

CITY OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRANSPORTATION AND TRANSIT DIVISION)

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

Re: Roseberry Avenue (Marine Drive to Marine Way): Barrier Removal and Bus Service

RECOMMENDATIONS:

1. **THAT** Council request the Engineering Department to improve the pavement surface on Roseberry Avenue by removing the bump adjacent to the Satchwell residence.
2. **THAT** a copy of this report be forwarded to Ileen and Brad Satchwell, 3992 S.E. Marine Drive, Burnaby, B.C.

REPORT

The Traffic and Transportation Committee (Transportation and Transit Division), at its meeting held on 1998 January 14, adopted the attached report advising of the completion of further analysis of the effects on the Satchwell residence of removing the traffic barrier on Roseberry Avenue to accommodate transit service to the Big Bend area.

Arising from consideration of the report, the Committee requested that after the pavement irregularity is removed, staff continue to monitor the area in question on an ongoing basis. It was further requested that BC Transit be contacted with respect to reducing the speed of buses on Roseberry Avenue and that the RCMP monitor truck usage on the Roseberry route. Staff will be reviewing signage to deter truck usage on Roseberry.

MEMBERS:

Ms. L. Boivin
Mr. R. Lupien
Mr. W.B. Roxburgh
Ms. L. Tatangelo

Respectfully submitted,

Councillor D. Evans
Chair

: COPY - CITY MANAGER
- DIRECTOR ENGINEERING
- DIR. PLNG. & BLDG.
- OFFICER-IN-CHARGE, R.C.M.P.

Councillor J. Young
Vice Chair

Councillor N. Volkow
Member

TO: CHAIR AND MEMBERS
TRAFFIC AND TRANSPORTATION COMMITTEE
(TRANSPORTATION AND TRANSIT DIVISION)

1998 January 08

FROM: DIRECTOR PLANNING AND BUILDING

Our File: 8.640

SUBJECT: Roseberry Avenue (Marine Drive to Marine Way): Barrier Removal
and Bus Service

PURPOSE: To advise the Traffic and Transportation Committee of the completion of further analyses of the effects on the Satchwell residence of removing the traffic barrier on Roseberry Avenue to accommodate transit service to the Big Bend area.

RECOMMENDATION:

1. **THAT** the Engineering Department be requested to improve the pavement surface on Roseberry Avenue by removing the bump adjacent to the Satchwell residence.
2. **THAT** a copy of this report be forwarded to Ileen and Brad Satchwell, 3992 S.E. Marine Drive, Burnaby, B.C.

REPORT

1.0 BACKGROUND

At its regular meeting of 1997 November 12 the Traffic and Transportation Committee received a report from the Director, Planning and Building with regard to the traffic barrier on Roseberry Avenue between Marine Drive and Marine Way. The report outlined the results of a variety of analyses conducted by City of Burnaby staff to determine the effect of removing the barrier. The results supported the following conclusions:

- (ii) traffic volumes are low
- (iii) excessive speeding is infrequent
- (iv) very few large trucks use Roseberry

The report, however, noted the need to pursue further work to determine the noise and vibration effects of the barrier removal on the residence of Ileen and Brad Satchwell of 3992 S.E. Marine Drive (at Roseberry Avenue.) The Committee also directed staff to analyse the traffic volume, traffic speed and truck volume data for the weekday period only (excluding weekends) and to estimate the impact of the United Flower Growers parking lot expansion

on traffic volumes.

This report is written to respond to these Committee requests.

2.0 WEEKDAY TRAFFIC VOLUME AND TRUCK ANALYSES

2.1 Traffic Volumes

The previous report to the Committee reported the results of a five day average of general traffic counts including the weekend of 1997 September 27 (Saturday) and 28 (Sunday). However, the day to day variation of traffic during the entire six day period of the counts is shown in **Table 1** below.

Table 1
DAILY TRAFFIC VOLUME
Roseberry Avenue (Keith Street - Marine Drive)
(24 Hour Vehicles Both Directions)

| Tues. | Wed. | Thurs. | Fri. | Sat. | Sun. |
|-------|------|--------|------|------|------|
| 619 | 474 | 546 | 457 | 254 | 263 |

The average **weekday** traffic volume (Tuesday to Friday) is 524 vehicles as compared to the 471 vehicles (five day average) identified in the previous report to the Committee. At this level of usage Roseberry Street would carry approximately 50 vehicles during the peak hour which the traffic counts show to be the noon hour period from 12:00 noon to 1:00 p.m. During the morning peak period from 6:00 a.m. to 9:00 a.m. traffic volumes average approximately 90 vehicles, of which possibly 50-60 may be generated by the United Flower Growers operation. The recent expansion of the United Flower Growers parking lot from the previous 646 spaces to a total of 958 spaces is not expected to generate more customers, and thus more traffic on Roseberry Avenue. Rather, the additional parking would better accommodate the existing customers which are now parking and loading trucks on Roseberry Avenue due to the lack of sufficient on-site parking. In this respect, the provision of additional parking may move this activity further away from the Satchwell residence.

