northern Vancouver, or the North Shore. Hastings Street will continue to see a high demand for transit services, with a stronger emphasis on Burnaby service.

As noted, longer local trips on Hastings would require a transfer, where none is needed today. To address this, Route 160 could originate at Kootenay Loop (just west of Boundary Road) rather than at Brentwood Station, as proposed. If this change were made, Hastings Street in Burnaby would have continuous local service to support the B-Line. This configuration exists for all other B-Line routes in the region. Access to Brentwood Station would still be available via transfer at Willingdon and Hastings Street to Route 130 as currently occurs today.

The proposed service changes for Hastings Street have been considered within the context of past requests from the Heights Merchants Association for Council to consider the feasibility of removal of the HOV lanes from Hastings Street. Staff consider the conversion of Route 135 to B-Line service and the addition of the Route 160 service as upgrades in the frequency of service that would neither promote nor impede any future consideration of the HOV lanes on Hastings Street. HOV lanes are not a prerequisite to B-Line service, and there are a number of examples of other B-Line routes in the region which operate on streets that do not have HOV lanes (e.g. portions of 99 B-Line on Broadway in Vancouver; 96 B-Line on 104 Avenue and King George Boulevard in Surrey).

Figure 11 - Proposed Hastings B-Line Service



- **Route 106 Restructuring:** Route 106 currently provides service between Metrotown and New Westminster Stations (**Figure 12**). TransLink analysis indicates that it would operate more efficiently if split into two routes, shown in **Figure 13**, so that service levels on each route could be adjusted to better match demand. This change will require transfers at Edmonds Station for anyone using both halves of the route, but these are relatively few in number. Most passengers at Edmonds Station are connecting to / from SkyTrain.

Figure 12 - Current Service Route 106

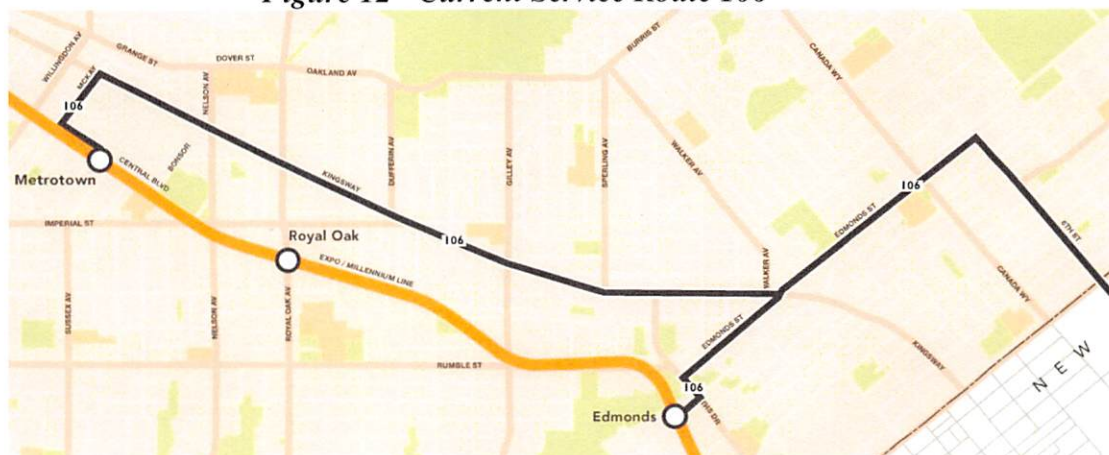
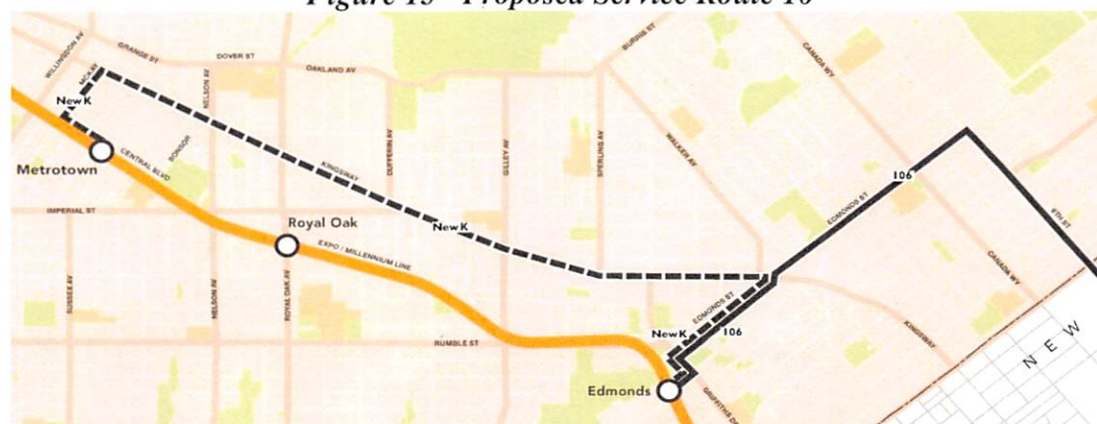


