

Re: Major Road Study and Program for 1975 Money Bylaw

Following is a report from the Director of Planning regarding a proposed Major Roads Money Bylaw.

RECOMMENDATION:

1. THAT the program comprising eight major road projects as detailed in Table 4 of the Planner's report be considered by Council as a basis for the proposed November, 1975 Money Bylaw; and
2. THAT as recommended by the Capital Improvement Committee in Item 21, Manager's Report No. 33, page 177, that Council select items 1 and 2 on Table 4 (Kensington Avenue and Boundary Road) totalling \$8,443,600 in cost, together with land acquisitions and design work for items 3 to 8 totalling \$1,297,850, be included in a bylaw together with \$3,570,000 in Parks land acquisitions and design costs, for submission to the ratepayer November 15, 1975, the bylaw total to be \$13,500,000 inclusive of a provision for contingency of \$188,550.

\* \* \* \* \*

TO: MUNICIPAL MANAGER

PLANNING DEPARTMENT  
APRIL 30, 1975

FROM: DIRECTOR OF PLANNING

RE: MAJOR ROAD STUDY AND PROGRAM FOR 1975 MONEY BYLAW

In the past 25 years improvement to Burnaby's major roads have consisted almost exclusively of upgrading and widening on east-west arterials, which are primarily routes under Provincial jurisdiction. Examples in this category are Kingsway, Hastings Street and Canada Way, together with the construction of the Freeway through central Burnaby. Improvements to north-south arterials have been few and limited to widening of segments of North Road, Boundary Road, and Willingdon Avenue. The only structure to be built, other than those structures built for grade-separation of the Freeway, has been the overpass of the CNR and BNRR tracks on Willingdon Avenue.

More recently, little progress has been achieved toward construction of arterial road improvements intended to improve accessibility, mobility, and cohesiveness of the whole arterial road system serving Burnaby. A shortage of finance, together with changing public attitudes against some major road improvements, have contributed to this situation.

To assist in identifying future travel demands and desirable priorities for improvements to major roads, the Planning Department retained N. D. Lea and Associates to assist in the preparation of the Planning Department report "Burnaby Transportation Study to 1985." This report established a conceptual major roads network and nine transportation policy guidelines which received the concurrence of Council on June 11, 1974. These guidelines were that Council:

1. Support the principle of a conceptual road network as a basis for future co-ordinated transportation development.
2. Strengthen the established Haison with the Provincial Government to seek an early resolution of the areas of the responsibility between municipal and non-municipal roads.

ITEM	16
MANAGER'S REPORT NO.	33
COUNCIL MEETING	May 5/75

- 2 -

3. Determine appropriate road design standards applicable to the finally adopted road network.
4. Introduce and pursue an active and continuing traffic management programme for all roads within the Municipality.
5. Fully support the concept of increased public transit both in Burnaby and in the Region.
6. Seek a stronger liaison with the Bureau of Transit to improve all aspects of public transit within Burnaby, particularly improving the local bus service and increasing the number of transit foci.
7. Review the priorities of the Major Roads Projects of the Capital Improvement Programme in the light of this report.
8. Embark on a study of truck volumes on routes within the Municipality and determine the best location of future truck routes in relation to the finally adopted network road.
9. Circulate copies of this report to all interested parties.

It was at this same meeting on June 11, 1974 that Council directed that "The Director of Planning bring back specific designs and recommendations for a five year program with a \$30 million expenditure for a loan authorization bylaw to be placed before the electors." This figure was arrived at on the basis of an average expenditure of \$6 million a year for five years, in an attempt to see what impact such a program would have in achieving completion of the conceptual road network (see Figure 1 attached) to desirable standards. The ensuing priority study by the Planning Department (see Tables 1-3 attached) and accompanying estimates provided by the Land Agent and Municipal Engineer (see Table 4 attached) have been directed towards answering this question.

In the subsequent priority study, the deficiencies in the conceptual road network were identified to provide a desirable 1985 road system. Generally, the improvements to streets were for widening or construction to four lanes, provision of grade separations with railway tracks, or for implementation of traffic management (refer Tables 1, 2 and 3).

The approach to priority selection recognized that as the number of routes under consideration became significant, a more sophisticated approach was necessary to ensure evaluation of all inputs in a truly rational and comparative manner.

