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REPORT
Regular Council Meeting
1992 November 23

CITY OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRAFFIC SAFETY DIVISION)

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

A. PEDESTRIANS CROSSING AT KENSINGTON/SUMAS

RECOMMENDATION:

1. THAT a copy of this report be sent to Ms. Cindy Palma, 6481 Sumas, Burnaby, B.C., V5B 2T9

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"At its last meeting, staff were directed by the Committee to review the intersection of Kensington and Sumas. Subsequently, staff were contacted by Ms. Cindy Palma who we understand had originated the complaint to the Committee.

Ms. Palma was concerned at the difficulty that she and others were having crossing Kensington at Sumas. Sumas is a finished residential cul-de-sac that joins Kensington at a T junction controlled by a stop sign. Kensington is classified as a major residential connector but is built to interim standard. In the south east quadrant, the intersection is flanked by a park which has a posted 30 km/h speed zone. Ms. Palma notes that the police have been most helpful in periodically enforcing the speed limit along Kensington but that the residual impact on traffic is short lived. However, for pedestrians the sightlines north and south along Kensington are excellent and during the times we have visited the intersection we have not had to wait unduly for safe crossing gaps. Only one accident - in 1987 - has been recorded at this intersection.

A part of the problem would appear to be that Kensington is unfinished and hence the crossing is not up to the usual urban standard. Ms. Palma notes difficulties crossing the street with a stroller. Unfortunately, successive LIP initiatives along the street have failed and there is no prospect for forthcoming success. We propose addressing part of this problem by seeing whether it is feasible to extend the finished curb and sidewalk on Sumas to a partial or full return on Kensington. We will also place 'Pedestrians on the Road' warning signs on the Kensington approaches to Sumas."

B. BETA AVENUE AT FRANCES STREET

RECOMMENDATION:

1. THAT a copy of this report be sent to Mr. Rick Moore, 4720 Francis Street, Burnaby, B.C., V5C 2S1.

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"1.0 INTRODUCTION

At its last meeting the Committee heard Mr. Rick Moore as a delegation. He spoke of accident problems at the Beta/Frances intersection. He suggested a number of possible traffic control measures, favouring the installation of a roundabout over more conventional control such as stop signs. A staff investigation had been initiated previously as a result of complaints received subsequent to a recent motor vehicle accident. Accordingly, the matter was referred to staff for a report.

2.0 TRAFFIC FLOWS

Both Beta Avenue and Frances Street are residential streets with average traffic flows for their classification. Recently gathered traffic counts show that the volumes have barely changed over the last 5 years.

<u>Location</u>	<u>1988</u>	<u>1992</u>
Beta (Georgia to Frances)	659	527
Beta (Frances to Pender)	686	668
Frances (Gamma to Beta)	536	671
Frances (Alpha to Beta)	Unavailable	

3.0 TRAFFIC ACCIDENTS

Staff also reviewed accident records for the intersection of Beta Avenue and Frances Street over the last 5 years. From the data collected, the intersection does not meet the warrants for stop control.

Traffic Accidents

1988 - 3 accidents
1989 - 1 accident
1990 - 1 accident
1991 - 3 accidents
1992 - 2 accidents (to date)

It was noted that all accidents were right angle collisions. This observation led us to look at the possible visual obstructions at this intersection.

4.0 VISUAL OBSTRUCTIONS

Staff conducted a field check of the intersection and found that the northeast and northwest corners were visually obstructed by trees and hedges from properties on each corner. The Traffic Division has requested the owners to bring their properties into compliance with Section 6.13 of the Burnaby Zoning Bylaw (Vision Clearance at Intersections). This will improve sight distance for vehicles travelling south on Beta Avenue and east and west on Frances Street where most of the right angle collisions occurred.

5.0 DISCUSSION/CONCLUSION

We have reviewed accident records for this intersection as they relate to warrants for stop sign installation. At this time the statistical warrant is not met for this measure of control. We have noted, however, that in the last year and a half totals have increased at this intersection, pushing it close to the warrant.

For comparison purposes, we also reviewed other intersections in the area. We noticed similar trends; either a recent increase in accident rates or a recent year in which totals were high. Individually, none of these intersections meet the warrant for stop sign installation but in grouping the area it is clear that there are problems. We intend to do a more comprehensive traffic study of the entire residential area bounded by Hastings, Willingdon, Parker, and Holdom.