Figure 13 - Proposed Service Route 10



Staff Comment: The splitting of Route 106 into two smaller routes will allow for a more balanced matching of supply with demand, requiring an additional transfer for only a small number of passengers.

- **Increased Travel options on Hwy 1:** Route 509 presently links Walnut Grove (north Langley) to SkyTrain at Surrey Central Station (**Figure 14**). The new proposal illustrated in **Figure 15**, would see this connection made at Lougheed Town Centre instead. This will provide additional capacity on Highway 1, where the existing Route 555 is crowded. It also provides the route with a direct connection to both the Expo and Millennium Lines. TransLink has confirmed that there is adequate space at Lougheed Station to add the Route 509 service.

Figure 14 - Existing Service Route 509

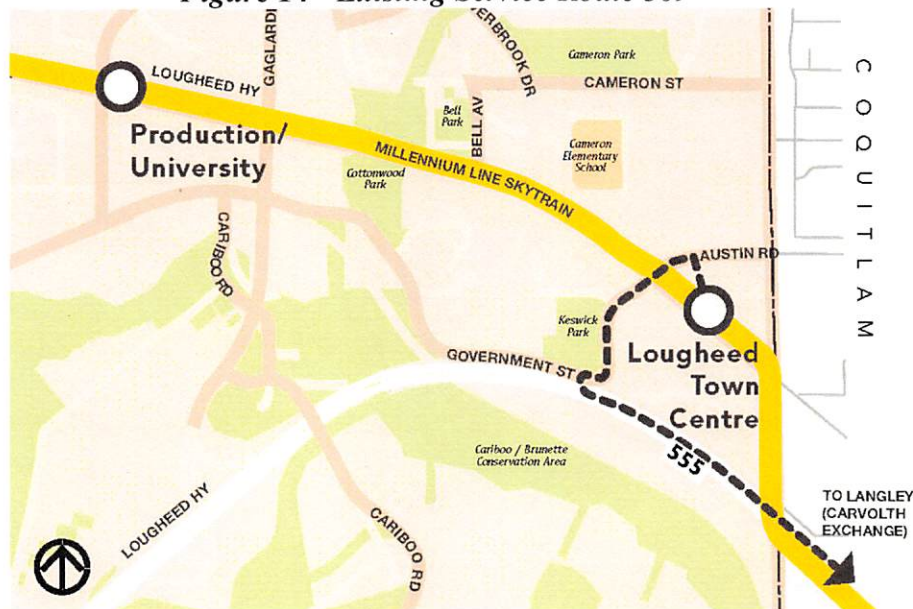
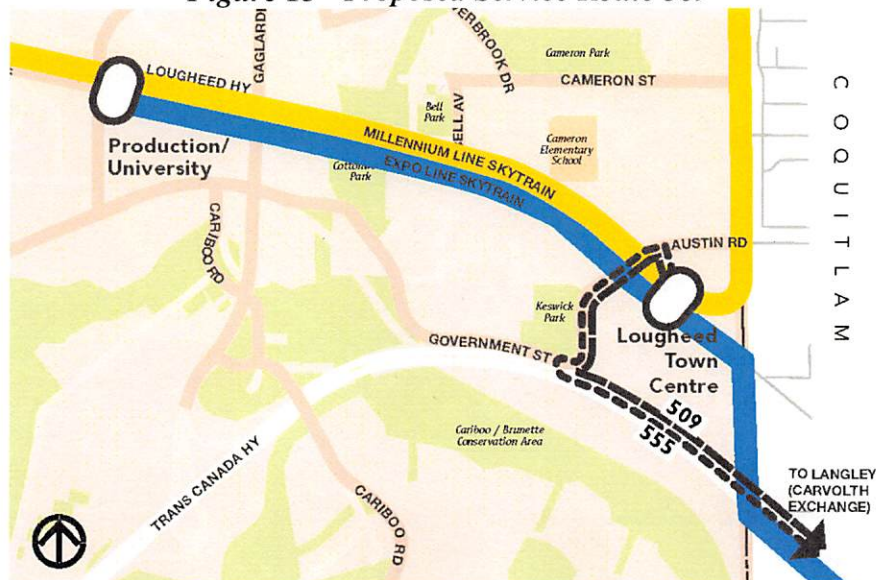


