

ITEM	19
MANAGER'S REPORT NO.	44
COUNCIL MEETING	94/07/25

TO: CITY MANAGER 1994 July 21

FROM: DIRECTOR PLANNING AND BUILDING FILE: 10.225.2.2

SUBJECT: BURNABY MOUNTAIN URBAN TRAIL - PHASE TWO  
(SHELLMONT STREET TO CAMERON LIBRARY  
AND RECREATION CENTRE)

PURPOSE: To obtain Council approval for the staged implementation of the Phase Two Urban Trail.

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**RECOMMENDATIONS:**

1. THAT Council authorize staff to pursue the staged implementation of Phase Two of the Burnaby Mountain Urban Trail as outlined in this report.
2. THAT a Capital Works Machinery and Equipment Reserve Fund Expenditure Bylaw in the amount of \$450,000 be brought forward to fund the design and construction of the Burnaby Mountain Urban Trail from Shellmont Street to Production Way.
3. THAT copies of this report be sent to the Stoney Creek Residents Committee, and to other residents who have written to Council regarding the Phase Two trail.
4. THAT a copy of this report be forwarded to the Bicycle Advisory Committee for information.

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## REPORT

### 1.0 BACKGROUND

Planning for the Burnaby Mountain Urban Trail was initiated by Council in 1990 as the first step in the phased implementation of the Urban Trail System. The overall route will provide a greenway connection between the Burrard Inlet waterfront and the Lougheed Town Centre and will link a variety of parks, community facilities, commercial areas, and residential neighbourhoods. Phase One of the trail was constructed between Hastings Street and Shellmont Street in 1992/93 and has been well received and well used by the general public.

Planning for Phase Two of the Burnaby Mountain Trail was initiated in 1992 and included an extensive public consultation process and analysis regarding various route alignment options. An information mail-out was sent to over 4,000 households and three Open Houses were held at Forest Grove School, Stoney Creek Community School and Cameron Recreation Centre in the affected neighbourhoods to discuss the trail.

Subsequently, at its 1992 November 09 meeting, Council gave approval in principle to a route alignment for Phase Two of the trail to extend from Shellmont Street to the Cameron Library and Recreation Centre. At that time Council asked that residents of Arden Avenue and the affected part of Broadway be consulted further to obtain their views with respect to the proposed trail.

In addition, Council has subsequently received correspondence and a delegation from residents along Beaverbrook Drive in the Simon Fraser Hills/Stoney Creek neighborhood regarding the proposed route and suggesting alternative alignments for the segment of route through their local neighborhood. Staff have undertaken further consultation with residents in this area and have incorporated this additional input into the proposed implementation plan for Phase Two as outlined in this report.

### 2.0 ROUTE ALIGNMENT AND STANDARDS

The overall route proposed for Phase Two as indicated on the attached Sketch #1 is approximately 4.0 kilometres in length and provides for a final standard urban trail that is separated from motor vehicles and which avoids crossing major roads except at protected intersections.

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Implementation of the trail will be in accordance with the "Design Guidelines for the Burnaby Urban Trail System" as approved by Council in 1992 May 19. The guidelines incorporate standards for trail development and address issues of trail safety, neighborhood impact, and environmental protection.

As outlined in the guidelines, Council's policies on Integrated Pest Management (IPM) and on Crime Prevention through Environmental Design (CPTED) will be applied to urban trail development.

IPM principles and techniques will be incorporated into the final site design and construction of the Phase Two trail to provide a facility that can be efficiently maintained at a reasonable cost without negative impacts to the environment.

Staff will consult with the RCMP to address CPTED principles related to issues of safety and security for the trail development.

The proposed alignment and standards for each section of the Phase Two trail are outlined below along with a discussion of neighborhood issues where relevant.

## 2.1 ARDEN AVENUE

- a) The recommended alignment along Arden Avenue from the end of the existing Phase One trail at Shellmont Street is to continue along the west side of the roadway on the golf course side south to the intersection with Woodhurst Drive. The trail will be a joint-use shared path 4.0 m wide (asphalt) and will generally be offset 1.8 m from the roadway curb. In addition, an existing path along the golf course fence will be upgraded to a crushed stone standard as a parallel route for walking.
- b) In general the existing vegetation on the boulevard area will be protected and retained although a small number of individual trees may be removed or relocated as a result of trail construction. Additional planting will be provided along both sides of Arden to reinforce the existing natural wooded character of this corridor.
- c) The trail will cross Arden Avenue at the intersection with Woodhurst Drive where warning signage for motorists will be installed to increase safety at the crosswalk.

