

CITY OF BURNABY

H

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRANSPORTATION AND TRANSIT DIVISION)

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

RE: WILLINGDON HOV PROJECT

RECOMMENDATIONS:

1. **THAT** Council approve the Willingdon HOV Project as outlined in Section 4.0 of the attached report for design and construction.
2. **THAT** a Capital Reserves Expenditure Bylaw in the amount of \$1,722,640 (inclusive of 7% GST) be brought forward to finance the total cost of the project.
3. **THAT** a copy of this report be forwarded to F. Blasetti, BCTFA, G. Puil, Chair of TransLink, M. Johnson, ICBC, and the members of the Willingdon HOV Steering Committee.

REPORT

The Traffic and Transportation Committee (Transportation and Transit Division), at its meeting held on 2000 April 12, received and adopted the attached report to request approval to cost share with the BC Transportation Financing Authority (BCTFA), TransLink and the Insurance Corporation of British Columbia (ICBC) for the detailed design and construction of the Willingdon HOV Project.

Respectfully submitted,

Councillor N. Volkow
Chair

Councillor D. Evans
Vice Chair

Councillor N. Harris
Member

<p>:COPY - CITY MANAGER - DIRECTOR ENGINEERING - DIRECTOR FINANCE - DIRECTOR PLANNING & BUILDING - CITY SOLICITOR</p>

TO: CHAIR & MEMBERS

2000 April 12

TRAFFIC & TRANSPORTATION COMMITTEE
(TRANSPORTATION AND TRANSIT DIVISION)

FROM: DIRECTOR PLANNING AND BUILDING

Our File: 08.102.2

SUBJECT: WILLINGDON HOV PROJECT

PURPOSE: To request approval to cost share with the BC Transportation Financing Authority (BCTFA), TransLink and the Insurance Corporation of BC (ICBC) for the detailed design and construction of the Willingdon HOV Project.

RECOMMENDATIONS:

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REPORT

1.0 BACKGROUND

At its regular meeting of 1998 May 25, Council approved in principle the network of HOV lanes identified within Burnaby as part of the *High Occupancy Network Vehicle Plan and Implementation Strategy* developed by the BC Transportation Finance Authority (BCTFA). At this same meeting Council more specifically approved in principle the development of HOV lanes on Willingdon, subject to undertaking a planning study for this initiative.

Subsequently, at its regular meeting of 1998 August 10, Council approved the amount of \$50,000 to finance the Benefit / Impact Study for the Willingdon HOV Project. It should be noted that \$25,000 or 50% of the cost of this study was provided by the BCTFA. Following this approval a multi-agency steering committee was assembled, a detailed terms of reference developed, a call for proposals issued, a consultant team selected, and the study initiated in

1999 January.

2.0 RATIONALE FOR THE PROJECT

2.1 The Burnaby Official Community Plan

The transportation goal of the Burnaby Official Community Plan (OCP) is *"to strive to facilitate the efficient movement of people and goods in a cost-effective manner which enhances the environment and the livability of the entire community."* The OCP also contains a number of sub-goals which specifically relate to the Willingdon HOV Project:

- Actively manage the development of the transportation system;
- Educate the community about the need for transportation alternatives and the impact of their choices;
- Reduce the impact of the transportation system by the expansion of the transit system;
- Carry more people in fewer vehicles;
- Optimize the use of existing road space; and
- Recognize that high occupancy vehicle (HOV) facilities are essential to change travel behaviour.

2.2 The Burnaby Transportation Plan

The Burnaby Transportation Plan includes the following specific policies which also support the implementation of the Willingdon HOV Project.

- Policy 1 *That the arterial road system in the City be designed to emphasize the movement of more people in fewer vehicles during the peak periods.*
- Policy 4 *That except in designated commercial areas, the City ensure that the provision of parking on arterial and major collector streets in commercial and industrial areas during peak periods reflects the need to maximize mobility.*
- Policy 11 *That the City support the continued development of its town centre areas with the provision of rapid transit linking these town centre areas with other town centres and road facilities linking town centres to other areas.*
- Policy 12 *That the City work with the Province to reserve rights of way for high occupancy vehicle lanes and rapid transit.*

- Policy 16 *That the City ensure that land development and the road network are designed to facilitate transit.*
- Policy 20 *That the City in conjunction with the Ministry of Transportation and Highways, develop a high occupancy vehicle road network which will designate roads for the use by carpools and buses during the peak periods.*

The underlying objective of these policies is to promote transit use and encourage commuters to carry more people in private vehicles by reducing travel time for buses and carpools relative to single occupant vehicles (SOVs).

