

March 8, 2006

4400

Chair Alan Lowe and CRD Board
Capital Regional District
524 Yates Street
PO Box 1000
Victoria, BC, V8W 2S6

Dear Mayor Lowe

RE: Application to Strategic Priorities Fund

In November 2005, BC Transit and the Capital Regional District entered into a partnership agreement regarding the implementation of the Regional Transportation Strategy. It is the objective of the two agencies to achieve the goals of the Regional Growth Strategy through cooperative transportation investments and acquisition of senior government funding.

The Regional Growth Strategy and its associated transportation plan, *Travel Choices*, identifies the provision of higher quality transit service as a key element in achieving the goals of the region.

In support of those goals, BC Transit and the City of Victoria are currently implementing a \$3 million dollar traffic signal and control infrastructure program to improve transit service on the Douglas Street corridor, the primary regional transit corridor linking downtown Victoria to Saanich, Westshore and Peninsula growth centers. In the planning for this infrastructure a conceptual plan for an exclusive transit right-of-way has been developed. Through a preliminary multiple account evaluation, this busway has been shown to generate higher levels of benefit to the region while fulfilling a major objective of the Growth Strategy and Travel Choices.

A status report on the current infrastructure project and information with respect to the busway is attached.

The New Deal for Cities and Communities provides a funding mechanism to advance significant capital projects such as this. The agreement between the Province, Federal Government and UBCM aims to reduce greenhouse gas emissions and contribute to cleaner air. The transit priority project will meet this aims in both the short and long term by increasing the proportion of regional travel made by public transit and aiding in the development of more centralized development patterns.

The New Deal for Cities agreement allows BC Transit to apply for Strategic Priorities Funding with the support of the Regional District. This letter is to request the Board's support for such an application.

At its meeting of December 15, 2005, the Victoria Regional Transit Commission endorsed this project for an application to the strategic priorities fund. Victoria City Council has also considered this project in principle at its meeting of February 16, 2006 and supports such an application.

With the Board's support, BC Transit will make application to the Strategic Priorities fund for the rapid transit project at the earliest opportunity, once the procedures and requirements of such process are identified by UBCM, the Province and Federal governments.

A handwritten signature in black ink, appearing to be 'Mike Davis', with a long horizontal line extending to the right.

Mike Davis, Manager,
Planning and Scheduling,
BC Transit,
Phone: 995-5617,
Email: Mike_Davis@bctransit.com,

Attachment: December 15, 2005 Commission Report

December 15, 2005

TO: Mayor Don Amos, Chair
and Members of the Victoria Regional Transit Commission

FROM: Ron Drolet, Senior Vice President, Customer Service
and Corporate Secretary

SUBJECT: **DOUGLAS STREET TRANSIT PRIORITY PROJECT**

Purpose

This report updates the Commission on the status of the Douglas Street Transit Priority Project and requests the Commission endorsement, subject to municipal and regional support, of an application to the strategic priority fund of the New Deal for Cities and communities Program for capital funds to complete detailed planning and construction of a median busway proposed from downtown Victoria to Saanich Road.

Background

Connecting major regional centers with high quality transit service is one of the key goals of the Regional Growth strategy and the subsequent Travel Choices strategy. To further that objective, BC Transit developed the *Rapid Transit Network Development Plan*, presented to the Commission earlier this year, which identified the 2 primary rapid transit corridors in the region and the steps needed to evolve from today's service towards rapid transit. The two corridors include a West Line from downtown to Langford connecting the downtown, Saanich, Tillicum, Colwood and Langford Centers. The North line from downtown connects the downtown, Saanich, Royal Oak and Sidney Centers. Express services connecting UVIC, University Heights to Saanich Center and these two primary corridors will also be added on McKenzie Road.

In order to achieve the objectives of the region, transit service characteristics must change in these primary corridors. Service should:

- Be frequent and regular in both directions
- Operate with readily identifiable vehicles
- Have fewer stops
- Have a higher standard, permanent bus stations

- Have a higher standard of passenger amenities including shelters, and schedule information
- Have higher operating speeds through transit priority than general transit services

BC Transit is working on improvements to all of these characteristics as part of the Rapid Transit Network Development Plan.

