

То:	Public Works & Transportation Committee	Date:	August 21, 2013
From:	Victor Wei, P. Eng. Director, Transportation	File:	01-0150-20-ICBC1- 01/2013-Vol 01
Re:	ICBC-CITY OF RICHMOND ROAD SAFETY PARTNERSHIP		

Staff Recommendation

- 1. That a letter be sent to the Board of Directors of ICBC expressing the City's appreciation of ICBC's comprehensive and collaborative approach to improving road safety in Richmond for all users.
- 2. That a copy of the report dated August 21, 2013 from the Director, Transportation outlining ICBC-City partnerships that have contributed to improved road safety in Richmond be forwarded to the Richmond Council-School Board Liaison Committee for information.
- 3. That the additional proposed road safety improvement projects, as described in the report, be endorsed for submission to the ICBC 2013 *Road Improvement Program* for consideration of cost sharing funding.
- 4. That should the above applications be successful, the Chief Administrative Officer and General Manager, Planning and Development be authorized to negotiate and execute the cost-share agreements and the 2013 Capital Plan and 5-Year (2013-2017) Financial Plan be amended accordingly.

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Victor Wei, P. Eng. Director, Transportation (604-276-4131)

Att. 3

REPORT CONCURRENCE			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Finance Division Engineering Law RCMP		Ar Goreg	
REVIEWED BY DIRECTORS	Initials: DW	REVIEWED BY CAO	
	CNCL - 193	4	

Staff Report

Origin

The City and ICBC have a long-standing collaborative approach to improve road safety in Richmond, which supports Council's community safety term goal via the implementation of road-related measures that are targeted to the city's specific needs and priorities as well as contribute to a healthy and liveable community. This report summarizes traffic safety projects that have received funding from the ICBC-City Road Improvement Program and outlines other ICBC-City partnerships that together have contributed to improved road safety in Richmond for all users of city streets.

Analysis

1. Road Improvement Program

ICBC initiated the Road Improvement Program in 1990 to help fund the implementation of road safety engineering measures to reduce the frequency and/or severity of crashes at high-risk locations, reduce claims costs and reduce the potential for crashes. The Program has fostered committed partnerships with communities across BC such as Richmond, which began participating in 1996, based on a strong mutual interest of reducing crashes.

1.1. Types of Initiatives Funded

The Program provides funding to assist with road safety improvements specific to highcrash and high conflict locations, broader measures known to improve road safety and, more recently, pro-active and innovative safety measures (see **Attachment 1** for a list of the current priorities of the Program). Examples of eligible projects include:

- the upgrade of road signs and markings to a consistent standard;
- traffic signal head upgrades such as larger diameter lenses, provision of a primary signal head for each through lane, and installation of highly reflective tape on the perimeter of the yellow backboards;
- installation of uninterrupted power supply at signalized intersections to ensure that signals remain operational during power outages;
- anti-skid surfacing treatments to reduce collisions or conflicts occurring under wet pavement conditions or due to loss of control;
- improved curve delineation with signage and pavement markings on roads with a history of off-road crashes;
- "grey spot" safety treatments that attempt to pro-actively address safety concerns at sites with high conflict situations (e.g., school zones) but not necessarily a high recorded crash history; CNCL - 194



Anti-skid Surface & Delineators at No. 6 Road S-Curve



LED Street Name Signs

- the use of new technology and tools that currently may not have extensive research but show promise of potential benefits; and
- safety improvements for vulnerable road users (pedestrians and cyclists) such as pedestrianactuated flashing beacons at crosswalks (i.e., special crosswalks), countdown timers at signalized intersections and shoulder widening for bike lanes.

1.2 Evaluation Criteria

Initially, ICBC funded only those retrofit road safety projects that were located at documented high crash and high conflict sites, and where the agency's analysis indicated that the proposed safety improvement and ICBC's contribution would meet a target return on investment of 2:1 over two years. In other words, for every dollar that ICBC invested into a road improvement project, ICBC would expect to save at least two dollars in claims costs within two years. This initial investment criterion of a 2:1 return over a two-year period remained in place until 2002.