We will be compiling traffic volume and accident data for this area in an attempt to determine problem intersections and possible reasons for/solutions to these problems. There may be a need for a comprehensive approach to control throughout this grid area including possibly a non-conventional traffic calming approach. We will report back to the Committee upon completion of our analysis. In the interim, the alleviation of the visual obstructions is anticipated to be beneficial."

Arising from the discussion of the report, the Committee requested that staff prepare a scheme of alternating stop signs for the grid streets in the neighbourhood bounded by Willingdon, Parker, Delta and Hastings. The Committee also requested that residents in the area be polled to determine the level of acceptance for the scheme.

C. TRAFFIC ON 4100-4400 BLOCKS UNION STREET

RECOMMENDATIONS:

1. THAT a 4-way stop be installed at Madison Avenue and Union Street.
2. THAT stop signs be placed on Madison Avenue at Frances Street and at Georgia Street.
3. THAT Mr. Mike Howe, 4255 Union Street, Burnaby, B.C., V5C 2X3 be sent a copy of this report.

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"BACKGROUND

We are in receipt of a petition from the residents of the 4100-4400 blocks of Union Street. The issues raised in this petition are in regard to high traffic volumes, especially in the peak periods, and the speed at which much of this traffic travels. Although no specific requests have been made, the petitioners do ask that we investigate ways to reduce volumes on their street.

UNION STREET HISTORY

Union Street is classified as a local residential collector street and as such is stop sign protected throughout. This classification is historic and in recent years has not been promoted. In fact, several measures have been taken which amongst other things should discourage traffic growth. These measures include: 4-way stop installations at Gilmore Avenue, Delta Avenue, and Springer Avenue; construction of Union to an 8.5m standard curb to curb rather than 11m typical for collector routes; and most recently, construction of a traffic island at Boundary Road, which restricts traffic to right turn in, right turn out only.

A recent traffic count indicates that these measures have been successful in controlling overall traffic growth as volumes are comparable to figures noted in 1984/85. However, peak hour volume and speed has appeared to increase and is of concern.

EVALUATION

Two recent traffic counts have been conducted on Union Street in 4100-4200 blocks. The counts, taken in July and October of 1992 indicate traffic volumes of 1,724 and 1,828 vehicles per day, respectively. These volumes are not high for this classification of roadway but do indicate areas of concern to us and obviously the residents of Union Street. These concerns are as follows:

- Union Street is not promoted as a collector route. Past efforts to reduce volume on it have not been significantly successful.
- The October traffic count indicated a traffic volume of 590 vehicles between 7:00-9:00am. This represents over 32% of the overall daily traffic.
- Union Street is constructed to a 8.5m standard curb to curb. This does not allow for two vehicles to pass if parking is occurring on both sides of the street. This can and does cause conflicts when opposing traffic meets this high peak flow.
- It has been noted that some of the Union Street traffic travels in excess of the allowable speed limit.

DISCUSSION/CONCLUSION

In the preceding report (Item B), we dealt with complaints regarding the Beta/Frances intersection and noted the need for a comprehensive review of the area. The problems here are not dissimilar. The grid of local streets results in their uniform use as local collectors, with possibly some extraneous traffic component. We propose further review on an area basis to address this concern. A solution that we are considering testing is alternating stop sign control for all grid intersections. It would however be premature to introduce such a wide ranging measure on an ad hoc basis. We also note decisions on traffic control are related to the Barnett/Hastings People Mover Project which is now in its concept design phase.

In the interim, we are recommending stop signs be installed on Union Street at Madison Avenue, converting the intersection into a 4-way stop. Although stop sign installation is normally reserved for assigning right-of-way or correcting an accident problem, we feel it is justified in this case. The high percentage of peak hour traffic, speed problems and the overall objective of down-playing the collector status of Union Street drew us to this conclusion.

An anticipated effect of this action is use of Madison Avenue as a desirable through street to Hastings Street as 4-way stops will then exist at Union, Pender, and Albert streets as well as the pedestrian signal at Hastings Street. To negate this, we are also recommending stopping Madison Avenue at the currently uncontrolled intersections of Frances Street and at Georgia Street. The addition of these controls addresses accident histories at these intersections."

D. TRAFFIC ACCIDENTS AT BUXTON AND FORGLEN

RECOMMENDATION:

- 1. THAT Council approve the installation of stop signs protecting Buxton at Forglen.