Transit Priority

Key amongst the characteristics needed to advance rapid transit is *Transit Priority*. Transit priority consists of a series of measures that can reduce the travel time for buses or increase the consistency of travel times for transit patrons by reducing the friction between general traffic and transit operations. For example, transit priority measures may be as simple as organizing fixed timing traffic signals to reflect transit vehicle travel times rather than general purpose travel times between signals. Other common measures include physical features such as queue jumpers or separate bus only lanes.

In 1999, BC Transit, Ministry of Transportation, City of Victoria and Municipality of Saanich completed its first review of transit priority requirements on the Douglas Street corridor. This report identified a series of immediate proposals and some short to medium term recommendations. As a result of this study, BC Transit and the Ministry of Transportation (BCTFA) partnered to construct outbound queue jumper lanes on Highway 1 at McKenzie / Admirals and at Tillicum Road. These facilities provide a means for buses to reach the head of the traffic queue at these congested locations then advance through the intersections prior to general traffic. Opened in 2002, these facilities have been providing benefit to transit service and patrons since.

Due to the lack of funding partners, BC Transit was unable to continue with implementation of other recommendations coming out of that review.

At the end of 2004, the City of Victoria was successful in acquiring a Canada/BC Infrastructure grant for the implementation of transit priority on the Douglas Street Corridor. The objectives of the project were to continue the implementation of priority facilities started as a result of the 1999 report.

Project Description

Following receipt of the infrastructure grant a steering committee of BC Transit, Ministry of Transportation, City of Victoria and Municipality of Saanich staff was established to guide the project. The City requested that BC Transit manage the study and implementation process. A total budget of \$3 Million was provided; \$2 Million from the federal/provincial infrastructure fund and \$1 Million from BC Transit's capital program.

As an initial step in the process, it was agreed by the study team to review the findings of the previous priority study in light of the Regional Growth Strategy and rapid transit development plans prepared in response to the goals of the region. A consultant team with considerable Canadian and international experience in this field was assembled to review transit priority options for the corridor.

The study team examined several levels of transit priority strategies. These included:

- Central Traffic Control: Changing traffic signal timing plans to better match bus travel characteristics and reduce delay by implementing a centralized signal control system to allow regular updating of signal plans to meet changing conditions
- Active Signal Priority: Adding communications equipment to traffic signals and transit vehicles which would extend the green signals or shorten the red signals when transit vehicles approach

2 approaches involved physical changes to Douglas Street to provide transit priority.

- The first was based on queue jumpers on Douglas Street at congested intersections such as Hillside, Finlayson, Cloverdale and Saanich Road as anticipated in the 1999 transit priority approach.
- The second was based on a busway in the center of Douglas Street using the rapid transit right of way identified by the City of Victoria and BC Transit subsequent to the LRT feasibility study completed in the 1990s.

Operational changes to transit service, such as reducing the number of stops on Douglas Street were also examined.

The project team conducted a number of traffic modeling exercises using sophisticated simulation tools calibrated to existing conditions on the Douglas Street Corridor. The results of these assessments were included in a multiple account assessment of the strategies where costs and benefits could be assessed in qualitative and quantitative terms. The MAE process includes the following evaluation criteria or accounts:

- Financial Account, which includes capital, operating and maintenance costs for the project over the life of the improvement.
- Customer Service considerations, which include travel time benefits to users, as well as benefits to BC Transit in terms of reduced operating hours.
- Social and Community Benefits, which include property impacts, community severance, cross-street delays, compatibility with the community plans, visual impacts and bicycle and pedestrian impacts.
- Economic Development considerations, which include business access, parking for businesses and land value impacts.
- Environmental considerations, which include land impacts and air quality impacts.

This analysis has concluded that improving Transit Operations to reduce the number of stops, implementing a Centralized Traffic Control System and Active Signal Priority, yield very high net benefits, for a total capital investment of \$2.94 million. In addition to the financial benefits, these improvements yield social/community, economic and environmental benefits to society. These improvements (termed Phase 1 and described in more detail below) are now being implemented through the capital funding provided by Federal and Provincial infrastructure programs and BC Transit capital funding.

The analysis also found that construction of a median busway would yield significant additional travel time benefits to the users amounting to \$5.7 million annually, as well as additional benefits to the community in terms of social, economic and environmental benefits associated with the much improved rapid bus system. The busway would require an additional investment of approximately \$3.3 million for planning, design and construction of the facility. The issues with respect to business impacts and impacts on green spaces, should be examined in more detail and designs prepared to mitigate the impacts. Then a public consultation program to solicit input from all affected stakeholders prior to finalizing the busway design should be carried out.