- d) South of Woodhurst the trail will continue on the grass boulevard on the east side of Arden. The adjacent 12 m treed buffer area at this location is densely planted and, together with existing private fences, will provide screening for the rear yards of homes in Forest Hills. To avoid the steep grades adjacent the Broadway intersection the trail will be located at the top of the slope and will have a sidewalk connecting down to the intersection.
- e) As directed by Council, staff have consulted with residents in the Forest Hills neighborhood regarding the trail development on Arden and part of Broadway. A general comment expressed by residents is that an alignment by-passing the neighborhood and linking directly to the Forest Grove School would have been preferred as a useful local route and one that would follow less-busy roads. Specific concerns raised by residents include:
- prefer trail to be on golf course side of Arden
  - safety at street crossings, especially for children
  - protect trees in existing buffer strip
  - aesthetics and appearance of paved trail vs. existing greenery
  - privacy of rear yards exposed to view from trail
  - prefer trails on quiet streets with less traffic
  - need for trail vs. status quo

As a result of the input from residents, the original trail alignment has been modified to cross Arden at Woodhurst rather than at Shellmont. The option of keeping the trail entirely on the golf course side of Arden was examined but found to be less desirable due to the steep grades and also more costly due to the existing high embankment near the Broadway intersection.

The concerns raised with safety at crosswalks will be addressed by providing appropriate signage for both motorists and trail users. Also, the original trail proposal has been modified to reduce the number of crosswalks and to avoid crossing Broadway.

The concerns raised with respect to the trail appearance and privacy in yards has been addressed by increasing the amount of tree planting on both sides of Arden to improve screening and provide additional "greenway" character to the street. The trail will not encroach on the 12 m treed buffer area.

Staff also re-examined using Shellmont and Underhill as a by-pass alignment but found the steep grades and constricted boulevards to be a major constraint on that route.

## 2.2 BROADWAY

- a) The recommended alignment along Broadway between Arden Avenue and Underhill Avenue is on the north side of the roadway. The original proposal has been modified to avoid crossing Broadway. The trail standard will be a joint-use shared trail 4.0 m wide (asphalt).
- b) From Arden to the bus stop on Broadway the trail will be located on the existing grassed boulevard area and will be screened from residential properties to the north by the existing 12 m treed buffer area and rear yard fences. Additional tree planting is proposed for the boulevard area and also to reinforce the buffer area where desired by residents.
- c) Between the bus stop and Underhill, the trail will continue east within the north side of the road allowance to take advantage of the existing partially cleared pipeline corridor. Existing trees remaining on portions of the pipeline alignment will require removal. Also, selected thinning of underbrush and trees between the trail and the road will be required to improve visibility and natural surveillance with respect to safety and security on the trail.
- d) Since Broadway does not currently have lighting and since there is not a convenient alternate route with lighting to serve trail users at night, it is recommended that upgraded roadway lighting be provided along Broadway between Arden and Underhill. All other sections of the proposed trail area are adequately served by existing street lighting.

## 2.3 UNDERHILL AVENUE

- a) The proposed trail will cross Underhill Avenue at the north side of Broadway. The crosswalk at this location will require some improvements and additional signage to provide for the trail safety. The recommended trail alignment along Underhill from Broadway to Eastlake Drive is on the east side of the roadway. The trail will consist of a concrete walkway 1.5 m wide and a separate two-way asphalt bike path 2.4 m wide
- b) Trail development will require the relocation and/or replacement of five trees and some shrubs from the boulevard area. Additional tree planting will be provided on the boulevard subject to coordination with existing overhead wiring and underground utilities.

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- c) Along Underhill the trail will cross three private driveways providing access to the adjacent Sears property. At these driveways, landscaping will be adjusted to improve sightlines and appropriate warning signage will be provided for safety.

#### 2.4 EASTLAKE DRIVE

- a) At the intersection of Underhill Avenue and Eastlake Drive the trail will use the existing crosswalk, which is protected by a stop sign, and will continue eastward on the south side of Eastlake adjacent the BNR railway.
- b) The trail will consist of a 2.4 m two-way asphalt bike path and a separate 1.5 m concrete walkway. Right-of-way is required from the BNR and from one other property owner to accommodate the development of the proposed trail to a final standard.
- c) The trail will generally be separated from the roadway curb by a planting strip approximately 1.8 m wide. Existing street trees will be retained along the boulevard subject to coordination with existing underground utilities and overhead wiring. Additional trees will be planted where sufficient space is available.
- d) Natural vegetation growing on the east side of the BNR right-of-way will require clearing and slope stabilization to allow for trail construction in the area southeast of the Gaglardi Way underpass. Natural growth will be restored in this area where sufficient space remains and additional trees will be planted on the boulevard.
- e) The first stage of construction planned for this year is intended to reach Production Way; Stage II, extending east of Production, is planned for construction in 1995.