In 2003, the funding criteria was changed to a target return on investment of 3:1 in two years to better reflect the actual rate of return that ICBC was achieving. However, subsequent review determined that the 3:1 criteria was too aggressive and caused a significant reduction in the level of ICBC contribution, which in turn marginalized ICBC's involvement in some projects. The funding criterion was therefore changed again in 2007, such that ICBC would expect to achieve a 50 per cent internal rate of return.

Effective 2013, ICBC broadened the eligibility of potential road safety projects to allow consideration of the implementation of new technology as well as pro-active measures to reduce the potential for crashes and to increase the safety of vulnerable road users such as pedestrians and cyclists.

1.3 Past Projects in Richmond

Attachment 2 summarizes the annual funding contributed by ICBC under the program as well as the major City projects that received the funding. Over the past 17 years (1996-2012), ICBC has contributed a total of nearly \$4.0 million to the City for an average of \$233,860 per year.

Recent projects around schools include the construction of neighbourhood walkways on Herbert Road (Afton Drive-Bates Road) and Aquila Road (lane north of Williams Road-Albion Road), both of which benefit students walking to/from school, and the installation of flashing school zone warning signs on Garden City Road at Garden City School to warn motorists of the presence of schoolchildren and remind drivers of the 50 km/h speed limit.



Flashing Beacons at Garden City Elementary School

This ICBC-City partnership is a vital component of the City's traffic safety program as it enables the City not only to undertake more traffic safety enhancements than it could alone but also to expedite some of these road safety improvement projects.

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1.4 Program Results

In 2009, ICBC undertook an evaluation of the safety performance of a sample of locations across BC (including three in Richmond) that have been improved under the Program in order to quantify its overall effectiveness by:

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- determining if the frequency and/or severity of collisions at the improvement sites was reduced after the implementation of the improvement; and by
- quantifying the program costs versus the economic safety benefits to determine the return on ICBC's road safety investment.

As summarized in Table 1, the results indicated that the goals and objectives of ICBC's Road Improvement Program have been achieved with an overall reduction in the frequency and severity of collisions and an excellent return on road improvement investments.

The same evaluation concluded that, within Richmond, ICBC sees a return four times the investment (i.e., for every dollar invested, ICBC saves \$4.00 in claims costs) – savings that get passed onto Richmond drivers.

Evaluation Results (2009)			
Criterion	Result		
Collision Reduction	 Property damage only collisions reduced by 11.9% Severe (fatal + injury) collisions reduced by 19.6% 		
Economic: 2-Yr Service Life	Net present value of \$21.3MBenefit/Cost ratio of 5.6		
Economic: 5-Yr Service Life	Net present value of \$54.1MBenefit/Cost ratio of 12.8		

Table 1: Road Improvement Program Evaluation Results (2009)

Given the significantly positive results achieved by the Program, ICBC not only is continuing its operation but also, as noted in Section 1.2, has recently expanded its scope of eligible projects to realize even greater benefits for road users. Staff anticipate using this opportunity to submit additional neighbourhood traffic safety projects such as the construction of walkways on local streets and the implementation of traffic calming measures, particularly in school zones.

1.5 Additional 2013 ICBC-City of Richmond Road Improvement Projects

At its March 25, 2013 meeting, Council approved the submission of a number of proposed road safety improvement projects to the 2013 *Road Improvement Program* for consideration of costshare funding. Since that time, staff have identified several additional projects related to the construction of the Railway Greenway for potential cost-share funding as shown in Table 2. With respect to the proposed project to install northbound left-turn arrows along Railway Avenue, ICBC has already pre-approved the project and prepared the cost-share agreements for execution.

Upon approval of a project by ICBC, the City would be required to enter into a funding agreement with ICBC. The agreement is provided by ICBC and generally includes an indemnity in favour of ICBC. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements for approved projects and the 2013 Capital Plan and 5-Year (2013-2017) Financial Plan be amended accordingly to reflect the receipt of external grants.