2.3 Actively Managing the Transportation System

In addition to supporting the goals and policies outlined above, the Willingdon HOV Project has the potential to assist the City of Burnaby in actively managing the transportation system by providing:

- ◆ improved travel times, increased reliability, higher capacity, improved frequency for transit connections between the Brentwood Town Centre and Metrotown;
- ◆ faster transit connections between the two town centres and the other activity centres along Willingdon (ie. the "Heights", Slough Estates, Canada Way Business Centre, BCIT and Discovery Park);
- ◆ improved access to the area from the existing east-west high frequency transit routes in the area operating on Hastings (No. 145 - Vancouver to SFU bus service), Lougheed (existing 99 B-Line bus service and future Brentwood SkyTrain Station), and the existing Metrotown SkyTrain Station; and
- ◆ reduced parking demand in the area by offering meaningful alternatives to single occupancy vehicle (SOV) travel into the area.

3.0 PUBLIC CONSULTATION

The Benefit / Impact Study for the Willingdon HOV Project was initiated in 1999 January to review options for HOV lanes within the study area of Willingdon from Moscrop / Deer Lake Parkway to Hastings as shown in *Figure 1*. The Benefit / Impact Study was designed to determine **where** the HOV lanes should be, **who** should be eligible to use them and **when** they should operate.

During 1999 January the first phase of the public consultation program, as shown in *Figure 2*, was undertaken. Phase one of the public consultation program was undertaken to introduce the project to the community. This first phase included articles in *InfoBurnaby*, information on the City's web-site, a business outreach program, a project mailing list, and introductory presentations to key groups including the *Willingdon Transportation Action Group* and the Burnaby School Board.

