

CITY OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRANSPORTATION AND TRANSIT DIVISION)

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

RE: BURNABY HEIGHTS TRAFFIC STUDY

RECOMMENDATION:

1. **THAT** Council direct staff to prepare a draft traffic calming plan for the Burnaby Heights area and hold an Open House to receive public comments on the results of the traffic study and to solicit input on the draft plan for the area.

REPORT

The Traffic and Transportation Committee (Transportation and Transit Division), at its meeting held on 1999 May 06, received and adopted the *attached* report to present information from the traffic study in Burnaby Heights and outline a process to develop a traffic calming plan for the area.

Respectfully submitted,

MEMBERS:
Lyle Boivin
Raymond Lupien
Tim Roxburgh
Leanne Tatangelo

Councillor N. Volkow
Chair

Councillor J. Young
Vice Chair

Councillor D. Evans
Member

:COPY - CITY MANAGER
- DIRECTOR ENGINEERING
- DIRECTOR PLANNING & BUILDING

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

1999 May 04

FROM: DIRECTOR PLANNING & BUILDING

OUR FILE: 8.640

SUBJECT: BURNABY HEIGHTS TRAFFIC STUDY

PURPOSE: To present information from the traffic study in Burnaby Heights and outline a process to develop a traffic calming plan for the area.

RECOMMENDATION:

1. **THAT** the Traffic and Transportation Committee direct staff to prepare a draft traffic calming plan for the Burnaby Heights area and hold an Open House to receive public comment on the results of the traffic study and to solicit input on the draft traffic calming plan for the area.

REPORT

1. INTRODUCTION

At its regular meeting of 1998 September 30, Council considered a Manager's Report that discussed traffic issues on Eton Street and Oxford Street regarding the inclusion of Oxford Street in the 1998 Local Improvement Program. Arising from the discussion, Council directed staff to study traffic in the Burnaby Heights area with specific reference to Eton and Oxford Streets.

This report presents the results of this traffic study as a basis to initiate a process to identify options that address the traffic issues in the Burnaby Heights area.

2. BURNABY HEIGHTS TRAFFIC ISSUES

2.1 Increasing Traffic Volumes

Over the years, traffic volumes in the Burnaby Heights area have varied significantly. As shown in *Table 1 attached*, in the early 1980's, traffic volumes on Oxford Street were higher than 5,000 vehicles per day while traffic volumes on Eton Street were between 1,300 and 1,400 vehicles per day. The construction of the Cassiar Connector and the removal of the Cambridge Overpass substantially reduced traffic in the Burnaby Heights area, especially on Oxford Street. Most recent traffic volumes for 1997 and 1998 show that both Oxford and Eton are carrying traffic volumes ranging from 2,250 to 2,550 vehicles per day. Residents have been concerned that traffic volumes have been increasing recently due to a lack of enforcement of the left turn prohibition during the evening peak period on McGill leading to the Skeena Tunnel.

2.2 Speeding Traffic

Residents of both Eton and Oxford, especially those living in the eastern sections between Madison Avenue and Willingdon Avenue, have been concerned about traffic, particularly during peak periods, exceeding the speed limit. The traffic study has collected information on traffic speeds by time of day to assess the degree and extent of this problem.

2.3 Commuter Through-Traffic

The issues of traffic volume and speed have been attributed to through-traffic (vehicles without an origin or destination in the Burnaby Heights area) to and from Vancouver during peak periods.

2.4 Street Classification

The grid street network in the Burnaby Heights area is based on a hierarchy of streets from Arterial to Local Residential, each having a different function. In Burnaby Heights, the status of a particular street and its place in the hierarchy often reflects considerations such as commuter traffic flows, traffic volumes, bus usage, and adjacent development.

The street classification of both Oxford and Eton has been identified in previous Council reports, studies and plans dating from 1974. A transportation study entitled the "Burnaby Transportation Study to 1985" published in 1974 identified a street hierarchy with the classifications of "Urban Collector" and "Urban Local." This report identified Oxford Street as an "Urban Collector" and Eton Street as an "Urban Local." The 1980 Conceptual Transportation Plan identified a street classification termed "Minor Residential Collector" at a 36' pavement surface, but it did not designate specific streets in this category. Later in a 1983 February report to Council dealing with commuter traffic issues in the Burnaby Heights area, Oxford Street was identified as a "Minor Collector" street intended to provide local mobility for traffic originating or destined within the area. Eton Street was identified as a local residential street.

Both Eton and Oxford are classified as Local Collector streets in the current Burnaby Transportation Plan. A Local Collector street refers to a street intended to provide access to and from a residential area and to carry traffic from Local Residential streets to the Major Road network. Local Collector streets are intended to carry traffic volumes of ranging from 1,000 - 5,000 vehicles per day.

