

THE CORPORATION OF THE DISTRICT OF BURNABY

TRANSPORTATION COMMITTEE

HIS WORSHIP, THE MAYOR  
AND ALDERMEN

Madam/Gentlemen:

REPORT OF THE TRANSPORTATION COMMITTEE  
RE: DESIGN PROPOSALS FOR ROYAL OAK AND MOSCROP/GILPIN PROJECTS

RECOMMENDATION:

1. THAT Council approve the modified Alignment E as a basis for a preliminary design and costing of the Moscrop/Gilpin Connector.
2. THAT staff be authorized to develop a preliminary road design and landscaping plan for the Moscrop/Gilpin Connector.

R E P O R T

BACKGROUND

Council at the regular Council Meeting held 1989 February 20 received a report from the Director Planning and Building Inspection advising of the results of the Open House held to discuss with the public the design proposals for the Royal Oak Moscrop/Gilpin projects. At that time Council tabled the following two recommendations:

- (1) THAT Council approve in principle the design concept of the Royal Oak realignment as presented to the public at the 1989 January 18 Open House;
- (2) THAT Council approve in principle the modified design concept for the Moscrop/Gilpin Connector as discussed in the report and shown on Exhibit 3 of the report.

Council adopted the third recommendation referring the report to the Transportation Committee and the Parks and Recreation Commission for their consideration.

The Parks and Recreation Commission in their report to Council on 1989 April 04 recommended 'THAT the modified concept for the Moscrop/Gilpin Connector not be approved'.

The Transportation Committee when reviewing the modified concept for the Moscrop/Gilpin Connector at its meeting of 1989 April 18 considered comments received from residents of the affected area as well as those concerns expressed by Parks and Recreation Commission. Subsequently, the Committee requested that staff report back with another modified route for the Moscrop/Gilpin Connector. At their meeting of 1989 May 11 the Transportation Committee received the attached report providing a new alignment for the Moscrop/Gilpin Connector and adopted the recommendations contained therein.

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- DIRECTOR ENGINEERING  
- DIRECTOR PLANNING & BUILDING INSPECTION

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CONCLUSION

The Transportation Committee have considered a number of proposed designs for the Moscrop/Gilpin Connector and it is the opinion of the Committee that the most recent proposal -- Alignment E, more particularly described in the attached report -- was the one that best represented the interests of all parties.

With respect to the design proposal for the Royal Oak project the Transportation Committee Chairman advises that the Committee supports the design concept as presented to the Public at the January 18 Open House.

Respectfully submitted,

Alderman R.G. Begin  
Chairman

Alderman D.P. Drummond  
Member

Alderman J.M. Sawicki  
Member

TO: CHAIRMAN AND MEMBERS  
TRANSPORTATION COMMITTEE

1989 MAY 08

FROM: DIRECTOR PLANNING &  
BUILDING INSPECTION

OUR FILE: 08.640  
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SUBJECT: MOSCROP/GILPIN CONNECTOR  
MODIFIED ALIGNMENT

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RECOMMENDATION:

1. THAT the Transportation Committee approve the modified Alignment E as a basis for a preliminary design and costing of the Moscrop/Gilpin Connector.
2. THAT staff be authorized to develop a preliminary road design and landscaping plan for the Moscrop/Gilpin Connector.

R E P O R T

1.0 BACKGROUND

On 1989 April 18 the Transportation Committee received a verbal presentation on material on the Moscrop/Gilpin Connector previously requested by the Committee.

At this meeting of the Transportation Committee the Committee reviewed four designs for the Moscrop/Gilpin Connector as follows:

- (I) the original proposal centered on the sewer line easement immediately to the south of the residential properties (Alignment A)
- (II) the proposal presented at the Open House (Alignment B)
- (III) the revised proposal amended as a result of public input (Alignment C)
- (IV) the proposal supported by the residents located 250 feet back from the residential property line (Alignment D).

Arising from the discussion following this presentation, the Committee adopted the following motions:

"THAT staff prepare a report investigating the possibility of re-aligning the Connector, encompassing the following aspects:

- (I) eastern section moved further east to avoid the two stands of conifers;
- (II) moving the alignment slightly south of the modified (green) route at Royal Oak; and further if this modified route causes problem with alignment to the west, through the bog area, then there should be a clear indication from staff that the more southerly alignment is not possible."

