

REPORT  
Regular Council Meeting  
1987 January 19

THE CORPORATION OF THE DISTRICT OF BURNABY

TRAFFIC SAFETY COMMITTEE

HIS WORSHIP, THE MAYOR  
AND ALDERMEN

Madam/Gentlemen:

REPORT OF THE TRAFFIC SAFETY COMMITTEE

A meeting of the Traffic Safety Committee was held in the Council Chamber, Municipal Hall, 4949 Canada Way, Burnaby, B.C. on Tuesday, 1987 January 13 at 6:00 p.m.

PRESENT:

Alderman A.H. Emmott, In the Chair  
Alderman L.A. Rankin  
Alderman S.G. Veitch  
Mr. William Anderson, Senior Citizens Representative  
Mr. K.R. Beedie, Burnaby Chamber of Commerce  
Mr. W.B. Bennett, B.C. Transit Representative  
Mrs. Lorraine Brown, Parent Teacher Council  
Mr. Rob Weston, B.C. Motor Transport Association  
Mr. John Woods, Citizens Representative

ABSENT:

Mrs. A.M.J. Bailey, School Board Representative  
Mr. D. Spencer McDonald, B.C. Safety Council

A. BYRNE ROAD AND MARINE DRIVE

RECOMMENDATIONS:

1. THAT the existing traffic signal at Byrne Road and Marine Drive be removed.
2. THAT the intersection of Byrne Road and Marine Drive be controlled by stop signs on all legs.

(CARRIED UNANIMOUSLY)

R E P O R T

A memorandum dated 1986 November 21 was received from the Director Engineering who reported as follows:

"The subject intersection is temporarily being controlled by multi-way stop signs. These were installed when a thief stole the signal controller on 1986 October 18. During that week we installed a temporary controller to enable us to put the signal into flash operation until we could replace it with a full controller. The temporary controller was stolen the following weekend. To date, we have not replaced the controller but have left the stop signs in place.

This signal was originally installed in 1982 December 23, and was warranted as a detour routing for Marine Way. With the opening of Marine Way and the closing of Marine Drive at the New Westminster end, traffic volumes on Marine Drive have dropped considerably.

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Before ordering and installing a new controller, we decided to check and update the signal warrant. Using the warrant from the Canadian Manual we find that the subject intersection can only meet 40 of a required minimum 100 points.

We have been observing the intersection and have found it to be functioning quite satisfactorily with the present stop sign control. No accidents have been reported since the signal controller was stolen. We also note that delays to traffic are minimized under stop sign control.

In summary, we feel that as the intersection no longer warrants a traffic signal, and as the multi-way stop control has proven satisfactory, that the signal be removed.

STAFF RECOMMENDATIONS TO THE TRAFFIC SAFETY COMMITTEE:

1. THAT the existing traffic signal at Byrne Road and Marine Drive be removed.
2. THAT the intersection of Byrne Road and Marine Drive be controlled by stop signs on all legs."

B. TRAFFIC SIGNAL REQUEST - DELTA AVENUE  
AT PARKER STREET

RECOMMENDATIONS:

1. THAT Council approve the installation of a semi-actuated, including pedestrian actuation, traffic signal at Delta Avenue and Parker Street.
2. THAT the Transportation Committee be requested to consider the reclassification of Delta Avenue to a residential collector.
3. THAT the Principal of Brentwood Park Elementary School, E.A. Elphick, be sent a copy of this report.

(CARRIED UNANIMOUSLY)

R E P O R T

A memorandum dated 1986 November 24 was received from the Director Engineering who reported as follows:

"The request from a parent of a child involved in an accident at this intersection, was relayed to us by the Principal of Brentwood Park Elementary School. In response to this request, we updated our vehicle volume statistics for the intersection and calculated the R.T.A.C. traffic signal warrant. Our procedure was different than usual in calculating the warrant in that we considered simultaneously the signal warrant at the adjacent intersection of Springer Avenue and Parker Street, for which we have also received similar requests.

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Initially, we calculated the warrants for both intersections assuming that only one of the intersections would be signalized. Delta-Parker recorded 101 points and Springer-Parker recorded 96 points based on this assumption. Secondly, we calculated the warrants for both intersections assuming both intersections would be signalized. The results were 72 points for Delta-Parker and 58 points for Springer-Parker. These reduced point totals demonstrate the negative impact that signals in close proximity have on traffic flows. Since in isolation either signal may be warranted but in combination they are in conflict, we analyzed the intersections to determine which one we would prefer to have signalized.