Many residents of Eton and Oxford view their street as fulfilling a local residential function that should not be accommodating either through-traffic (traffic to or from other areas in Burnaby or elsewhere) or neighbourhood traffic (Burnaby Heights residents not living on Eton or Oxford). To ascertain the current function of Eton and Oxford Streets the traffic study collected information on traffic volumes and through-traffic flows. This information would be used to determine whether the street classification and associated design standards in the Burnaby Transportation Plan reflect the current and intended function of these streets.

3. RESULTS FROM THE TRAFFIC STUDY

3.1 Traffic Volumes

- **Overall Weekday Traffic**

As shown in *Figure 1 attached*, both Oxford and Eton Street are carrying similar volumes of traffic ranging from 2,000 to 2,500 vehicles per day depending on the location. Volumes of this magnitude are characteristic of minor Local Collector streets in Burnaby that typically carry 2,000 to 3,000 vehicles per day but, sometimes, can carry up to 5,000 vehicles per day.

As shown in *Table 1 attached*, these daily traffic volumes are consistent with the volumes recorded in traffic counts undertaken since 1991 and the opening of the Cassiar Connector. Until that time, traffic volumes on Oxford Street ranged between 5,000 and 7,000 vehicles per day but have diminished to their current levels of 2,000 - 2,500 vehicles per day. Traffic volumes on Eton Street that ranged between 1,500 and 2,000 vehicles per day prior to 1991 have increased slightly to their current levels.

- **Traffic Volumes by Location**

As shown on *Figure 1 attached*, daily traffic volumes on Oxford Street are uniform throughout the corridor at approximately 2,400 vehicles per day but decrease to approximately 2,100 in the Rosser to Willingdon section. In this section of Eton Street, traffic volumes are approximately 2,400 vehicles compared with 2,000 - 2,200 in the rest of the corridor.

- **Peak Period Volumes**

As shown in *Figure 2 attached*, afternoon (PM) peak hour traffic volumes

are higher than morning (AM) peak hour volumes on both streets. In the AM peak hour, traffic volumes on Oxford are higher than those on Eton. In the PM peak hour, traffic volumes on both streets are similar at approximately 275 vph except in the section between Rosser and Willingdon where PM peak traffic volumes on Eton are 300 vph while traffic volumes on Oxford are 245 vph.

3.2 Vehicle Speeds

- **Weekday Average**

Traffic data for vehicle speeds was analyzed for 24 hour average (mean) speeds and for the peak hour. As shown in *Figure 3 attached*, mean vehicle speeds on Oxford Street over the 24 hour period were at or below the speed limit of 50 kph in all sections while mean vehicle speeds on Eton Street were slightly higher overall.

- **Peak Hour**

Peak hour speeds were identified for the 85th percentile. This means that 85% of the vehicles were traveling at that speed or lower and 15 % of the vehicles were traveling at a higher speed. As shown in *Figure 4 attached*, 85% of the vehicles traveling on Oxford Street during the AM peak hour westbound and the PM peak hour eastbound were traveling between 49 kph and 54 kph depending on the section and direction of travel.

On Eton Street, the 85th percentile of vehicle speeds ranged from 47 kph to 60 kph with the highest speeds of 56 - 60 kph recorded between Gilmore and Willingdon. While these vehicle speeds are higher compared with other streets in Burnaby Heights, these speeds are lower than typically encountered on similar streets elsewhere in Burnaby.

3.3 Traffic Origin and Destination

Thursday, 1999 February 18 during the AM and PM peak periods, licence plate surveys were conducted to determine the extent of local and through traffic on Eton and Oxford streets. The surveys defined through-traffic as the following:

- the percent of traffic destined to the Skeena Tunnel in the AM Peak (7 - 9 AM) period which originates from the area east of Willingdon along Penzance Drive;

- the percent of traffic originating from the Skeena Tunnel in the PM Peak (3 - 6 PM) period which exits the area at Hastings/Willingdon Avenue, Hastings/Empire Drive or Hastings/Holdom Avenue.

In the AM Peak period, 439 vehicles used the Skeena Tunnel northbound into the City of Vancouver. As shown in *Figure 5 attached*, of these 439 total vehicles, 37 vehicles or 8% originated from the area east of Willingdon and could be defined as through trips. Of these 37 vehicles, 6 vehicles used Eton Street representing 2% of the total traffic on Eton Street and 31 vehicles used Oxford Street representing 10 % of the total traffic using Oxford Street.

In the PM peak period, the percent of through traffic on Eton and Oxford streets is much higher. In the PM Peak period, 1,322 vehicles used the Skeena Tunnel southbound into Burnaby. As shown in *Figure 6 attached*, of these 1,322 total vehicles, 428 vehicles or 32% were destined to the area east of Willingdon and exited the area at either Willingdon/Hastings, Empire/Hastings or Holdom/Hastings and could be considered to be trips through Burnaby Heights. Of these 428 vehicles, 126 vehicles used Eton Street representing 35% of the eastbound traffic on Eton Street during the PM peak period and 302 vehicles used Oxford Street representing 62% of the eastbound traffic using Oxford Street during the PM Peak period.