In all, nine separate criteria were rated for each deficient link contained in the conceptual network on a scale ranging from 0 (low priority) to 10 (high priority). These criteria were:

1. capacity
2. railway crossings
3. network continuity
4. land use
5. level of commitment
6. availability of right-of-way
7. jurisdiction
8. public image
9. traffic management

- 3 -

Following the rating of these criteria, each criteria was then differentially weighted according to an agreed method. In all, five different weighting systems were tested, and of these, four were used to arrive at the three priority groupings given in Tables 1, 2 and 3.

In preparing these estimates within the time available, the Municipal Engineer and Land Agent have provided costs for all items in the priority A grouping, except for Provincial Highways which are beyond Municipal jurisdiction.

The estimates have been prepared on the basis of 1976 costs and as can be seen in Table 4, the Municipal component of the priority "A" items (from Table 1) is estimated at \$18,861,400. This amount does not allow for monies recoverable under cost-sharing agreements with neighbouring municipalities or federal or provincial agencies, all of which tend to reduce this amount.

It was on the basis of the priority "A" items that the Planning Department has prepared a schedule of eight projects in Table 4 for consideration in the proposed money bylaw. This table makes no allowance for inflation, which could realistically be estimated at 12% per annum. If this program were spread over five years, inflation compounded at 12% per annum would inflate the amount required from \$18.8 million to in excess of \$23 million. A review of priority "B" items in Table 2 indicates that a \$30 million estimate would easily be reached without even proceeding to priority "C" items.


In proposing the eight projects estimated in Table 4, and accompanied by a description of their justification in Table 5 (attached), the Planning Department believes that this program is a sound program, reflecting Municipal major road priorities and a program which can readily be accomplished by the Municipal Engineer within existing departmental capability.

The location of the eight projects put forward for inclusion in the bylaw program are shown in Figure 2 attached, together with those projects under provincial control which fall into priority "A".

The location of those projects comprising projects in priorities "B" and "C" are given in Figure 3 attached.

#### RECOMMENDATION

The Planning Department recommends THAT the program comprising eight major road projects and detailed in Table 4 be considered by Council as a basis for the proposed November, 1975 Money Bylaw.

  
A. L. Parr  
DIRECTOR OF PLANNING

GDH:cw

- Atts. Table 1 - List of Major Roads in Priority "A" Group  
Table 2 - List of Major Roads in Priority "B" Group  
Table 3 - List of Major Roads in Priority "C" Group  
Table 4 - Estimates of eight Priority "A" items for inclusion in proposed Money Bylaw Program  
Table 5 - Justification for items in Money Bylaw Program  
Figure 1 - Conceptual Road Network - 1985  
Figure 2 - Location of Major Roads Proposed for the Bylaw  
Figure 3 - Location of Major Road Improvements - Priorities "B" and "C"

cc: Municipal Treasurer  
Municipal Engineer

ITEM	16
MANAGER'S REPORT NO.	33
COUNCIL MEETING	May 5/75

TABLE 1

LIST OF MAJOR ROADS IN PRIORITY "A" GROUP  
REQUIRING IMPROVEMENT

<u>LOCATION</u>	<u>IMPROVEMENTS (1)</u>
Kensington Avenue (Hastings to Sprott St.)	W4.S.(M)
Boundary Road (29th Avenue to Dubois)	W6.S.(M)
Moscrop/Percival (Wayburne Drive to Canada Way)	C4.(M)
North Road (Freeway to New Westminster Boundary)	W4.(M)
Douglas-Holdom (Sprott to Lougheed)	W4.S
Sprott Street (Canada Way to Norland)	W4
Nelson Avenue (Marine Drive to Marine Way)	C4
Patterson/Roseberry (Rumble to Marine Way)	C4
(2) Willingdon Southerly Extension (Kingsway to Imperial)	C4.S.(M)

PROVINCIAL RESPONSIBILITY

Marine Way (Boundary to Eastern Municipal Boundary)	C4
Broadway (North Road to Gaglardi Way)	C4
Sprott Street (Norland to Kensington)	W4
Gaglardi Way (Southern Extension to Stormont)	C4.S
Kingsway (Boundary to Patterson)	W6.S.T.M.

NOTES (1) The keys to these improvements are:

- W = widen
- C = new construction
- 4 = 4 lane standard
- 6 = 6 lane standard
- S = structure along route
- TM = traffic management
- (M) = median or part median

(2) In preparing Figure 2, Willingdon Southerly Extension was moved to Priority "B" and omitted from the Bylaw Program, to be reconsidered at such time as the report on the Kingsway Regional Town Centre was available.

