



To: Public Works and Transportation Committee **Date:** February 7, 2007
From: Victor Wei, P. Eng. **File:** 10-6350-01/2007-Vol 01
Director, Transportation
Re: **RUSS BAKER WAY-ARTHUR LAING BRIDGE CORRIDOR – TRAFFIC
MANAGEMENT INITIATIVES**

Staff Recommendation

1. That the following four traffic management initiatives for the Russ Baker Way-Arthur Laing Bridge corridor be assessed further by staff in working with Vancouver International Airport Authority, TransLink, and the City of Vancouver:
 - a) Stationing of a tow truck (point duty) at the south end of the Arthur Laing Bridge during the weekday morning peak period;
 - b) Installation of a video traffic monitoring camera in the vicinity of the Russ Baker Way/Cessna Drive intersection;
 - c) Southern extension of the northbound high occupancy vehicle (HOV) lane on Russ Baker Way to the north end of No. 2 Road Bridge; and
 - d) Submission of Russ Baker Way for the inclusion in TransLink’s Major Road Network.

2. That staff report back on the outcome of the above assessment and if applicable, an implementation strategy of the proposed traffic management initiatives for Council’s approval.

Victor Wei, P. Eng.
Director, Transportation (4131)

Att. 5

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Engineering	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
Policy Planning	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	REVIEWED BY CAO	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

At its November 27, 2006 regular Council meeting, Richmond City Council passed the following resolution:

- (1) *That a letter be prepared to the Vancouver International Airport (YVR) for the Mayor's signature emphasising the need for YVR to station tow trucks at either end of the Arthur Lang Bridge during both the morning and afternoon peak travel periods.*

A letter from the Mayor to YVR dated November 29, 2006 is included in **Attachment 1**. A response from YVR dated December 18, 2006 is included in **Attachment 2** which expressed support in working with the City to explore the feasibility of introducing tow trucks at Arthur Laing Bridge.

As the stationing of tow trucks is considered only as part of an overall strategy to ensure the operational efficiency of the Russ Baker Way-Arthur Laing Bridge corridor, in further response to the above referral, this report proposes several other traffic management and incident initiatives for this primary commuter/airport user route. Subject to Council endorsement in principle of these initiatives, staff would report back with an implementation and funding strategy for Council approval.

Findings Of Fact

Reported Traffic Incidents at Major Bridge Crossings

The table below lists the number of reported incidents and motor vehicle collisions along several selected Greater Vancouver bridges including Arthur Laing Bridge. These particular bridges were chosen to compare with Arthur Laing Bridge, as they are similar in the number of lanes and except for Arthur Laing Bridge, they are all presently monitored by tow trucks in case of any traffic incidents. As outlined in the table, these reported incidents comprise events requiring the attendance of a tow truck and include vehicle stalls, vehicle crashes and the clearing of debris. Crashes comprise events that resulted in a vehicle insurance claim being made to ICBC.

Summary of Reported Incidents and Accidents on Key Bridges

Bridge	Number of Reported Incidents per year ¹	Number of Crashes per year ²
Oak Street	190	73
Knight Street	266	380
Queensborough	No Annual Data	94
Patullo	No Annual Data	159
Arthur Laing	22	127

(1) Source: 2006 data from tow truck company and two-way annual average based on YVR records.

(2) Source: ICBC Claims Data – 5 year average for 2001-2005.

Analysis

1. Rationale and Objectives of a Traffic Management Strategy

The impetus for the initiative to station tow trucks at the Arthur Laing Bridge is to minimize unnecessary travel delays for bridge users by providing timely responses by tow trucks to clear traffic incidents in a consistent manner. This initiative can be broadened to encompass a traffic management strategy for the entire Russ Baker Way-Arthur Laing Bridge corridor. The traffic management strategy aims to alleviate the on-going traffic concerns related to the traffic congestions experienced along the corridor during the peak periods, particularly during the weekday morning peak.