#### 2.5 BEAVERBROOK DRIVE

- a) The recommended alignment between Eastlake Drive and Cameron Park is for the trail to cross Eastlake at the intersection with Beaverbrook Drive and continue along the south side of Beaverbrook to the traffic signals at Noel Drive. The trail standard will be a 2.4 m wide asphalt bike path and a separate concrete sidewalk varying in width from 1.2 m for existing sections to 1.5 m for new sections where required.
- b) Provision for bicycles will be created by reducing the existing 14 m (46 ft.) roadway to 11 m (36 ft.) and converting the former curb lane into a two-way bike path on the south side of the street. A concrete median 0.6 m wide will be provided to physically separate bikes from roadway traffic.

The proposed modification to the existing roadway requires removal of on-street parking for 15 cars on the south side of Beaverbrook to maintain the existing traffic flow patterns and also as desirable for the continued operation of transit buses on this route. Existing parking on the north side of the street will remain.

- c) From the Stoney Creek bridge to Noel, the existing 14.0 m roadway will be retained and the trail will be located on the existing boulevard.
- d) For pedestrians, the existing 1.2 m concrete walkway on the major portion of the south side of Beaverbrook will be retained and new sidewalks will be provided where required to complete the route.
- e) The existing roadway curb 150 mm high and grass boulevard strip 1.2 m wide will be retained as a separation between the bike path and walkway. Trees will be planted in this area subject to coordination with Engineering requirements regarding underground utilities and protection of adjacent curbs and walkway structures. Subject to agreement of property owners, additional planting can also be provided on adjacent private property to reinforce the existing landscaped setback areas.
- f) Council and staff have received comments regarding the trail development on Beaverbrook from a number of area residents, including the Stoney Creek Residents Committee. As well, staff have attended a number of meetings in the neighborhood to discuss the project, including a site walk with strata council members from south of Beaverbrook and a neighborhood meeting organized by Stoney Creek Residents Committee.

In general, residents have indicated support for development of the overall urban trail system but have emphasized that the location of the Phase Two trail should be well thought out relative to their neighborhood. A summary of specific concerns raised with regard to the Beaverbrook alignment include:

- impact on privacy of townhouses patios fronting Beaverbrook
- unattractive street for bikes/walking (ie. too much traffic).
- safety for pedestrians at intersections including school crosswalk.
- increased traffic congestion during rush hour.
- increased difficulty for left turning vehicles into side streets and driveway.
- loss of on-street parking which is now heavily used by residents.
- difficulty for garbage pickup and fire truck access to adjacent housing projects.
- alternative routes are available which would bypass to the south of the residential areas and avoid the need for changes to Beaverbrook

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- g) Staff have consulted with residents regarding alternative alignments for the trail through their neighborhood. As a result, three route options to by-pass Beaverbrook Drive were identified. These are illustrated on the attached Sketch #2.

The three options identified avoid using Beaverbrook Drive by routing the proposed trail through the Stoney Creek ravine to the south of the residential area. In general, the ravine setting offers advantages in terms of natural beauty, separation from traffic, increased recreation benefits, and reducing or eliminating changes required on Beaverbrook Drive.

Disadvantages of the ravine route options include increased environmental impacts within the natural setting, reduced visibility and natural surveillance of the trail in terms of safety issues, significant increase in the length of trail, relatively steep grades required to traverse the ravine, and additional overall development costs.

A detailed description and further evaluation of the three route options is outlined below:

**Option #1:**

This route follows Eastlake Drive and the BNR railway right-of-way south down into the bottom of the Stoney Creek ravine. From there the trail would follow an existing path along the north bank of the creek back up to the roadway bridge on Beaverbrook Drive and continue along Beaverbrook to the intersection with Noel Drive.

The total length of this route is approximately 900 m and includes relatively steep gradients required to descend into the ravine and then return back up the slope to Beaverbrook at the roadway bridge. Development of this route would have some recreational benefit in that it would greatly improve the standard of the existing recreational path along Stoney Creek and could connect directly (under the bridge) with walking trails in Stoney Creek Park to the north.

While this route minimizes any direct impact on surrounding residential areas, it has the disadvantage of being less convenient as a direct, practical route for local residents.