Proposed Project ⁽¹⁾	Est Total Cost	Source of City Funds ⁽²⁾	External Agency Funding
 Installation of NB left-turn arrows: Railway Ave at Steveston Hwy, Williams Rd, Francis Rd, Blundell Rd 	\$60,000	\$9,000 2013 Traffic Signal Program	\$42,000 ICBC (pending) \$9,000 TransLink (confirmed)
 Delineation of greenway crossings with green anti-skid surface: Railway Ave south of Brunswick Dr and Steveston Hwy, Williams Rd, Princeton Ave, Francis Rd, Blundell Rd, Granville Ave 	\$75,000	\$37,500 2013 Active Transportation Improvement Program	\$37,500 TransLink (confirmed)
Installation of raised crosswalks: • Granville Ave at McCallan Road • Railway Ave west of Brunswick Dr	\$67,000	\$33,500 2013 Neighbourhood Traffic Safety Program	\$33,500 TransLink (confirmed)

Table 2: Proposed Additional 2013 City-ICBC Road Improvement Projects

(1) Should additional proposed projects not listed be approved by ICBC to receive funding, the City's portion would be drawn from funding sources previously approved by Council.

(2) Should the submitted project receive funding from ICBC, the City's portion of the total cost would be reduced accordingly.

2. Municipal Road Safety Audit Program

Since 2001, ICBC has offered the services of its road safety specialists to perform road safety audits, which are formal and independent safety performance reviews of road transportation projects based on sound road safety engineering principles and undertaken from the perspective of all road users. The objectives of a road safety audit are to:

- minimize the frequency and severity of preventable collisions;
- consider the safety of all road users, including vulnerable road users;
- ensure that collision mitigation measures that may eliminate or reduce the identified safety problems are considered fully; and
- minimize potentially negative safety impacts outside the project limits (i.e., avoid introducing collisions elsewhere along the route or on the network).

The resulting reports document any identified safety issues and suggest improvements to address those issues at a conceptual level. These improvements can then be incorporated as each project proceeds through detailed design. Current major road projects that have benefitted from ICBC's review and expertise include the widening of Westminster Highway (Nelson Road-McMillan Way) and No. 6 Road (northbound between Westminster Highway and International Place).

3. Intersection Safety Camera Program

ICBC is a partner with the provincial government in the Intersection Safety Camera (ISC) Program, which was upgraded in 2010 with digital red-light cameras and expanded to 140 of B.C.'s most crash- and casualty-prone intersections. As part of this upgrade, eight new locations in Richmond were selected based on their rankings generated by a prediction model that considered crash frequency and severity, crash configurations, potential for improvement by an ISC, and the cost-benefit results derived by measuring predicted crash reduction against the projected cost of installing and operating a camera at a site. All eight cameras became fully operational in Spring 2011.

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An independent study to evaluate the impact of the expanded and upgraded ISC program is in progress and the results will be available in early 2014. The most recent peer-reviewed research conducted by ICBC concluded that intersection safety cameras reduced total crashes at ISC sites by five per cent. The research also showed a similar decrease in crashes resulting in injuries and fatalities. ICBC anticipates that the upgraded and expanded program will improve these road safety benefits.

4. Road Safety Education & Enforcement

ICBC works with Richmond RCMP and City staff to operate a number of recurring road safety campaigns in Richmond throughout each year that are often linked to seasonal events and changing weather conditions such as summer and holiday CounterAttack (June and December), back to school (September) and pedestrian safety (Spring and Fall at change of daylight savings time). For example, with respect to pedestrian safety, Richmond RCMP, ICBC and the City of Richmond jointly distributed 1,000 fluorescent wrist bands to pedestrians in high pedestrian locations throughout Richmond in Spring and Fall 2012 as part of a campaign to educate and remind pedestrians on safety tips when travelling in the dark or late at night.