TABLE 2

LIST OF MAJOR ROADS IN PRIORITY "B" GROUP  
REQUIRING IMPROVEMENT

<u>LOCATION</u>	<u>IMPROVEMENTS (1)</u>
Edmonds Street (Connection to Newcombe Extension)	W4.C4.(M)
Moscrop Street (Boundary to Willingdon)	W4.(M)
Bainbridge-Phillips Connector	C4.(M)
Curtis Street (Kensington Avenue east to Phillips Avenue Extension)	W4.C4
Austin Road (Lougheed to North Road)	T.M.
Oakland Street (Dover to Burris)	W4.C4
Burris Street (Sperling to Canada Way)	W4
Nelson Avenue (Grange to Moscrop)	W4.C4.(M)
Boundary Road (Dubois to Marine Way)	W6.C6.(M)

PROVINCIAL RESPONSIBILITY

Newcombe Street (Stormont I/C to McBride Boulevard)	W4.C4.(M)
Hastings Street (Cliff to Eastern Municipal Boundary)	W4
Kingsway (Edmonds to Tenth Avenue)	W6.T.M.
Tenth Avenue (Connection to Marine Drive)	C4.S.S.

NOTES (1) See Note (1) on Table 1.

ITEM	16
MANAGER'S REPORT NO.	33
COUNCIL MEETING	May 5/75

TABLE 3

LIST OF MAJOR ROADS IN PRIORITY "C" GROUP  
REQUIRING IMPROVEMENT

<u>LOCATION</u>	<u>IMPROVEMENTS (1)</u>
Boundary Road (Lougheed Highway to Freeway)	S. (M)
Phillips/Bainbridge Northerly Extension	C4
Canada Way (Boundary to Willingdon)	T.M.

PROVINCIAL RESPONSIBILITY

Lougheed Highway (Boundary to North Road)	T.M.
New University Access (Hastings to Gaglardi Way)	C4. (M)
Kingsway (Patterson to Edmonds)	T.M.
Hastings Street (Boundary Road to Cliff Avenue)	T.M.

NOTES (1) See Note (1) of Table 1.

29/4/75

TABLE 4  
ESTIMATES OF EIGHT PRIORITY A ITEMS FOR INCLUSION  
IN PROPOSED MONEY BY-LAW PROGRAM

Priority	Location	1976 Estimates			Gross Total	Cash on Hand	Net Total (By-law)
		Land Acquisition	Construction	Design Costs <sup>(1)</sup>			
1	Kensington Avenue (Hastings to Sprott St.)	803,400	4,431,600	165,000	5,400,000 <sup>(2)</sup>		5,400,000
2	Boundary Road. (29th Avenue to Dubois)	791,600	2,292,100 <sup>(3)</sup>	65,900	3,149,600	106,000	3,043,600
3	Moscrop/Percival (Wayburne Drive to Canada Way)	92,000	1,681,900	43,100	1,817,000		1,817,000
4	North Road (Freeway to New Westminster Boundary)	313,150 <sup>(4)</sup>	1,328,400 <sup>(5)</sup>	56,600	1,698,150		1,698,150
5	Douglas/Holdom (Sprott to Lougheed)	512,650	5,223,750 <sup>(6)</sup>	206,250	5,942,650		5,942,650
6	Sprott St. (Canada Way to Norland)	-	160,900	4,100	165,000		165,000
7	Nelson Avenue (Marine Drive to Marine Way)	35,530	282,750 <sup>(7)</sup>	7,250	325,530	55,000	270,530
8	Patterson/Roseberry (Rumble to Marine Way)	14,470	497,250	12,750	524,470		524,470
		2,562,800	15,898,650	560,950	19,022,400	161,000	18,861,400

Notes

- (1) Allowance for consultants design fees are based on an average of 2½% of construction costs plus 4% of structure costs.  
 (2) No allowance made for CTC & BNRR share of \$1,050,000.  
 (3) No allowance made for either the 50% cost sharing by Vancouver City (= \$1,126,000) or the \$106,000 deposit paid by B. C. Tel.

- (4) No allowance made for 50% cost sharing (= \$156,575) with Coquitlam.  
 (5) No allowance made on structure for CTC cost sharing of \$450,000, and Coquitlam + Dept. of Highways 75% share (= \$487,500) on residual structure cost.  
 (6) No allowance for CTC cost sharing of \$2,600,000, and BNRR cost sharing of \$200,000.  
 (7) Partial construction proposed in 1975. (\$55,000 contained in C.I.P.)