Arising out of further discussion on the report, the Committee also adopted the following motions:

- "(I) THAT staff report back to the Committee outlining the ramifications of removing the proposed median and examining such factors as safety, cost and amount of parkland saved.
- (II) THAT a follow-up letter be sent to all those area residents who the Committee had previously corresponded with on the subject of the Moscrop/Gilpin Connector allowing them a period of two weeks to submit any further concerns to this Committee.
- (III) THAT staff prepare a report outlining a plan for landscaping treatment for the affected areas surrounding Royal Oak."

This report is written in response to the direction of the Transportation Committee.

## 2.0 MODIFIED ALIGNMENT

As shown in Figure 1, Alignment E superimposed on Alignment C reflects the two modifications suggested by the Transportation Committee with respect to the two stands of conifer trees and the intersection with Royal Oak. These are discussed in detail in the following sections.

### 2.1 Retention of the Conifer Trees

Both alignment options including the alignment presented at the Open House (Alignment B - Figure 2) and the revised alignment (Alignment C - Figure 3) developed from public input at the Open House, intruded on two stands of mature conifer trees in Deer Lake Park. As shown in Figures 1, 2 and 3 these conifer trees are located south of the Cedarwood Street subdivision, i.e. the eastern conifer stand and south of the Colbrook Crescent subdivision, i.e. the western conifer stand.

The previous alignment developed from public input (Alignment C) would have necessitated the removal of an area of conifer trees of approximately 1,500 sq. metres of the eastern conifer stand. Avoiding the eastern conifer stand requires that the south edge of the right-of-way be relocated from 13-30 metres further north at this point. Further analysis of the design criteria for the road indicated that this realignment could be accommodated without moving the eastern section of the alignment further east into Deer Lake Park. The eastern conifer stand has been avoided with an alignment which closely corresponds to the eastern section of the previous alignment prepared for the Open House (Alignment B).

Alignment C requires the removal of approximately 1,400 sq. metres of the western conifer stand. To avoid these conifer trees the alignment has been moved approximately 23 metres northward at this point.

In summary retention of the conifer trees requires that the minimum distance from the residential property line to the edge of roadway be reduced from 40 metres under Alignment C to 32 metres under Alignment E.

## 2.2 Alignment Near Royal Oak Avenue

The possibility of moving the alignment of the western section of the roadway slightly south of Alignment C was investigated. A condition of this revised alignment was that the realignment not infringe on the bog area located to the west of Royal Oak Avenue.

The location of the bog area constitutes an impediment to a significant realignment of the western section southward. In order to bypass the bog area it is possible to move the western section only 3 metres further south of Alignment C. Alignment E reflects this new position.

## 3.0 ROADWAY MEDIAN

### 3.1 Function

Previous designs for the Moscrop/Gilpin Connector have included a 4.5m median extending the entire length of the road from its intersection with Deer Lake Place to Moscrop Street. The median essentially serves three major functions as follows:

- (I) Safety - inclusion of the median reduces the accident potential by establishing a barrier between oncoming vehicles and if landscaped, can reduce headlight glare. A median also increases pedestrian safety by providing a refuge area.
- (II) Noise attenuation - inclusion of a median would provide additional separation from the residential areas north of the roadway. In addition dense landscaping within a median consisting of closely spaced shrubs can reduce noise impacts on adjacent residences.
- (III) Aesthetics - the landscaped median was provided to reflect the character of the Moscrop/Gilpin Connector as a road within a park. Provision of the median is viewed as essential for the road to be compatible with the park setting.

The current design for Alignment E contains approximately 1.4 kilometres of median extending from the intersection with Deer Lake Place to the intersection of Garden Grove Drive near Moscrop Street. At a width of approximately 4.5m the median represents an area of approximately 6,300 sq. metres or 2/3 hectares.

### 3.2 Options for the Median

To assess the implications of removing part of the median three options were examined. The implications of each option with respect to safety, noise attenuation, aesthetics, park-land and capital costs are summarized as follows:

(i) Option 1 - Retain median required for traffic circulation only.

As sections of the median will be required to accommodate turning movements and channelization, removing all of the median is not a feasible option. Retaining only those sections of the median required for traffic circulation (primarily at intersection approaches) would necessitate 550-600m of median.

This option would reduce the safety, noise attenuation and aesthetic appeal of the road to the lowest level. As removal of the median would move the southern curb line of the road further north from the park, approximately .38 hectares or 3,850 sq. metres of land would be added to the park. The total capital cost of this median is estimated at approximately \$45,000 in 1989 dollars.

(ii) Option 2 - Retain median required for traffic circulation and noise attenuation.