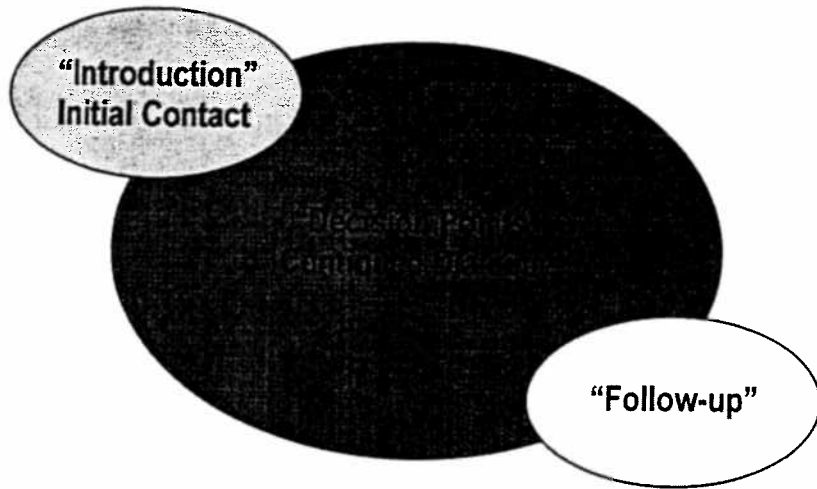


Figure 2
Phases of the Public Consultation Process

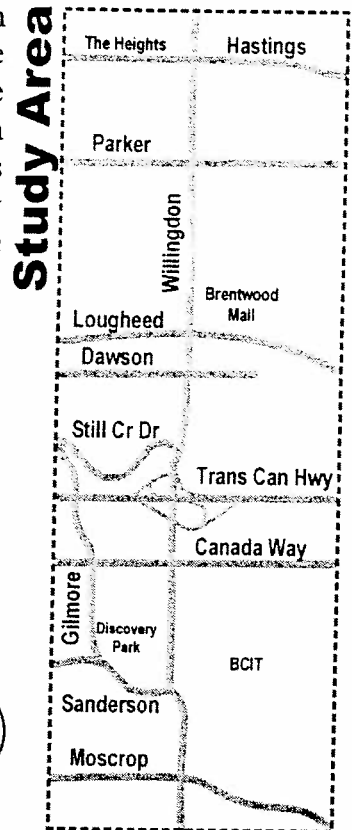


Figure 1
The Study Area

The Benefit / Impact Study was guided by a multi-agency Steering Committee as shown in *Figure 3*. The Steering Committee had representatives from the Burnaby Planning and Engineering Departments as well as BCTFA, *TransLink* as the agency responsible for transit service and TDM initiatives in the region, BCIT as a major area stakeholder, MoTH as the operator of the TCH and the agency having jurisdiction of Willingdon from Canada Way to Still Creek Drive, RCMP who are responsible for enforcing HOV facilities within Burnaby, and ICBC as the agency responsible for the Road Sense (safety) program.

Representatives for both the BCIT Student Association and Brentwood Mall were also sent copies of all the material reviewed by the Steering Committee so they could follow along with the workings of the Benefit / Impact Assessment.

The Steering Committee assembled a series of guiding principles for the project which are in *Attachment A*. These guiding principles are consistent with the City of Burnaby policies noted Section 2.1 of this report and were used as the framework during the evaluation of the options considered.

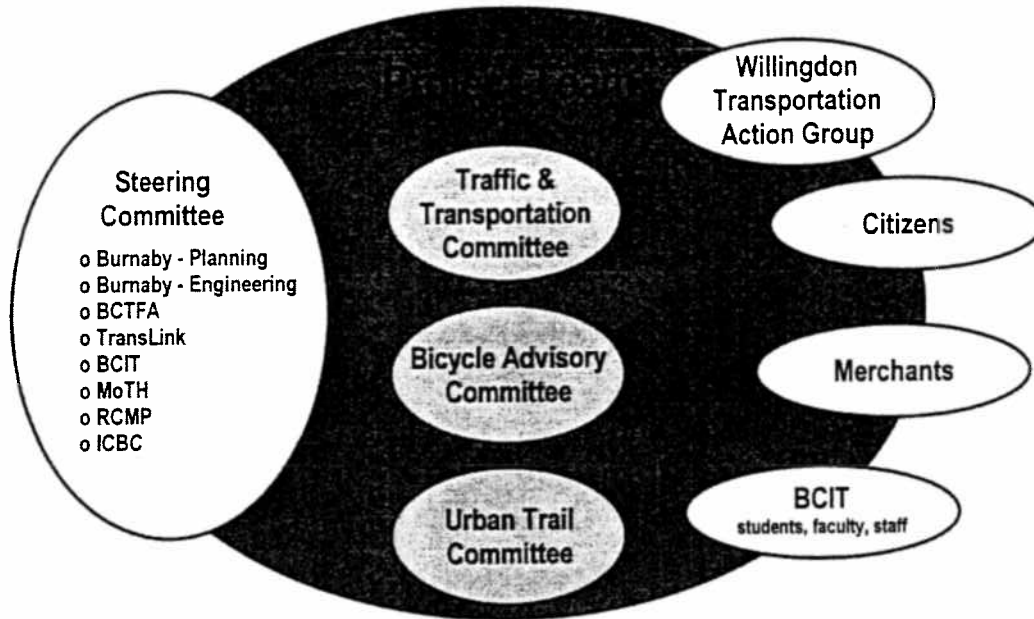


Figure 3
 The Steering Committee

A ranking of eight options considered during this review is contained in *Attachment B*. This ranking was the result of a year of technical work which saw two preferred options identified in 2000 January. The general scope of the HOV lanes proposed in the two highest ranked options is shown in *Figure 4*. The key difference between the two options was the extent to which the existing on-street parking between Moscrop / Deer Lake Parkway and Canada Way would be impacted to create either partial Bus Queue Jump Lanes (two thirds of the parking would be removed leaving about one third or about 85 spaces) or continuous Bus Lanes (all of the parking would be removed).

At the 2000 February 09 meeting of the Traffic and Transportation Committee (Transportation and Transit Division) the two preferred options were endorsed and second phase of the public consultation program was initiated.