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These annual campaigns are supplemented by specific events directed at a particular behaviour such as driver distraction (e.g., using a handheld device while driving). Attachment 3 identifies ICBC's 2013 calendar of road safety education campaigns. Active enforcement of the targeted behaviour by Richmond RCMP is a key component of the campaigns and all campaigns involve extensive use of media (e.g., television, radio, bus tail, and cinema advertising as well as staged demonstrations) for maximum dissemination of the messages to the public.

ICBC also supports the Speed and Auto Crime Watch Programs. Speed Watch seeks to promote safer driving habits by encouraging all drivers to slow down. Through the use of portable speed radar equipment electronic reader boards, drivers receive instant feedback on the speeds they are traveling as well as reminders of the posted speed by placement of signs indicating the allowable speed in the zone they are being monitored. Volunteers track the number of speeders, their speeds and a number of other qualifiers. This



Speed Watch Volunteers

information is forwarded to Richmond RCMP and used to assist in prioritizing enforcement efforts. In 2012, over 25 volunteers completed the ICBC Speed Watch Training course and, in total, volunteers in Richmond checked over 134,700 vehicles for their speed.

In September 2012, the Richmond RCMP and ICBC conducted "Project Swoop," which is a speed watch education and enforcement day throughout Richmond. Volunteers, Richmond RCMP traffic and auxiliary members set up speed watch deployments at five locations in the morning and five locations in the afternoon. If a motorist went through a speed watch



Intersection Safety Camera

deployment and did not slow down, RCMP traffic members were set up just down the road to ticket those individuals who continued to speed.

With respect to auto crime, Crime Watch volunteers checked over 119,190 vehicles for signs of auto crime in various parking lots throughout Richmond in 2012. They also handed out 17,400 Lock Out Auto Crime notices to vehicles in parking lots to educate drivers about leaving valuables in their vehicles and to recognize when they were doing all the right things to avoid becoming an auto crime victim. These same volunteers ran over 42,500 vehicle license plates through the Stolen Auto Recovery Program.

ICBC also provides annual crash data for Richmond and tools for analysis to assist the City in identifying high-crash locations. Funding support is also available to undertake studies at those high-crash locations to identify countermeasures that would reduce crashes.

5. Membership on City Committees

ICBC is a valued member of the following City committees:

- <u>Traffic Safety Advisory Committee</u>: formed in 1997 to create a co-operative partnership between City staff, community groups and other agencies that seek to enhance traffic and pedestrian safety in Richmond. The Committee provides input and feedback on a wide range of traffic safety issues such as school zone concerns, neighbourhood traffic calming requests and traffic-related education initiatives, and has initiated a range of successful measures encompassing engineering, education and enforcement activities.
- <u>REACT (Richmond Events Approval Coordination Team)</u>: forum of cross-departmental and public safety agency staff that reviews event applications, initiates event approvals, ensures coordination of City and agency services, and provides a one-stop approval process for managers of events external to the City (i.e., not organized by the City).

6. Future Directions

As noted in Section 1, ICBC's Road Improvement Program originally focused only on retrofit projects at documented high crash locations for motor vehicles. Effective 2013, the Program's strategic focus for eligible projects expanded to include proactive measures as well as improvements specific to vulnerable road users (i.e., pedestrians and cyclists).

Both the Official Community Plan and Council have long- and near-term goals that seek to reduce greenhouse gas emissions, enhance community safety and mobility, and improve the overall health and liveability of Richmond. In line with these goals, staff intend to prioritize future road safety improvements that:

- support alternative travel modes such as the construction of walkways, particularly around school zones and neighbourhood centres;
- enhance the safety of vulnerable road users (e.g., upgrade of arterial road crosswalks, construction of new local street bikeways, and transit stop upgrades); and
- mitigate the negative impacts of vehicle traffic, particularly within neighbourhoods (e.g., traffic calming measures).

With respect to education and enforcement, ICBC and Richmond RCMP both align their campaigns to support City priorities for road safety, which include campaigns targeted at pedestrian safety, intersection safety, distracted driving (e.g., cell phone use), and seatbelt use.

