

REPORT  
Regular Council Meeting  
1992 May 11

THE CORPORATION OF THE DISTRICT OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE  
(TRANSPORTATION AND TRANSIT DIVISION)

HIS WORSHIP, THE MAYOR  
AND ALDERMEN

RE: TEMPORARY REROUTING OF THE  
#106, #131 AND #132 BUS ROUTES

RECOMMENDATION:

1. THAT Council approve the temporary rerouting of the #106, #131 and #132 bus routes via 18th Street and 18th Avenue in the southbound direction only to the Edmonds SkyTrain Station.

R E P O R T

"1.0 BACKGROUND

On 1992 April 29 staff received a request from BC Transit for consideration of a temporary rerouting in one direction only of the #106, #131 and #132 bus routes via Edmonds, 16th Street and 18th Street as shown in Figure 1 attached. These bus routes currently operate via Edmonds and 19th Street to Edmonds SkyTrain Station.

The reason for the request is due to the unsafe operating conditions for buses turning left from Edmonds to 19th Street at the unsignalized intersection of Edmonds and 19th Street. BC Transit notes in the attached report (Appendix A) the following factors:

- i) increases in traffic volumes have reduced gaps in traffic to the point where buses are significantly delayed
- ii) the prevailing sight distances for traffic on 19th Street/Rumble do not accommodate a safe stopping distance for drivers upon seeking a bus turning left onto 19th Street
- iii) buses turning left are obstructing northbound traffic on 19th Avenue in order to create a gap to turn left safely.

These issues would be addressed by the signalization of the Edmonds/19th intersection to be implemented in conjunction with the 19th/Griffiths project but as this signalization would not occur until 1992 September at the earliest, BC Transit is requesting consideration of the temporary rerouting.

The rerouting proposed by BC Transit could require relocation of a bus stop from its current location on Edmonds near 19th Street to 18th Avenue and 18th Street as shown in Figure 1 attached. In addition, stopping restrictions will be required on the west side of 16th Street near Edmonds.

INTERNAL DISTRIBUTION:  
AGENDA - 1992 MAY 11  
COPY - ACTING MUNICIPAL MANAGER  
- DIRECTOR ENGINEERING  
- DIRECTOR PLANNING & BUILDING

BC Transit has made a commitment to the bus operators' union to seek implementation of this change at the earliest possible opportunity and are suggesting initiating the rerouting on Monday, 1992 May 04.

As the rerouting will involve use of municipal streets on which buses do not currently operate, approval of the Traffic and Transportation Committee and Council will be required. In the interests of expediting this process, staff are bringing the BC Transit proposal forward for Council consideration at this time.

## 2.0 EVALUATION OF THE PROPOSAL

Staff have reviewed the BC Transit proposal and have concerns with respect to the use of 18th Avenue between 16th Street and 18th Street by buses. This section of 18th Avenue currently provides only an interim pavement cap of 6.1m with narrow gravel shoulders. Parking is provided on both sides of the street and overlaps onto the pavement surface obstructing the two-way flow of traffic. In addition, lacking sidewalks, pedestrians often walk on the pavement surface. Combined with the increase in traffic on this street accruing from development in the Edmonds Town Centre, use of this section of 18th Street by buses could exacerbate conflicts amongst vehicles and pedestrians.

Staff have therefore suggested BC Transit consider as alternative rerouting via 18th Street and 18th Avenue which overall provides a wider street surface with fewer traffic conflicts. Moreover, the bus stop on Edmonds north of 18th Street could remain in its present location. Implementation of the rerouting by 1992 May 04 however, is temporarily compromised by the paving of 18th Street from Edmonds to the lane which is expected to occur, weather permitting, the week of May 04 - 08. To avoid this conflict it is suggested that BC Transit initiate the rerouting of the #106, #131 and #132 via 18th Street southbound only on 1992 May 11."

