

TRANSPORTATION COMMITTEE

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

SUBJECT: BUS ROUTE CHANGES IN SOUTH SLOPE / BIG BEND AREA

RECOMMENDATIONS:

1. THAT Council approve the introduction of bus service on the road segments identified in Section 5.0 of this report, in order for Coast Mountain Bus Company to implement proposed bus routings as outlined in Section 3.0 and shown in Figure 3 of this report.
2. THAT Council forward copies of this report to those that have corresponded with the City on this subject or appeared as delegations to the Transportation Committee or Council, and to P. Noriega, Manager, Service Planning, Coast Mountain Bus Company.
3. THAT Council advise Coast Mountain Bus Company that prior Council approval is required for implementation of conventional buses on road segments that have been approved for community shuttle use, with the exceptions noted in Section 4.2.1. of this report.
4. THAT Council instruct the City staff to work with Coast Mountain Bus Company to ensure public consultation prior to approval of new bus stops in the area.
5. THAT Council request Coast Mountain Bus Company to consider provision of bus service on Imperial, between Royal Oak and Central Boulevard.
6. THAT Council request Coast Mountain Bus Company to consider extending weekend start times and seven-day termination times on the South Slope.

REPORT

The Transportation Committee, at its meeting held on 2005 August 24, received and adopted the *attached* report requesting Council approval for bus service to be introduced on various South Slope and Big Bend roads.

To: His Worship, the Mayor and Councillors
From: Transportation Committee
Re: Bus Route Changes in South Slope / Big Bend Area
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The route revisions proposed by Coast Mountain Bus Company provide improved bus service in the South Slope and Big Bend, covering a greater area, for more of the day, and in some cases with increased frequency. Proposals include introduction of Community Shuttle services, which have been successfully introduced region-wide (including Burnaby Heights) and are generally preferred by residents of lower-density residential areas.

Arising from discussion, the Committee amended the recommendations to include four additional recommendations to accommodate residents' concerns regarding bus routes, service times, public consultations regarding new bus stops, and conventional bus use on shuttle routes.

Respectfully submitted,

Councillor Nick Volkow
Chair

Councillor Doug Evans
Vice Chair

Councillor Lee Rankin
Member

Copied to: CITY MANAGER DIRECTOR ENGINEERING DIRECTOR PLNG. & BLDG.

TO: CHAIR AND MEMBERS
TRANSPORTATION COMMITTEE

DATE: 2005 August 22

FROM: DIRECTOR PLANNING AND BUILDING

FILE: PL 90100 - 03

SUBJECT: BUS ROUTE CHANGES IN SOUTH SLOPE / BIG BEND AREA

PURPOSE: To request Council approval for bus service to be introduced on various South Slope and Big Bend roads.

RECOMMENDATIONS:

1. **THAT** the Committee recommend that Council approve the introduction of bus service on the road segments identified in Section 5.0 of this report, in order for Coast Mountain Bus Company to implement proposed bus routings as outlined in Section 3.0 and shown in Figure 3 of this report.
2. **THAT** the Committee recommend that Council forward copies of this report to those that have corresponded with the City on this subject or appeared as delegations to the Transportation Committee or Council, and to P. Noriega, Manager, Service Planning, Coast Mountain Bus Company.