In recognition of ICBC's multi-faceted and collaborative approach to improving road safety in Richmond through its support of engineering, education and enforcement measures, staff recommend that a letter be sent to the Board of Directors of ICBC expressing the City's appreciation of ICBC's continued efforts that have materially enhanced the level of community safety in Richmond.

Financial Impact

None.

The funding sources for the City's portion of the costs of the proposed projects have been previously approved or endorsed by Council as indicated in Table 2 in this report. Several of the identified projects have additional external grants either approved or pending approval from other agencies such as TransLink.

Conclusion

ICBC is a significant long-time partner working with the City to promote traffic safety in Richmond. The traffic safety initiatives jointly implemented by ICBC and the City together with Richmond RCMP, including various road and traffic management enhancements, educational efforts and enforcement measures, have expedited a higher number of projects being implemented, resulted in safer streets for all road users in Richmond and, in turn, enhanced the liveability of the city.

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Joan Caravan Transportation Planner (604-276-4035)

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ICBC Road Improvement Program: Eligible Projects



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Date:	April 19, 2013	

RE: ICBC Cost Sharing Opportunities - Road Improvement Program

The following summarizes the various initiatives that funding assistance can be provided from ICBC's Road Improvement Program (RIP) towards safety improvements in BC communities. The Program aims to reduce crashes and claims costs, and reduce the potential for crashes, by financially supporting engineering measures that will improve safety at recognized high crash and high conflict locations.

RETROFIT PROGRAM (high crash areas)

Municipal Capital & Rehabilitation Projects

ICBC will cost share with municipalities on Road Improvement Projects that incorporate proven safety measures at documented high crash locations. These include but are not limited to traffic signals, modern roundabouts, corridor widening, street lighting and intersection channelization.

Modern Roundabouts

Roundabouts can help reduce serious crashes, particularly crashes involving bodily injury, while also lessening vehicle speed, improving pedestrian and bicycle safety and eliminating the need for traffic signals. In addition to providing cost sharing of modern roundabouts at high crash locations, ICBC can assist in identifying the benefits of roundabouts and appropriate locations, and in providing implementation assistance in terms of education material.

Road Sign & Road Marking Reviews & Upgrades

ICBC is encouraging smaller communities to upgrade their road signs and markings to a consistent standard. This is being undertaken by offering workshops, conducting a review of existing facilities and procedures and helping cost share towards recommended improvements.

Safety Studies

Funding will be available to cost share on safety studies of intersections, corridors or other areas of concern to the community. Typically, we undertake safety reviews that help the municipality to evaluate recognized safety concerns and identify safety improvement options for municipal consideration. The studies also indicate ICBC funding levels that may be warranted towards the various improvement options.

Uninterrupted Power Supply Systems (UPS)

ICBC also provides funding towards the installation of UPS at signalized intersections to ensure that the signals remain operational during power outages.

Traffic Signal Head Upgrades

Safety can be improved at signalized intersections by upgrading existing signal heads from 200mm to 300mm diameter lenses, providing a primary signal head for each through lane, and installing highly reflective tape on the perimeter of the yellow backboards. ICBC funding assistance will be available for these types of improvements.

Highly Reflective Pavement Markings

ICBC will consider funding treatments that include upgrading paint markings to highly reflective inlaid profiled thermoplastic, surface-mounted highly reflective profiled thermoplastic, or wet reflective tape (inlaid or overlay) that have demonstrated effectiveness in reducing collision frequency and severity.

ICBC Road Improvement Program: Eligible Projects



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Anti-Skid Treatments

Implementation of anti-skid surfacing treatments to reduce the frequency of collisions at locations where there are collisions occurring under wet pavement conditions or due to loss of control.

Enhanced Curve Delineation

ICBC will cost share towards improved curve delineation (i.e; signage & pavement markings) on roads with a history of off-road collisions.

Centre-line & Shoulder Rumble Strips

ICBC will help fund the installation of Centre-line and Shoulder rumble strips in areas where there has been a history of centre-line cross over and off road incidents.

