



CITY OF VANCOUVER

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### ADMINISTRATIVE REPORT

Report Date: January 29, 2008  
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Meeting Date: February 12, 2008

TO: Standing Committee on Transportation and Traffic

FROM: General Manager of Engineering Services

SUBJECT: Reconfiguration of Boundary Road and Canada Way

#### RECOMMENDATION

- A. That Council approve the modifications which lie within the City of Vancouver required for the reconfiguration of Boundary Road at Canada Way as outlined in this report at an estimated cost of \$258,000 to be funded by:
- i. \$200,000 from the 2008 Streets Basic Capital Budget for Strategic Transportation subject to approval of the 2008 Capital Budget;
  - ii. \$33,000 from City Wide Development Cost Levies (DCL) allocated to Strategic Transportation subject to approval of the 2008 Capital Budget; and,
  - iii. \$25,000 from the 2007 Capital Budget allocated for Strategic Transportation.

#### COUNCIL POLICY

In 1997, Council approved the Vancouver Transportation Plan which stated that the City supports maintaining peak road capacity from the region at no more than the present level.

## PURPOSE

The purpose of this report is to seek Council approval for the geometric modifications within the City of Vancouver required to reconfigure the intersection of Boundary Road and Canada Way.

## DISCUSSION

This project was initiated by the City of Burnaby. Currently, Canada Way and Boundary Road are awkwardly aligned which can cause driver confusion. The existing configuration has three intersections (two of them signalized) in close proximity resulting in challenges for traffic operations. The westbound-to-southbound left requires drivers to first make a permissive left then queue up to make a protected left. In some instances, this queuing blocks the southbound-to-eastbound traffic creating a potential safety concern. Additionally, the northbound-to-eastbound right turn requires drivers to first turn at a signal, then, immediately stop at a stop sign and wait until there is a gap in the southbound-to-eastbound traffic. A driver unfamiliar with the intersection may not be anticipating this unusual operation and may bypass the stop sign creating a conflict with the southbound-to-eastbound traffic. Refer to Figure 1 in Appendix A for an overview of the current intersection layout.

This project will reconstruct the intersection into a standard "T" intersection. This reconfiguration will not result in additional lanes entering into Vancouver. In Vancouver, the most significant geometric change will be the shifting of the southbound-to-eastbound left turn lane approximately 70 m southward. Trees will be replanted to compensate for the two trees in the median that will have to be removed as part of these modifications. The reconfiguration of the intersection is expected to improve pedestrian crossings as well as reduce the amount of paved area by approximately 900 m<sup>2</sup>. The recommended design is shown in Figure 2 in Appendix A.

In May of 2007, an opinion survey was delivered to residents and businesses in the area bounded by Rupert Street, Broadway/Lougheed Highway, Boundary Road, and 22<sup>nd</sup> Avenue. Included in this survey was an invitation to an Open House on May 3<sup>rd</sup>, 2007 for more information on a number of transportation projects in the surrounding area including the reconfiguration of Boundary Road and Canada Way. Although the Open House was lightly attended, 168 surveys of the 831 surveys delivered were returned to staff, representing a 20% response rate. Refer to Figure 3 in Appendix A to see the design as proposed in the survey. Following the survey, Burnaby made a small design change to reduce the size of the right turn channel. Specific comments received by staff on returned survey forms are in Appendix B.

The following survey results were received regarding the proposed modifications to the intersection of Boundary Road and 11<sup>th</sup> Avenue:

Do you support the proposed reconfiguration of Boundary Road and Canada Way?			
Yes - 77 %	No - 13 %	Neutral - 7 %	No Comment - 3 %

## FINANCIAL IMPLICATIONS

Burnaby Staff have estimated the total construction cost of this project to be \$1.4 million and are seeking \$700,000 from TransLink's MRN Minor Capital Program. Of the \$700,000 remaining, Burnaby Staff have committed \$467,000 to construction.

If approved by Council, The City of Vancouver would contribute \$233,000 towards the construction costs and an additional \$25,000 towards the design costs of this project. These costs would be provided by funding from the following sources:

2008 Streets Basic Capital Budget for Strategic Transportation (A4a)	\$200,000
City Wide Development Cost Levies (DCL) allocated to the 2008 Streets Basic Capital Budget for Strategic Transportation (A4a)	\$33,000
2007 Streets Basic Capital Budget for Strategic Transportation (A4a)	\$25,000
<b>Total funding required</b>	<b>258,000</b>

There is approximately \$2 million remaining in the 2006-2008 Capital Plan for Strategic Transportation.