The results show that, during the PM Peak period only, through-traffic on both Eton and Oxford streets is higher than may be considered as appropriate for Local Collector streets and that through-traffic is greater on Oxford Street than Eton Street.

4. SUMMARY OF ISSUES

The results of the traffic study substantiate the issues raised by the residents in the Burnaby Heights area. The following major conclusions can be drawn:

- Both Eton and Oxford are functioning as Local Collector streets in terms of traffic volumes and usage by residents of the Burnaby Heights area. Although both streets carry some through-traffic during the PM peak period most of the weekday traffic carried by these streets is local traffic originating from or destined to the Burnaby Heights area.
- In the PM peak period both Eton and Oxford Street carry through-traffic volumes that are higher than the level appropriate for Local Collector streets in the Burnaby Transportation Plan. The orientation of Oxford directly to Penzance Drive and the configuration of the traffic diverter on Oxford at Ingleton partly explain this traffic pattern.

- traffic speeds on both Eton and Oxford Streets are generally not excessive over a weekday but exceed the speed limit during the AM peak hour westbound and the PM peak hour eastbound on the section of Eton Street between Gilmore and Willingdon. This driver behavior can be partly attributed to the steep grade on Eton between Gilmore and Rosser.

5. PROPOSED APPROACH

5.1 Traffic Measures

The results of the traffic study show the need to consider measures to reduce through-traffic originating from the City of Vancouver via the Skeena Tunnel on Eton and Oxford during the PM peak period. Better enforcement of the left turn prohibition on McGill in the City of Vancouver could reduce non-local traffic through Burnaby Heights during the PM peak period. The uneven distribution of this through-traffic to Oxford Street could be partly addressed through the reconfiguration of the traffic barrier to maintain Cambridge closed but to avoid directing traffic to either Eton or Oxford.

As through-traffic is a contributor to the speeding problem on the eastern section of Eton Street measures such as working with the City of Vancouver for greater enforcement of the left turn prohibition on McGill Street could reduce non-local traffic and thus the number of speeding vehicles. On-site traffic calming measures, however, could also be considered including measures that deflect vehicles vertically such as raised intersections, sidewalk extensions or deflect vehicles horizontally such as chicanes, curb extensions, raised median islands, and traffic circles. These measures could be part of a traffic calming plan that could reduce speeds without diverting traffic onto adjacent streets or adversely affecting the operation of buses on Eton Street.

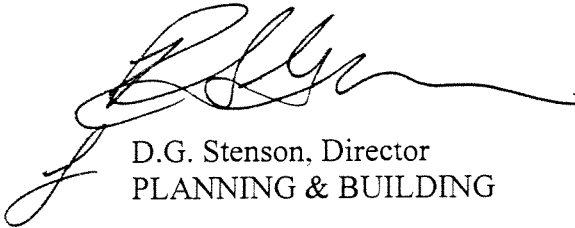
5.2 Public Open House

The traffic study has provided information that can be used to identify and highlight the location and extent of traffic problems in the Burnaby Heights area with particular attention to Eton and Oxford streets and can provide a basis to develop measures to address the traffic issues raised by residents. It is intended that this traffic information and the anecdotal information we already have from residents be used to develop a draft traffic calming plan for the area that could be presented to the residents in an Open House to be held in 1999 June. An Open House would be the appropriate forum to receive comments on the results of the study and to present a draft traffic calming plan for the Burnaby Heights area. Based on response from the community, staff will develop a revised traffic

calming plan for the area that could be taken back to the residents for their further review and comment.

6. CONCLUSION

The traffic studies of the Burnaby Heights area requested by Council provide useful information to identify the location and extent of traffic problems in the area and to develop traffic calming measures to address these issues. To initiate this process it is proposed that an Open House be held in the area in 1999 June to present the results of the study and to receive comments from residents on a draft traffic calming plan for the Burnaby Heights area.



D.G. Stenson, Director
PLANNING & BUILDING

RG/sla
Attachment

cc: City Manager
Director Engineering

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TABLE 1
WEEKDAY TRAFFIC VOLUMES (BOTH DIRECTIONS)
ETON AND OXFORD STREETS

DATE	ETON STREET Boundary - Willingdon East & Westbound	OXFORD STREET Boundary -Willingdon East & Westbound
Feb. 1979		6.500
Mar. 1980	1,300	
Mar. 1980	1,400	
May 1980		6.200
May 1980		6.700
May 1983	1,250	
Feb. 1984	1,200	
May 1984	1,400	
May 1985	1,600	
1986	1,700	
Sept. 1989		4.850
Sept. 1991	2,100	
April 1993		2.300
July 1993	1,650	
Oct. 1993	1,650	
Nov. 1995		1.800
Sept. 1996	1,900	
June 1997	2.250	
April 1998		2.200
June 1998		2.550

* Volumes have been rounded to the nearest 50 vehicles.