The second phase of the public consultation program was designed to bring the project back to the community at the key "decision point". This two-month process has included the following presentations and events (the two underlined events were advertised public events).

- ◆ Transportation and Transit Division, Committee of Council

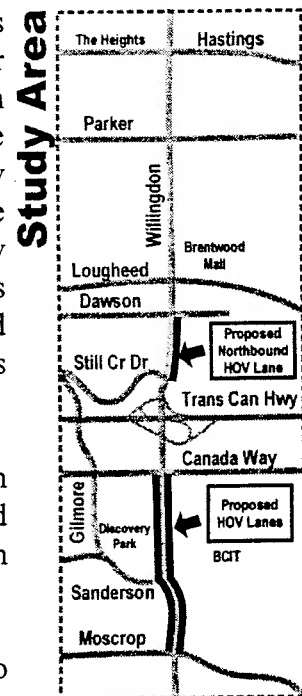


Figure 4
 Recommended Option

- ◆ Ministry of Transportation and Highways 2000 February 9
- ◆ Brentwood Mall 2000 February 24
- ◆ Burnaby School Board 2000 February 25
- ◆ BCIT Student Association 2000 March 1
- ◆ Willingdon Transportation Action Group 2000 March 6 and 20
- ◆ Heights Merchants' Association 2000 March 14
- ◆ BCIT Open Forum (for faculty, staff and students) 2000 March 15
- ◆ Burnaby Bicycle Advisory Committee 2000 March 22
- ◆ Community Open House 2000 March 23
- ◆ 2000 April 10

The project has been well received at all events. It has also been endorsed by the BCIT administration, the BCIT Student Association, and the Willingdon Transportation Action Group.

On the issue of how much parking should be removed from Willingdon for either the Bus Queue Jump Lane Option (Option 1) or the Bus Lane Option (Option 2), most groups felt that the additional benefit anticipated for transit under Option 2 justified the full removal of parking on the section of Willingdon between Moscrop/Deer Lake Parkway and Canada Way.

The summary of the questionnaires received at the two public events also support the Bus Lane Option (Option 2) as shown in **Figure 5** (24 responses in total). It should be noted that the

majority of these respondents (17) are now currently "frequent" auto drivers or auto passengers. Of the respondents 42% said they would be "very" or "somewhat" likely to *cycle more often* along Willingdon and 62% said they would be "very" or "somewhat" more likely to *use transit more often* along Willingdon as a result of the changes proposed as part of the HOV project.

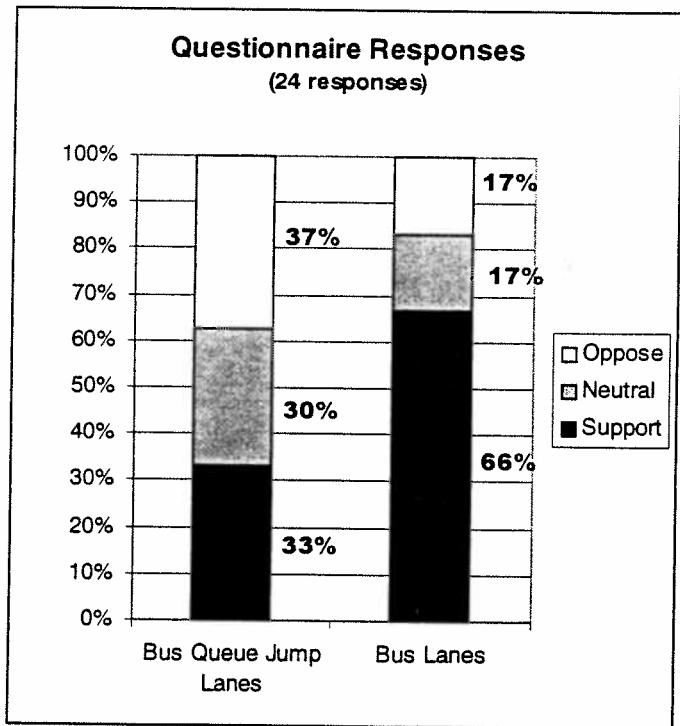


Figure 5
 Open House Questionnaire Responses

4.0 RECOMMENDED PROJECT (PRODUCT)

The recommended option (Bus Lane Option with signal priority) is a multi-modal option which encourages transit, vanpools, cycling and pedestrian activity along Willingdon. It is a true transportation demand management (TDM) initiative aimed at providing a safer operating environment and travel time incentive for alternatives to single occupant vehicle (SOV) travel along Willingdon. The recommended option is shown in detail in **Figure 6**. A larger scale colour version of this figure has been forwarded to each member of Council under separate cover and will also be available for public viewing in the Planning Department at City Hall.

