



# City of Richmond

## Report to Committee

**To:** General Purposes Committee  
**From:** Lloyd Bie, P. Eng.  
Director, Transportation  
**Date:** June 19, 2020  
**File:** 01-0154-04/2020-Vol 01  
**Re:** TransLink 2020 Capital Cost-Share Program – Supplemental Applications

### Staff Recommendation

That as described in the report titled “TransLink 2020 Capital Cost-Share Program – Supplemental Applications” dated June 19, 2020 from the Director, Transportation:

- (a) the transit-related projects recommended for cost-sharing as part of the TransLink 2020 Bus Speed and Reliability Program be endorsed;
- (b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Revised Consolidated 5 Year Financial Plan (2020-2024) be updated accordingly; and
- (c) staff be directed to implement the projects approved by TransLink and report back in one year as part of the City’s proposed applications to TransLink’s 2021 Capital Cost-Share Programs.

Lloyd Bie, P. Eng.  
Director, Transportation  
(604-276-4131)  
Att. 4

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Finance	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
RCMP	<input checked="" type="checkbox"/>	
Fire Rescue	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b>	<b>APPROVED BY CAO</b>

## Staff Report

### Origin

In October 2019, Council endorsed the submission of several road, bicycle and transit-related improvement projects for funding consideration from TransLink's 2020 capital cost-share funding programs. In response to a late call in March 2020 from TransLink for submissions to its 2020 Bus Speed and Reliability (BSR) Program, the City submitted eight applications. The City's 2020 BSR Program submissions have received preliminary approval and are anticipated to receive final approval in early July 2020. Staff are now seeking Council's endorsement of the projects and authorization to execute the anticipated funding agreements.

Beginning in March 2020, TransLink has made a number of operational changes in response to the COVID-19 pandemic to balance lower ridership with the need to maintain physical distancing, and address the loss of fare revenue, gas tax and other funding sources. TransLink has advised that there is no change at this time to its capital funding towards municipal cost-share programs and the 2020 programs will proceed.

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

*Accountable, transparent, and responsible financial management that supports the needs of the community into the future.*

5.4 *Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.*

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

*Leadership in effective and sustainable growth that supports Richmond's physical and social needs.*

6.3 *Build on transportation and active mobility networks.*

### Analysis

#### TransLink 2020 Bus Speed and Reliability Program

TransLink's Bus Speed and Reliability (BSR) Program provides cost-share funding for feasibility studies and capital projects that support improved bus speed and reliability. TransLink may provide up to 100% cost-share funding for projects deemed to be high priority. For 2020, the BSR Program has \$3.725 million with all funding available on a competitive basis. Of the total applications received, the City's projects are recommended to receive the most funding of any municipality and comprise 35% (\$950,150) of the total funding recommended for approval (Figure 1). As summarized in Table 1 and described in detail below, the City submitted a total of eight applications to the 2020 BSR Program.