BURRARD INLET

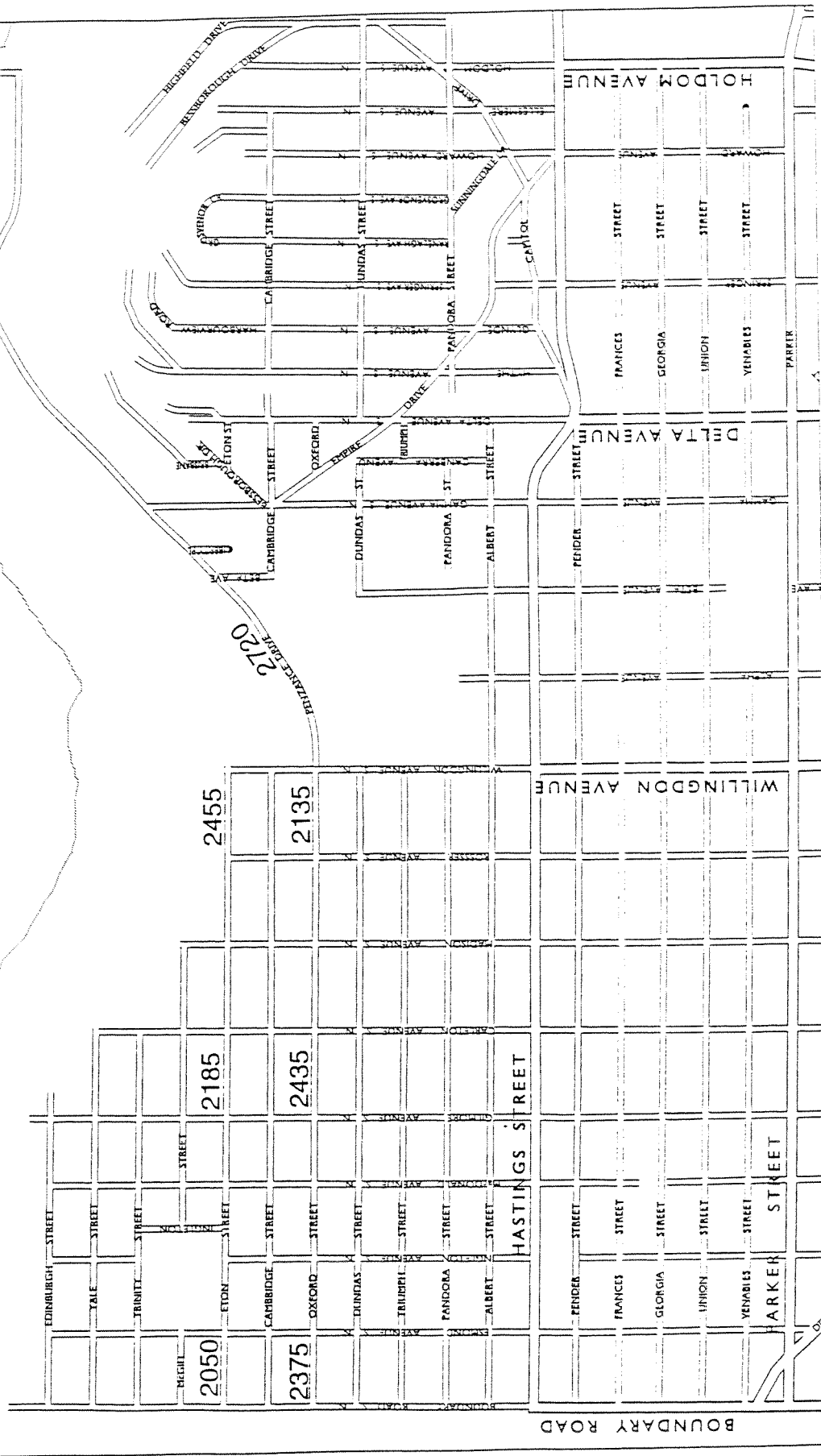
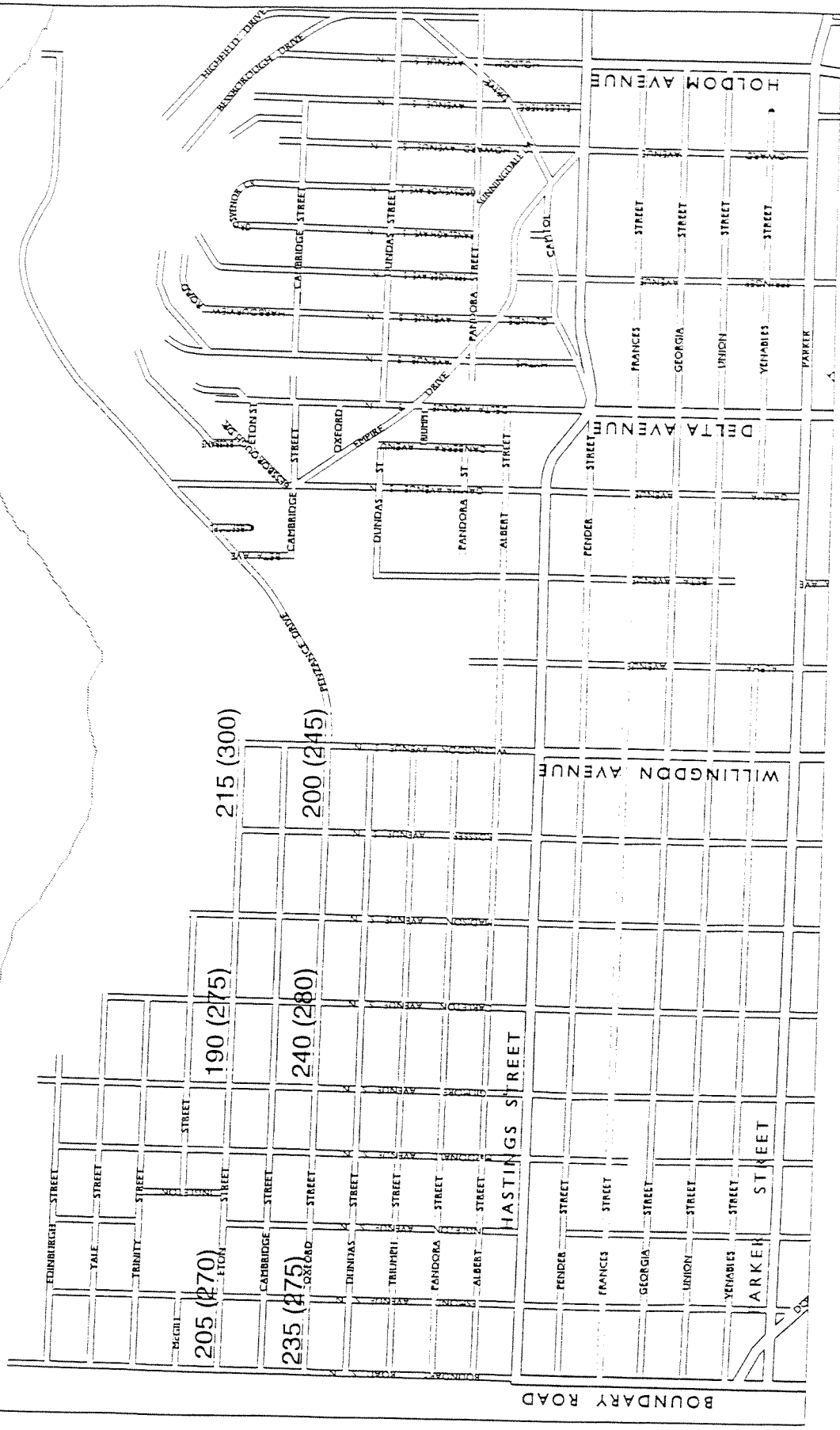


