

CITY OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRAFFIC SAFETY DIVISION)

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

SUBJECT: PEDESTRIAN CROSSING FACILITIES ON KINGSWAY BETWEEN
PATTERSON AVENUE AND BOUNDARY ROAD

RECOMMENDATION:

1. **THAT** Council approve installation of a special pedestrian crosswalk on Kingsway at Inman Avenue.

REPORT

The Traffic and Transportation Committee (Traffic Safety Division), at its open meeting held on 2002 October 1, received and adopted the *attached* report responding to Council's request for more information regarding the proposed siting of a pedestrian crosswalk on Kingsway at Inman rather than Jersey.

The Committee advised that there are a number of advantages to locating the crossing at Inman rather than one block west at Jersey. First, the Inman Avenue location reflects the current focus of pedestrian crossing demand and addresses the collision history. A secondary concern is that the Jersey pedestrian crossing would not be optimally spaced relative to a potential crossing at Smith in the future. Third, the road width geometrics at Inman and Kingsway present the opportunity for extending the control median westward from Patterson to provide a pedestrian midcrossing refuge at Inman. Providing a similar facility at Jersey would require removal of all on-street parking on Kingsway in this reach.

The Committee also advised of an opportunity to further enhance crossing safety by equipping the Kingsway/Inman crossing as a special crosswalk at marginal extra cost. The development of a pedestrian refuge median is also proposed.

Initial estimates suggest a cost of \$80,000 to construct the special crosswalk, median refuge and minor curb work at Inman. If approved, this project will be incorporated into the Capital Budget process with a view to cost sharing with TransLink and ICBC.

Respectfully submitted,

Councillor D. Evans
Chair

Councillor B. Der
Vice Chair

Councillor G. Begin
Member

COPY: - DIR. ENGINEERING
- DIR. PLNG. & BLDG.
- DIR. FINANCE

City of Burnaby

INTER-OFFICE COMMUNICATION

TO: TRAFFIC SAFETY COMMITTEE **DATE:** 2002 09 23
FROM: ASST. DIRECTOR ENGINEERING,
TRAFFIC & ENGINEERING SYSTEMS **FILE:** 55-04-01
SUBJECT: PEDESTRIAN CROSSING FACILITIES ON KINGSWAY
BETWEEN PATTERSON AVENUE AND BOUNDARY ROAD
PURPOSE: To respond to Council's request for more information regarding the proposal siting a pedestrian crosswalk on Kingsway at Inman rather than Jersey.

RECOMMENDATION:

1. **THAT** a special pedestrian crosswalk be installed on Kingsway at Inman Avenue.

R E P O R T

1.0 INTRODUCTION

In response to correspondence requesting a pedestrian crosswalk on Kingsway in the 3900 block, staff prepared a report recommending a crosswalk at Inman. The proposed special crosswalk was intended to address the needs of those wishing to access the medical buildings on the north side of Kingsway, as well as Central Park's amenities on the south side of the road. The recommendation was approved by the Committee and forwarded to Council. Council, after discussion of concerns regarding the proposed crosswalk location, referred the report back for further consideration. This report incorporates the substance of the prior one and provides a more detailed review of why the crosswalk at Inman was proposed rather than one at Jersey (Section 5.0).

2.0 BACKGROUND

Signalized pedestrian crossings at the Patterson Avenue and Boundary Road intersections, bracket the 750 metre stretch of Kingsway adjacent Central Park. In addition there is a pedestrian overpass integrated into the Telus building complex which provides a connection to Central Park. The overpass is located approximately 150 metres east of Boundary Road.

There are “legal” unmarked crosswalks along Kingsway at Smith, Jersey and Inman. Given the width of Kingsway, the junctions on the north side of the road may not be apparent to eastbound motorists.

Transit stops which are pedestrian crossing generators are located on both sides of Kingsway at the Smith and Inman Avenue intersections. Central Park and the recreational facilities within the park also generate additional pedestrian crossings along this section of Kingsway. There are a number of senior housing complexes in the neighbourhood on the north side of Kingsway located in proximity to the Inman Avenue intersection.

The **attached** plan, Exhibit 1, illustrates this reach of Kingsway.

3.0 REVIEW AND EVALUATION

Staff has reviewed the pedestrian collision history for this section of Kingsway. Over the 10 year period from 1992 to 2001, a total of 10 pedestrian/vehicle incidents have been reported to the police, including a pedestrian fatality. The collisions on record have been listed in the table below.

Table 1 Pedestrian Collision History	
Incident Location on Kingsway @	Incident Date
Patterson Avenue	February 1994 November 1994
Inman Avenue	July 1993 January 1999 (Fatality) February 1999 July 2001
Jersey Avenue	November 1992 October 1994 November 1995
Smith Avenue	April 1997

Staff has also observed and recorded the number of individuals crossing Kingsway between Patterson and Smith Avenue’s on weekdays. This data has been summarized in the table below.