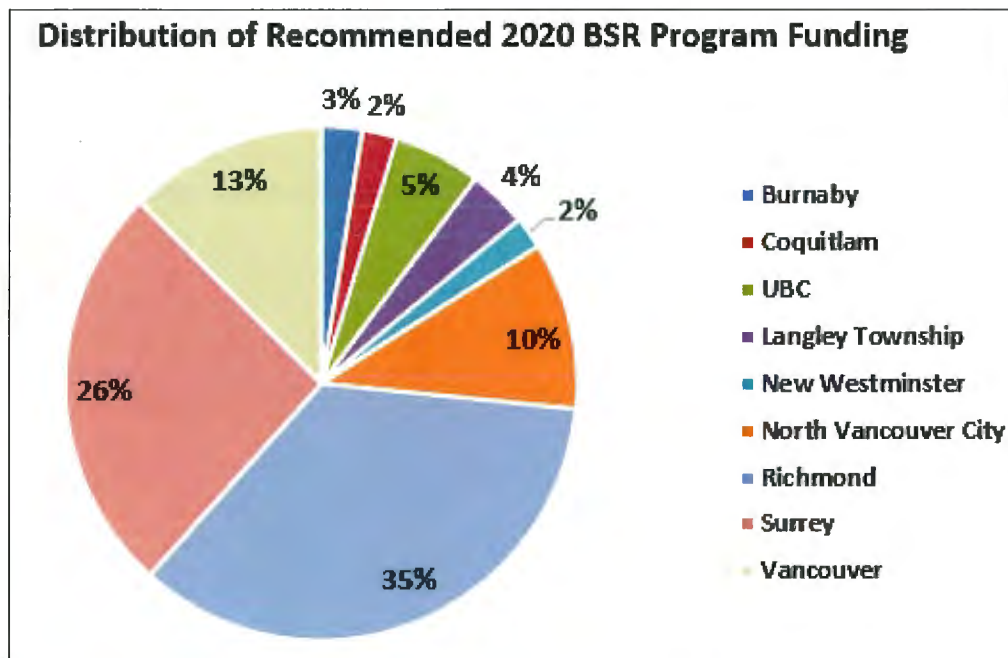


Figure 1: Distribution of Recommended 2020 BSR Program Funding

Table 1: Summary of Projects submitted to 2020 BSR Program

Category	# of Projects	General Scope
Capital Project	5	Implement measures recommended by Project Development studies completed as part of the approved 2019 BSR Program: (1) Steveston Highway and No. 5 Road in vicinity of Highway 99: Channelization of Traffic (2) Bridgeport Station and Transit Exchange: Bus Access (3) Bridgeport Station and Transit Exchange: Bus Egress (4) Eastbound Westminster Highway at Garden City Road: Signal Changes (5) Eastbound Westminster Highway at Garden City Road: Left-Turn Lane
Project Development	3	Undertake studies of "hot spot" locations in Richmond where buses are experiencing travel delays as identified by TransLink: (1) No. 3 Road (Cook Road-Steveston Highway) (2) Corridor and "Hot Spot" Analysis: various locations (3) Steveston Highway (Highway 99-Palmberg Road)

#### Steveston Highway and No. 5 Road in vicinity of Highway 99: Channelization of Traffic

As part of the 2019 BSR Program, the City received funding to retain a consultant to analyze delays for bus service along Steveston Highway in the vicinity of Highway 99 and identify potential solutions. As shown in Table 2, a number of bus routes travelling eastbound on Steveston Highway from Shell Road towards Highway 99 encounter major delays due to traffic congestion during peak periods with many bus operators opting to take a long detour through Riverside Industrial Park to avoid the congestion. Similarly, buses travelling northbound on No. 5 Road intending to make a right turn at Steveston Highway also encounter traffic congestion as both eastbound lanes on Steveston Highway can be occupied by traffic heading to southbound Highway 99.

**Table 2: Bus Routes Impacted by Congestion on  
Steveston Highway and No. 5 Road in vicinity of Highway 99**

<b>Bus Route</b>	<b>Routing</b>	<b>Destination</b>
403, 404, 408 (weekends), 413	Eastbound Steveston Hwy	Entertainment Blvd
Buses leaving Richmond Transit Centre "Not in Service" to begin peak period service south of the Fraser River (i.e., from Ladner, Tsawwassen or White Rock)	Northbound No. 5 Road and Eastbound Steveston Hwy	Highway 99 Southbound

In addition, a key traffic-related concern received by the City from the public is that eastbound traffic on Steveston Highway intending to access No. 6 Road or northbound Highway 99 via the Highway 99 overpass is blocked by congestion on Steveston Highway from No. 5 Road to Highway 99, which stems from queued southbound traffic for the George Massey Tunnel and/or last minute merging of motorists traffic using and blocking the inside lane.

To improve bus speed and reliability as well as overall traffic operations, particularly for eastbound traffic using the Highway 99 overpass, the 2019 BSR study examined numerous options and ultimately recommended new signage and pavement markings to better direct motorists and minimize weaving, as well as traffic signal modifications.