Figure 1
Weekday Traffic
(Vehicles)

BURNABY HEIGHTS

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BURNABY HEIGHTS

Figure 2
 Peak Hour Traffic
 AM (PM) Vehicles

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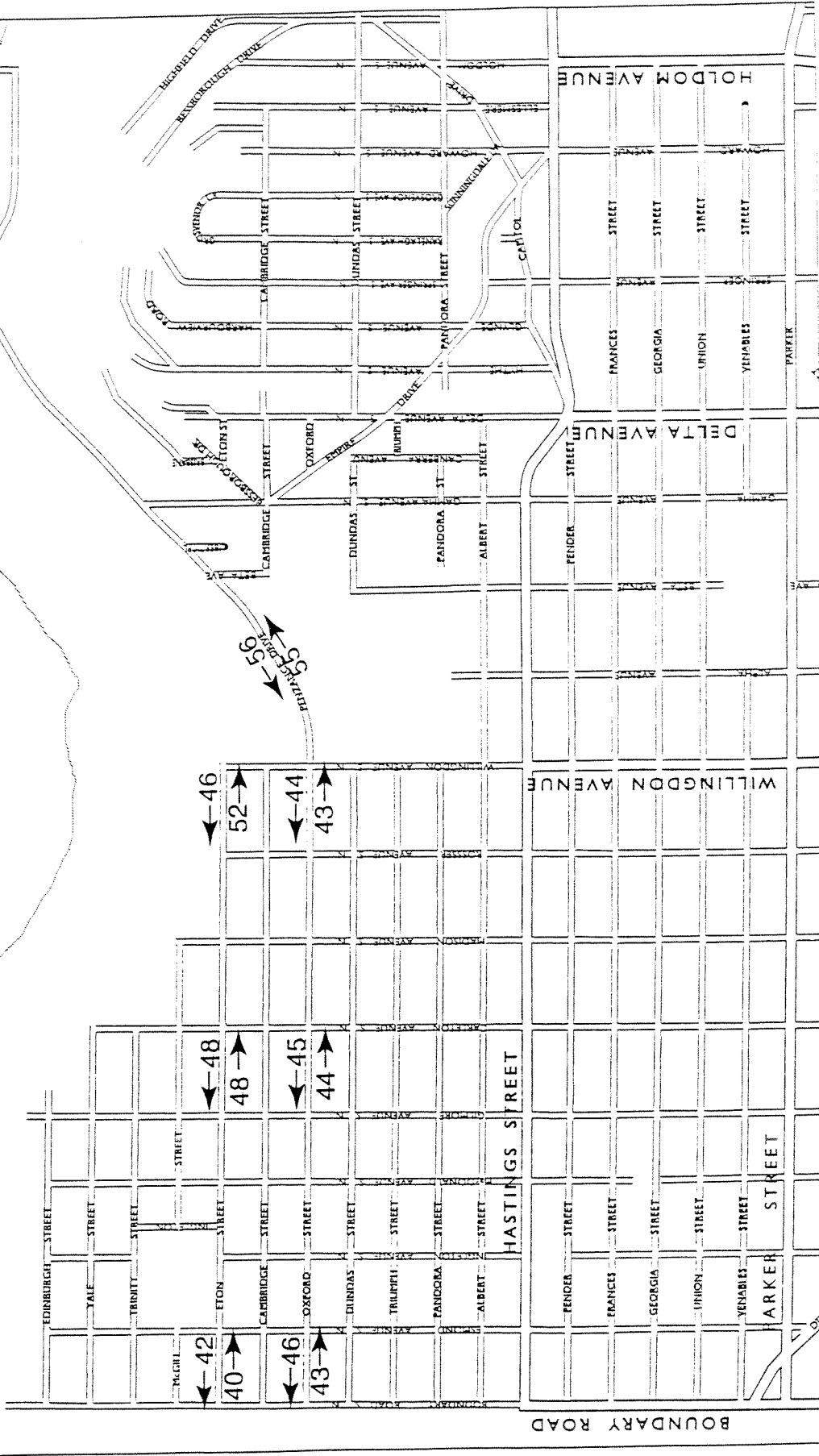
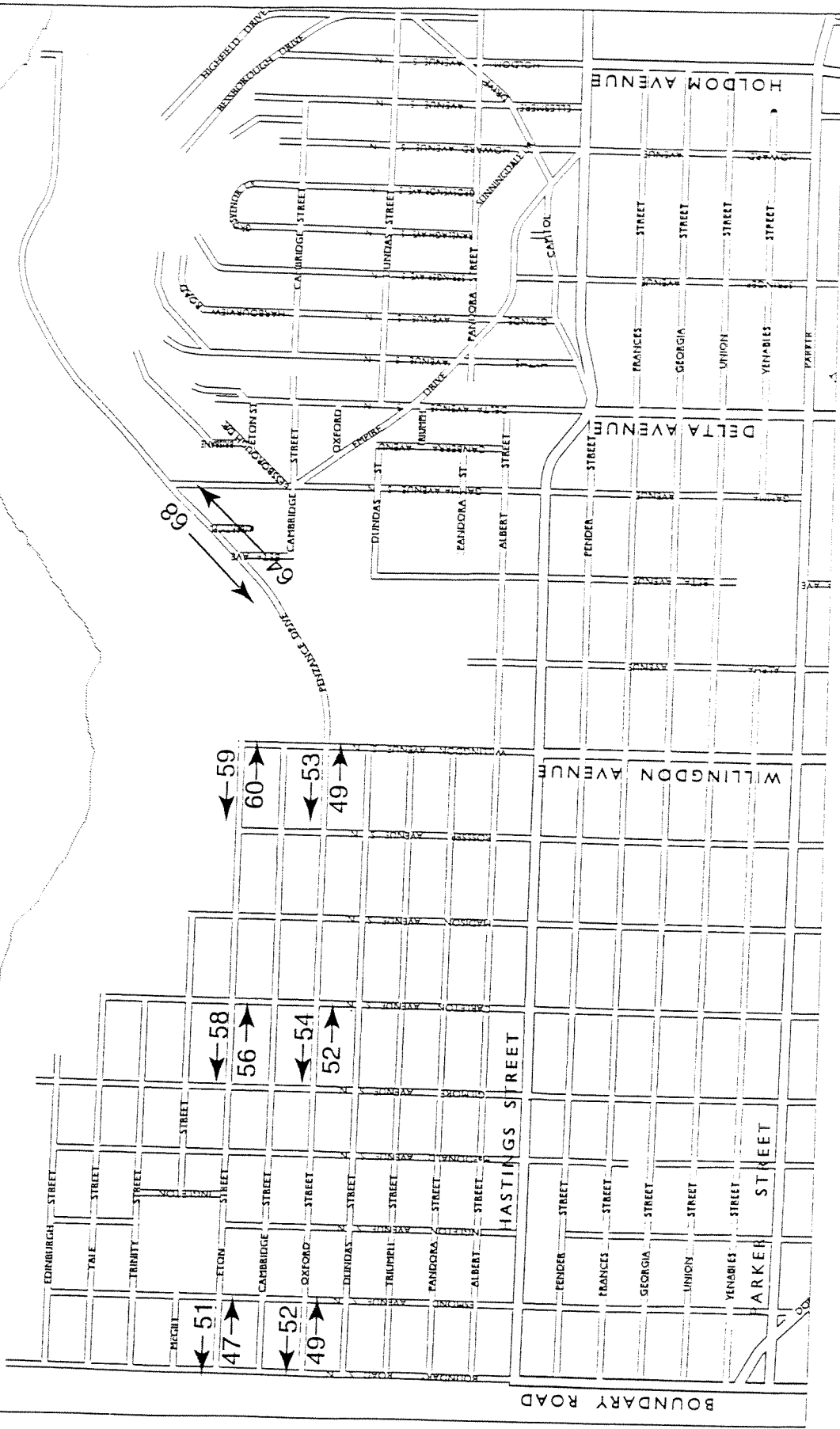