In addition to these funding sources, staff will investigate the possibility of obtaining additional funding sources such as the ICBC Road Improvement Program.

No increase in operating funding will be required as the majority of new green space created will lie within the City of Burnaby.

## CONCLUSION

Staff recommend that Council approve the modifications which lie within the City of Vancouver required for the reconfiguration of Boundary Road as outlined within this report.

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EXISTING AND PROPOSED DESIGNS

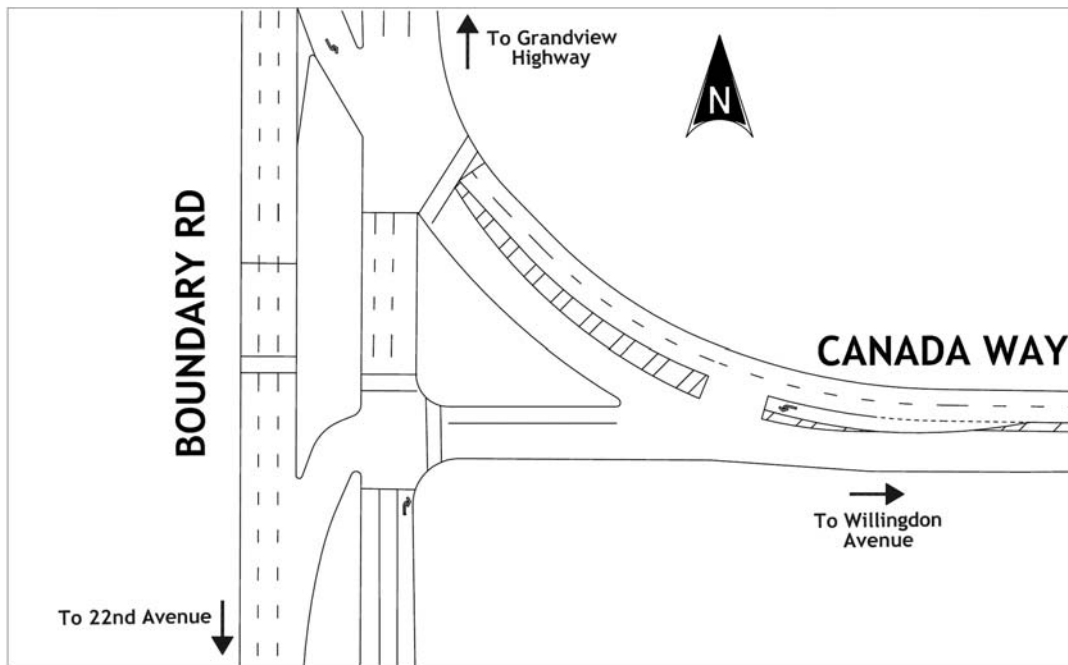


Figure 1 - Existing Conditions

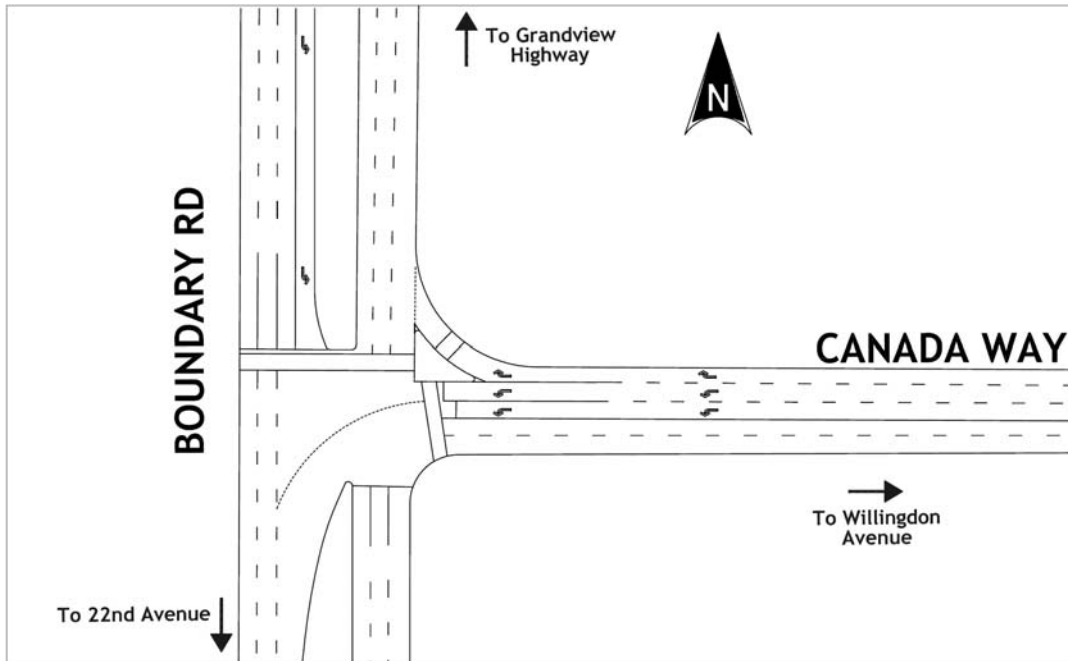


Figure 2 - Recommended Design

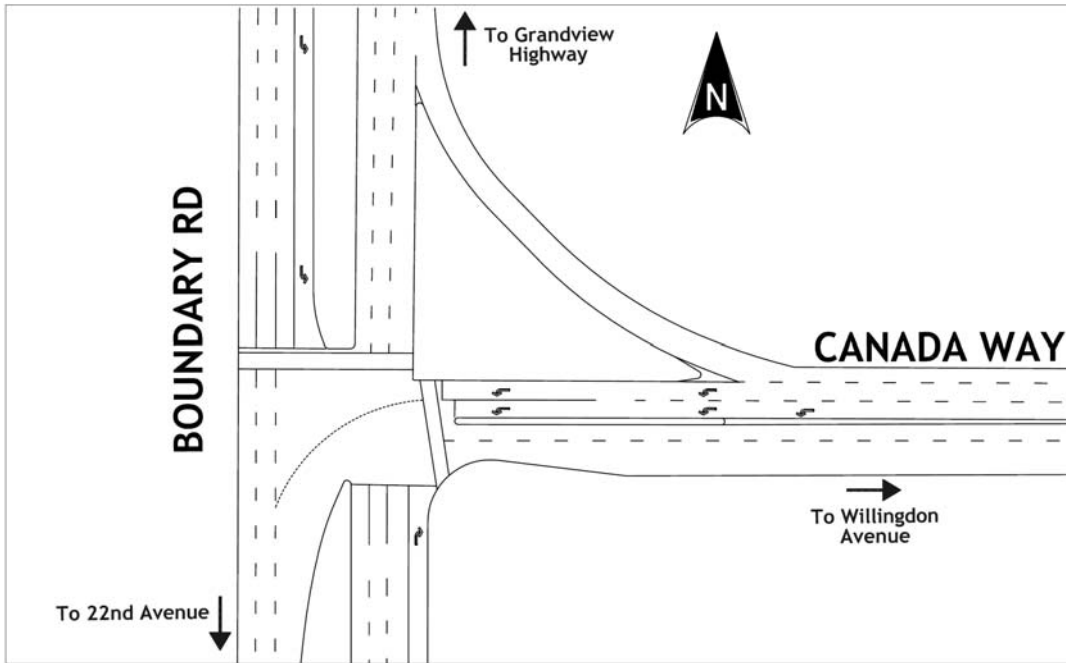


Figure 3 - Proposed in Survey

SPECIFIC COMMENTS RECEIVED IN SURVEY

Survey No. 14: 3300 Block Anzio - I hope that these projects will help to divert some of the heavy truck traffic away from Rupert Street. Rupert from Grandview to Kingsway is simply not adequate for a truck route.
Survey No. 25: 3400 Block Anzio - All of these conceptions are great. They will ease the problems that we have when we use these intersections and will help us get around better.
Survey No. 28: 3400 Block Dieppe - HOV "Queue Jumpers". At Boundary and Grandview, eastbound curb lane: this lane is already very busy with people turning right, (southbound) in the curb lane. Won't the Queue Jumpers Lane restrict the cars trying to turn on Boundary Rd? P.S. Will my taxes be reduced as a result of these improvements?
Survey No. 31: 4100 Block Boundary Rd - There is more than enough traffic on Boundary Rd causing noise and pollution which is unhealthy. The vinyl siding is always dirty from the pollution, exhaust fumes. Also the window sills. We definitely do not need more traffic on Boundary Rd.
Survey No. 36: 3500 Block - Very good initiatives. I would also recommend that the on ramp unto Hwy 1 at Grandview Hwy be made double lane, see diagram. Also on page 3 Hwy 1 on ramp, the single lane should continue longer before merging with Hwy traffic. Blind spot, dangerous merge. Could be extended further down to allow seamless merging, see diagram.
Survey No. 43: 3400 Block Matapan Cr. - We do not need an HOV lane on Grandview Hwy! Nor do we need to cut off westbound traffic onto 11 <sup>th</sup> avenue. If we cut off westbound traffic on 11 <sup>th</sup> it will make traffic worse on Grandview. The other two suggestions are great and should be implemented.