Phase 1 Implementation

The first phase of implementation is funded through capital contributions from the Infrastructure program and BC Transit capital funding. A total budget of \$2.94 million has been allocated for this project. BC Transit has been requested to manage the project on behalf of the City of Victoria.

There are two primary components to this phase of the project:

- Design and development and implementation of a centralized traffic signal control system and
- Design and development and implementation of active transit priority on the corridor

The centralized traffic signal control system implementation involves

- updating traffic signal controllers owned by the Ministry of Transportation, District of Saanich and City of Victoria to technology which can communicate with transit vehicles and central control
- updating all traffic signal plans to accommodate transit priority phases and commands
- acquiring central traffic control software and hardware
- developing the inter-agency agreements and management protocols to ensure on-going operation and maintenance of the system

Active transit priority involves the buses using the corridor communicating with the traffic signals to shorten the delays that bus passengers encounter. This implementation involves:

- Acquiring the traffic signal control hardware required to add this functionality
- Adding associated equipment to transit vehicles indented to operate regional services on this corridor
- Adjusting traffic signal timing and operations to include transit priority

These steps are now underway. Acquisition of the required equipment is anticipated by spring 2006 with full implementation by fall 2006. Under the Infrastructure grant requirements, project work must be concluded by the end of next fiscal year.

Phase 2 and Funding Process

The planning phase recently completed identifies that improved transit services better meeting the needs of the region is achievable through the development of a median busway between downtown and Saanich Road. The exclusive right-of-way would reduce transit travel times and increase the reliability and consistency of transit service leading to an increase in ridership (see attachment).

Buses would use curb side stops in the downtown as they do now and transition to a center lane busway at Herald Street, just past the old Bay Store. The bus lanes would occupy the center 7.0 meters of Douglas Street as anticipated by the City of Victoria's dedication of this right-of-way in the 1990s. In the vicinity of Saanich Road buses would transition back to the curb lanes for Western community buses to continue along Highway 1 to View Royal, Colwood and Langford, while Peninsula buses used Saanich Road or an equivalent.

The multiple account analysis found that there would be positive benefit to transit and the community from the development of such a facility. There are many detailed questions that need to be resolved through a detailed planning and design process including station location and design, impacts on left turning traffic, pedestrians and local access from the facility.

In order to obtain funding for this detailed planning, design and community consultation process it is recommended that an application to the Strategic Priorities Fund be made. This fund was established through the federal/provincial "New Deal" agreement on gas tax funds transfer and is administered by UBCM. The Strategic Priorities Fund is established to fund strategic investments that are larger in scale or regional in impact. BC Transit with CRD and municipal support can apply for project funding through this means. As the busway facilitates several of the regional and municipal development objectives as well as transportation and environmental objectives of the "New Deal", it is anticipated that this project will meet approval with the fund Board. This project application would represent a first opportunity to advance a regional transportation project under the BC Transit/CRD cooperation agreement signed earlier this fall.

Planning and Implementation Process

Detailed planning for the project would commence subsequent to the acquisition of funds for the project. It is anticipated that the planning process would take approximately 12 months.

The project would include a significant community consultation process. A project oversight committee including political representatives from the City of Victoria, District of Saanich, CRD and the Commission and senior staff from BC Transit and the Ministry of Transportation would provide the overall direction with respect to regional and municipal goals. The technical work of the project would be managed by BC Transit through a Steering Committee comprised of Transit, Ministry of Transportation, City of Victoria, District of Saanich and CRD staff. A Stakeholder committee including local community groups, adjacent land owners and business representatives and Douglas Street users will assist in ensuring that community issues and communications are well addressed. Block to block meetings with adjacent properties are anticipated to review plans and issues.

At the end of the detailed planning review, the recommended plans would be brought before this Commission, and Councils in Victoria and Saanich for their approval. The Ministry of Transportation would also need to approve the final plan prior to construction.

Subsequent to that approval, detailed engineering would be finalized and construction commenced. It is anticipated that the construction process would take in the order of 6 months to complete.