Recognizing the need for maintaining efficient and reliable traffic movements and convenient access among Richmond, the airport, and Vancouver, staff have initiated discussions with YVR and City of Vancouver staff on options to meet this need. The options considered were also aimed at achieving transit priority for buses and more efficient utilization of road space on Russ Baker Way by encouraging the use of commuter carpools. The following section presents a number of initiatives designed to ensure adequate access to the main terminal and Vancouver via Russ Baker Way during peak periods as well as to:

- reduce incident response time;
- proactively monitor traffic congestion;
- ensure more efficient use of road space by encouraging carpooling; and
- obtain possible partial funding from TransLink for the Russ Baker Way-Arthur Laing Bridge corridor upgrade and maintenance.

2. Proposed Traffic Management Strategies

The following four traffic management strategies are proposed to maintain acceptable service levels on Russ Baker Way and Arthur Laing Bridge for traffic during peak hours. Together, these initiatives are expected for a more efficient use of road space and encourage higher vehicle occupancy to accommodate travel demand generated along the Russ Baker Way-Arthur Laing Bridge corridor.

Strategy 1: Traffic Incident Response via Stationing of Tow Truck(s)

Staff propose stationing at a minimum of one tow truck (point duty) at the south end of the Arthur Laing Bridge during the morning peak period when the northbound traffic volumes are heaviest (see **Attachment 3** for the proposed location). Discussions are also on-going with Vancouver staff on the potential of stationing a second tow truck at the north end of the bridge. Providing tow truck(s) would minimize unnecessary travel delays for bridge users during traffic incidents by clearing the incidents in a timely and consistent manner. The preliminary estimated annual cost for staging one tow truck for three hours (6:00 am to 9:00 am) during weekdays is approximately \$35,000.

Strategy 2: Installation of a Video Camera at Russ Baker Way/Cessna Drive

Staff have been investigating the feasibility of installing video cameras at pilot locations to relay real-time video imaging of traffic conditions along selected corridors to the City's traffic signal

control centre. Initial pilot locations include the Russ Baker Way corridor in the vicinity of the Russ Baker Way/Cessna Drive intersection. The cameras would have pan/zoom/tilt (PZT) features and be capable of zooming in on traffic incidents. The continued enhancements to the City's communications network, including technological advancements such as fibre optic or wireless connections, would potentially allow the facilitation of full motion video connections with multiple camera locations. The cameras would be designed to be multi-functional so that they could provide useful images to other user groups such as the Ministry of Transportation, TransLink, and television stations.

Initially, the proposed camera on Russ Baker Way would feed motion images of traffic conditions to the City's traffic signal control centre throughout the day so that traffic signals can be adjusted accordingly to optimize varying traffic flow along this key commuter corridor. Ultimately, it is envisioned that all of the City's cameras would be integrated with TransLink's iMove project, which is a regional traveller information system that will feature over 120 camera feeds of traffic conditions across the Lower Mainland. The preliminary estimated cost for implementing the proposed camera is approximately \$40,000 which can potentially be cost-shared with other road authorities. More accurate cost estimates would be prepared as this initiative progresses to the next planning stage.

Strategy 3: Extension of the HOV Facility along Russ Baker Way

It is also proposed that Russ Baker Way be widened in the northbound direction to achieve three continuous through lanes between No. 2 Road Bridge and north of Miller Road with the shoulder lane being a transit priority/high occupancy vehicle (HOV)/high priority vehicle (HPV) lane. Currently, the existing three lane section from Hudson Street to north of Miller Road already allows use of the shoulder lane for vehicles destined to the main terminal of the airport as well as an HOV lane for vehicles with three or more occupants destined to the Arthur Laing Bridge. This combined airport/HOV/HPV lane would be extended south to the north end of No. 2 Road Bridge (see **Attachment 4**). The preliminary estimated cost for the construction of the proposed transit priority/HOV/HPV lane is approximately \$0.5 million. It should be noted that this initiative will be eligible for TransLink's transit priority funding.