Survey No. 59: 3400 Block Mons Dr. - 1a) The queue jumpers are a good idea provided that there is some enforcement by police and plastic posts are put in place in the merging area to prevent both the left and queue jump lanes from merging at the same time into the middle lane at the on ramp to Hwy 1. Currently people use the left lane to queue jump. 1b) I am for the Left Turn lanes if they reduce traffic on Rupert by diverting cars to Boundary. I would further put a limit on truck traffic on Rupert. I am concerned that the Left Turn lanes will make people wait too long at red lights. 2. The Right Turn on 11 <sup>th</sup> provides a good bypass when traffic is clogged on Boundary. 3. Great! This is much needed and will improve traffic flow if the lights are properly synchronized.
Survey No. 62: 3500 Block Haida - Make it soon! Thanks
Survey No. 66: 3300 Block Dieppe - 1. Left Turn Lanes from Eastbound Grandview to Northbound Boundary are a must. If they were there 2 months ago I would be still driving my old car. Instead of having it totalled trying to make a left turn onto Esmond. These would make the turn safer. On figure 2 the HOV lanes are only in place west of Boundary. This is fine. If they are put in place east of Boundary they will encourage people to maintain highway velocity into the city which is unsafe for left turns onto Esmond (refer to flipped car above). 2. The right hand lane of Northbound Boundary from Grandview to Hwy 1 on ramp (westbound) is unsafe as drivers wishing to gain access to the Trans-Canada have approximately 150 meters to get in the right hand lane after crossing Grandview. Taking into consideration the fact that 95% of Vancouver drivers are homicidal maniacs this situation is dangerous. 3. It takes some faith (see homicidal maniacs above) to enter the Boundary-Canada

<p>Way intersection in the current design. The traffic lights (which are generally ignored anyway) operate under some mysterious system and cars routinely appear out of nowhere to obliterate the unwary. Simplify the system. Figure 6 is a damn sight better.. These changes will make it more difficult for said maniacs to find victims. That being said some police presence is needed here. An average of 2 - 3 cars run every red light (I count) and virtually everyone runs stop signs. When you're done with this mess see if you can install traffic calming devices between Grandview and Skeena and Dieppe and 18<sup>th</sup>. People skip through here to avoid Grandview/Boundary. This is a lot of info. Call if you like.</p>
<p>Survey No. 69: 3600 Block Haida - Any changes will increase traffic flow. Therefore safety come first and no more traffic. We should make use of public transport.</p>