4.1 Project Elements

The following items describe the major elements of the recommended option and their location (i.e **where** the improvements would be made):

- ◆ transit signal priority at key intersections along Willingdon including (Parker, Halifax, Lougheed, Dawson, Canada Way, Sanderson Way and Moscrop / Deer Lake Parkway);
- ◆ a new southbound half-signal at the northbound Willingdon to westbound Trans Canada Highway ramp entrance (to improve safety of this movement);
- ◆ a new signal and improved transit shelters at Goard Way (at the main entrance to BCIT to improve transit waiting areas, personal safety and traffic safety);
- ◆ a northbound HOV lane from Still Creek Drive to Dawson;
- ◆ full removal of parking from Moscrop / Deer Lake Parkway to Canada Way to create HOV lanes in both directions; and
- ◆ improved pedestrian / cycling connections across the Trans Canada Highway (urban trail extension from Sanderson Way to Canada Way on the BCIT site, joint pedestrian / bicycle connections on both sides of Willingdon from Canada Way to Still Creek Drive and on-street bicycle lanes from Still Creek Drive to Dawson on Willingdon in both directions).

4.2 Eligibility

The recommended option also defines **who** would be allowed to use the lane. Use of the HOV lane would be restricted to buses, with vanpools (6+), bicycles, motorcycles, taxis, *HandiDart*, and emergency vehicles also being allowed.