Figure 3
Vehicle Speeds (kph)
 24 Hour Mean

BURNABY HEIGHTS

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BURNABY HEIGHTS

Figure 4
Vehicle Speeds (kph)
 AM Peak Hour Westbound
 PM Peak Hour Eastbound
 85th Percentile

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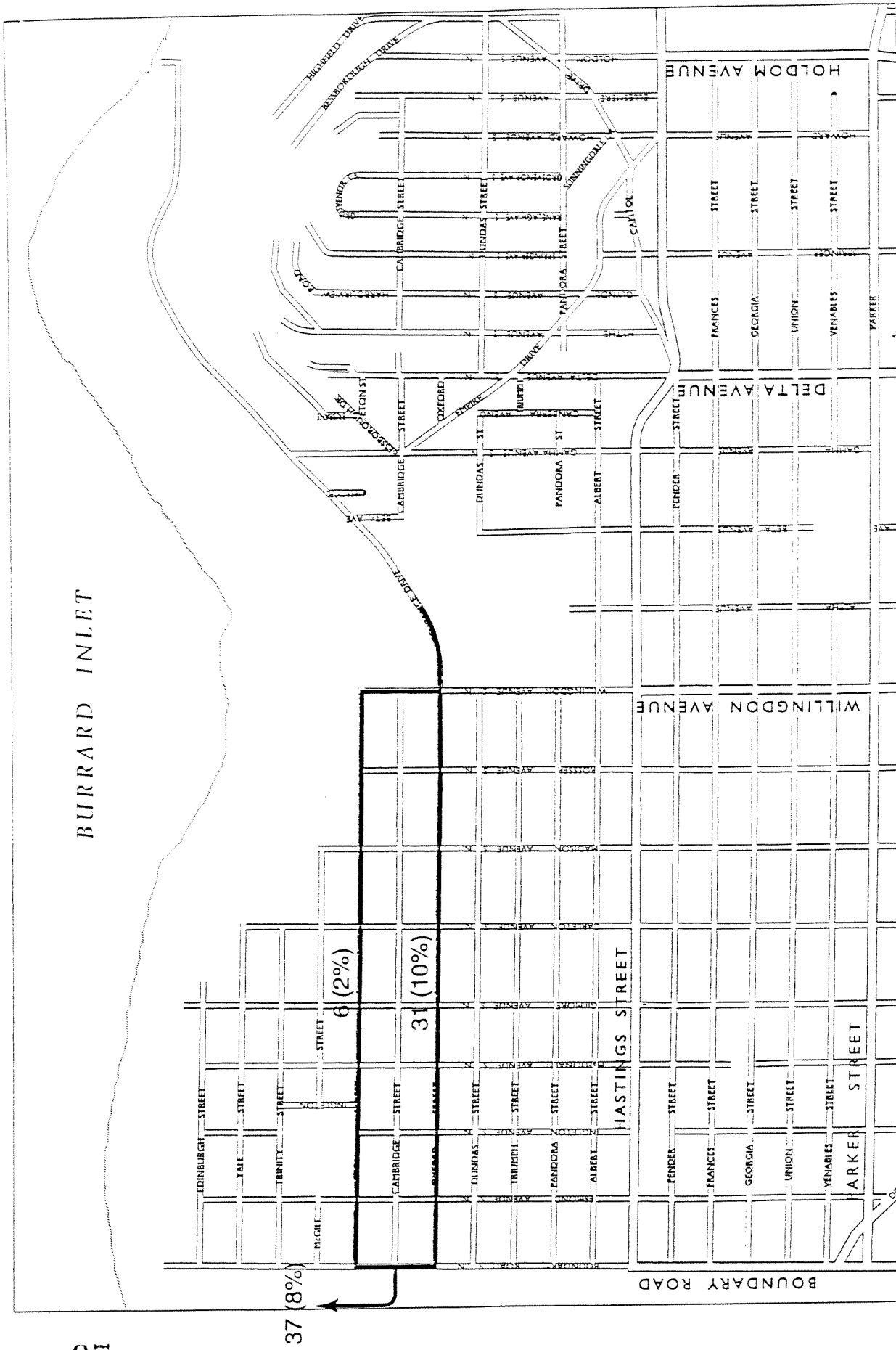