Respectfully submitted,

### Members:

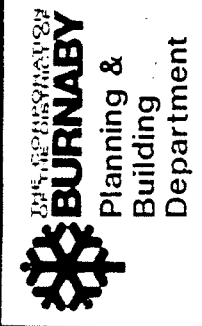
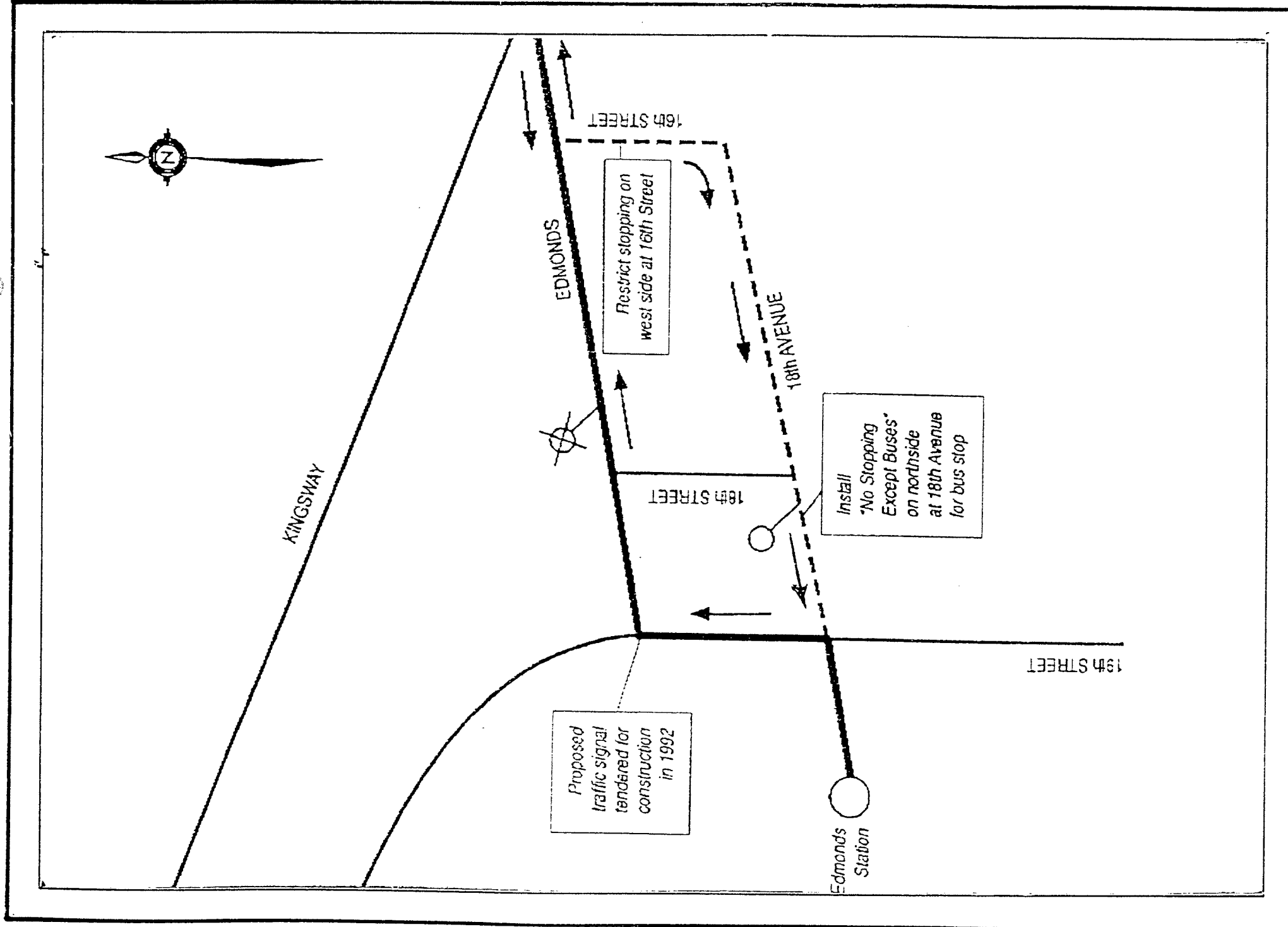
Mr. Ernest Neumann  
Mr. Peter Miller  
Mr. Len Werden