REPORT**1.0 BACKGROUND**

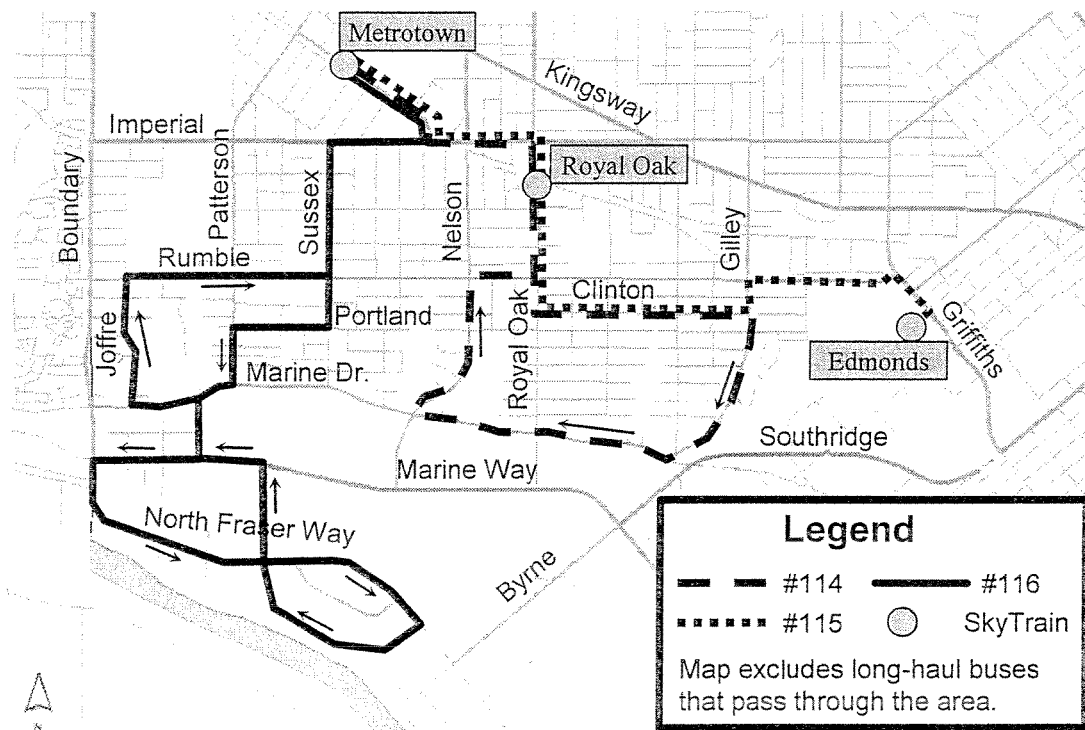
On 2005 March 14, Council authorized staff to work with Coast Mountain Bus Company (CMBC) on bus route improvements for the South Slope / Big Bend area, with a focus on expanding the area of transit service coverage and enhancing local trips within the South Slope area. The outcome of that process was reported to the Transportation Committee on 2005 June 22, at which time the report was referred back to staff for further evaluation of the options, including more examination of a Boundary Road routing. At the Council meeting of 2005 July 11, a delegation from Patterson Avenue expressed conditional support for Community Shuttles but requested that Council oppose the use of conventional 40-foot buses on Patterson Avenue. This report responds to this direction of the Transportation Committee, as well as addressing the issues raised by residents through correspondence and as delegations to the Committee and Council.

Appearing elsewhere on this Transportation Committee agenda is a referral from Council resulting from a delegation from the Canadian Auto Workers (CAW) Local 111, regarding the process used by CMBC in implementing new bus routes. Depending on the Transportation Committee's decision it may be the subject of a subsequent report to the Committee. In bringing these South Slope route changes for Committee and Council consideration, CMBC and Translink have followed their current process for the implementation of new bus routes.

2.0 REASONS FOR CHANGES

The existing local bus route network in the South Slope / Big Bend area is shown in *Figure 1*. There are three routes, all operated with "conventional" 40-foot buses.