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"BACKGROUND

The Traffic Department received a petition from residents in the Buxton/Forglen area requesting the installation of stop signs 'before there is a fatality' in 1992 March 26. While staff were prepared to recommend a stop control on Forglen we recommended that Buxton Street residents be given the opportunity to comment on this proposal. Since then, staff sent a questionnaire to the residents who had petitioned on this matter as well as Buxton residents. We have also been monitoring the intersection and reviewing the volume and traffic accident data.

INVESTIGATION

Staff recently gathered traffic counts and accident information at the intersection of Buxton/Forglen. Traffic volumes have remained virtually unchanged since 1985. A count taken in January of 1985 indicated a volume of 822, the current figure is 853.

We have also reviewed our accident records which show only 10 accidents reported in 15 years. Since 1985, only 3 accidents have been reported.

- 1986 - 1 accident
- 1991 - 1 accident
- 1992 - 1 accident

Staff conducted a neighbourhood survey of the Buxton/Forglen intersection in 1992 September. The questionnaire was distributed to 27 households but we received only 17 responses.

The results of the survey are as follows:

'I am NOT IN FAVOUR of the installation of stop signs on Forglen favouring Buxton.' 2

'I am IN FAVOUR of the installation of stop signs on Forglen favouring Buxton.' 15

Out of the 15 in favour, 2 requested the stop signs to be on Buxton and 1 requested for a 4-way stop.

DISCUSSION/CONCLUSIONS

Buxton currently functions as a minor local collector. As such, we are recommending stop control of Forglen as supported by the resident poll."

E. HAMMARSKJOLD DRIVE AT HASTINGS STREET
AND AT KENSINGTON AVENUE

RECOMMENDATIONS:

1. THAT Council approve in principle the closure of Hammarksjold Drive at Hastings Street.
2. THAT a copy of this report be submitted to the Barnet/Hastings People Mover Project.

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"A report to the Committee dated 1992 April 27 addressed safety concerns relative to traffic accidents at the Hastings Street/Hammarksjold Drive intersection. It was recommended that closing Hammarksjold Drive at Hastings Street would address these safety concerns. The motorists presently using Hammarksjold would take advantage of the traffic signal at Kensington Avenue/Hastings Street.

While this recommendation was favoured by the Committee, a referral to the Fire Department was requested. There was some concern regarding emergency access to Hammarksjold Drive. After discussing this closure with the Fire Department staff, they had no objections to it but suggested, as a precaution, that a fire gate be installed. We would therefore install a gate at Hammarksjold and Hastings with the appropriate pavement design, etc. with the closure.

This closure requires some roadworks downstream at Kensington. Currently the main traffic flow is via Hammarksjold Drive. Construction will be required at the Kensington/Union intersection so as to redirect the flow to Kensington Avenue. Construction of the road realignment and closure, will include new curb and gutter sidewalk work and some utility relocation. An estimate of \$65,000 has been prepared for all of these works.

It would be appropriate if the cost of the closure and consequent works be budgeted for in the context of the Barnet/Hastings People Mover Project. This H.O.V. project will require a rationalization of access to Hastings Street including the closure of Hammarksjold Drive."

F. 14TH AVENUE BETWEEN CANADA WAY AND 6TH STREET

RECOMMENDATION:

1. THAT a copy of this report be sent to A.F. Lawson, 7775 14th Avenue, Burnaby, B.C., V3N 2A8.

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"BACKGROUND

In his letter to the Committee Mr. Lawson has brought two issues to our attention. First, an inappropriately located driveway crossing at 7711 14th Avenue and second, a general concern over traffic volume on 14th Avenue between Canada Way and 6th Street. Mr. Lawson is requesting barriers or diverters to curb this problem.

DRIVEWAY AT 7711 14TH AVENUE

This property is located at the corner of 14th Avenue and Canada Way. Our policy relating to access to corner lots is as follows: 'Where secondary street or lane access is available, access will not be permitted to arterial streets or major collectors.' In this case, 14th Avenue is the secondary street access was restricted to it.

We also require that 'Access shall be located a minimum of 6m (20 ft.) from the property line.' Access to this property is 6m from the Canada Way property line.

As Mr. Lawson notes, the original site plans indicated the driveway at the end of the property beyond the current setback from Canada Way.

When the owner was informed of the need to relocate a street light at an additional cost of approximately \$1,500 the design drawings re-submitted. The new design was approved as it complied with policy.