Alderman J. Young  
Chairman

Alderman D. Evans  
Member

Alderman D. Lawson  
Member

Alderman C. Redman  
Member



Date:	1992 04 30
Scale:	
Drawn By:	

FIGURE 1  
**BC TRANSIT  
 PROPOSAL  
 FOR REROUTING**

04/29/92

12:05

604 264 5026

BCT PLANNING

0027009



1200 West 73rd Avenue, Vancouver, B.C. V6P 6M2 Telephone (604) 264-5000

April 29, 1992

Municipality of Burnaby  
Engineering Department  
4949 Canada Way  
Burnaby, B.C.  
V5G 1M2

Attn: Mr. Bob Glover

Dear Mr. Glover:

Re: #106/#131/#132 Services - Temporary Reroute

As we discussed last week, I am forwarding to the Municipality of Burnaby a copy of a brief report proposing a temporary reroute of the #106/#131/#132 bus services. This reroute is required to deal with the traffic safety hazards bus drivers are faced with in making the unprotected left turn from Edmonds Street onto 19th Street.

I appreciate very much the inclusion of a traffic signal at Edmonds Street/19th Street by the Municipality of Burnaby as part of the overall 19th Street/Griffiths Connector Project. As soon as this signal becomes operational, the #106/#131/#132 services will be reverted back to the regular routing.

To facilitate this temporary reroute, a number of bus stop changes and traffic control signage are required. Please refer to the attached report for details.

I would appreciate it very much if you could present this issue at the April 30, 1992 Traffic and Transportation Committee meeting. BC Transit wishes to implement this temporary reroute effective May 4, 1992.

Thank you very much for your assistance in dealing with this issue.

Yours truly,

Gordon Chan, P.Eng.  
Manager, Transportation Engineering

Attachment

cc: P. Ljivmagi, Municipality of Burnaby  
S. Cleave, Municipality of Burnaby  
B. Kelly, BTC  
G. Leicester, Planning

GC/bl

APPENDIX A

04/29/92

12:06

0604 264 5026

BCT PLANNING

003-009

**Temporary Reroute**

**#106/#131/#132 Transit Services**

**(via Edmonds Street/16th Street/18th Avenue)**

## 1. Introduction

Traffic volumes on 19th Street have increased since 1986 when bus service was first routed along 19th Street to access Edmonds Station. These additional traffic volumes have increased delays and conflicts with general traffic for buses turning left from Edmonds Street onto southbound 19th Street. BC Transit is very concerned with the traffic safety hazards associated with making this unprotected left turning movement onto a major arterial with high traffic volumes and operating speeds.

The Municipality of Burnaby has tendered the 19th Street/Griffiths Connector Project, including the installation of a traffic signal at the Edmonds/19th Street intersection. This signal will address the safety issue described above. However, this signal will not be operational until September, 1992 or later. As an interim solution, BC Transit proposes to reroute the #106, #131, #132 Edmonds Station services via Edmonds Street, 16th Street, 18th Avenue to address the safety issue until a traffic signal at Edmonds/19th Street is put into operation.

## 2. Problem Description

Edmonds Street traffic (including buses) is controlled by a stop sign at 19th Street, requiring westbound traffic to give way to all traffic on 19th Street. Traffic volumes on 19th Street provide few gaps long enough to permit bus drivers to safely turn onto southbound 19th Street. The existing operation at this intersection has been analyzed to quantify the safety and delay concerns.

### 2.1 Gap Analysis

Bus operators can only make the turn when a suitable gap occurs in the 19th Street traffic. Recent traffic counts show a total of 1,570 vehicles on 19th Street at Edmonds during the PM peak period. However, the high volume of south to east left turns (approximately 200 in the peak hour) reduces the intersection capacity significantly. These vehicles are delayed by the northbound traffic on 19th Street and utilize a portion of the gaps that could otherwise serve the left turning movement from Edmonds. Field observations (see Attachment 1) indicate that buses are delayed up to two minutes when making this turn.

### 2.2 Sight Distance

The existing curvature of 19th Street limits the sight lines for bus operators to view both northbound and southbound vehicles from the stop controlled position on Edmonds Street.