This proposed 2020 BSR Program project will implement the recommended measures that separate and channelize traffic movements along Steveston Highway and No. 5 Road, and modify the traffic signal at Steveston Highway-No. 5 Road (Attachment 1). The components of the project comprise the following measures:

- Eastbound Steveston Highway: Install continuous flexible delineators along the approaches to No. 5 Road and to Highway 99 to separate traffic destined for southbound Highway 99 (curb lane) and northbound Highway 99/eastbound Steveston Highway (inside lane).
- Eastbound Steveston Highway at Highway 99: Provide a bus-only lane at the Highway 99 southbound on-ramp approach.
- Northbound and Southbound No. 5 Road: Install continuous flexible delineators along the approach to Steveston Highway and provide exclusive and shared turning lanes.
- Southbound No. 5 Road to Eastbound Steveston Hwy: The southbound to eastbound left-turn movement will be restricted for trucks for safety considerations due to conflicts if two trucks are turning simultaneously. Truck drivers making this movement will need to detour via Horseshoe Way and Coppersmith Way. However, few trucks will be impacted by this proposed change as currently, three trucks in the morning and one truck in the afternoon peak periods typically make the southbound to eastbound turn movement.
- No. 5 Road-Steveston Highway: Modify traffic signal operation.
- Signage and Pavement Markings: Add new signage (overhead and shoulder-mounted) on Steveston Highway and No. 5 Road to notify motorists of the changes and modify pavement markings to accommodate the changes.

The proposed measures will benefit both bus and general traffic operations, and are compatible with any future changes in the area associated with potential improvements at the Steveston Highway-Highway 99 Interchange and the George Massey Tunnel crossing. The key benefit for motorists is that vehicle traffic will be channelled into the correct lane before approaching the Steveston Highway-No. 5 Road intersection, thereby reducing the congestion on eastbound

Steveston Highway from No. 5 Road to Highway 99 that arises from the last minute merging of traffic using and blocking the eastbound centre lane on Steveston Highway. Longer vehicle queues for traffic destined for Highway 99 southbound may result as the proposed improvements will direct motorists into the appropriate lane before approaching the Steveston Highway-No. 5 Road intersection.

Transit service in particular will benefit as the channelization will help buses to access:

- the eastbound bus-only lane on Steveston Highway for routes destined southbound on Highway 99; or
- the through eastbound lane on Steveston Highway across the Highway 99 overpass for routes destined for No. 6 Road.

#### *Stakeholder Consultation and Public Awareness*

Staff have shared the proposed measures with the Ministry of Transportation and Infrastructure (the Ministry), who did not identify any significant concerns. Prior to implementation, staff will undertake detailed design, discuss the measures in further detail with the Ministry and consult with local area businesses and stakeholders. Targeted consultation via a mail-out to residents and businesses within the area bordered by Williams Road, Shell Road, Entertainment Boulevard, and Dyke Road will occur in Q3 2020. The general public will be advised of the proposed measures prior to implementation via the City's regular communications channels (e.g., media release, information on City website, social media, etc).

#### *Enforcement*

The proposed measures are a notable change to traffic movements and staff anticipate that increased enforcement may be required to ensure motorists' compliance, particularly during the initial implementation phase. Staff have consulted with Richmond RCMP regarding the project and will continue to engage with RCMP throughout the project implementation.

#### *ICBC Safety Audit of Proposed Improvements*

At the City's request, ICBC staff carried out an independent safety audit of the proposed scope with an aim to improve the overall road safety performance of the project. The proposed design has incorporated ICBC's suggestions from the audit that are feasible and implementable within the project scope.

#### *Implementation*

Pending Council endorsement, the project will be implemented in Q4 2020/Q1 2021 following public and stakeholder consultation. Staff will monitor operations and report back in one year with any recommended modifications.

#### Bridgeport Station and Transit Exchange: Bus Access and Egress

As part of the 2019 BSR Program, the City received funding to retain a consultant to analyze delays due to traffic volumes for regional bus routes to/from south of the Fraser River when travelling between Highway 99 and the Bridgeport Exchange. These two proposed 2020 BSR

Program projects will implement the recommended measures to improve bus speed and reliability (Attachment 2).

- *Bridgeport Station Access*: From Highway 99, regional buses currently travel westbound Bridgeport Road and northbound Great Canadian Way. This project will re-route these buses along Gage Road and Beckwith Road, thus avoiding the congestion along the current route. The changes comprise new signage and pavement markings, and modification of the curb return at the northeast corner of Great Canadian Way-Beckwith Road to accommodate bus turning movements. Abutting business along Gage Road and Beckwith Road as well as residents on Beckwith Road east of Highway 99, who rely on these roads for access, will be informed of the proposed changes via mail notification.
- *Bridgeport Station Egress*: This project will modify signal operation and timing at Great Canadian Way-Sea Island Way to improve the operation performance and reduce the delay for regional bus routes when travelling from Bridgeport Exchange to Highway 99 via southbound Great Canadian Way and eastbound Sea Island Way. As a follow-up to the 2019 study, a separate study is currently underway to examine long-term improvements such as establishing a southbound bus-only lane on Great Canadian Way to further facilitate buses accessing Highway 99 southbound. These study findings will be reported back separately when completed.