<p>Survey No. 76: 3600 Block Vimy Cr. - Please do as little improvement as possible. Every time you do something the situation gets worse. When Skeena hill was improved the traffic on Dieppe became a lot worse. At times it takes 4 - 5 minutes to cross Dieppe as a pedestrian. The proposed left turning lanes from Grandview to Boundary will make it impossible for a pedestrian to get to nearby bus stops on Boundary Rd. When my wife wants to go to the North Shore she takes a southbound bus travels two blocks south then catches a northbound bus and gets to North Vancouver. Come at busy hour and try to cross Boundary Rd. Oh by the way: what is an HOV "Queue Jumper"? The so called Open House is a sham you have already decided what you are going to do. It is nothing more than a public relation exercise. I will not be attending any more meetings. I tried to phone Mr. Darwent, he was out of town for training. I tried to phone Engineering Services. I gave up after 20 minutes.</p>
<p>Survey No. 78: location unknown - An additional traffic light or crosswalk should be placed on Boundary and 18<sup>th</sup>. Many people cross the street on Boundary to take the bus across the street and it is really dangerous to cross there.</p>
<p>Survey No. 80: 3400 Block Matapan - This should have been done twenty years ago.</p>
<p>Survey No. 91: 3200 Block Matapan - Excellent proposals. Hopefully you will also plant some trees, shrubs, flowers etc to beautify the area.</p>
<p>Survey No. 93: 3400 Block Seaforth - I do not support the Grandview and Boundary Plan. This will only increase traffic volume. The current system breaks up the Boundary traffic via Willingdon ave to Canada Way. The Canada Way and Boundary Plan, which I support should handle the left turn Boundary traffic. The 11<sup>th</sup> &amp; Boundary Plan also closes an avenue to break up Boundary traffic so I would like the current system to stay in place.</p>
<p>Survey No. 98: 3400 Block Seaforth - 1. The current design of the Boundary/Canada Way intersection does ??? danger to drivers heading east (the stop sign on Canada Way). I am not sure how much would the reconfiguration proposed here help to improve the situation but I personally do not support relocating the existing left turn further south. If possible I would like to see the existing stay where it is but have a traffic light set up to replace that confusing stop sign. 2. The Hwy 1 entering ??? on Grandview Hwy got congested ALL THE TIME. I personally think that no lane cutting should be allowed ??? the ?????light on Boundary and Grandview Hwy.</p>
<p>Survey No. 99: 3200 Block Vimy - I am strongly supporting the addition of left turn lanes and a left turn signal on busy streets. Consequently reduce most of the serious accidents. Thanks</p>
<p>Survey No. 100: 3400 Block Mons Dr - I expect that the population density of Vancouver will increase. Therefore we cannot afford to lose land to accommodate our desire to increase road traffic volume. It would be contrary to our desire to have more or at least not reduce, space for living and outdoor's activities near our dwellings. Other side effects of paving over more land, like reduced percolation of rain works into the</p>