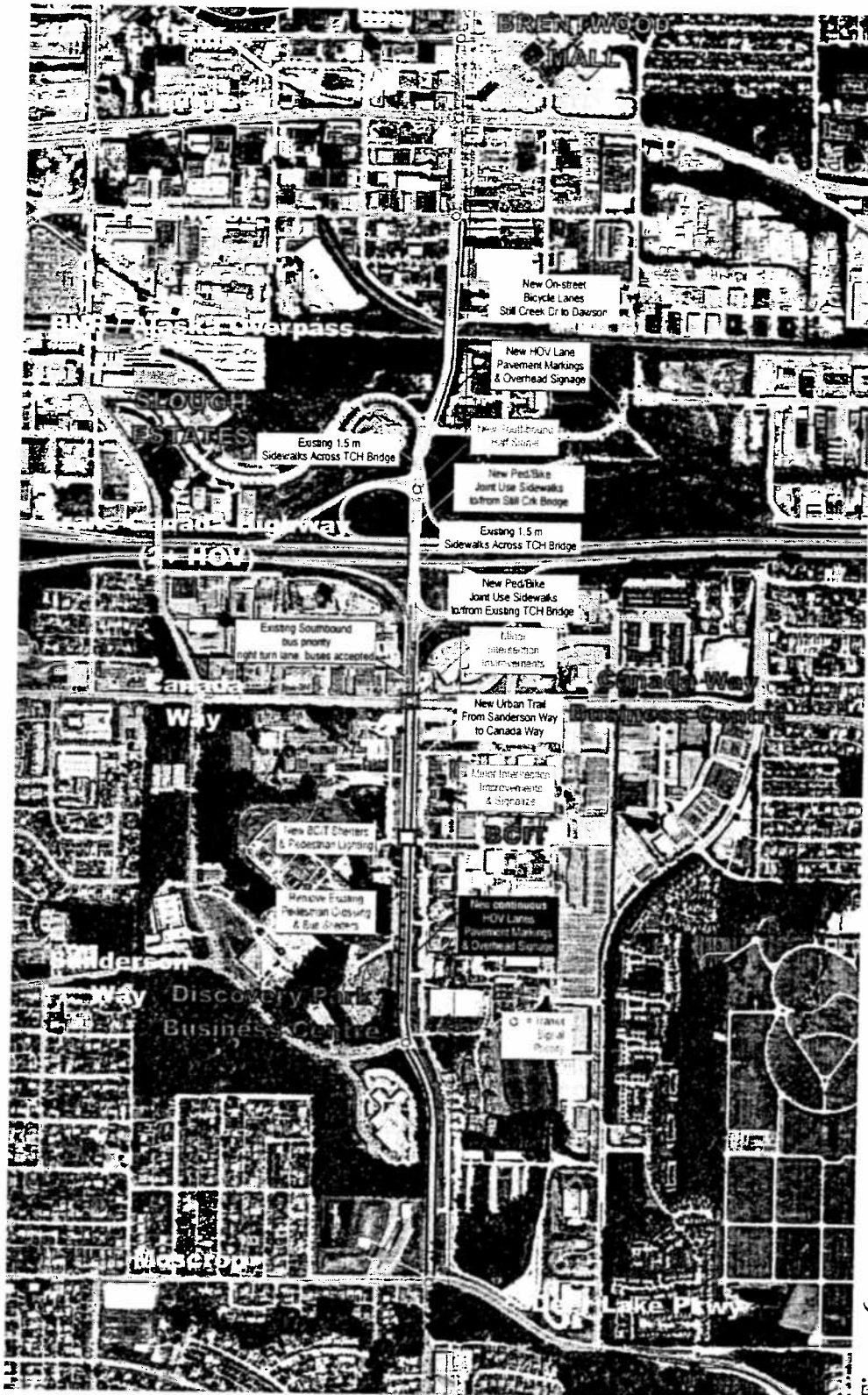


Figure 6
 The Recommended Option

4.3 Operation

The recommended option also defines **when** the lanes would be in operation. The HOV lanes would operate 24-hours a day in both directions, to make the lanes easy to understand and easy to enforce. Although demand for the HOV lanes is strong during the morning, mid-day and afternoon, demand is not expected to be high in the evening or overnight. However, there is no significant residential demand for on-street parking in this section of Willingdon.

5.0 FINANCING

5.1 Capital Cost

The following list is a summary of capital costs by major element.

Minor Road Improvements	\$93,465
Pedestrian / Bicycle Improvements (including urban trail)	\$340,500
Transit Signal Priority Measures and Goard Way Signal	\$508,000
HOV Lane Signage and Pavement Markings	\$115,800
Bus Shelters and Pedestrian Lighting	\$144,000
Public Awareness Campaign	\$3,000
Contingency (@ 25%)	\$301,195
Property	\$8,435
<u>Design Costs</u>	<u>\$95,550</u>
sub-total	\$1,609,945
<u>GST (@ 7%)</u>	<u>\$112,695</u>
<u>Total</u>	<u>\$1,722,640</u>

5.2 Cost Sharing

The general cost sharing principles for the project provide for BCTFA to contribute 50%, TransLink 25% and the City of Burnaby 25%. However, the specific amounts and percentages vary as described below. The main reasons for these variations are BCTFA will not finance property costs (a minor component of this project¹) and will limit their total contribution to the pedestrian / cycling improvements to a total of \$200,000. The other consideration in the basic cost sharing principles is that ICBC will be contributing \$153,010 (including 7% GST) toward the southbound half-signal for the Trans Canada Highway westbound entry ramp. BCIT has agreed in principle to make the public right-of-access required for the proposed urban trail (Sanderson Way to Canada Way) a no cost donation-in-

¹ Consisting of a small easement required from Dogwood Estate for the bus shelter proposed for the west side of Willingdon at Goard Way.

kind to the project. This was recently the subject of separate report to Council.

- **City of Burnaby** will initially be responsible for financing the full cost of the project or \$1,722,640 (including 7% GST). Once the BCTFA, TransLink and ICBC pay out their contributions, the City of Burnaby's net contribution will be \$410,627 (including 7% GST) or about 24%.
- **BCTFA** will be responsible for a cost contribution of \$748,376 (including 7% GST) or about 43% of the total project budget.
- **TransLink** will be responsible for a cost contribution of \$410,627 (including 7% GST) or about 24% of the total project budget.
- **ICBC** will be contributing \$153,010 (including 7% GST) or about 9% of the total project budget. This contribution represents most of the cost for the design and construction of the southbound half-signal at Willingdon / TCH and is being provided through their road improvements program.