Figure 1: Existing Local Bus Routes

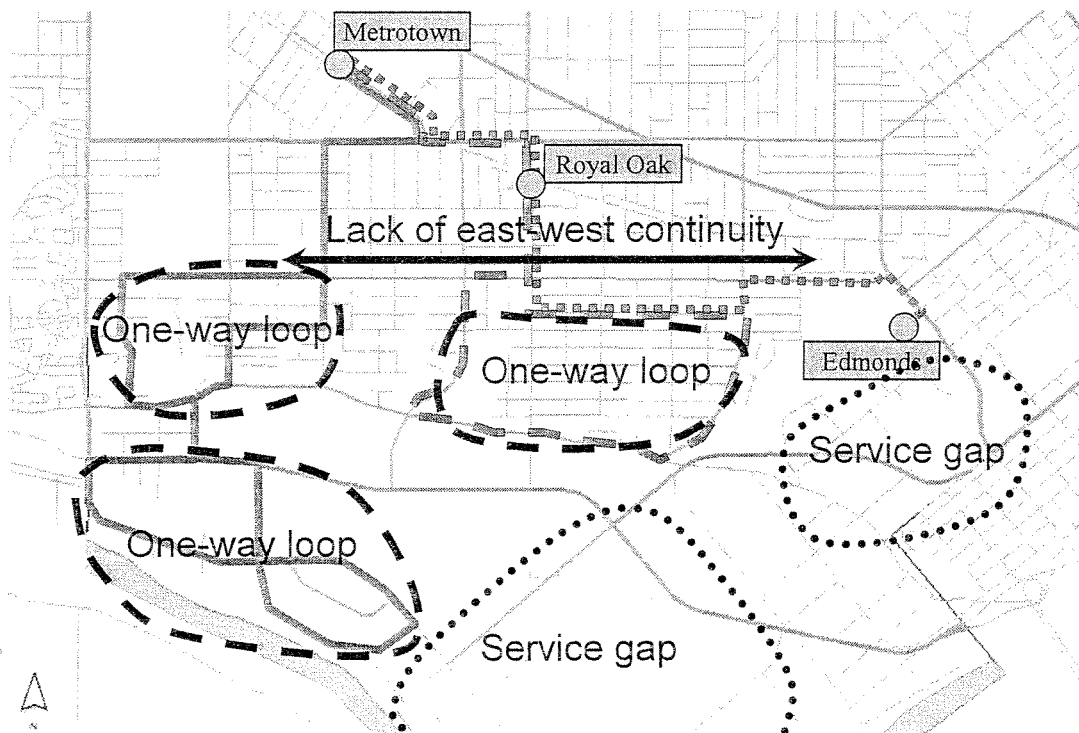


Most other routes in the City (in Central and North Burnaby) were revised when the Millennium Line was opened in 2002 September, leaving only the South Slope / Big Bend area routes to be improved. Service issues previously identified in this area are illustrated in *Figure 2*, and include:

- Enhancing east-west connectivity in the South Slope area. The existing route structure has a strong north-south focus on SkyTrain, making it difficult to make local east-west trips within the neighbourhood, such as school and local shopping trips.

- Improving service to the Big Bend area to support this growing employment centre.
- Addressing gaps in the existing service area.
- As shown earlier, in *Figure 1*, much of the existing service operates in only one direction. This provides poorer customer service, in that residents wishing to travel in the reverse direction must take longer, more circuitous routes around the neighbourhood. This is a particular concern on the #116 bus route where, for example, someone destined from Metrotown to Joffre Avenue may be forced to first travel down to the Big Bend and back up again.

Figure 2: Service Issues



CMBC has indicated that the existing #114 and #115 buses are not attracting enough riders to warrant operation of these services using conventional (40-foot) buses. The #116, however, attracts sufficient riders to be retained as a regular bus service, and will attract more riders in future as the Big Bend area continues to develop. Switching some of the South Slope services to smaller Community Shuttles, as suggested in the March 14 report, will reduce vehicle noise, emissions, and fuel consumption. In addition, CMBC has indicated that, due to lower operating costs, use of Community Shuttles allows for an increase in the number of service hours. This can be used to expand service into under-served parts of the South Slope to address the service gaps in the eastern part of the South Slope service area as well as increasing the frequency of service, and extending the time-of-day coverage.

