ITEM	6
MANAGER'S REPORT NO.	4
COUNCIL MEETING	85/01/14

RE: METROTOWN TROLLEY EXTENSION

MUNICIPAL MANAGER'S RECOMMENDATION:

1. THAT the recommendation of the Director Planning & Building Inspection be adopted.

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TO: MUNICIPAL MANAGER

1985 January 07

FROM: DIRECTOR PLANNING & BUILDING INSPECTION

Our File: 08.212

SUBJECT: METROTOWN TROLLEY EXTENSION

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RECOMMENDATIONS:

1. THAT Council endorse the proposed Metrotown trolley extension design which minimizes overhead wiring requirements as discussed in this report.

2. THAT Council endorse the cost sharing proposal described in Section 4 of this report.

3. THAT the Municipal Solicitor be directed to bring forward a Capital Works Machinery and Equipment Reserve Fund By-law in the amount of $170,000, this being the estimated Municipal share of the additional cost of the agreed standard of trolley extension and construction in the Metrotown area (the total estimated cost of the project is $1.9M).

1.0 INTRODUCTION/SUMMARY

Municipal and BC Transit staff have been working together to define the appropriate standard of trolley construction for the Metrotown area. The proposed standard would minimize the amount of overhead wiring clutter by suspending trolley wires from bracket arms rather than span wires and by incorporation of the DC power feed cable into the ALRT guideway rather than suspending it from pole to pole along the length of the route. The additional cost of this standard would be shared between the Municipality and BC Transit as outlined in this report.

2.0 BACKGROUND

Discussions on the appropriate design standard for trolley construction in Burnaby were first considered by staff relative to the Hastings trolley extension. At that time the GVRD was the agency responsible for transit planning. After some discussion the GVRD agreed to the suspension of the trolley wires over the road surface by cantilevers projecting from roadside poles (termed bracket arm construction). The use of bracket arms would have eliminated the need for a network of overhead structural support (span) wires on most sections of the trolley route.

Although the Municipality had this agreement with the GVRD for the installation of bracket arms, the matter of the DC feed had not been resolved although a fair amount of discussion had taken place. Municipal staff had stated that the heavy DC power feed cables, which the GVRD proposed to suspend from pole to pole along the trolley route, should be placed underground.

Subsequent to those discussions the authority for transit planning shifted to BC Transit, the Hastings trolley extension was deferred and the extension of Kingsway trolley services to the Metrotown transit interchange became the high priority trolley extension. Staff have been working with BC Transit to attain the best possible solution from a range of viewpoints: from cost to civic design. It was recognized that if the best solution required additional cost then those costs would be shared in an acceptable fashion.

3.0 PROPOSED TROLLEY EXTENSION DESIGN

For Burnaby Metrotown where visual appearance is an important civic design consideration, the preferred trolley design is one which reduces overhead wiring clutter. This is best accomplished by supporting the trolley wires themselves by cantilevered arms projecting from roadside poles - bracket arm construction and by placing the heavy DC feed cables underground.

The use of bracket arm construction eliminates the need for span wires criss-crossing the street to support the trolley overhead. The proposed trolley design for Metrotown also includes the incorporation of the DC feeder cables into the ALRT guideway as a compromise solution to placing the feed underground. This obviates requirement for stringing the DC feed from pole to pole along the route or placing it underground along the length of the route. Undergrounding the DC feeder would meet Municipal requirements but would be much more expensive than incorporating it into the ALRT guideway.

An example of a street (not dissimilar to Kingsway) where bracket arm construction without overhead feeder cable has been employed is Burrard between Smythe and Davie. The proposed trolley extension to UBC via the University Boulevard will also be built to this standard.

4.0 COST IMPLICATIONS

The cost of the agreed scheme has been measured against the basic construction method which would use span wires to support the trolley wires and overhead pole to pole support for the DC feeder cable. The proposal for cost sharing is based on BC Transit and

the Municipality being responsible for separate elements of the additional cost. BC Transit has agreed to incorporate the DC feeder cables into the ALRT guideway at an estimated additional cost of $190,000 as its share. It is proposed that the Municipality bear the cost of minimizing the use of overhead span wires. This cost is estimated as follows:

1.	Added cost for bracket arm construction	$120,000
2.	Undergrounding of cross feed taps	36,000
3.	Contingency	14,000
Total Municipal share		$170,000

The Municipal share represents approximately 9% of the total estimated cost ($1.9M) of the trolley extension project. If Council approves the proposed design and the cost sharing, the required funds will be included in the 1985 Annual Capital Budget with the financing provided from the Capital Works Financing Fund. It is recommended that a Capital Works Machinery and Equipment Reserve Bylaw be brought forth for the Municipal share of the project in the amount of $170,000. The By-law requires an affirmative vote of at least two-thirds of all members of Council and the approval of the Minister of Municipal Affairs. This approval will be sought after three readings of the By-law by Council.

5.0 CONCLUSIONS

The extension of the trolley service to Metrotown is considered to be a high priority project which will improve transit service for Burnaby . Notwithstanding the desirability of this trolley extension it should be implemented so as to minimize its environmental impact. This is particularly important because Metrotown is Burnaby's downtown. The additional cost of diverting the DC feeder from the trolley route (Kingsway/Willingdon/Central Boulevard) and the use of bracket arm construction, should be viewed relative to the benefits over the expected life of this project and the consistent policy approach taken by Burnaby towards the gradual elimination of overhead wiring in this Municipality.

A.L. Parr
DIRECTOR PLANNING &
BUILDING INSPECTION

ALP/PL/mcb

cc: Director Engineering
Director Finance
Municipal Solicitor