<p>ground and a more extreme micro-climate are additional reasons to oppose projects resulting in a net loss of vegetated areas (in and outside Vancouver).</p>
<p>Survey No. 101: 3400 Block McMillan - This is good. It will help keep the traffic out of our residential area as no turns were allowed on Boundary. Traffic onto the Freeway off of Boundary Rd &amp; Grandview needs work reconstruction. When one is trying to merge onto Freeway there is traffic trying to come off Freeway onto Willingdon south dangerous area.</p>
<p>Survey No. 104: 3600 Vimy Cr - Re: 1a) Need to allow right turn for single occupancy vehicle at Rupert or any subsequent road 1b) Excellent as we don't need to turn right at Boundary and make a "U" turn. 2) Even now it is quite a challenge to turn left at Boundary from 11<sup>th</sup> avenue anyway. 3) It is nice to have two lanes that turn left unto Boundary road from Canada Way and one lane that turns left from Boundary unto Canada Way less confusing + flow is not interrupted.</p>
<p>Survey No. 114: 3500 Block - 2) need Right hand turns for Boundary (southbound) from curb lane only onto E 11<sup>th</sup> avenue. Agree with no left hand turn from E 11<sup>th</sup>.</p>
<p>Survey No. 122 3400 Block Grandview Hwy - I don't see why you need HOV lanes when it doesn't exit towards the Freeway. You still need to back into the entrance of the Freeway if you are on Hwy 1 going westbound. There is only two line traffic on each side on Grandview Hwy as well as all the way to UBC. Plus you are in the city of Vancouver already, you don't need HOV to just exit out of the Freeway. I think it is important to keep the speed limit down by having cars parked on the lane then to create HOV lanes to have vehicle merging back &amp; forth. This to me will cause more accidents.</p>
<p>Survey No. 126: 3100 Block E 16<sup>th</sup> - I'm concerned about volume southbound on Boundary then onto Joyce!! (and north on Joyce!) I'm also concerned about Kingsway impacts.</p>
<p>Survey No. 129: 3200 Block Dieppe - Ensure safe pedestrian crossing of Boundary with these changes.</p>
<p>Survey No. 133: 00 Block Worthington - A) For item no. 1 Grandview &amp; Boundary for Grandview traffic to Hwy 1. There are lots of queue jumpers already where the left lane traffic jumps into the right lane main traffic. My suggestion is to remove one straight eastbound lane through traffic, use the left lane for left turn into northbound Boundary Rd. With the additional HOV lane the through would probably come out to be the same. B) For item no. 2 Boundary &amp; 11<sup>th</sup>, Highway traffic should be allowed to go to 11<sup>th</sup> to access the Costco store not to add traffic to Grandview which is congested already.</p>
<p>Survey No. 137: 3900 Block Boundary Rd - At 22<sup>nd</sup> and Boundary there should be barriers put up to stop vehicles from driving up curb lane.</p>
<p>Survey No. 146: 2800 Block - Petition by 21 people. We the undersigned request that the City of Vancouver amend the proposed reconfiguration of Boundary Road and 11<sup>th</sup> avenue to the following. Continue to allow right turns from Hwy 1 off ramp onto 11<sup>th</sup> ave and extend the diverter from the underpass so that right turns off Boundary onto 11<sup>th</sup> ave are no longer possible. We feel this will properly address the safety issue, prevent large back-ups at the intersection of Boundary and Grandview Hwy, and not impede on our ability to access the businesses in the 11<sup>th</sup> avenue area which we frequent on a daily basis.</p>
<p>Survey No. 166: 3400 Block Falaise - Re Project 3: Please consider local residents on Vancouver side from 18<sup>th</sup> avenue crossing Boundary Rd to enter Canada Way. Thank you.</p>