#### Eastbound Westminster Highway at Garden City Road

As part of the 2019 BSR Program, the City received funding to retain a consultant to analyze the delays experienced by the 301 (Newton Exchange-Brighthouse Station) service during peak hours at Westminster Highway-Garden City Road when making an eastbound to northbound left-turn. As recommended by the 2019 study, two separate projects are proposed for the 2020 BSR Program to reduce the delay in bus travel time (Attachment 3).

- *Traffic Signal*: Modify signal operation and timing to improve performance.
- *Eastbound Left-Turn Lane on Westminster Highway*: Increase the storage capacity for the eastbound left-turn lane by approximately 30 m to avoid the blockage of the left-turn bay by eastbound through vehicles and accommodate queuing during peak hours.

#### Project Development Studies

In addition to the above proposed capital projects, the City also submitted three Project Development studies as part of the 2020 BSR Program. All of the locations (Attachment 4) are identified by TransLink as key areas in Richmond where bus speed and reliability are negatively impacted. Subject to final approval by TransLink, each of the proposed projects will fund retaining a consultant to analyze the issues and identify potential solutions. If supported by the City and TransLink, the potential solutions may then be the subject of future cost-share applications to support implementation.

- *No. 3 Road (Cook Road-Steveston Highway)*: TransLink's 2019 Bus Speed and Reliability Report ranks No. 3 Road as #17 among the top 20 corridors in the region (and the only one in Richmond) contributing to person-hours of delay. The project will review and identify bus



speed and reliability issues in the southern portion of the corridor and develop conceptual designs or operational plans to address the issues. A similar analysis and review of the northern section of No. 3 Road (Cook Road-River Road) is anticipated to be undertaken as part of TransLink's planned RapidBus service between Richmond and the Expo Line.

- *Corridor and "Hot Spot" Analysis:* TransLink has identified several corridors as having high person-hours of delay as well as selected hot spot intersections. This project will review and identify bus speed and reliability issues for these corridors and hot spots, and develop conceptual designs or operational plans to address the issues at the following sites:
  - Garden City Road: Sea Island Way-Cook Road
  - Lansdowne Road: No. 3 Road-Kwantlen Street
  - Granville Ave: No. 3 Road-No. 4 Road
  - Horseshoe Way at No. 5 Road
  - Bridgeport Road at Viking Way
- *Steveston Highway (Highway 99-Palmberg Road):* As the next phase of analysis of delays to bus operations along Steveston Highway in the vicinity of Highway 99, particularly in the westbound direction, this project will retain a QEP (Qualified Environmental Professional) to analyse and quantify the environmental impacts of widening Steveston Highway (Highway 99-150 m east of Palmberg Road) to provide an additional westbound lane to improve bus speed and reliability. An environmental impact analysis is required as there are ESA (Environmentally Sensitive Area) and RMA (Riparian Management Area) designations along this corridor that will need to be addressed if the road is to be widened.

#### Requested Funding and Estimated Project Costs

The total recommended funding for the City's Project Development and Capital Project applications to TransLink's 2020 Bus Speed and Reliability program is \$950,150, which will support projects with a total estimated cost of \$995,900 (Table 3). The City will receive 100% funding for the Project Development applications and will provide in-kind support via management of the consultant. Of the Capital Project applications, the City will contribute 10% of the estimated total cost towards two of the projects where the project is anticipated to improve travel speed and reliability for general traffic as well as buses. The City will receive 100% funding for the remaining three projects where the changes will primarily benefit bus performance. Overall, TransLink will fund 95% of the total costs with the City funding the balance of 5% of the total costs.