Springer Avenue is a designated collector street whereas Delta Avenue is considered as a residential street, although it is built to an eleven metre standard from Parker Street to Ridgelawn Drive and is an existing bus route. The intersections of Delta Avenue with Venables Street and with Westlawn and Eastlawn Drives are uncontrolled four legged intersections, the remainder are either already controlled or are T-intersections which tend to be self-controlling. The eleven metre pavement width and the greater proportion of controlled or self-controlling to uncontrolled intersections, we feel result in motorists driving Delta Avenue as if it were currently a collector street.

Signalization of either intersection would probably result in an increase of traffic on the north-south street. Delta Avenue, though, would probably experience a greater increase due to its continuity from Hastings Street, across Loughheed Highway at a signalized intersection, and tying into Douglas Road with connections to the freeway and Canada Way. Springer Avenue, on the other hand, terminates at both Hastings Street and Loughheed Highway, although at the latter there is a left turn permitted from eastbound Loughheed.

The intersection of Delta-Parker currently has a marked and adult-patrolled school crosswalk on the west leg of the intersection. All four legs are completed to their final standard with sidewalks on both sides of each street. Springer Avenue has sidewalks only on the west side.

The accidents at Springer Avenue have been more frequent and with a higher percent considered correctable than at Delta Avenue, but only the latter location has recorded a pedestrian accident. A signal at either intersection would probably assist the traffic at the unsignalized intersection by creating gaps in the traffic that would allow the north-south traffic to cross or turn onto Parker Street. A signal at Delta Avenue, as it is the midpoint between the existing signals at Holdom and at Willingdon Avenues, would probably have a better effect on Springer Avenue than vice versa. This can be seen in the signal warrants in that a signal at Delta reduces the warrant at Springer from 96 to 58 points (40% reduction) whereas a signal at Springer reduces the Delta warrant from 101 to 72 points (29% reduction).

We are recommending that a semi-actuated, including pedestrian actuation, traffic signal be installed at the intersection of Delta Avenue and Parker Street. The following is a summary of the reasons why we feel that Delta Avenue is preferred to Springer Avenue:

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1. higher R.T.A.C. point rating for a signal warrant,
2. existing marked and patrolled school crosswalk,
3. existing bus route,
4. existing concrete sidewalks on both sides of all legs,
5. higher volumes on Delta Avenue than Springer Avenue,
6. Delta Avenue built to collector standard and effectively functions as same,
7. a signal at Delta Avenue has better effect at Springer Avenue than vice versa, and,
8. a signal at Delta Avenue serves a larger neighbourhood than one at Springer Avenue.

The main detrimental factor to the selection of Delta Avenue over Springer Avenue is that Delta Avenue is not designated a collector street. As a signal will probably increase the volume of traffic on Delta Avenue, we are also recommending that the matter of changing the designation of Delta Avenue be referred to the Transportation Committee.

STAFF RECOMMENDATIONS TO THE TRAFFIC SAFETY COMMITTEE:

1. THAT the Committee approve the installation of a semi-actuated, including pedestrian actuation, traffic signal at Delta Avenue and Parker Street.
2. THAT the Transportation Committee be requested to consider the reclassification of Delta Avenue to a residential collector.
3. THAT the Principal of Brentwood Park Elementary School, E.A. Elphick, be sent a copy of this report."

C. INTERSECTION OF NOEL DRIVE AND BEAVERBROOK DRIVE

RECOMMENDATION:

1. THAT a semi-actuated traffic signal be installed at the intersection of Beaverbrook Drive and Noel Drive.

(CARRIED  
 OPPOSED: Messrs. Bennett,  
 Beedie, Weston  
 and Woods)

R E P O R T

A letter dated 1986 August 29 was received by His Worship, Mayor Lewarne from Mrs. J. Rita, 2661 Noel Drive, Burnaby, the B.C. who requested, among other things, a four-way stop at the intersection of Noel Drive and Beaverbrook Drive. His Worship, Mayor Lewarne, forwarded this item to the Traffic Safety Committee for their review.

This matter was directed to the Director Engineering who reported as follows:

"Beaverbrook Drive is constructed to a 14 m standard which reflects its 'major collector-residential' classification under the Council adopted Conceptual Transportation Plan. Of Noel Drive is an 8.5 m residential non-collector street. Of the existing 'all-stop' intersections within the Municipality none involve a major collector street with a residential non-collector street.

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The warrant for the installation of a four-way stop is a two part warrant composed of accident history and vehicle volumes. The accident history portion is five accidents, within a twelve month period, of a type correctable by four-way stop control. There have been five right-angle accidents at the intersection within the previous twelve month period.