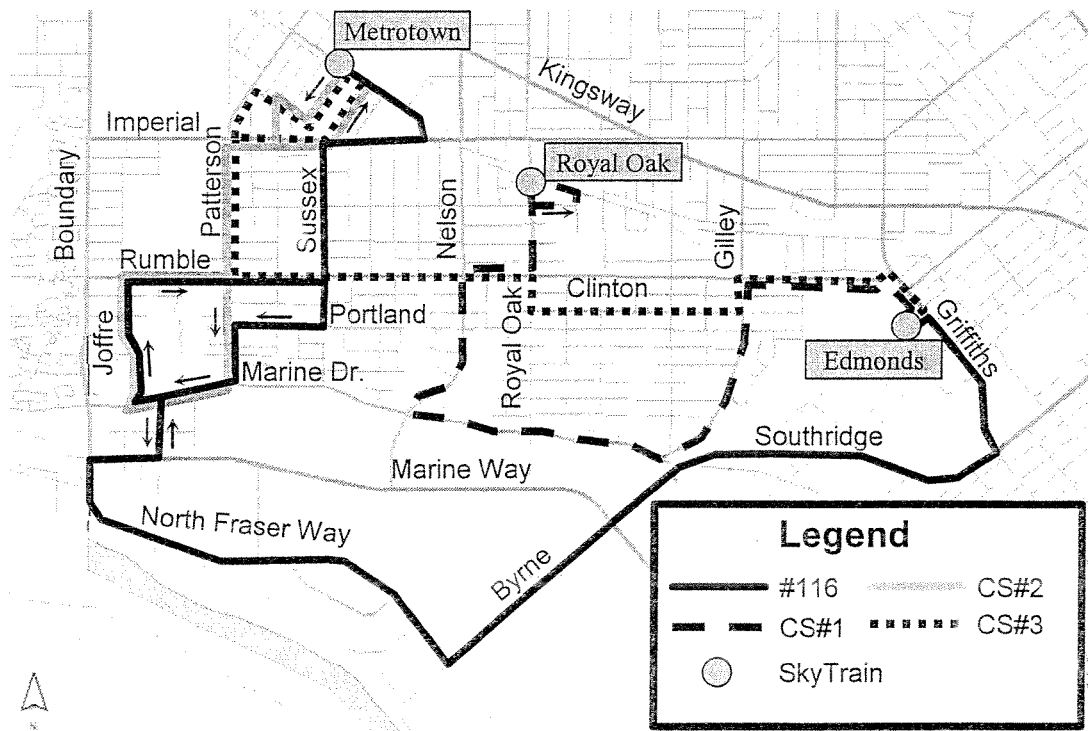
3.0 PROPOSED SERVICE IMPROVEMENTS

The Burnaby Transportation Plan states that "... greater efforts must be made to promote alternative modes of transportation which make more efficient use of road space to carry more people in fewer vehicles ..." This can be achieved by providing service that is more direct, more frequent, covers more of the day, provides links to key local and regional destinations, and expands into presently-unserved areas. The proposal for achieving this in the South Slope and Big Bend areas is described below.

3.1 Proposed Routes

The new routes that CMBC is proposing for the South Slope area are shown in *Figure 3*. It is the view of CMBC and City staff that the following proposed route changes address the goals identified in Section 2.0, improve the level of service in both the South Slope and Big Bend areas, and respond to the issues raised by residents.

Figure 3: Proposed Local Bus Routes



Under the proposed routing plan, **Route #116** remains as the service to the Big Bend, using the same South Slope roads that it does today continuing the one way routing between Rumble and Marine Drive but is extended out to Byrne Road to cover more of the Big Bend and then up Southridge Drive to Edmonds SkyTrain station to cover more of the eastern South Slope/Edmonds area. This would give Big Bend employees a choice of two SkyTrain stations, depending on where they are coming from and going to. It also

makes bus service available further east in the Big Bend and South Slope than at present, thus bringing transit service to more businesses (including the developing commercial area at Marine Way and Byrne Road) and to more residents in the Edmonds Town Centre South area. On Griffiths Avenue, the route would serve the new Byrne Creek Secondary School. In the future, when the necessary roads are in place, consideration can be given to extend the #116 further eastward on North Fraser Way, east of Byrne Road, to further expand service coverage within the Big Bend.

At the direction of the Committee, staff have assessed a number of routing options for the #116 in the South Slope between Metrotown and the Big Bend including Patterson, Boundary Road, Nelson, Joffre and Matheson (in Vancouver) The #116 routing as shown in *Figure 3* is recommended for the following reasons:

- From a transit service perspective, the proposed route provides a reasonable walking distance for many residents, complements the Community Shuttle buses, maximizes service to the local area and focuses on the area where CMBC has received the majority of requests for improved service.
- Bus stops are provided (unlike on Boundary Road), which would improve transit service in the neighbourhood and for the industrial area north of Marine Way.
- The proposed route provides a reasonably direct service (as compared with a Nelson Avenue routing) linking the South Slope community to both Metrotown and the Big Bend. This more direct route enhances ridership, thus potentially reducing traffic volumes and pollution.
- The proposed route is safer than Boundary Road from an operational point of view, as there is not the mix of buses with trucks on this route, and speeds are lower.

The other route options for the #116 are evaluated in Section 4.0: Public Consultation of this report.

Community Shuttle #1 would extend from Edmonds SkyTrain station to Royal Oak SkyTrain station, covering most of the existing #114 and #115 services. However, it does so with two-way service, whereas much of this area has only one-way service at present.

Community Shuttle #2 would serve Patterson Avenue and the Suncrest neighbourhood. This additional Community Shuttle service is needed because of the one-way loop on the #116 between Rumble and Marine Drive. Without the Shuttle, someone who picks up the #116 on Joffre, for example, would not be able to get back home without being routed through the Big Bend. The proposal is to terminate this route on the south side of Metrotown SkyTrain station, on Beresford Street, rather than in the Metrotown Station bus loop. This benefits passengers by bringing the bus stop closer to the SkyTrain station, and helps to ease over-crowding in the Metrotown bus loop. Approval of the use

of Patterson Avenue by buses between Portland and Imperial is required to permit this Community Shuttle to operate.