Strategy 4: Inclusion of Russ Baker Way in TransLink Major Road Network

TransLink has the mandate to support a network of roads and bridges, known as the Major Road Network (MRN), that serve intra-regional transportation requirements (see **Attachment 5**). The criteria established for the inclusion of a road in the MRN are based on its role in serving activity centres, facilitating inter-municipal travel and goods movement, serving as a transit corridor and emergency response route, and promoting network continuity. Currently, only municipal roads are included in the MRN and municipalities retain ownership of these municipal roads.

TransLink provides funding to municipalities towards capital improvements and maintenance/rehabilitation for roads in the MRN based on the number of lane-kilometres within the municipality. Presently, there are 2,179 lane-kilometres of roads in the entire MRN and 2007 funding allocations from TransLink were \$20 million for minor capital improvements and \$30.9 million for maintenance/rehabilitation (equivalent to \$12,735 per lane kilometre) within the regional network.

No. 2 Road between Steveston Highway and Airport Road South as well as Marine Drive in Vancouver at the north end of the Arthur Laing Bridge are already part of the regional MRN. Thus, the Russ Baker Way corridor would be a logical extension as it would provide a continuous link to Vancouver and serve a major regional activity centre (airport) as well as inter-municipal travel and goods movement.

YVR is fully supportive of the proposal to include Russ Baker Way in the MRN as it would allow YVR to access funding assistance from TransLink to maintain and improve this corridor for all users. Given that only municipal roads are currently included in the MRN, the City may be able to “sponsor” its inclusion, which, if successful, would formally recognize the City’s partnership in overseeing the functionality and operation of this corridor. It should be noted that the City currently manages all traffic signals on Russ Baker Way for YVR.

3. Next Steps

Given Council endorsement in principle of the proposed strategies, staff would undertake the following actions and report back with an implementation strategy for Council approval.

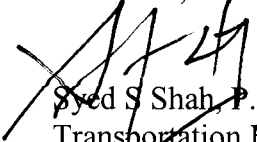
- Strategy 1: Traffic Incident Response via Stationing of Tow Truck(s): continue discussions with YVR, TransLink, City of Vancouver and potential tow truck companies.
- Strategy 2: Installation of a Video Camera at Russ Baker Way/Cessna Drive: undertake further analysis with respect to technical feasibility, cost impacts and integration with TransLink’s iMove project.
- Strategy 3: Ultimate Road Widening of Russ Baker Way to Extend HOV Lane: develop the preliminary and detailed design in 2007. The timing of implementation of this road improvement is uncertain at this time, as YVR has indicated that it would prefer to develop a corridor-wide road improvement strategy (e.g., include access issues at north end of Arthur Laing Bridge) rather than address isolated improvements. However, staff will aim to implement this improvement within the next two years subject to the support from YVR.
- Strategy 4: Inclusion of Russ Baker Way in TransLink MRN: initiate discussions with and submission to YVR, TransLink, and City of Vancouver staff.

Financial Impact

There is no financial impact to the City at this time. Any financial impacts resulted from the proposed initiatives will be presented in future reporting back to Council prior to any commitment for implementation.

Conclusion

Staff propose a number of traffic management initiatives for the Russ Baker Way-Arthur Laing Bridge corridor, intended to alleviate traffic congestion in the corridor and maintain acceptable service levels for all road users in the long term. Given Council endorsement in principle of the initiatives, staff will report back with an implementation strategy for Council approval.


Syed S. Shah, P. Eng., M. Eng., MITE
Transportation Engineer
(4049)



City of RICHMOND

6911 No. 3 Road
Richmond, B.C. V6Y 2C1
Telephone: (604) 276-4123
Fax No: (604) 276-4332

MALCOLM BRODIE
MAYOR

November 29, 2006

Vancouver International Airport Authority (YVR)
P.O. Box 23750 Airport Postal Office
Richmond BC V7B 1Y7

Attention: **Mr. Graham Clarke**
Chair, Board of Directors

Dear Mr. Clarke:

Re: Proposed Traffic Incident Response Initiative for the Arthur Laing Bridge

The Vancouver International Airport Authority's Draft 20-Year YVR Master Plan emphasizes the need to continue, in the future, to rely on the existing area road infrastructure with the Arthur Laing Bridge being a primary ground transportation link. The City of Richmond shares this view and finds that it is essential to act on initiatives that will maximize the operational efficiency of this bridge. One potential initiative is the mitigation of the negative impacts of traffic incident occurrences on the Arthur Laing Bridge, which, as you are well aware, have become more evident in recent years. These incidents affect all users of this river crossing including air passengers, air cargo trucks, commuters, and employees of the airport.