Table 2. Weekday Count of Pedestrians Crossing Kingsway

Note: EAU, "Equivalent Adult Unit" total weights children, Seniors Persons with disabilities.

Time of Day	Observation Location							
	Patterson - Jersey				Jersey - Smith			
	Adult	Senior	Children	EAU	Adult	Senior	Children	EAU
7:00 - 8:00	9	0	0	9	4	0	0	4
8:00 - 9:00	10	3	2	19	3	4	0	9
9:00 - 10:00	14	3	0	19	13	1	0	15
10:00 - 11:00	10	5	0	18	2	1	0	4
11:00 - 12:00	5	5	0	13	4	0	0	4
12:00 - 1:00	6	4	0	12	9	0	0	9
1:00 - 2:00	9	2	1	14	7	0	0	7
2:00 - 3:00	8	1	0	10	8	0	0	8
3:00 - 4:00	16	1	1	20	10	1	1	14
4:00 - 5:00	14	3	1	21	11	0	0	11
5:00 - 6:00	2	0	0	2	7	0	0	7

Of the two areas observed, the section of Kingsway between Patterson and Jersey Avenues was the more popular crossing location with a consistent level of activity throughout the day. The majority of pedestrians in this reach crossed in the vicinity of Inman. We note that the pedestrian crossing demand correlates with vehicle travel demand, with coincident morning and afternoon peaks, the latter being the more significant.

We have compared the weighted hourly totals of observed pedestrians (EAUs) with the evaluation warrant of the Pedestrian Crossing Control Manual. If we assume that the majority of pedestrians (say 2/3) were attracted to a defined crossing then there is sufficient activity during three hours of observation to justify a marked crosswalk. It should also be noted that if we assume that **all** pedestrians were drawn to a single crossing the warrant threshold for a "special" crosswalk would be approached but not exceeded during the 3:00 to 4:00 p.m. period. Peak hour pedestrian demand would need to double before the warrant analysis mandated a Pedestrian signal.

4.0 DISCUSSION

The observed pedestrian activity on Kingsway satisfies the minimum requirements for a marked crosswalk indicating a need for an improvement to pedestrian crossing control. Both on-site observation and collision history indicate that crossing improvements should be focussed at Inman at this time. For a multilane roadway, such as Kingsway, the application standard indicates the requirement for overhead signing, which in accordance with City practice, would be back lighted with crosswalk down lighting to enhance visibility during hours of darkness. With this requirement the additional cost of upgrading control to a "special crosswalk" (pedestrian activated flashing amber lighting on the overhead signs) is only marginal. Given the configuration of the intersection at Inman, the heavy traffic on Kingsway and the potentially significant latent demand for an improved crossing, staff recommends implementation of a "special crosswalk" from the inception. The crosswalk infrastructure would be designed to allow for cost-effective conversion to a Pedestrian signal in the future if required.

5.0 CROSSWALK LOCATION

There are a number of advantages to locating the crossing at Inman rather than one block west at Jersey. First, the Inman Avenue location reflects the current focus of pedestrian crossing demand and addresses the collision history. If the crossing were to be placed at Jersey then the bus stops would need to be relocated from Inman to Jersey to draw transit user demand to the crossing. This would trigger a review of spacing to adjacent stops. Potentially the bus stops at Smith Avenue might be eliminated resulting in a net reduction in transit accessibility. While moving bus stops would address transit users, it is not clear how much of the Central Park oriented demand would be drawn to a Jersey crossing location.

A secondary concern is that the Jersey pedestrian crossing would not be optimally spaced relative to a potential second crossing at Smith in the future. The need for a Smith pedestrian crossing would emerge if the longstanding proposal to align the BC Parkway along the rail right-of-way behind BC Tel is realized (a pedestrian/cyclist bridge over Boundary Road is a pre-requisite).

Third, the road width geometrics at Inman and Kingsway presents the opportunity for extending the central median area westward from Patterson to provide a pedestrian mid-crossing refuge at Inman. This feature, as shown on Figure 1, **attached**, is considered a significant safety benefit. Providing a similar facility at Jersey would require removal of all on-street parking on Kingsway in this reach.

It has been noted that the "free" entry of westbound Grange to Kingsway traffic has been considered a problem in the past and there is a concern that it would adversely affect safety at the Inman crosswalk. It is proposed to keep the controls installed to address the concern (stop control, no right turn to Inman) and supplement them with yield style entry markings. In addition, the revised lane alignments will serve to reduce any ambiguity resulting from the expanse of asphalt at the present merge.

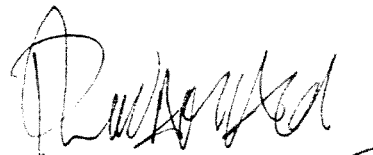
6.0 COST

The cost of installing the recommended special crosswalk is estimated to be \$65,000. The estimated cost of the central median would be about \$15,000, with the bulk of the cost being consumed by removal and reinstatement of road markings. The project should be eligible for cost sharing with Translink under the MRN Minor Capital Program. A grant from ICBC would also be sought. Capital budgeting constraints may push implementation to 2004.