This option retains additional sections of the median to provide noise attenuation in those residential areas with the least separation from the road. Approximately 900-950 metres of median would be required or 350 metres more than Option 1.

The aesthetic quality of the road as well as driver and pedestrian safety would be significantly lower for this option. The noise attenuation benefits of a median would also be reduced by decreasing the separation from residences. Approximately .23 hectares or 2,300 sq. metres would be added to the park under this option. The capital cost of this option is estimated at \$90,000 or \$45,000 more than Option 1.

(iii) Option 3 - Retain all the median.

This option would provide a 4.5 metre wide median the entire length of the road except for openings at intersections, i.e. 1,450 metres. This option maximizes the safety, noise attenuation and aesthetic aspects of the median. The provision of a full barrier considerably reduces the potential for head-on collisions and improves visibility by reducing headlight glare.

The provision of dense median landscaping near to the noise source would reduce noise levels from the east-bound lanes of the road on the residential areas to the north. Aesthetic quality is also rated high as the appearance of the road would be more compatible with its natural park surroundings. The capital cost of retaining the median in its entirety is estimated at approximately \$145,000.

In summary, it would appear that Option 3, retaining all the median on the Moscrop/Gilpin Connector, realizes substantial benefits in terms of safety, noise attenuation and aesthetics. It is the view of staff therefore that providing full median treatment on Moscrop/Gilpin is the most desirable option.

#### 4.0 LANDSCAPING TREATMENT

Although the Moscrop/Gilpin Connector traverses a heavily forested area of parkland, landscaping would be required to protect the residences on the north from traffic noise and to maintain privacy. Landscaping can consist of three types including median treatment, berm treatment, and reforestation. Median treatment has been discussed in Section 3.0 and the latter two are discussed in the following sections:

##### 4.1 Berm Treatment

Noise attenuation can be achieved through the provision of a six foot high landscaped berm in areas where sufficient space is available from the edge of the roadway to the sewer line which abuts the alignment on the north side. The landscaped berm cannot intrude onto the sewer right-of-way due to the effect of the additional weight on the sewer line. The berm would be replaced with a 1.5 metre fence in areas where insufficient space is available between the edge of the sidewalk and the sewer right-of-way. In total approximately 650 lineal metres of landscaped berm and 330 lineal metres of fencing would be provided.

Both the landscaped berm and the fencing are effective options for noise attenuation. This effectiveness is enhanced by locating the berm or fence near the roadway edge as close as possible to the noise source, in this case motor vehicles.

##### 4.2 Reforestation

The zone between the Moscrop/Gilpin alignment and the residential areas to the north consists predominantly of deciduous forest except for an open area near Royal Oak Avenue. As a spatial separation between the road and the residences, the zone supplements the berm and the fencing in providing noise attenuation. An equally important function however is to provide a visual barrier affording privacy to the residential areas.

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re: Moscrop/Gilpin Connector  
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To increase its effectiveness in screening the residential areas, a reforestation program in this area would accomplish the following:

(i) to provide a year round visual barrier through gradual replacement of deciduous forest with the coniferous trees

(ii) to replant the open area near Royal Oak Avenue with coniferous trees.

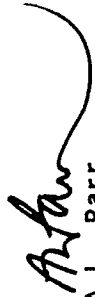
Finalization of the alignment would allow this reforestation program to commence prior to construction of the road. Tree planting (1.5-2 metre trees) outside of the construction area could be initiated in the Fall to ensure a larger forest on completion of the road.

#### 5.0 PUBLIC INPUT

Area residents have been advised by letter (Attachment A) that the Transportation Committee is finalizing the review process for the Moscrop/Gilpin Connector and have been requested to provide written submissions.

#### 6.0 SUMMARY

The modified alignment (Alignment E) has been developed to recognize the need to preserve the recreational values of the park while minimizing the impact of the road on adjacent residential areas. While the alignment has been relocated slightly closer to residential areas in two locations, noise attenuation could be provided and privacy enhanced by the inclusion of a landscaped berm or fence, a landscaped median and reforestation of the area north of the road. The landscaped median should therefore be retained for the full length of the road. In conclusion, the modified alignment with the inclusion of these design treatments establishes a reasonable compromise to proceed to the more detailed design phase.