RECOMMENDATION

IT IS RECOMMENDED THAT THE VICTORIA REGIONAL TRANSIT COMMISSION DIRECT STAFF TO SEEK THE ENDORSEMENT OF THE CRD UNDER THE BC TRANSIT/CRD COOPERATION AGREEMENT, AS WELL AS, CITY OF VICTORIA AND MUNICIPALITY OF SAANICH FOR STRATEGIC PRIORITY FUNDING TO COMPLETE THE PLANNING AND DEVELOPMENT OF PHASE II OF THE DOUGLAS STREET TRANSIT PRIORITY PROJECT - THE DOUGLAS STREET BUSWAY.

Ron Drolet
Senior Vice President
Customer Service and Corporate Secretary

Attachment: Douglas Street/ Highway 1 Corridor Final Report Executive Summary

Douglas Street / Highway 1 Transit Priority Study

October 2005

EXECUTIVE SUMMARY

The *Travel Choices* strategy developed in conjunction with the Capital Region Growth Strategy defines the long term transit service requirements for the region. In order to achieve the community, transportation and environmental objectives of the Growth Strategy, Travel Choices envisions a network of rapid transit services linking the downtown of Victoria to major regional growth centers in the outer city and the suburbs. Travel Choices calls for development of rapid transit corridors along Douglas Street from downtown Victoria to Langford on the west and to Sidney and Swartz Bay ferry terminal on the northeast, as shown in Exhibit 1.1.

As a first step in implementing meeting the needs of the Regional Growth strategy, BC Transit has been investigating the application of lower cost, bus transit and transit priority measures in this corridor, which could be implemented in advance of LRT. The bus transit service will involve limited stop bus service, incorporating transit priority measures to achieve rapid and on time service performance. The enhanced rapid bus transit services will promote growth in transit ridership in the corridor and strengthen transit linkages between major centers.

The first steps in implementing improved transit services in the western corridor were the development of transit queue jump lanes and transit signal priority northbound on Highway 1 at both McKenzie Avenue and Tillicum Road, efforts which yielded high transit benefits for relatively low cost.

Since then, BC Transit and the City of Victoria have applied and received grants from the federal and provincial governments, and together with BC Transit's contribution, have created a \$3 million infrastructure fund to improve transit services in the corridor. The consulting firm IBI Group was retained to assess auto and transit operations on Douglas Street and Highway 1 between Belleville Street in the downtown and Helmcken Road in the District of Saanich and to develop improvement plans to meet these objectives. A number of problems and possible solutions were identified as summarized in Exhibit 1.2.