2.2 Truck Usage

The analyses of truck volumes over the weekday period only is shown in **Table 2**. The results are not different from the analysis of the five day average truck volumes in the previous report, and show that during the weekday period covered by the count there were no large Class 7 or 8 trucks using Roseberry Avenue.

Table 2
 VEHICLE CLASSIFICATION
 Roseberry Avenue (Keith Street - Marine Drive)
 (Total Vehicles - Four Weekdays)*

| Vehicle Class | Number | Percent |
|--|--------------|---------------|
| Class 1 - Motorcycles | 52 | 2.5 |
| Class 2 & 3 - Passenger Vehicles | 1,939 | 92.5 |
| Class 4 - Buses | 80 | 3.8 |
| Class 5 - Two Axle Trucks | 15 | .7 |
| Class 6 - Three Axle Trucks (single unit) | 10 | .5 |
| Class 7 - Four or More Axle Trucks (single unit) | 0 | 0.0 |
| Class 8 - Four or More Axle Trucks (trailer) | 0 | 0.0 |
| Total All Classes | 2,096 | 100.00 |

* Tuesday 1997 September 23 to Friday 1997 September 26

3.0 NOISE EVALUATION

In response to concerns expressed by the Satchwells regarding increased noise levels due to traffic on Roseberry Avenue, the Engineering Department measured noise levels at the Satchwell residence over a 24 hour period on 1997 October 27. The attached report from the Director, Engineering notes that the noise level averaged over a 24 hour period was 59.7 decibels. Relative to the Housing and Urban Development (HUD) criteria, this noise level falls within the category of "Normally Acceptable" defined by the HUD as follows:

"the noise exposure is great enough to be of some concern but common building construction will make the indoor environment acceptable even for sleeping quarters, and the outdoor environment will be reasonably pleasant for recreation and play."

Since noise measurements were not conducted prior to the removal of the barrier, the current noise levels cannot be compared to previous noise levels to determine the increase in noise due to the higher traffic volumes and use by buses. It can be concluded, however, that removal of the barrier has probably resulted in higher noise levels emanating from Roseberry Avenue, but that the increased noise from vehicles on Roseberry Avenue has not appreciably affected the livability of either the indoor or outdoor environment of the Satchwell residence. Although an evaluation of Marine Drive noise was not conducted, it is likely that traffic noise from Marine Drive may have a greater impact on ambient noise levels outside and inside the Satchwell residence.

4.0 VIBRATION EFFECTS

The Traffic and Transportation Committee also directed staff to investigate the concern expressed by the Satchwells regarding the vibration felt inside their residence attributable to large vehicles such as trucks and buses using Roseberry Avenue. Staff conducted a site visit to the Satchwell residence on the morning of 1998 January 02 and the afternoon of 1998 January 05 to determine the vibration outside and inside the house from buses operating on Roseberry Avenue.

Vibration in the interior of the house was detectable in the kitchen area of the house when a bus passed over a small bump on Roseberry adjacent to the rear of the Satchwell residence directly where the kitchen is located. The bump of approximately 1½" in height is attributable to asphalt resurfacing by City crews over a sewer line which traverses Roseberry. The exterior vibration caused by a bus going over the bump is apparently being transmitted to the rear wall of the house. Staff also noticed that a structurally heavy sundeck was attached to the house with the footings resting on an area of poor drainage. This may be a factor in the transmission of exterior vibration to the rear wall of the interior of the house. It is the view of staff that the interior vibration could be addressed by regrading of the asphalt surface of Roseberry to remove the bump at an estimated cost of \$2,000. This work to be undertaken by City crews is recommended.

5.0 CONCLUSION

With the addition of the analyses of weekday general traffic and truck volumes, noise levels, and vibration, the review of the effects of moving the barrier on Roseberry is complete. The result of the analyses can be summarized as follows:

(i) Weekday Traffic Volumes are Low

As outlined in Section 2.1, average weekday traffic volumes of 524 vehicles are not significantly higher than the five day average of 471 or the six day average of

435. Traffic volumes of this magnitude are equivalent to that of an average local residential street in Burnaby.

(ii) Very Few Large Trucks Use Roseberry During Weekdays

The analysis of truck volumes for the weekday only period show that there were no large Class 7 or 8 trucks using Roseberry. The largest vehicles were buses (80 units) and large delivery trucks (10 units). No semi trailer trucks were counted.