On November 27, 2006, Richmond City Council passed a motion to forward a proposal for tow truck standby stations at the Arthur Laing Bridge as a traffic incident management initiative to the Vancouver International Airport Authority for consideration. The objective of this initiative is to minimize unnecessary travel delays for bridge users with the provision of timely responses by tow trucks to clear such traffic incidents in a consistent manner.

Therefore, we are requesting the support of the Vancouver International Airport Authority to begin exploring the tow truck station initiative immediately with City staff, and potentially City of Vancouver staff, with a view to implementing this measure as soon as possible. Furthermore, as part of these efforts, we can discuss other possible traffic management planning initiatives.



We look forward to receiving your favourable response and are committed to continue to work with the Authority to find ways to maximize the utilization of the existing transportation network to achieve mutual benefits. The introduction of tow trucks at the Arthur Laing Bridge would be a small but significant step towards advancing this partnership. In the meantime, should you require technical information on this initiative, please call Mr. Victor Wei, Director of Transportation, at 604-276-4131.

Yours truly,

A handwritten signature in black ink, appearing to read "Malcolm D. Brodie". The signature is fluid and cursive, with a long horizontal stroke at the end.

Malcolm D. Brodie
Mayor

cc: Peter Dhillon – YVR Board Member



Vancouver International Airport Authority
Administration de l'aéroport international de Vancouver

110, Box 23750
Airport Postal Outlet
Richmond, B.C. Canada V7B 1Y7
Website: www.yvr.ca

Larry Berg
President and Chief Executive Officer

December 18, 2006

His Worship Mayor Malcolm Brodie,
City of Richmond,
6911 No. 3 Road,
Richmond, B.C. V6Y 2C1

Your Worship:

I am responding to your letter to Graham Clarke, Chair of the Vancouver International Airport Authority regarding the deployment of tow trucks on the Arthur Laing Bridge.

Councillor Rob Howard has previously raised this issue with Bob Cowan, the Airport's Senior Vice President, Engineering.

Bob has reviewed the matter and advises that our records indicate a total of 43 incidents on the Arthur Laing Bridge over the past two years in which traffic was impacted and the services of a tow truck could have been deployed for towing or clean-up. Not all incidents are reported to our Operations Centre, but certainly those with emergency response or significant traffic delays would be reported. There were 2 and 4 incidents respectively at the Dinsmore and Middle Arm bridges over the same period.

Bob also advises that the provincial Ministry of Transportation presently provide tow trucks at their cost at a number of bridges in the Lower Mainland through their maintenance contractor, including the Massey Tunnel, Knight Street, Oak Street, Queensborough, Alex Fraser, Port Mann, Patullo and Pitt River bridges.

I subsequently called Pat Jacobsen to suggest that TransLink discuss the issue with the Ministry, and I believe she has done so.

We are certainly willing to work with you and others if this proves to be a significant problem.

Yours truly,

RECEIVED
IN TRANSPORTATION
Date: Jan 4/07
(LE) W

cc: Graham Clarke, Chair
Peter Dhillon, Director
Bob Cowan, Senior Vice President, Engineering

City of Richmond
R E C E I V E D
DEC 22 2006
MAYOR'S OFFICE

Proposed Tow Truck Location for the Arthur Laing Bridge



 Proposed Location of Tow Truck Station

Proposed Extension of Russ Baker Way HOV Lane



Existing HOV Lane

Proposed Extension of HOV Lane —————

Location of Russ Baker Way within TransLink's Major Road Network