Speed Reader Boards

In recent years this program was offered by ICBC, but it was not administered by the Road Improvement Program. Commencing in 2013, the RIP will be responsible for evaluating funding applications for these devices in areas where they are considered to be effective tools to address speed related concerns or increase driver awareness in high risk areas.

PROACTIVE PROGRAM (high conflict areas)

Road Safety Audits

ICBC will undertake road safety audits, at no cost to the municipality, of an existing or future road corridor or intersection improvement. Road safety audits can be used in any phase of project development from planning and preliminary engineering, design and construction.

Grey Spot Safety Treatments

ICBC will help cost share towards improvements that attempt to pro-actively address safety concerns at locations that are associated with high conflict situations. This will involve sites that may not be eligible for funding based on a recorded crash history.

Innovation & New Technology

New technology and new tools to respond to road safety issues are constantly being developed. ICBC will support municipalities to study and implement road improvements that may not currently have extensive research, but show promise of potential safety benefits.

Vulnerable Road User Improvements

ICBC will help fund safety improvements related to vulnerable road users (i.e; pedestrian & cyclists). This can include pedestrian crosswalks, countdown timers at signalized intersections, pedestrian activated flashing crosswalks, shoulder widening for bicycle use, sidewalks, etc...

It should be noted that ICBC's Road Improvement Program has limited resources and therefore applications are prioritized based on the available funding and review of the specific safety history at each site. Applications for ICBC funding consideration for your area can be forwarded to the Road Safety Engineer as indicated by the contact information contained in this letter.

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David Hill, P.Eng. Road Safety Engineer Lower Mainland Region, ICBC building trust. driving confidence.

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Year	Major Projects Funded	ICBC Funding Contribution
1996	Traffic safety improvements along Hazelbridge Way	\$49,000
4007	Traffic safety improvements along Blundell Road corridor (Phase 1)	<u> </u>
1997	 Improvements to Garden City Road and Alderbridge Way intersection 	\$129,000
4000	Traffic safety improvements along Blundell Road corridor (Phase 2)	* ~~ ~~~
1998	Traffic signal upgardes at various locations	\$90,000
	Intersection signal & sign upgrades at various locations	
1000	Traffic safety improvements along Westminster Highway corridor	¢409.000
1999	• Installation of new traffic signal on No. 2 Road at MacDonalds (Blundell Centre)	\$408,000
	 Construction of left-turn bays at Blundell Road and No. 2 Road 	
	Replacement of 700 stop signs	
2000	 Traffic signal upgardes at various locations 	\$287,800
	Various traffic safety improvements	
2001	 Installation of four new traffic signals and one special crosswalk 	\$400.000
2001	Traffic safety improvements to Sea Island Way and St. Edwards Drive	φ+00,000
	 Installation of special crosswalk on River Road at Hollybridge Way 	
	 Construction of bike lanes on Williams Road (No. 1 Road to west dyke) 	
2002	 Upgrade of signal visibility at four intersections on Sea Island 	\$364,000
	 Installation of left-turn signals at seven intersections 	
	Installation of traffic safety features on Airport Connector Bridge	
	Installation of left-turn signals at various intersections	
	Installation of new traffic signal at Hazelbridge Way and Leslie Road	
2003	Construction of Garden City Rd extension (Sea Island Way-Bridgeport Road)	\$317,000
	Installation of pavement lane markings on Hazelbridge way and Cooney Road	
	Opgrade of traffic signals downloaded from Province (5 locations) Bebebilitation of Blundell Based (No. 4 Based to Shell Based)	
	Renabilitation of blundell Road (No. 4 Road to Shell Road)	
	 France salely reviews of various intersections Centre median installation on Westminster Hwy (Buswell St. to Cooney Pd. 	
2004	 Centre median delineator installation on No. 2 Road south of Blundell Road 	\$75,670
	 Installation of roadside barriers on No. 2 Road north of Granville Avenue 	
	Westminster Hwy and No. 4 Road intersection improvements	
	City-wide upgrade of traffic signals (new backboards & reflective tape): Phase 1	
2005	 Upgrades to 25 signalized intersections (volume-density treatments): Phase 1 	\$261,000
	 Westminster Highway and No. 5 Road intersection improvements 	+=== 1,000
	Steveston Highway and No. 5 Road intersection improvements: Phase 1	
	Upgrade of over 100 intersections with third primary signal head: Phase 1	
	Review & optimization of 24-hour signal setting at all signal locations	
	Arterial road crosswalk upgrade at five locations	
	Garden City Road and Cambie Road intersection improvments	
	Citywide coordination of signalized intersections	
	 Alderbridge Way and Garden City Road intersection improvements 	
2006	 Alderbridge Way and Shell Road intersection improvements 	\$295 156
2000	 City-wide upgrade of traffic signals (new backboards & reflective tape): Phase 2 	\$200,100
	 Upgrades to 25 signalized intersections (volume-density treatments): Phase 2 	
	Raised centre median on Great Canadian Way at Costco access	
	Upgrade of pedestrian signal to full signal at Minoru Blvd. and Blundell Road	
	Kuss Baker Way at Hudson Avenue and Cessna Drive: left-turn upgrades	
	volume-density traffic signal improvements at 10 sites	
1	 Steveston Highway and No. 5 Road Intersection Improvements: Phase 2 	