We note that with the current siting of the driveway there is no legal parking spot between the driveway and the stop sign hence clearance on the intersection approach is well in excess of 'normal'. While the driveway location is not ideal it is typical of many corner lots where lane access is not available.

TRAFFIC ON 14TH AVENUE

We have conducted traffic counts on 14th Avenue between Canada Way and 6th Street. Mr. Lawson's quote of 800 vehicles per day is based on a count taken in March of 1992. Mr. Lawson maintains that this volume is high for a residential area and barriers or diverters should be installed as a deterrent.

Perhaps unfortunately, a traffic volume of 800 vehicles per day is not unusual for typical residential streets in Burnaby. Flows of 500-1000 vehicles per day are normal figures and vary with road length network continuity and the area density. We note that single family residential housing generates on average over 10 vehicle trips per day and we would expect higher volumes in areas which have secondary suites. Grid residential streets also attract extraneous traffic if arterials are congested. For comparison, a volume of 781 vehicles was counted on 12th Avenue in 1990 and 1,727 vehicles were counted on 16th Avenue in 1991. As 16th Avenue is stop sign controlled at 7th Street and signalized at 6th Street it draws more traffic.

We have also reviewed our accident data for the intersection of 14th Avenue and 7th Street. It is at this intersection that Mr. Lawson proposes barriers. We have a record of only one reported accident in the last three years.

Based on the traffic volumes and accident rate along 14th Avenue we feel any type of additional ad hoc traffic control is not required. This whole area however probably receives extraneous traffic due to the congestion on the major arterials that border it. We would propose that the neighbourhood be considered a candidate for traffic calming protection. This review should occur after completion of the Canada Way/Edmonds project, and the review of the Burnaby Comprehensive Transportation Plan."

G. TRAFFIC IMPROVEMENTS ON BOUNDARY ROAD

RECOMMENDATIONS:

1. THAT the left turn restriction on Boundary at Georgia, proposed by the City of Vancouver, be approved.
2. THAT a copy of this report be sent to the City of Vancouver Engineering Department.

The Assistant Director Engineering - Traffic and Engineering Systems submitted the following report to the Committee:

REPORT

"1.0 INTRODUCTION

At a recent meeting, the TSC agenda included correspondence from the City of Vancouver Engineering Department regarding 'proposed left turn restrictions Boundary Road northbound at Georgia Street'. The Committee, by motion, resolved 'that the letter from the City of Vancouver Engineering Department be referred to staff for a report on all of the traffic management initiatives along Boundary'. This report addresses the requirements of the Committee. The specific recommendations fall out of the report.

2.0 BACKGROUND/HISTORY

The Boundary Road right-of-way has been augmented by widening and varies in width ranging up to 132' and contains the 'legal' border between Burnaby and the City of Vancouver. There is a maintenance agreement that defines how operational jurisdiction and costs are equitably split.

The cost sharing for works at Provincial arterial highway intersections also includes the Ministry of Transportation & Highways. More recently, B.C. Transit has initiated and/or participated in the capital cost in signal works in order to assure that their operational requirements are met (these include intersections at Arbor/22nd and Adanac).

Historically the City has 'managed' signals along Boundary Road. This arrangement continues because it makes sense to have a single authority control the corridor.

3.0 ITEMS OF MUTUAL CONCERN

The attached table (APPENDIX 1) lists, from north to south, the 'outstanding' items of mutual concern along the Boundary Road corridor. The information in the table has been reviewed with City Engineering Department staff.

3.1 Turn Restriction at Georgia

Members of the Committee will recall that, to accommodate transit, the intersection at Boundary and Adanac was realigned and signalized to facilitate left turns from westbound Adanac to northbound Boundary. Although some potential problems arising from the change were anticipated and addressed by the design (e.g. the delta island at Union on the Burnaby side) it was also expected that further fine tuning through traffic regulation would be required. Accordingly, the City Transportation Engineer has written as follows:

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The median changes at Boundary and Adanac help to protect Adanac Street from commuter traffic. However, we feel additional measures are required to prevent commuter traffic from using Adanac by making U-turns on Boundary Road. Our last count showed over 80 vehicles making this movement in the morning peak hour.

To address this, we are proposing morning peak left-turn restriction into Vancouver from Boundary Road northbound at Georgia Street and request Burnaby's approval for this signing.

We recommend approval of this minor turn restriction.