Community Shuttle #3 provides the new, local, east-west service within the South Slope. It links schools, homes, and local commercial areas. Like the above route, the Metrotown stop would be on Beresford Street rather than in the bus loop.

3.2 Proposed Service Hours

The existing #116 operates regular service in the South Slope, but extends to the Big Bend only during peak periods. As part of this service change, the #116 would operate to the Big Bend at off-peak times and on weekends which would operate on a 30-minute service frequency (headway). The existing 15-minute headway for peak periods would be retained.

For the three Community Shuttles, service would be every 30 minutes during the daytime on weekdays, and every 60 minutes in the evenings and on weekends. This is similar to, or better than, the service frequencies on the existing #114 and #115.

For all routes, service would begin at about 6:00 a.m. on weekdays, and 8:00 to 9:00 a.m. on weekends. Service for all routes would end at about 10:00 p.m. on all days. Peak-period service for #116 on weekdays would be from about 6:00 a.m. to 9:00 a.m. and from about 3:00 p.m. to 6:00 p.m.

In addition to the longer time-of-day coverage on the #116 and improved headways on some routes, the proposed plan represents an increase of 50% in the route-kilometres (coverage) within the South Slope / Big Bend area.

In total, the proposed concept represents an increase of 11,500 service hours over existing service. CMBC is proposing that the service enhancements be implemented in 2005 December.

3.3 Transit Operations

All four routes have been field tested by CMBC, with the involvement of their planning staff and bus operators. As per the standard practice of CMBC and the CAW, this included the involvement of the joint CMBC / CAW Safety Committee for the conventional (40-foot) bus routes. City staff were also in attendance for all tests. The proposed routes are considered suitable for transit operations, without any upgrades or other changes to existing roads.

4.0 PUBLIC CONSULTATION

4.1 General Comments

CMBC hosted a Public Open House on 2005 May 18 at Bonsor Recreation Centre from 2:00 p.m. to 8:00 p.m. The event was promoted via the Burnaby Now, TransLink's on-board Buzzer newsletter, Community Advisories faxed to relevant stakeholders, CMBC and TransLink websites, and Rider Alerts on board the South Slope buses. About 45 people attended the Open House.

Highlights of the feedback from the Open House were:

- Support for the use of Community Shuttles in the South Slope.
- Most support for network options that included three Community Shuttle routes (the other options had only two).
- Positive response to improving east/west connections through the community, including access to the shopping plaza at Royal Oak and Rumble.
- Concern that Community Shuttles may not be large enough to accommodate peak volumes to Burnaby South Secondary School (CMBC will monitor this as a potential capacity issue, and may implement conventional 40-foot buses at peak school times as are currently provided for Burnaby Mountain Secondary School).
- Requests for later service (beyond the existing 10:00 p.m.) and more frequent service.
- Appreciation for continued transit service to the health care and seniors facilities on Sussex Avenue.
- Appreciation for the more direct routing to Big Bend.
- Some concern over introduction of bus service on Patterson Avenue, between Imperial and Rumble.

4.2 #116 Route Issues and Options

4.2.1 Patterson Avenue

One of the options presented at the Open House, and subsequently recommended in the City staff report at the 2005 June 22 meeting of the Transportation Committee, included routing the #116 with conventional (40-foot) bus service on Patterson Avenue, between Marine Drive and Imperial Street. The revised proposal outlined in Section 3.1, however, would only use conventional buses on Patterson one way southbound between Portland and Marine Drive (as the #116 is currently operated). While the use of Patterson from

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Imperial to Marine Drive was supported by Big Bend employees and some South Slope residents who favoured this more direct route, other South Slope residents raised concerns with the previous Patterson routing for the #116 as discussed below.

CMBC and the City received communications from people representing a total of 121 South Slope properties, expressing concern about the possible introduction of conventional (40-foot) bus service on Patterson Avenue. Almost all of these communications were in the form of three petitions, but a few people contacted the City and/or CMBC individually. Of those that expressed these concerns, 50% actually abut Patterson Avenue. The remaining 50% are on cross-streets, some of them up to 11 properties away from where the bus would run. The petitioners' views were expressed by two residents, Mr. K. Pinchin and Mr. R. Ford, appearing as a delegation to Traffic Safety Committee (June 7), Transportation Committee (June 22), and Council (July 11) as follows:

- **Not a local bus.** Some of the material provided by CMBC to the residents states that "... the #116 has become a commuter route connecting Metrotown Station with the Glenlyon area." Residents have made reference to this statement, and suggested that the bus is essentially an "express" service from Big Bend to Metrotown, and should not infringe on their neighbourhood. However, weekly boarding and alighting using the current #116 in the South Slope area (excluding Metrotown SkyTrain station) are twice those of the Big Bend. The route clearly has a strong role in providing bus service to South Slope residential areas, which CMBC understandably wishes to maintain. Normal practice, as is proposed for the South Slope, is to provide bus routes that are not "express" but that actually serve the area that they pass through.
- **Safety,** primarily to pass a bus stopped at a bus stop. This is no different than the situation already experienced on other local and collector roads. Where there is insufficient room to pass a stopped bus without crossing the centre line, drivers must decide whether to wait for the bus to proceed, or cross the centre line to pass the stopped bus when they judge it to be safe. However, being in a single-family residential area, the amount of time spent at any given stop will generally be short.
- **Engine noise,** particularly when going uphill. The southern part of Patterson Avenue, between Marine Drive and Rumble Street, has grades of up to 13%. These streets can be operated by conventional buses but may not be as desirable from a noise perspective as streets with a lower gradient. The remaining section of Patterson Avenue from Rumble Street to Imperial Street which is proposed for Community Shuttle buses has a much gentler grade, 7% in the south declining to 3% in the north. However the revised proposal does not have conventional buses operating on Patterson Street in the uphill direction.

- **More traffic and pollution** on Patterson Avenue. Patterson Avenue is designated as a Major Collector – Secondary in the City’s Transportation Plan. For such a road, the Plan suggests a maximum desirable volume of 12,000 vehicles per day. Existing volumes are below that value, being on the order of 10,000 vehicles or less. This is lower than the volume on parallel routes, such as Nelson or Royal Oak. The #116 bus would increase these volumes by 1%. Viewing the question from a neighbourhood perspective, traffic impacts and pollution can be minimized by keeping the bus route-kilometres shorter. This favours a direct route over a more circuitous one (such as Nelson).
- **More capacity than needed.** It has been suggested that conventional 40-foot buses on the #116 provide more capacity than is needed, except during the morning and peak periods. After six to twelve months for ridership on the new route to stabilize, CMBC will typically evaluate the feasibility and desirability of using conventional buses on this route and may switch to Community Shuttles on this route at off-peak times.
- **Eastern access.** It has been suggested that most Big Bend employees live to the east, and that Big Bend bus service should, therefore emphasize the connection to Edmonds SkyTrain station and provide less capacity (i.e., a Community Shuttle) from Metrotown. Origin-destination information is available for two major employers in the Big Bend area. Analysis indicates that about 60% of trips are oriented to/from the west (i.e., through Metrotown) and 40% to/from the east.
- **Leaving the door open.** The delegation to Council on 2005 July 11 expressed concern that introduction of Community Shuttles on Patterson Avenue would “leave the door open” for CMBC to subsequently convert this service to conventional buses. They asked Council to require CMBC to return to Council before allowing such a change in vehicle type.

Although staff are satisfied that the section of Patterson from Imperial Street to Rumble Street is very suitable for all types of buses (both smaller buses and conventional buses), the revised proposal does not propose the use of conventional buses on Patterson Avenue at this time. It is recommended that all the new road sections including Patterson to be used as Community Shuttle routes be approved for Community Shuttles vehicles (smaller buses) only and that any change from Community Shuttle buses to conventional buses on a road section would require further consideration by Council. This restriction of some road segments to Community Shuttle use is not intended to prevent CMBC from scheduling limited 40-foot bus service if needed to handle school-related peak loads, or from operating occasional 40-foot service if

Community Shuttles are unavailable due to periodic maintenance requirements.

4.2.2 Boundary Road

Most of the correspondents favoured a Boundary Road routing over Patterson Avenue, although Sussex Avenue was also suggested by a few as being better than Patterson. At the 2005 June 22 meeting of Transportation Committee, some members also suggested that the bus be routed onto Boundary Road.