  
A.L. Parr  
DIRECTOR PLANNING &  
BUILDING INSPECTION

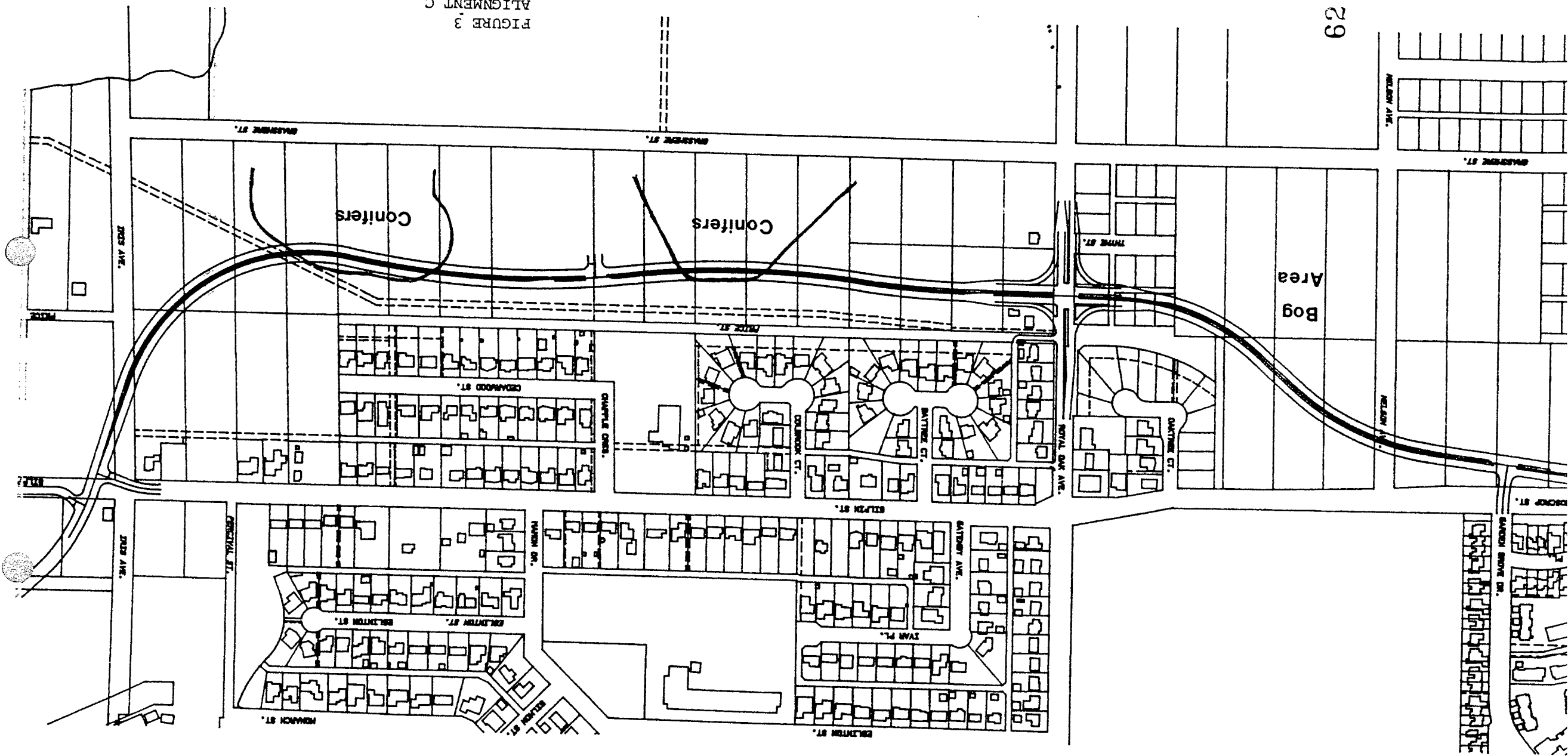
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Attachs:







FIGURE 3  
ALIGNMENT C





4949 Canada Way, Burnaby, B.C. V5G 1M2  
Department of the Municipal Clerk

Telephone (604) 294-7290

1989 April 25

File: J 03 05 04

ATTACHMENT A

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Dear Resident:

Re: Moscrop/Gilpin Connector

Further to our letter dated 1989 March 10 please be advised that the Burnaby Transportation Committee is finalizing the review process for the Moscrop/Gilpin Connector Alignment. The Committee wish to extend an invitation to you, the concerned residents of this area, to provide additional input or voice any concerns you may have on this issue. Written submissions in this regard will be received in the Office of the Municipal Clerk up to and including 1989 May 05.

If you require any additional information please contact the undersigned at 294-7295.

Yours truly,

Mrs. A.L. (Ann) Lorentsen  
COMMITTEE SECRETARY