Table 3: Projects Approved as part of 2020 TransLink Bus Speed and Reliability Program

Category	Project	Requested TransLink Funding <sup>(1)</sup>	Proposed City Portion	Est. Total Project Cost
Project Development	No. 3 Road (Cook Road-Steveston Highway)	\$100,000	\$0	\$100,000
	Corridor and Hot Spot Analysis	\$100,000	\$0	\$100,000
	Steveston Highway (Highway 99-Palmberg Road)	\$26,200	\$0	\$26,200
	<b>Subtotal</b>	<b>\$226,200</b>	<b>\$0</b>	<b>\$226,200</b>

Category	Project	Requested TransLink Funding <sup>(1)</sup>	Proposed City Portion	Est. Total Project Cost
Capital Project	Bridgeport Station Access	\$25,900	\$0	\$25,900
	Bridgeport Station Egress	\$33,750	\$3,750	\$37,500
	Garden City Road-Westminster Highway: Signal Changes	\$87,800	\$0	\$87,800
	Garden City Road-Westminster Highway: Eastbound Left-Turn Lane Extension	\$198,500	\$0	\$198,500
	Steveston Highway (No. 5 Road-Hwy 99)	\$378,000	\$42,000	\$420,000
	<b>Subtotal</b>	<b>\$723,950</b>	<b>\$45,750</b>	<b>\$769,700</b>
	<b>Total</b>	<b>\$950,150</b>	<b>\$45,750</b>	<b>\$995,900</b>

(1) The amounts shown represent the maximum funding contribution to be requested from TransLink based on the City's cost estimate for the project. The actual amount invoiced to TransLink follows project completion and is based on incurred costs.

Should TransLink not provide final approval, the projects will be deferred and the City will re-apply to TransLink as part of its 2021 BSR Program. All projects are deemed good candidates for future BSR Program funding as they benefit transit riders and were developed in collaboration with TransLink staff. Based on the submissions being successful, the City will enter into funding agreements with TransLink. The agreements are standard form agreements provided by TransLink and include an indemnity and release in favour of TransLink. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the agreements.

### Financial Impact

The City's proposed total funding share of \$45,750 can be accommodated within approved Transportation annual programs.

### Conclusion

Eight projects submitted by the City have received preliminary approval by TransLink and are anticipated to receive final approval in July 2020 as part of its 2020 Bus Speed and Reliability program. Execution of the funding agreements and implementation of the projects will support advancing the goals of the *Official Community Plan* to achieve a higher transit mode share and improve traffic operations for the public at two key locations: Steveston Highway-No. 5 Road and Garden City Road-Sea Island Way.



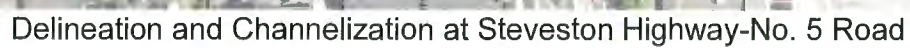
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- Att.1: Steveston Highway and No. 5 Road in vicinity of Highway 99
- Att.2: Bridgeport Station and Transit Exchange: Bus Access and Egress
- Att.3: Eastbound Westminster Highway at Garden City Road
- Att.4: Location of Project Development Studies





Steveston Highway and No. 5 Road in vicinity of Highway 99



Overhead Signage on Steveston Highway west of Shell Road



Steveston Highway and No. 5 Road in vicinity of Highway 99



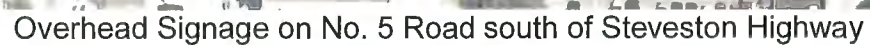
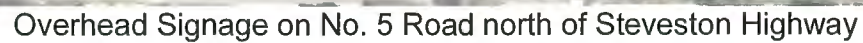
Overhead Signage on Steveston Highway east of Shell Road

Steveston Highway and No. 5 Road in vicinity of Highway 99



Overhead Signage on Steveston Highway east of Coppersmith Place







Steveston Highway and No. 5 Road in vicinity of Highway 99



Shoulder-Mounted Signage for Truck Detour  
for Southbound No. 5 Road to Eastbound Steveston Hwy Left-turn Movement