#### (i) Southbound Traffic

Drivers of southbound vehicles on Rumble approaching the Edmonds/19th Street intersection can observe an object at approximately 75 metres. It is

## 2

noted that the required stopping distance for a vehicle travelling at 60 kph (prevailing speed) is 85 metres. Any vehicles travelling 60 kph or over may not recognize a hazard (bus or automobile) in time to come to a complete stop.

(ii) Northbound Traffic

Drivers of northbound vehicles on 19th Street can observe an object at the Edmonds/19th intersection from approximately 140 metres. The required stopping sight distance for a 60 kph prevailing speed is 95 metres (with downgrade adjustments).

### 2.3 Intersection Conflicts

Several types of conflicts were observed at this intersection. These are illustrated in Attachment 2 and are described below:

(i) Interruption of Northbound Traffic

Bus drivers will proceed into the intersection when a gap occurs in the northbound traffic on 19th Street. While the bus driver waits for a gap in the southbound traffic, northbound vehicles must slow or come to a complete stop until the bus clears the intersection. Some northbound drivers have been observed braking abruptly, possibly because they do not expect the intersection to be blocked.

(ii) Interruption of Southbound Traffic

Southbound traffic is interrupted as the bus completes the turn onto southbound 19th Street. Vehicles have been observed braking abruptly. Other vehicles have been observed passing the turning bus (or automobile) on the shoulder.

### 3.0 Solutions

#### 3.1 Permanent Solution - Signalization of Edmonds/19th Avenue

The installation of a traffic signal at Edmonds/19th Avenue will provide protection for the left turn to southbound 19th Street. Municipal staff have tendered the re-construction of the intersection and the installation of a traffic signal. If Burnaby Council approves the contract (to be reviewed May 11, 1992), the signal may be in operation by the end of September, 1992. This would be the permanent solution.

### 3.2 Interim Solution - Temporary Reroute

BC Transit proposes an interim rerouting to be implemented immediately. The reroute will only affect the inbound service (to Edmonds Station). This reroute will be via: Edmonds/16th Street/18th Avenue (Attachment 3). This option will be in effect until a traffic signal is installed at Edmonds Street/19th Street.

## 4. Implementation Details

### 4.1 Service Impacts

With this temporary reroute, the bus stop on westbound Edmonds nearside 16th Street could no longer be served. This bus stop will be replaced by a temporary bus stop on westbound 18th Avenue farside 18th Street.

### 4.2 Operational Requirements

#### (i) Southbound 16th Street farside Edmonds

This turn will require the removal of approximately 30 metres of parking on the west side of 16th Street south of Edmonds. This will allow bus drivers to remain in the southbound lane of 16th Street.

#### (ii) Eastbound 18th Avenue farside 18th Street

A bus zone is required to provide a clear loading area for the temporary bus stop at this location.

## 5.0 Recommendation

It is recommended that the #106, #131 and #132 Edmonds Station bus services be temporarily rerouted via westbound Edmonds Street, southbound 16th Street, and westbound 18th Avenue into Edmonds Station until the signal at Edmonds Street and 19th Street is installed. The following bus stop changes and traffic control signing are required:

- (i) Install a temporary bus stop on westbound 18th Avenue farside 18th Street.
- (ii) Install a "No Stopping Anytime" sign on the west side of 16th Avenue from Edmonds Street to 30 metres south.
- (iii) Install a "No Stopping - Except Buses" sign on the north side of 18th Avenue at the proposed temporary bus stop farside 18th Street.

It is further recommended that the temporary reroute be implemented effective May 4, 1992.