4.0 DISCUSSION/CONCLUSION

The Municipality and the City of Vancouver have shared jurisdiction over the Boundary Road arterial. This partnership has worked well through consultation between staffs and Councils. We anticipate continued cooperation in resolving the concerns listed in the attached table (APPENDIX 1)."

H. BOUNDARY ROAD/HASTINGS STREET INTERSECTION

RECOMMENDATION:

1. THAT the City of Vancouver be requested to join with the City of Burnaby in requesting the Ministry of Transportation and Highways to install advance left turn arrows at the Boundary Road/Hastings Street intersection.

REPORT

Under the new business portion of the Traffic Safety Division meeting held on 1992 November 03, the Committee advised that advance left turn arrows should be installed at the Boundary Road/Hastings Street intersection prior to implementation of the improvements proposed in the Barnet/Hastings People Moving Project. Accordingly, the Committee adopted the recommendation listed above.

MEMBERS:

Respectfully submitted,

Mr. D. Rankin
Mr. W.B. Bennett
Mr. M. Bloomfield
Mrs. L. Brown
Mrs. M. Canessa
Mrs. G. Evans
Mr. T. Hulme
Mr. E. Furchalk
Mr. D. Ramsbotham
Mr. W.B. Roxburgh
Mr. R. Weston

Councillor J. Young
Chairman

Councillor D. Evans
Member

Councillor D. Lawson
Member

Councillor C. Redman
Member

TABLE I: BOUNDARY ROAD CORRIDOR: OUTSTANDING ISSUES

INTERSECTION	SCOPE	COMMENTS
Cambridge/Oxford/Eton	Diversion of traffic	The closure of the Skeena Tunnel (included in the Terms of Reference of Cassiar Connector) is being reviewed by City. A Licence Plate Survey is being conducted to determine the extent of "through" traffic.
Hastings	Intersection widening with renewed signals	Improvements to this intersection are being driven by the Barne/Hastings People Moving Project. Notwithstanding right-of-way constraint an interim solution including left turn channelization has been proposed.
Georgia (& possibly other locations)	Left turn restrictions	As a result of the signal and intersection improvements at Adanac, traffic patterns have changed. Some regulatory fine tuning is required to minimize rat-running. The City is seeking approval for minor changes (as outlined in the attached report). Staff are monitoring the situation to identify any emerging problems that may require further action on our part.
Lougheed Highway	Improvements	As a result of development there will be a widening to the Lougheed Highway east leg of this intersection.
Broadway	Signal/left turn bay	Signal and left turn bay modifications are proposed for this location at a developer cost.
Henning	Signal	A signal is proposed for this location as a developer cost.
Grandview	Widening	The Municipality has lobbied MOTH for improvements and they have acquired right-of-way. We expect improvements in conjunction with Trans Canada widening.
Canada Way	Realignment	The existing intersection at Boundary Road is proposed to be reconstructed to rationalize movements and conflicts. Not scheduled in current five year CIP.
22nd Street/Kincaid	Left turn channelization and a signal at 22nd	Project initiated by B.C. Transit (was King Edward cross-town route). Cost sharing approved and budgeted for. Construction expected Fall 1992.
Moscrop	Signal	The junction of this major collector and Boundary has been pre-ducted for a signal and is in the City's Capital Budget for 1992. The signal is needed to allow left turns to Boundary. Implementation would relieve left turn problems at Burke.
SkyTrain	Widening	With the abandonment of the freight railway there is an opportunity for eliminating the physical pinch point of the underpass. However, reinstatement of B.C. Parkway Overpass would be desirable. Related to Vanness improvements (below).
Vanness/B.C. Tel Drive	Realignment	The City wishes to improve this intersection as a major access to the Collingwood Village project. Normally this would be a developer cost project but the City wishes all benefiting parties to participate in cost sharing. Timing of a traffic signal/pedestrian signal is a subject of debate between Burnaby, the City, B.C. Transit and B.C. Tel.
Kingsway	Capacity improvements	With acquisition of right-of-way, MOTH is in a position to widen Kingsway's east leg (to match City's). Municipality would participate in widening south leg to match north (see above). Final designs to be available shortly, for both the east and south legs.
Imperial/49th	Widening	With the acquisition of right-of-way the Municipality is in a position to widen the Imperial leg of the intersection to allow for left channelization. Scheduled for 1993 in current Capital Budget.

APPENDIX I