# Bridgeport Station and Transit Exchange: Bus Access and Egress



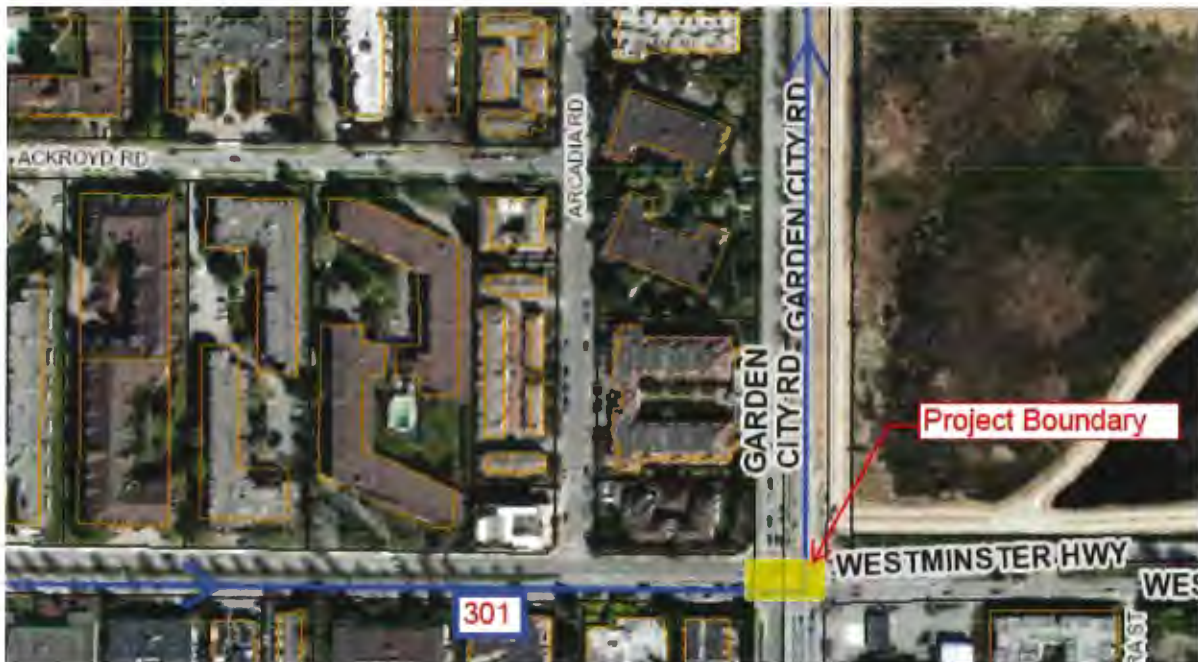
Bridgeport Transit Exchange: New Routing for Regional Bus Access



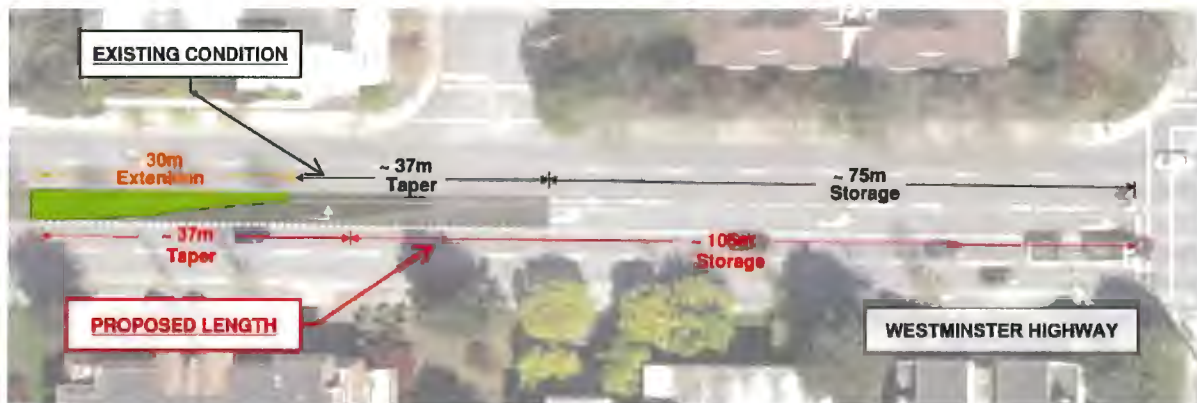
Bridgeport Transit Exchange: Modification to Traffic Signal Operations for Bus Egress



### Eastbound Westminster Highway at Garden City Road



Westminster Highway-Garden City Road: Modification to Traffic Signal Operations



Eastbound Westminster Highway at Garden City Road: Extension of Left-Turn Lane

## Location of Project Development Studies



No. 3 Road (Cook Road-Steveston Highway)



Location of Project Development Studies



Corridor and “Hot Spot” Analysis: Various Locations



Steveston Highway east of Highway 99: Environmental Study