Attachment J

**Observation of Bus Turning Movement  
from Westbound Edmonds to Southbound 19th Street**

Time	Bus Delay (Min/Sec)	N/B Traffic Blocked by Bus	S/B Traffic Interrupted by Bus
430	0:10	No	No
435	0:10	No	No
437	0:45	Yes	Yes
440	2:00	Yes	Yes
446	2:25	Yes	Yes
454	0:15	No	Yes
457	0:35	Yes	No
505	1:05	Yes	Yes
505	1:35	Yes	Yes
510	0:35	No	No
522	0:30	Yes	No
523	0:10	No	No

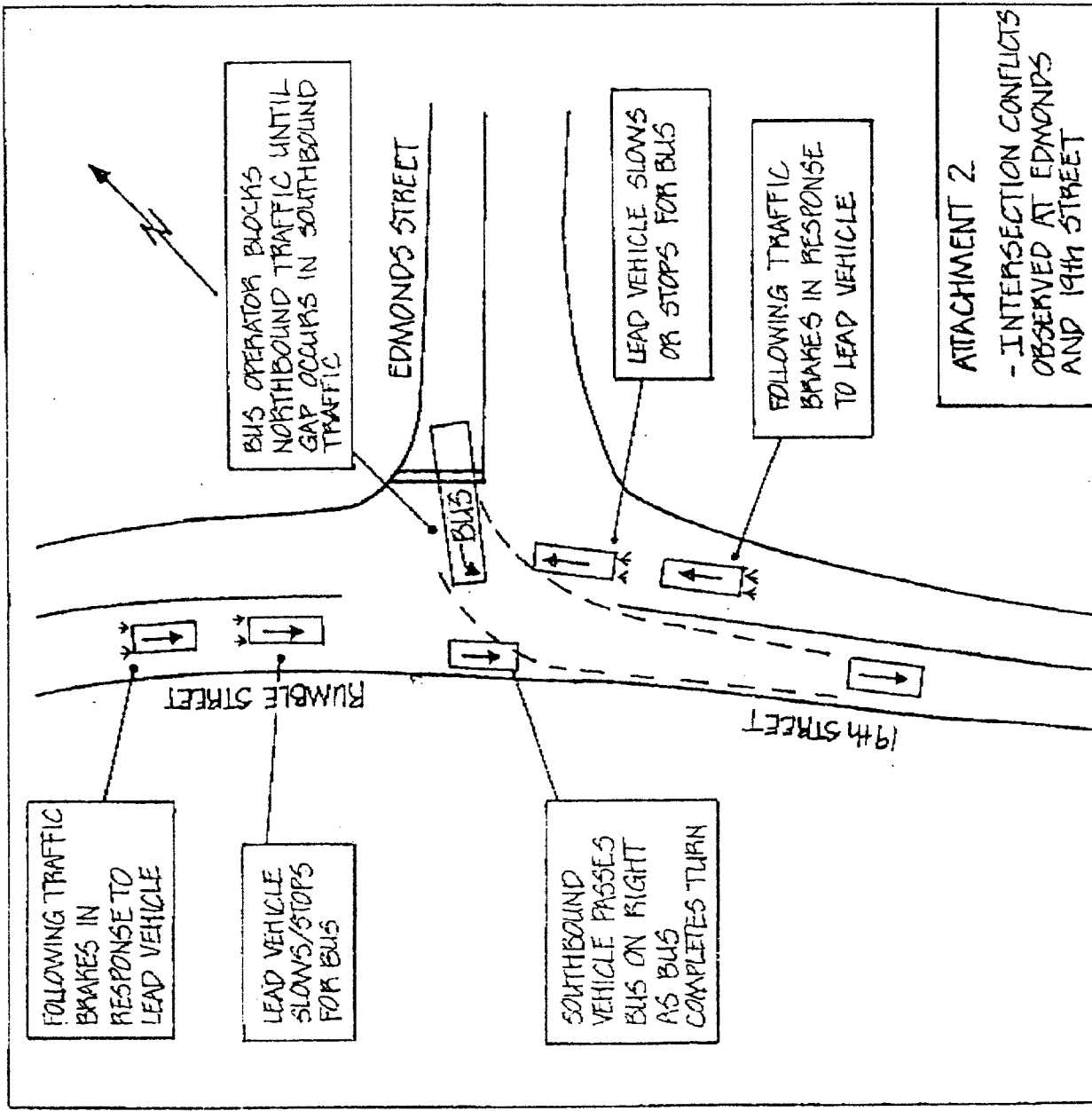
04/28/92

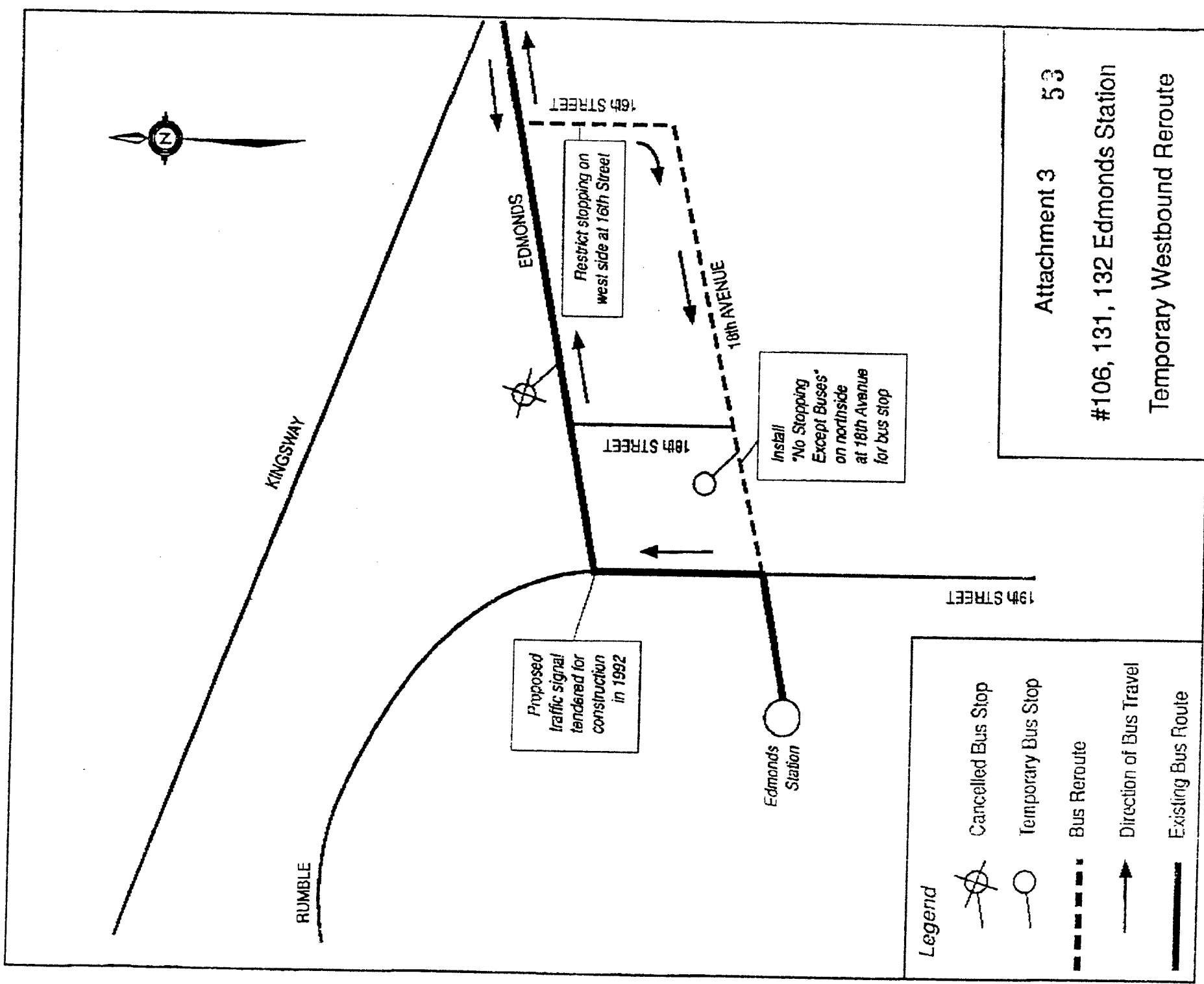
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BCT PLANNING

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Attachment 3 53  
 #106, 131, 132 Edmonds Station  
 Temporary Westbound Reroute