ICBC Funding Contributions to Richmond Road Safety Projects: 1996-2012

Year	Major Projects Funded	ICBC Funding Contribution
2007	 Upgrade of over 100 intersections with third primary signal head: Phase 2 Traffic signal head upgrades (reflective backboards) on MRN roads Construction of turn bays and signal upgrades at two intersections Arterial road crosswalk upgrade at three locations Westminster Highway widening (McMillan Way-Highway 91 Interchange) New traffic signals at two intersections Traffic signal improvements at Gilbert Road and Williams Road 	\$321,400
2008	 Installation of left-turn signals at four intersections Arterial road crosswalk upgrade at three locations New traffic signal at Granville Avenue and Buswell Street Construction of southbound left-turn bay on Garden City Rd. at Ferndale Rd. 	\$92,000
2009	 Installation of left-turn signals at Francis Road and No. 2 Road Installation of overhead illuminated street name signs on No. 3 Road Arterial road crosswalk upgrade at three locations 	\$104,000
2010	 Installation of left-turn signals at four intersections No. 6 Road S-curve: anti-skid surfacing Installation of overhead illuminated street name signs at various locations Completion of southbound left-turn bay on Garden City Road at Cook Road Intersection realignment at Railway Avenue and Moncton Street Arterial road crosswalk upgrade at one location 	\$205,100
2011	 New westbound turn bays at Steveston Highway and No. 5 Road Additional crosswalk on west leg at Minoru Gate and Granville Avenue Electronic "Ped Caution" sign for drivers on Lansdowne Rd. at Garden City Rd. Additional traffic signal heads and backboard upgrades (16 sites) Speed humps and speed reader board on Gilbert Road south of Finn Road Centre median railing on No. 3 Road from Cambie Road to Browngate Road Arterial road crosswalk upgrades at two locations Advisory warning flashers on Finn Road curve 	\$205,500
2012	 Centre median railing on No. 3 Road from Saba Road to Brighouse Station Arterial road crosswalk upgrade at two locations Construction of neighbourhood walkways on Herbert Road (Afton DrBates Rd.) and Aquila Road (lane north of Williams RdAlbion Rd.) Flashing school zone warning sign on Garden City Road at Garden City School Signal co-ordination with installation of video-detection traffic cameras on No. 2 Road (Westminster Highway-Steveston Highway) and Westminster Highway (No. 2 Road-No. 3 Road) 	\$371,000
	\$3,975,626	
	ANNUAL AVERAGE	\$233,860

ICBC Funding Contributions to Richmond Road Safety Projects: 1996-2012

Attachment 3

ICBC 2013 Calendar of Road Safety Campaigns