The volume portion of the warrant is that the vehicle volumes on the intersecting streets should be approximately equal. The most recent traffic count on Beaverbrook Drive recorded almost 8,200 vehicles whereas the Noel Drive traffic count at the same time recorded only 2,500 vehicles. To install a four-way stop with this volume imbalance would probably create problems similar to those which existed at Holdom-Curtis-Parker prior to its conversion from four-way stop to traffic signal. These problems, resulting from driver impatience caused by 'unnecessary' stops, included: disobeying the stop signs; vehicles going through the intersection two abreast; failing to yield to pedestrians; or speeding on the departure side of the intersection. If the latter problem were to occur in the westbound direction from the Beaverbrook-Noel intersection then the speeding would be through the Beaverbrook Drive-Beaverbrook Crescent intersection where we already have complaints regarding speeding.

Emergency vehicle response time, which appears to be a main concern of Mrs. Rita, could possibly be adversely affected by the installation of a four-way stop due to the back-ups created by the four-way stop. Both firehalls in the vicinity are west of the subject intersection and the probable access route would be via Beaverbrook Drive.

Of the five reported right-angle collisions reported within the past twelve month period, three of them occurred during off-peak periods: 5 a.m. Tuesday; 12 noon Saturday; and 2 p.m. Sunday. All five accidents involved westbound traffic yet the sight distance is adequate for all directions. The previous twelve month period recorded three accidents, all involving eastbound vehicles.

In summary, we feel that while the accident history indicates that a four-way stop may be warranted, the imbalance of vehicle volumes could create several new problems. In view of this we are recommending that a four-way stop not be installed at Noel Drive and Beaverbrook Drive.

STAFF RECOMMENDATIONS TO THE TRAFFIC SAFETY COMMITTEE:

1. THAT the request for a four-way stop at the intersection of Beaverbrook Drive and Noel Drive not be approved.
2. THAT Mrs. J.T. Rita be sent a copy of this report. "

Arising out of your Committee's discussion of this matter it was felt that since Noel Drive is the only point of access and egress for this particular area that a semi-actuated traffic signal should be installed at the intersection. The Committee referred the matter back to staff for a report on the warrant for such a signal. In response, the Director Engineering, reported as follows:

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"At its meeting of 1986 November 18 the Committee asked that we calculate the signal warrant for the intersection.

We have calculated the warrant based on the Canadian Manual of Uniform Traffic Control Devices which assigns a point system of 100 points as a minimum warrant. Beaverbrook Drive and Noel Drive rating is 31% of the required 100 points. The accident factor rates a minus nine points. This in theory suggests that a traffic signal would increase the existing accident rate.

In summary we must advise that the subject intersection has failed to meet the warrant for a traffic signal."

As a result of your Committee's consideration of this matter the above noted recommendation is submitted.

**D. INTERSECTION OF WALKER AVENUE AND ELWELL STREET**

**RECOMMENDATION:**

1. THAT the Committee approve the installation of a four-way stop at the intersection of Elwell Street and Walker Avenue.

(CARRIED UNANIMOUSLY)

**R E P O R T**

A memorandum dated 1986 November 24 was received from the Director Engineering who reported as follows:

"The subject intersection is currently controlled by a two-way stop. Walker Avenue, designated a local collector, has the right-of-way over Elwell Street, designated minor residential.

The intersection's reported accident history over the past two years shows six accidents in 1985 and nine so far in 1986. Eleven of the fifteen accidents were right angle collisions primarily caused by driver error after stopping for the stop signs. Analysis of the accident reports indicate that a combination of causative factors contributed to the accidents occurring. There was no indication that failing to stop was a factor in any of the accidents.

The intersection meets both the volume and accident portions of the Committee's adopted warrant for the installation of a four-way stop. Over the past twelve month period, there have been seven accidents of a kind susceptible to correction by a multi-way stop installation. The approach volumes on the two streets (4,470 vehicles on Elwell and 3,300 vehicles on Walker) represent a 57/43% split which is in the acceptable range for a multi-way stop control.

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The installation of a four-way stop should have little effect on volumes in the intersection under the present area development. Any future development in the Kingsway/Edmonds area would probably increase volumes on Walker Avenue which would benefit the warrant split.

STAFF RECOMMENDATION TO THE TRAFFIC SAFETY COMMITTEE:

1. THAT the Committee approve the installation of a four-way stop at the intersection of Elwell Street and Walker Avenue."

Respectfully submitted,

Alderman A.H. Emmott,  
Chairman

Alderman L.A. Rankin,  
Member

Alderman S.G. Veitch,  
Member