(iii) Noise Levels are Acceptable

With traffic volumes equivalent to that of a residential street, noise levels of 59.7 decibels attributable to vehicles on Roseberry are no higher than that which would be expected on a local residential street and do not compromise the indoor or outdoor residential environment.

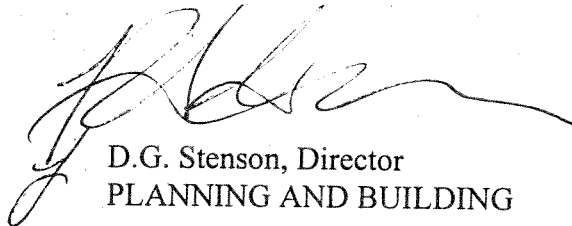
(iv) Interior Vibration is Detectable

Interior vibration is detectable in the kitchen at the rear of the house. The detectable interior vibration is attributable to buses passing over an unevenness in surface of Roseberry Avenue across from the Satchwell's kitchen. A structurally heavy rear sundeck located in an area of poor drainage may also be a factor in the transmission of vibration to the kitchen area of the house.

The additional analyses undertaken at the direction of the Committee confirm that, since the removal of the barrier, Roseberry is operating like a local residential street characterized by low traffic weekday volumes, infrequent excessive speeding, acceptable noise levels, and very few trucks. Removal of the barrier has had the effect of changing a closed street providing access only to a few houses fronting on Marine Drive to the equivalent of a typical local residential street in Burnaby. It is understood that for the Satchwells, however, Roseberry Avenue with the removal of the barrier and the introduction of some buses, has changed significantly from its previous status as a closed street. However, the situation for the Satchwells is not appreciably different from most residents of Burnaby who live on relatively quiet, traffic-safe local residential streets and is substantially better than many residents who live on busier local collector streets.

The one significant issue, interior vibration, is caused by buses or other heavy vehicles passing over a bump in the road surface on Roseberry Avenue adjacent to the kitchen area of the house. Staff would therefore recommend that the Engineering Department be requested to remove the bump in the road surface on Roseberry which is the source of the exterior vibration.

In conclusion, the issues raised by the Satchwells could be addressed by reinstating the barrier and rerouting the buses to Greenall Avenue and Keith Street as suggested by the Satchwells. This would return Roseberry to the status of a closed street which has been constructed to a finished standard, but serves only to access a few residents living on Marine Drive. However, this action would force buses to use an interim standard road which is not designed to accommodate them. As noted in the attached letter from BC Transit (**Attachment B**) Greenall is narrow, with ditches on both sides, provides difficult turning movements at its intersection with Marine and cannot accommodate bus stops. As the analyses which have been undertaken to date have not shown a significant impact on the livability of the Satchwell residence from removal of the barrier, except for the interior vibration, reinstatement of the barrier and rerouting of the bus service to a street which is not designed to accommodate buses is not recommended.



D.G. Stenson, Director
PLANNING AND BUILDING



Attachments
RG\sk

cc: City Manager
Director, Engineering

**COPY**

13401 - 108th Avenue, Surrey, B.C. V3T 5T4 Telephone (604) 540-3000

March 14, 1997

Our Ref.: 10.2.1

Mr. Peeter Liivamagi, P. Eng.
Assistant Director, Engineering
City of Burnaby
4949 Canada Way
Burnaby, BC V5G 1M2

Dear Mr. Liivamagi:

RE: Transit Service for the Glenlyon/North Fraser Way Business Park

BC Transit has been working with the City of Burnaby to consider options for providing public transit service for the Glenlyon/North Fraser Way Business Park. BC Transit would like to extend an existing route - the #116 Metrotown Station/Suncrest route - into this growing industrial area in September, 1997.

Recently completed roadworks will now allow suitable bus operation in the business park. Selected trips of the #116 will be re-routed into the business park. A field test was recently conducted to review routing options. The test confirmed the suitability of the existing roadways within the business park, provided the "speed humps" on North Fraser Way will be removed (as discussed with City of Burnaby staff) prior to implementation.

Two roadways, Greenal Avenue and Roseberry Avenue, between Marine Drive and Marine Way were field tested. The business park could be accessed via either of these roadways. Greenal Avenue (Option 1) is narrow, with ditches on both sides and provides difficult turning movements at its intersection with Marine Drive. No bus stops could be established without major roadway improvements. On the other hand, Roseberry Avenue (Option 2) is a wide, curbed street with good potential locations for bus stops. Therefore, from operational and customer convenience perspectives, Option 2 is preferred to Option 1.