Exhibit 1.1 Transit Network Development

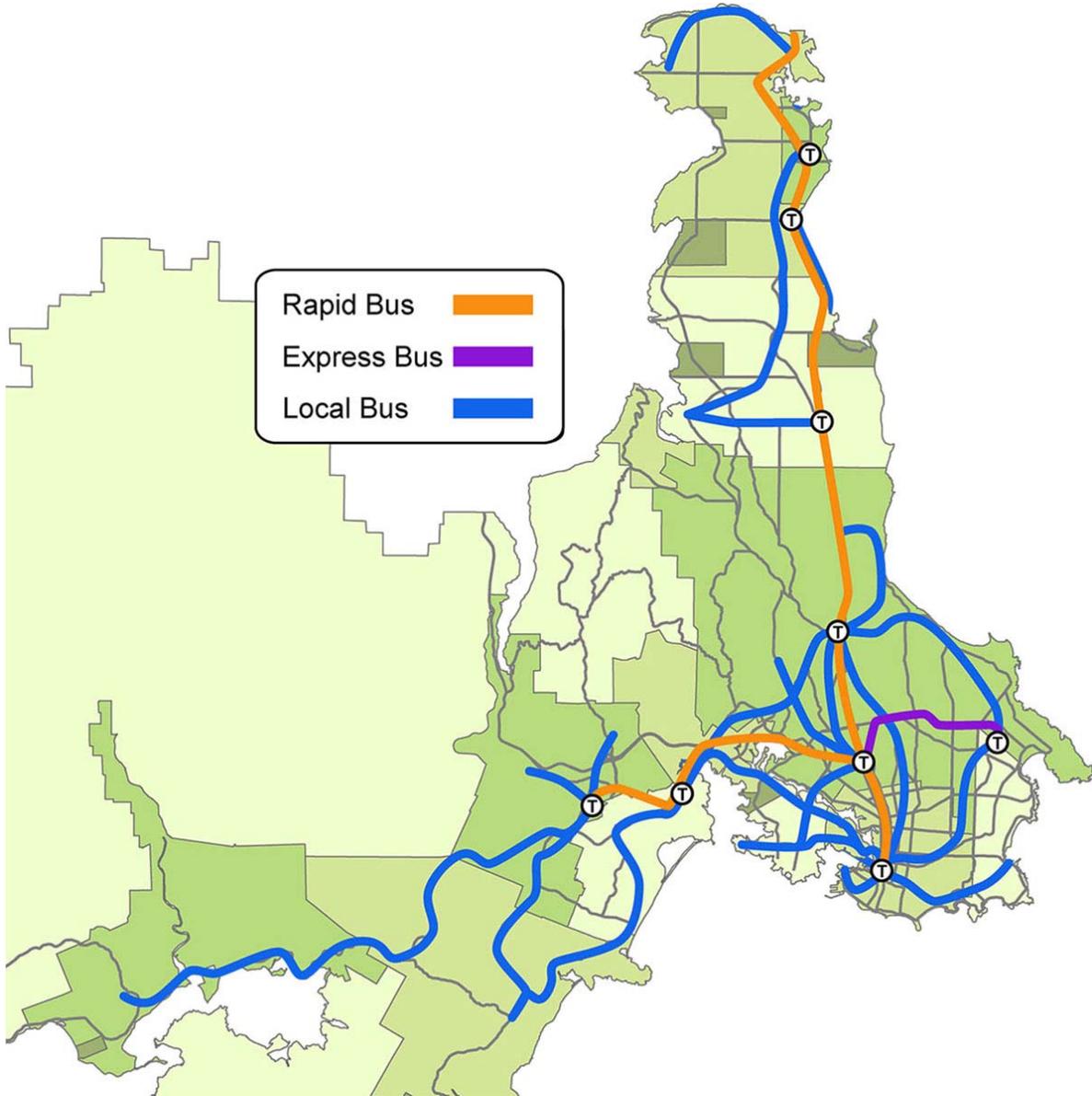


Exhibit 1.2 Transit Service Problems And Solutions

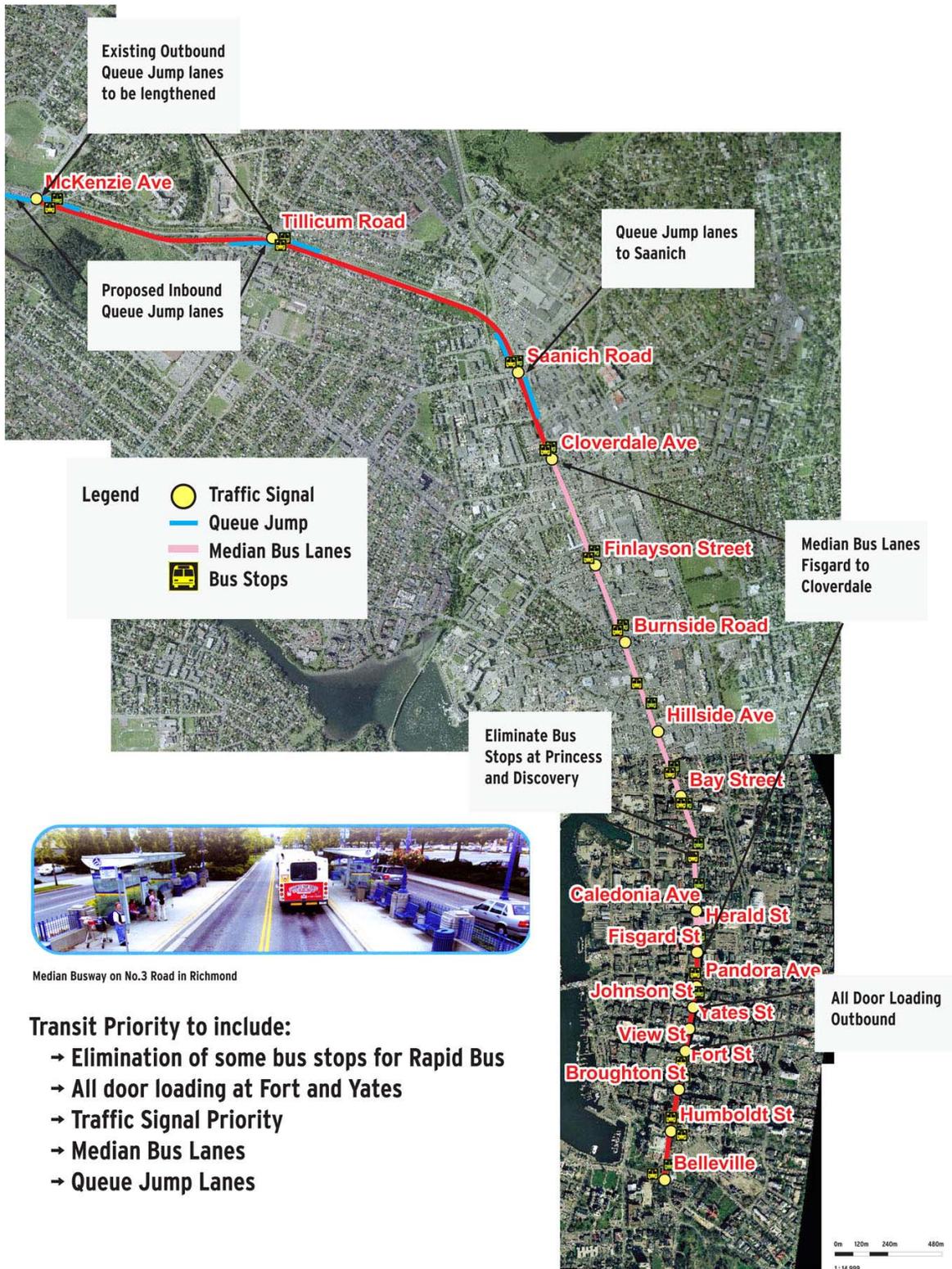
Problems	Possible Solutions
<ul style="list-style-type: none"> Some bus stops are very close together resulting in low rider usage at these stops and increased delay stopping and starting. 	<ul style="list-style-type: none"> It is proposed to introduce limited stop, rapid bus service and eliminate some low usage, closely spaced bus stops for this service.
<ul style="list-style-type: none"> Bus layover times at timing points are sometimes very high. 	<ul style="list-style-type: none"> It is proposed to eliminate mid-route timing points, particularly for regional routes in this portion of the corridor.
<ul style="list-style-type: none"> High variances in travel times were observed in the peak direction, particularly in the northbound direction in p.m. peak period. 	<ul style="list-style-type: none"> Traffic signal priority, bus lanes and queue jump lanes are proposed to improve travel times.
<ul style="list-style-type: none"> 95% to 98% of delays are due to traffic signals, with particularly high delays at McKenzie Avenue, Tillicum Road, Finlayson and Hillside in the southbound direction, and Saanich, Cloverdale, Broughton and Hillside in the northbound direction. 	<ul style="list-style-type: none"> Bus lanes, queue jump lanes and traffic signal priority measures are proposed to address these issues.
<ul style="list-style-type: none"> Travel speeds are higher on Blanshard than Douglas 	<ul style="list-style-type: none"> Blanshard provides another feasible option for operation of some limited stop routes.

The possible solutions were developed further and described on graphs and charts and presented at a public open house on June 29th. Exhibit 1.3 presents the transit priority alternatives. The improvements are categorized into three groups:

- Transit Operations, including elimination of some closely spaced bus stops, eliminate some timing points and provide all door loading at stops where large numbers of passengers are boarding.
- Transit Priority Measures which included improved traffic signal coordination and bus activated traffic signal priority.
- Geometric improvements - two approaches were investigated. One based on queue jump lanes similar to the improvements on Highway 1 northbound, the other using median bus lanes.

The open house was advertised in the media and letters were sent to all property owners along the corridor to solicit input. There was lively discussion of the need for improved transit in the corridor and general support for the measures, particularly the busway, in hope that this would lead to eventual construction of LRT.