7.0 CONCLUSION

Based on the level of pedestrian activity occurring along Kingsway between Patterson and Jersey Avenues, there is a warrant for installation of a pedestrian crosswalk which would be best sited at Inman. There is the opportunity to further enhance crossing safety by equipping the crossing as a special crosswalk at marginal extra cost. The development of a pedestrian refuge median is also proposed.

Initial estimates suggest a cost of \$80,000 to construct the special crosswalk, median refuge and minor curb work at Inman. If approved, staff would incorporate this project into the Capital Budget process with a view to cost sharing with Translink and ICBC.

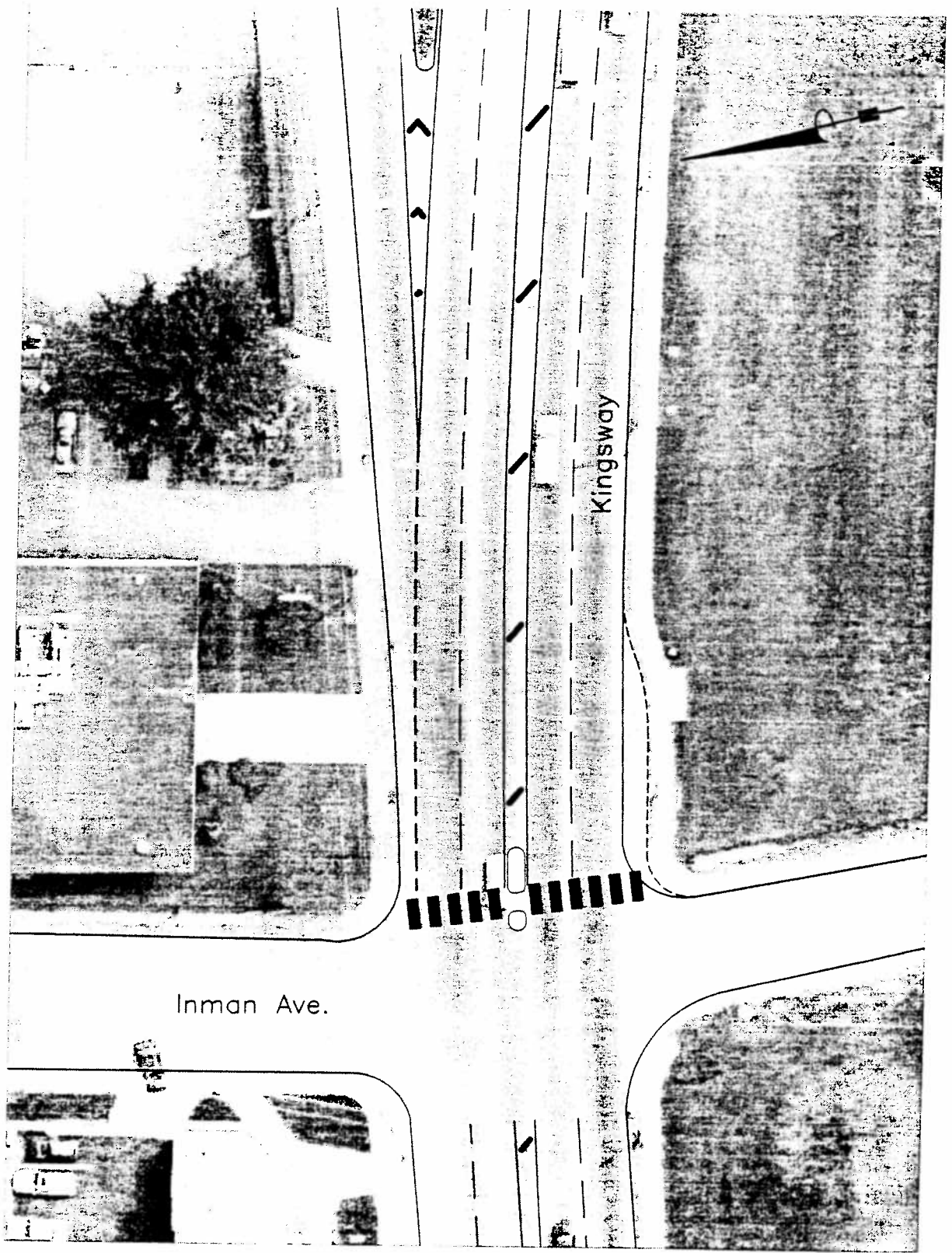


P. Liivamagi, P. Eng.
ASST. DIRECTOR ENGINEERING,
TRAFFIC & ENG. SYSTEMS

AE:su/jb

Attach.

cc: City Manager



Proposed Pedestrian Crossing of
Kingsway @ Inman Ave.
showing roadway modifications

DRAWN BY: A.K.E	SCALE: N.T.S.
APPRV'D BY: P.L.	DATE: 02/09/23

A EXHIBIT 1