Roseberry Avenue, however, between Marine Drive and Marine Way is not open to traffic. BC Transit would request the City of Burnaby to remove the barricades from Roseberry Avenue, thereby



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- 2 -

allowing the extension of public transit service into the Glenlyon/North Fraser Way Business Park via this roadway. To facilitate transit operation, we would also request the City to put the Roseberry Avenue and Marine Drive intersection under a 3-way stop control.

Please advise if this proposal is acceptable to the City. We would appreciate receiving your response by April 15, 1997.

Yours truly,

William Lambert

W. Lambert
Director, Customer Support

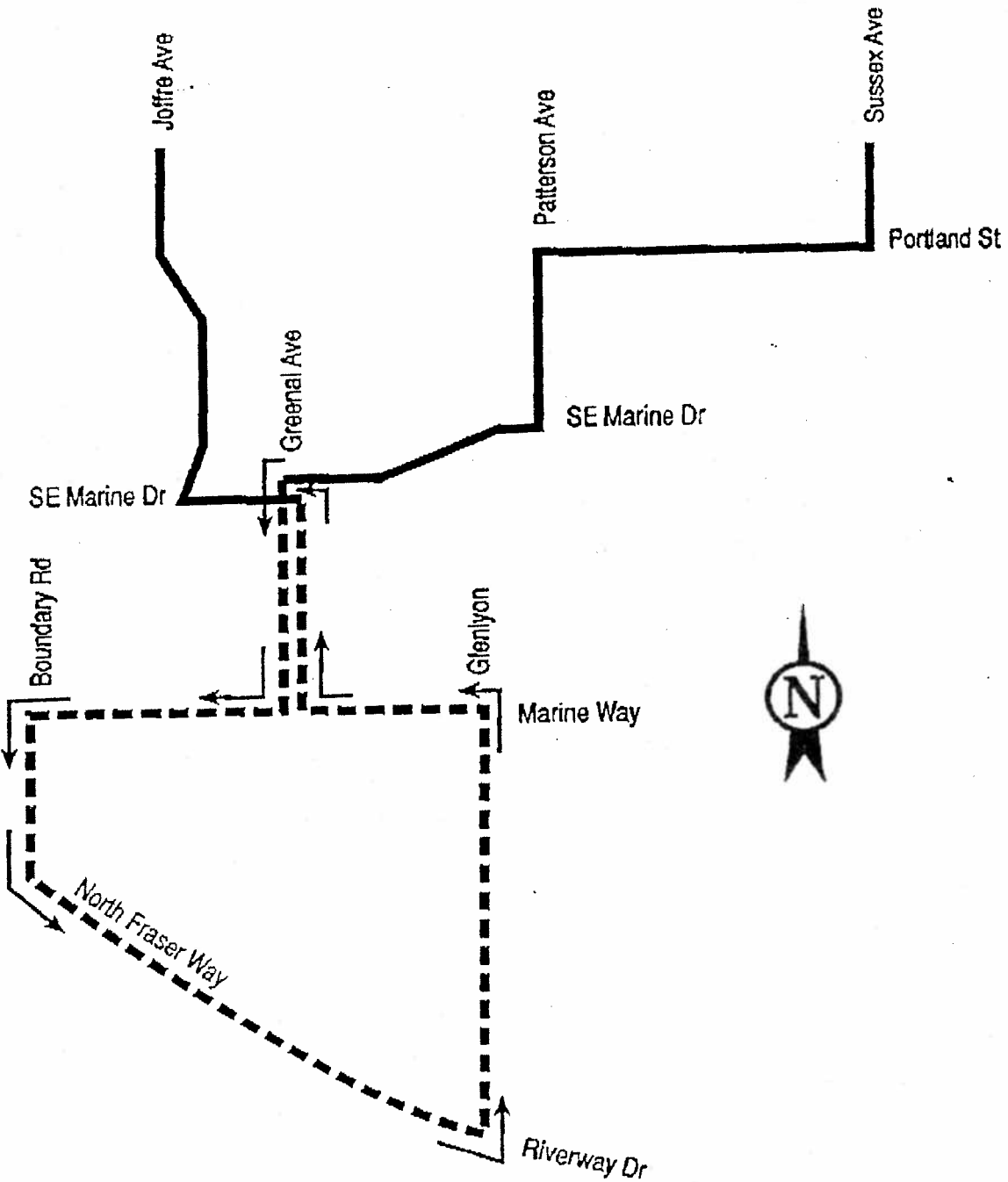
WL/hss/cd

Attachments

c: R. Glover, City of Burnaby
D. Evans, City of Burnaby Council and Transportation Committee
N. Smith
C. Kelly
C. Van Alstyne
J. Prokop
D. McDonald
H. Wang

OPTION 1

(Extension of Route #116)



OPTION 2

(Extension of Route #116)