Sufficient Capital Reserves are available and this project is included under the 2000 Major Roads component of the 2000-2004 Annual Capital Program, however, project expenditures will exceed the 2000 CAP by approximately \$1,358,250 net of the GST rebate. As stated previously the City of Burnaby's net capital cost for this project will be approximately \$395,300 (net of the GST rebate) once the BCTFA, TransLink and ICBC reimburse the City for their respective contributions.

Appearing elsewhere on the Agenda is the subject Capital Reserves Expenditure ByLaw.

6.0 TIMING

If this report is adopted by Council, detailed design for the Willingdon HOV Project would be undertaken immediately. Construction would begin this summer with the HOV lanes themselves open for September of 2000 (the beginning of BCIT's next program year and coincident with further planned *TransLink* bus service improvements for Willingdon). However, the transit signal priority improvements and some of the other associated elements may not be completed until the end of 2000.

7.0 CONCLUSION

The Willingdon HOV Project is a major north-south element of the HOV network plan contained within the Burnaby Transportation Plan. It represents a "missing link" in the north-south direction for people trying to make transit connections to/from the area using the existing high frequency east-west transit services on either Hastings (No. 135), Lougheed (99

B-Line) or the existing SkyTrain line. The specific project recommended for design and construction in this report represents the conclusion of a significant planning study which was supported by an inclusive public consultation process. Moreover, the benefits of the recommended Willingdon HOV Project option for transit, vanpools, cyclists and pedestrians far outweigh the impacts.


✓ D.G. Stenson, Director
PLANNING AND BUILDING

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cc. City Manager
Director Engineering
Director Finance

ATTACHMENT "A"

Guiding Principles
For the Willingdon HOV Project

The following guiding principles were established by the Steering Committee and they were used as an evaluation framework for the review of all of the potential options.

1. **Help to change travel behaviour** by ensuring any change makes high-occupancy vehicle (HOV) use more time competitive than single-occupant vehicle (SOV) use.
2. **Improve transit connections** by increasing the frequency, efficiency and reliability of transit service between Brentwood Town Centre, Metrotown Centre and the other activity centres in the Willingdon area (Willingdon Heights, BCIT, Slough Estates, Discovery Park).
3. **Accommodate other HOV users** to the extent that they do not adversely impact the potential benefit to transit service.
4. **Use existing road space to create the HOV lanes** (travel or parking lanes) wherever possible and new lane construction should be a second choice reserved for areas of severe congestion.
5. Make the system **easy to understand** and **easy to enforce**.
6. Ensure the system is consistent with and **extends the existing HOV network** only if it does not adversely impact transit or indirectly benefit SOV users.
7. **Accommodate cycling** to the greatest extent possible.
8. **Limit the overall impact** on the surrounding community.

ATTACHMENT "B"

Ranked Options
Resulting from Benefit / Impact Study
 For the Willingdon HOV Project

Ranking	Option	Benefit	Impact	Cost	Key Factor
1	Bus Lanes with signal priority (middle, south)	High	Medium	Medium	Increased benefit at same cost
2	Bus Queue Jump Lanes with signal priority (middle, south)	Medium - High	Medium - Low	Medium	Some parking retained
3	Bus Lanes with signal priority (north, middle, south)	High	High	High	High impact and little benefit in north section
4	Bus Lanes (north, middle, south)	Medium - High	High	High	High impact and little benefit in north section
5	"3+" HOV (north, middle, south)	Medium - High	High	High	Hastings and TCH are "2+" - network inconsistency/enforcement issues
6	"2+" HOV (north, middle, south)	Low	High	High	Too many "2+" users to have a benefit
7	Left turn lanes (north)	Low	Low	Low	No benefit to transit
8	Existing Condition	-	-	-	No Benefit

It is important to note that the options ranked three through to six included new HOV lanes (one in either direction) in the north section of Willingdon from Halifax to Hastings. **This work lead the Steering Committee to focus on option(s) which had Bus Lanes limited to sections of Willingdon south of Dawson.**