Figure 5
 Through Traffic
 AM Peak Period (7-9 AM)
 Westbound

BURNABY HEIGHTS

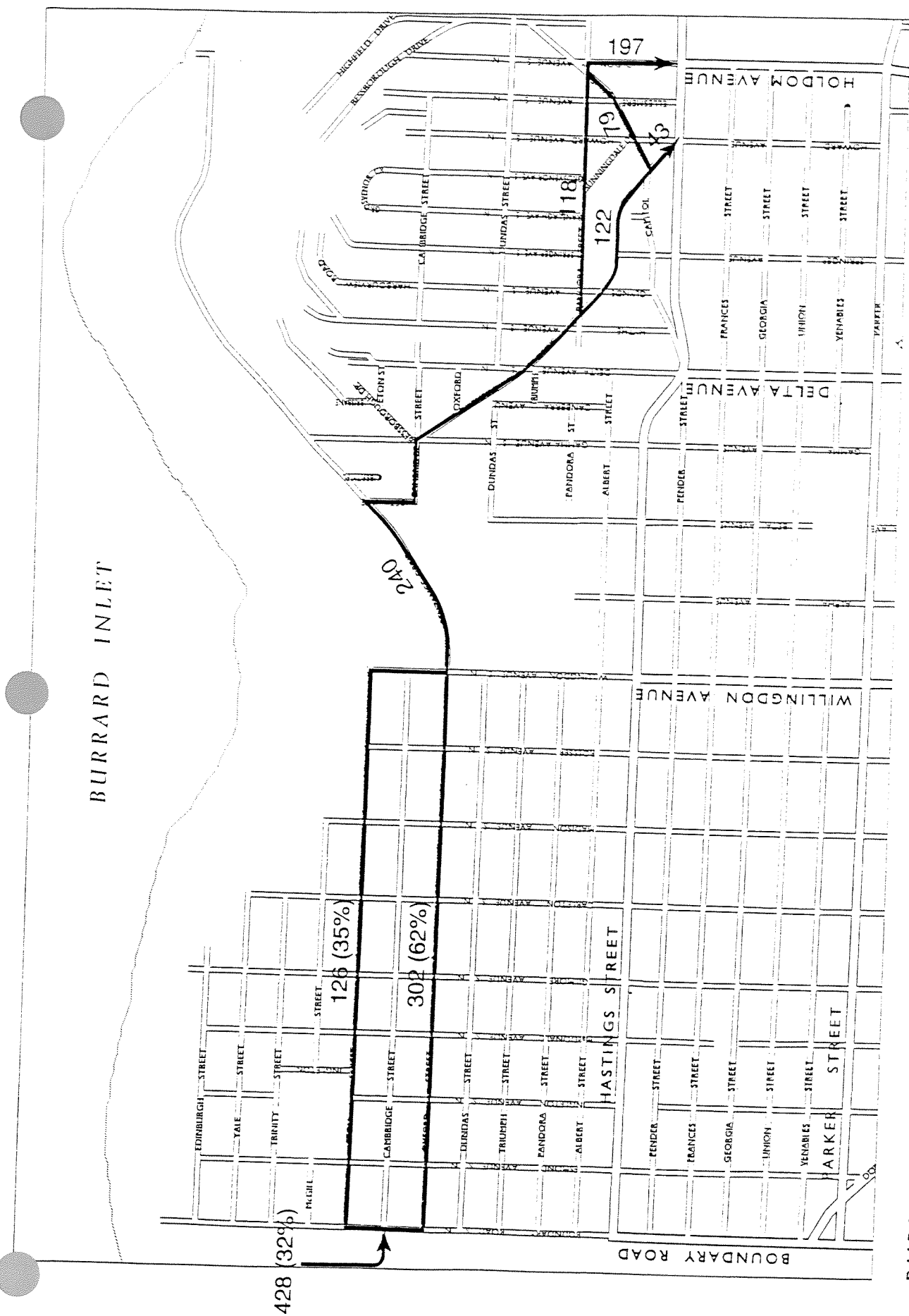


Figure 6
 Through Traffic
 PM Peak (3-6 PM)
 Eastbound