Figure 15 - Proposed Service Route 509



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Staff Comment: The proposed extension of Route 509 will increase connections for transit customers between Surrey Central and Lougheed Town Centre.

6.0 PUBLIC CONSULTATION PROCESS

Prior to the launch of the public consultation period, a TransLink delegation presented the proposed transit service modifications at the 2015 October 7 Transportation Committee.

Public consultation was held during the period October 13 – November 6, 2015, with an online focus via various media. Based on the results of the public and stakeholder engagement, TransLink may make adjustments to the proposed initiatives and will confirm the program for implementation. Any feedback Council wishes to provide would be considered prior to the implementation of any changes by TransLink. Once approved by the TransLink Board, the service change proposals will be implemented through the regular (April, June, September and December) transit service change process beginning in 2016 and extending into 2017. Much of the timing is governed by the need to synchronize with other improvements, such as the Metrotown Station renovations and opening of the Evergreen Extension.

7.0 CONCLUSION

TransLink has proposed a number of transit network changes for 2016 and beyond which focus on:

- Integrating bus service to the new Millennium Line/Evergreen Extension;
- Decreasing travel time on busy routes and extending service to areas with high customer demand;
- Taking advantage of road and infrastructure changes; and
- Making the system more efficient.

Transit service improvement proposals for 2016-2017 in the City of Burnaby include:

- **Evergreen SkyTrain Changes:** Extension of the Millennium Line to the Northeast Sector and termination of the Expo Line at Production Way/University.
- **Evergreen Bus Integration Changes:** Discontinuation of the 97 B-Line service, redesign of C24 to maintain service on North Road, discontinuation of Route 190 from Hastings Street, and corresponding enhancements to Route 160.
- **Metrotown Station Upgrade Integration:** Re-design of route architecture for Routes 49, 116, 130, 144 and 430 to terminate and layover on Central Boulevard adjacent to the new station plaza, and re-design of Route 129 to terminate at Patterson Station.
- **Road Infrastructure Changes:** Modification of all bus service routing at Simon Fraser University to take advantage of the new two-way road system by providing more efficient, direct and faster service.
- **Network Changes:** Candidate proposals for improved transit service include: introduction of B-Line Service on Hastings Street to replace Route 135, restructuring of Route 106 into two separate services, and re-structuring of Route 509 to terminate at Lougheed Station.

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The proposed changes are generally beneficial and supportable. This report recommends that Council request TransLink amend their proposal for Route 160 so that it originates at Kootenay Loop rather than Brentwood Mall, to provide more consistent local service on Hastings Street and to support the introduction of B-Line service.

The report further recommends that Council authorize the use of a short section of road segment (Wilson Avenue, between Central Boulevard and Beresford Street) for transit operations, and that a copy of this report be sent to Mr. Dan Freeman, Manager, Transit Network Management, TransLink.



Lou Pelletier, Director
PLANNING AND BUILDING

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cc: Director Engineering
City Clerk