Exhibit 1.3 Transit Priority Alternatives



Median Busway on No.3 Road in Richmond

Transit Priority to include:

- Elimination of some bus stops for Rapid Bus
- All door loading at Fort and Yates
- Traffic Signal Priority
- Median Bus Lanes
- Queue Jump Lanes

Following the open house meeting, discrete improvement options or scenarios were developed by the consultants and subjected to comprehensive evaluation of benefits and costs, applying the multiple account evaluation (MAE) evaluative process developed by the Province and used by BC Transit and Ministry of Transportation. The MAE process includes the following evaluation criteria or accounts:

- Financial Account, which includes capital and operating and maintenance costs for the improvement over the life of the improvement.
- Customer Service considerations, which include travel time benefits to users, as well as benefits to BC Transit in terms of reduced operating hours.
- Social and Community Benefits, which include property impacts, community severance, cross-street delays, compatibility with the community plans, visual impacts and bicycle and pedestrian impacts.
- Economic Development considerations, which include business access, parking for businesses and land value impacts.
- Environmental considerations, which include land impacts and air quality impacts.

The multiple account evaluation concluded the following:

Scenario 1: Transit Operations Improvement

- this scenario involves elimination of two bus stops in each direction on the route, provision of all door loading, implementation of a rapid bus marketing program, and updating shelters at the rapid bus stops and upgrading rapid bus vehicles.
- capital cost - \$800,000.
- these improvements will yield high benefits to users and to BC Transit, totaling \$10 million over 10 years.
- this scenario should be implemented immediately.

Scenario 2: Transit Operations and Centralized Traffic Signal Control

- this scenario involves implementation of a centralized traffic signal control system in the corridor to improve both auto and transit flows, and which is responsive to changes in traffic patterns throughout the day and throughout the week.
- incremental capital cost - \$1.25 million
- 10 year net benefits - \$16 million
- positive benefits in terms of community plan compatibility, land value increase and reductions in fuel consumption and greenhouse gas emissions.

Scenario 3: Transit Operations, Centralized Traffic Control and Traffic Signal Priority

- as well as the transit operations and centralized traffic control system, this scenario would also involve implementation of equipment on the rapid bus fleet and at signalized intersections which would provide priority to transit vehicles to reduce traffic signal delay.
- incremental capital cost – \$880,000
- net benefits – \$26 million over 10 years.

- higher quality transit service will encourage greater transit usage and be more compatible with the long term transit plan, encourage higher land values and lower auto fuel consumption and greenhouse gas emissions.

Scenario 4: Busway Between Herald Street and Saanich Road

- this improvement would involve construction of two median bus lanes as well as bike lanes between Herald Street and Saanich Road, as well as implementation of the centralized traffic control system.
- incremental capital cost – \$3.3 million
- significant benefits to users and to BC Transit, amounting to a net benefit of \$32 million over 10 years.
- additional benefits in terms of a stronger statement in support of the long term plan for rapid transit, benefits to bicyclists, enhanced land values and greater reductions in fuel consumption and greenhouse gas emissions.
- some minor disbenefits such as restrictions that pedestrian and traffic crossing must occur at signalized intersections, longer walking distances for pedestrians crossing the wider roadway, some loss of parking and trees, and increased left turn restrictions.

Scenario 5: Busway + Traffic Signal Priority

- this is the same as Scenario 4, but it also includes bus activated traffic signal priority.
- incremental capital cost is approximately \$880,000 greater than Scenario 4, i.e. \$6.2 million.
- benefits are approximately \$6 million greater than Scenario 4, that is \$38 million over 10 years.
- greater positive benefits due to higher quality transit service and higher transit usage, and same disbenefits.

These transit improvements clearly fall into two time phases:

- Phase 1 should involve immediate implementation of the transit operational improvements, as well as the centralized traffic control system and the transit priority equipment to be installed on buses operating in the corridor, and at the 19 signalized intersections. This work would amount to a capital expenditure of \$2.9 million and would be funded under the \$3 million federal / provincial / BC Transit fund. The project should be initiated and funds committed before the end of the fiscal year, March 31, 2006, in order to qualify under the terms of the federal / provincial funding.
- Phase 2 should involve implementation of the busway, with the traffic signal priority system. Work should commence immediately on the development of busway and bikeway designs to mitigate the negative impacts described above, and then undertake a comprehensive stakeholder consultation program to identify implementation problems and find appropriate solutions. Timing of construction would be dependent on availability of the \$3.3 million capital investment required for this phase.

The Phase 1 work can commence immediately and the transit improvement systems defined and contractors selected in sufficient time for commitments to be made prior to the fiscal year end, March 31, 2006.

While design of the Phase 1 improvements associated with the traffic control system and transit priority systems proceeds, work can also proceed on the Phase 2 design to ensure compatibility of designs, so that the busway system can be implemented with least loss of initial investment.