A field test was conducted to evaluate the Boundary Road corridor. CMBC has concluded that Boundary Road is not suitable for the following reasons:

- It would not be feasible to have bus stops on Boundary Road due to vehicular safety issues with buses merging back into the vehicle flow, which moves at high speed and has a high percentage of trucks and lack of a suitable pedestrian environment. Sidewalks are directly adjacent the road (and discontinuous), street lighting is incomplete, there are few pedestrian crossing opportunities. Further the safety of bus riders is compromised by the lack of “eyes on the street” from adjoining properties.
- With few, if any, stops on Boundary Road, this route will not serve the area that it passes through. Furthermore, the residential areas to either side of Boundary Road are already served by existing bus services, notably #26 on the Vancouver side of the border. A routing via Boundary Road would be wasteful, running for two kilometres past homes that it would not be serving.
- The steep grade on Boundary Road is longer and faster-moving than on parallel routes, such as Patterson. This shortens the life of the brakes, and would have a long-term impact on the vehicles. This was a topic of some interest to the Transportation Committee on June 22. In response, staff have received correspondence from CMBC Fleet Maintenance regarding Boundary Road which indicates that “... there would be a good chance that the transmission retarder would not be able to absorb as much energy as would be needed to stop the bus at the bottom of the hill. The result of this would be that the foundation brakes on the bus would have to perform a much greater duty, resulting in greatly-increased brake wear on the buses.” They compare Boundary Road to the Gaglardi Way descent of Burnaby Mountain which “... is a constant source of roadcalls and equipment problems for us.” In contrast, routes within the South Slope neighbourhood have shorter grades that can be driven at slower speeds.
- Conflicts between trucks and buses on the steep hill of Boundary Road (high speeds downhill and slow speeds uphill).

4.2.3 Nelson Avenue

Nelson Avenue creates a longer and more circuitous route from Metrotown to Big Bend, and is, thus less attractive for customers. In addition, a field test identified concerns with the right turn from eastbound Imperial to southbound Nelson, which would form part of such a route.

4.2.4 Sussex Avenue

At 16%, the southern end of Sussex Avenue is the steepest of the roads in this area, exceeding the alternatives by 3% to 6%. This steepness makes it unsuitable for bus service.

4.2.5 Joffre Avenue

Joffre Avenue, which currently operates as the #116 route in the southbound direction only was reviewed as an option for a two-way routing between Marine Drive and Rumble. However the narrower width of Joffre would require the removal of on street parking from one side of the street to accommodate this two-way routing. Moreover, there were issues with sight lines and stopping distances for buses operating in opposing directions. Joffre Avenue however remains an option for further consideration in the future to achieve a two way routing.

4.2.6 Matheson Crescent

Matheson Crescent, west of Boundary Road in Vancouver, and has been suggested by some as a suitable north/south route. However, this area is already served by existing transit routes. It would also take the route back and forth across a fare boundary. Matheson would make for a much longer, more circuitous route that would be less able to attract ridership.

4.3 Other Issues

There are two other letters that the City has received about the proposed network changes:

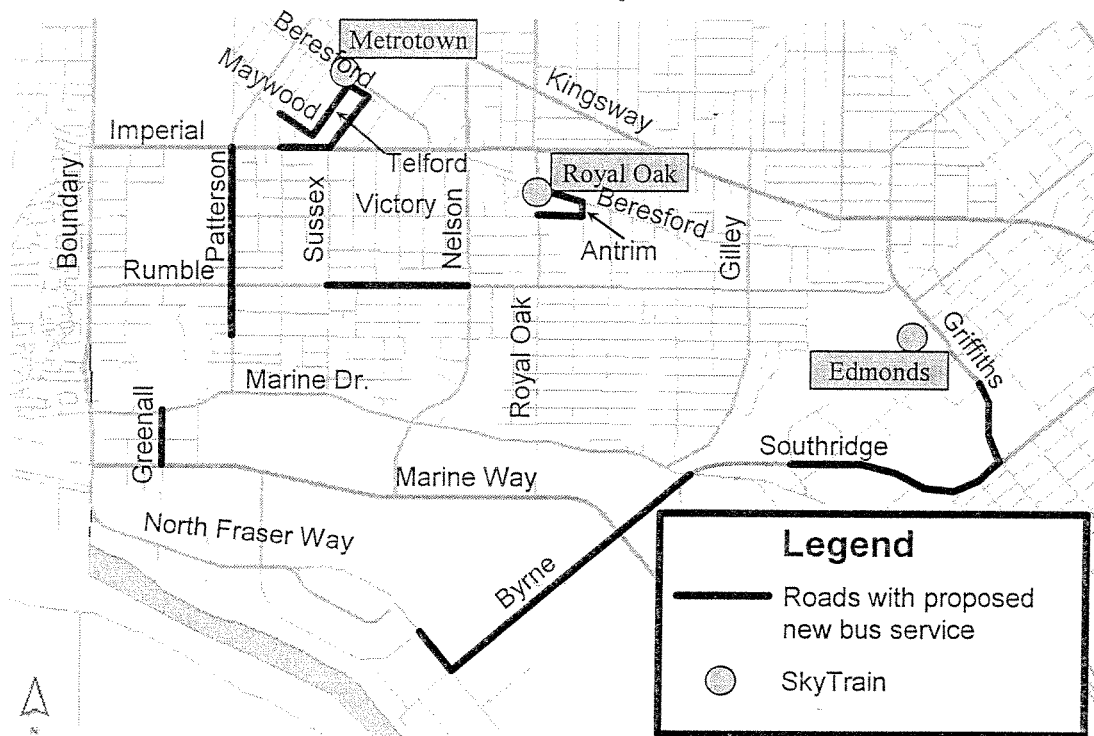
- The Executive Director of St. Michael's Centre, 7451 Sussex Avenue, wishes to be sure that service is retained for the facilities in this area, via either conventional bus or Community Shuttle. This has been achieved, and in fact enhanced by the addition of east-west service, in the proposed network plan.
- The City received a letter expressing concern about the possibility of decreased service frequency on Joffre Avenue. In fact, Joffre residents will have an enhanced service and a more direct routing to/from Metrotown.