ITEM 16  
MANAGER'S REPORT NO. 33  
COUNCIL MEETING MAY 5/75

ITEM	16
MANAGER'S REPORT NO.	33
COUNCIL MEETING	May 5/75

TABLE 5

JUSTIFICATION FOR ITEMS IN  
MONEY BYLAW PROGRAM

<u>PRIORITY</u>	<u>JUSTIFICATION</u>
1.	Elimination of grade crossing on this vital north-south arterial in Central Valley area, and general upgrading over its length.
2.	This length of Boundary Road is regarded as a high priority by both Vancouver City and Burnaby. Development adjacent B.C. Tel becoming urgent.
3.	Needed to simplify travel patterns in central area especially through Municipal Complex.
4.	Recognized by both Burnaby and New Westminster as a longstanding bottleneck to peak-hour traffic flows.
5.	Provides a grade separation on one of the very few north-south routes crossing the Central Valley.
6.	Increasing traffic and development in the vicinity of the Sperling/Sprott area require the upgrading at access routes to and from the freeway.
7, 8	Provides connections to the new Marine Way from the South Slope area.



ITEM 16  
 MANAGER'S REPORT NO. 33  
 COUNCIL MEETING May 5/75

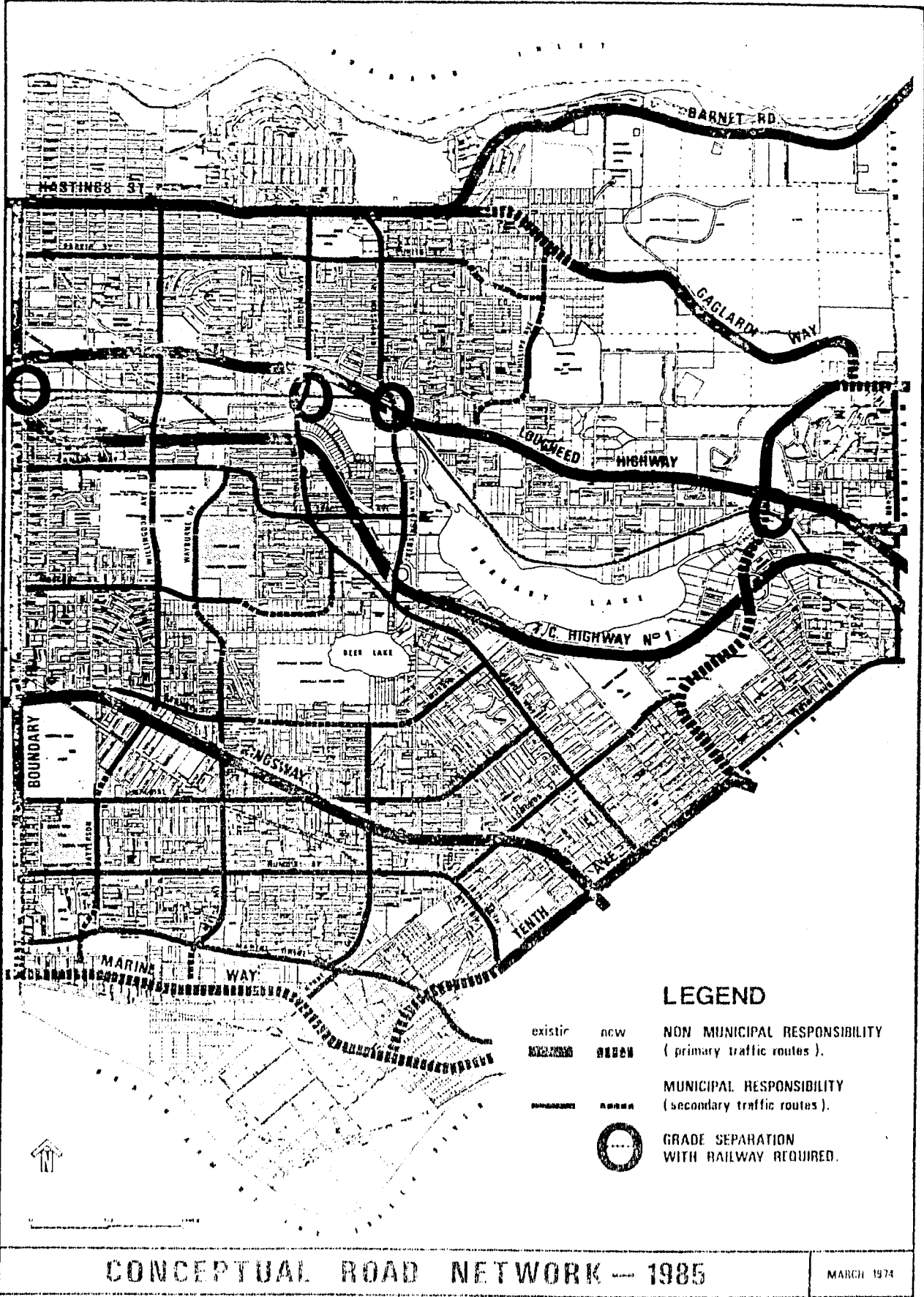


FIGURE 1

ITEM 16  
MANAGER'S REPORT NO. 33  
COUNCIL MEETING May 5/75

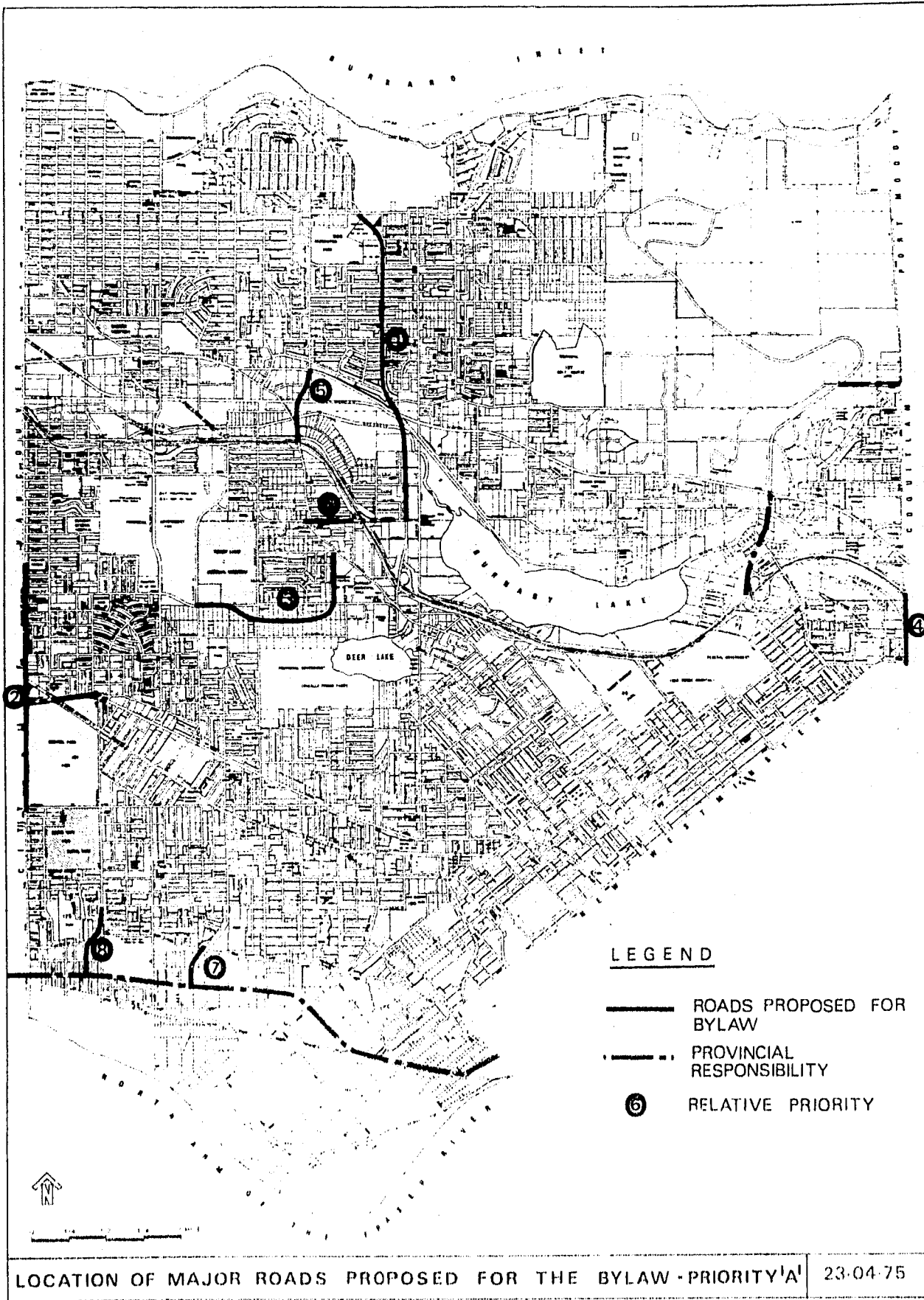


Figure 2

ITEM 16  
MANAGER'S REPORT NO. 33  
COUNCIL MEETING May 5/75