5.0 ROAD SEGMENTS WITH NEW BUS SERVICE

Introduction of bus service on roads which do not currently have buses operating on them requires the approval of Council. The proposed bus route network changes will result in the introduction of bus service on a number of road segments that do not presently have service.

The proposed new road segments are illustrated in *Figure 4*.

Figure 4: Roads With Proposed New Service



Specific road sections are recommended for approval by all buses except for the roads proposed for Community Shuttle routes. Road sections recommended for Community Shuttles only would be restricted to use by smaller buses, with the exceptions noted earlier for school-related peak loads and vehicle maintenance requirements. It would be expected that CMBC would seek prior Council approval to operate conventional buses on a more regular basis, if they wished to do so on those streets approved for use by Community Shuttles only.

Streets Approved for Use by All Buses

- Greenall Avenue between Marine Way and Marine Drive
- North Fraser Way between Glenlyon Parkway and Byrne Road
- Byrne Road between North Fraser Way and Marine Drive

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- Southridge Drive between Byrnespark Drive and Griffiths Drive
- Griffiths Drive between Southridge Drive and 14th Avenue.

Streets Approved for Use by Community Shuttle Buses Only

- Imperial Street between McKay Avenue and Sussex Avenue
- Sussex Avenue between Imperial Street and Beresford Street
- Beresford Street between Sussex Avenue and Telford Avenue
- Telford Avenue between Beresford Street and Maywood Street
- Maywood Street between Telford Avenue and McKay Avenue.
- Patterson Avenue between Portland Street and Imperial Street
- Rumble Street between Sussex Avenue and Nelson Avenue
- Victory Street between Royal Oak Avenue and Antrim Avenue
- Antrim Avenue between Victory Street and Beresford Street
- Beresford Street between Antrim Avenue and Royal Oak Avenue.

All of these road segments were presented for comment in the options shown by CMBC in the Public Open House.

6.0 CONCLUSION

The proposed route revisions proposed by CMBC provide improved bus service in the South Slope and Big Bend, covering a greater area, for more of the day, and in some cases with increased frequency. Proposals include introduction of Community Shuttle services, which have been successfully introduced region-wide (including Burnaby Heights) and are generally preferred by residents of lower-density residential areas.

This report has presented the bus route changes being proposed by CMBC for the South Slope and Big Bend areas. It has outlined the reasons for selection of the proposed routes, and the service improvements that will be provided to Burnaby residents and employees. Service is proposed to commence in 2005 December, contingent on receiving City approval for use of the recommended road segments by late August. This will allow sufficient lead time for CMBC to complete the detailed scheduling and staffing of the service. Prior to implementation, the potential new bus stop locations will be evaluated, and immediately abutting residents will be

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informed. Any concerns regarding bus stop locations will be addressed by the Traffic Safety Committee.

It is recommended that Council approve introduction of bus service on the road segments listed in Section 5.0, in order for Coast Mountain Bus Company to implement proposed bus routings as shown in *Figure 3* of this report. It is also recommended that copies of this report be sent to those that have corresponded with the City on this issue or appeared as delegations to the Transportation Committee or Council, and to CMBC.



J.S. Belhouse, Director
PLANNING AND BUILDING

SR:RG:jc:sa

Copied to: City Manager
Director Engineering

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