The cost of Option #1 is estimated to be \$144,000.



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**Option #2:**

This route is similar to #1 in that it follows Eastlake Drive down into the Stoney Creek ravine. Option #2 then follows the path along the north bank of the creek for a short distance to where the trail would cross Stoney Creek on a new pedestrian/cycle bridge that would be located in the vicinity of Eastlake Park. From the new bridge the trail would continue eastward up the slope to the top of the ravine and on to the intersection of Keswick Avenue and Hunter Street. From there the trail would follow north along Keswick to Cameron Street where it would continue east to Cameron Park at the intersection with Beaverbrook Drive.

This route is approximately 950 m in length and, with development of a bridge crossing Stoney Creek, would provide a useful connection between the various parks and adjacent residential areas on each side of the creek. However, this option also brings the trail through the residential neighborhood east of Stoney Creek where the alignment would cross a number of private driveways and would require modifications to the existing boulevards to accommodate the new bike path and a walkway components of the urban trail.

The cost of Option #2 is estimated to be \$218,000.

**Option #3:**

This route is similar to #2 in length and most other respects except that, rather than requiring a new bridge over Stoney Creek, Option #3 crosses on the existing culvert headwall adjacent to Lougheed Highway and follows the base of the highway embankment eastward to Keswick Avenue. While this route avoids the cost of a new bridge, the location of the creek crossing proposed would be somewhat inconvenient for local residents to use for access to neighborhood parks in the area. This route generally has the same disadvantages as Option #2.

The cost of Option #3 is estimated to be \$162,000.

- h) In summary, it is recommended that the Beaverbrook Drive alignment be implemented for this section of the urban trail. In comparison with the other options studied, this route offers the benefits of being the most direct and convenient, is free of major hills, is highly visible from the street for safety, has existing street lighting, and is the least expensive. This route is approximately 450 m in length and is estimated to cost \$80,000.

In response to the concerns raised by residents, staff have modified the proposed route on Beaverbrook as discussed below:

The proposed roadway width has been increased from previous trail plans. The proposed standard will generally maintain the existing traffic flow on Beaverbrook and will allow sufficient room for emergency vehicles, service vehicles, and also left-turning vehicles where required. Also, additional roadway width can be provided at bus stops where required for traffic management. While the proposed roadway standard will retain the existing two travel lanes on Beaverbrook, it is recognized that future potential for four travel lanes will not be retained.

Between the Stoney Creek bridge and the intersection with Noel, the existing 14.0 m roadway will be retained and will continue to accommodate an open curb lane for right turn movements at the traffic signals. For this section there is sufficient space on the existing boulevard to accommodate the bike path and a separate walkway.

The privacy concerns for townhouse units on the south side of Beaverbrook can be addressed by providing additional planting and privacy fencing on private property adjacent the existing sidewalk where desired by the residents.

Also, since motor vehicles on Beaverbrook will be an additional 3.0 m from the property line compared to the present situation, some increased privacy for residents should result.

Regarding safety for trail users, the proposed route between Eastlake and Noel will be completely separated from automobile traffic except for the one private driveway access at Ganymede Drive. The bike path component of the trail will be separated from motor vehicles by a concrete median. The walkway component will be an additional 3.0 m from the roadway compared to the existing conditions.

Regarding safety at the school crosswalk at Beaverbrook Crescent, trail development will result in a shorter crossing distance for pedestrians when compared to the existing conditions. Sightlines and visibility will not be affected by the proposed trail.

Residents who presently use the on-street parking in the area will be affected by removal of 15 parking spaces on the south side of Beaverbrook. Some additional parking may be available with modifications to Eastlake Drive, but would only be on an interim basis until the planned Eastlake extension (to Government Street) is built. A limited number of additional parking spaces may also be achievable on private property within the townhouse project itself. Staff will consult further with the local strata council to investigate this option.

While it is recognised that Beaverbrook alignment is not within a park setting, the street does have well-landscaped setbacks on both sides and is a relatively attractive corridor. In consultation with area residents, additional street trees and other planting can be pursued to reinforce the greenway character desired for this section of the trail.

- i) If the proposed route is supported by Council, staff will consult further with area residents to refine the detailed design of the trail to minimize impacts of the project and to maximize the overall benefits to the neighborhood as discussed in this report.

## 2.6 CAMERON PARK

- a) At the intersection of Beaverbrook Drive and Noel Drive, the trail will use the existing crosswalks at the traffic signals and will enter the northwest corner of Cameron Park.
- b) The recommended trail alignment within Cameron Park has been incorporated into the Park Master Plan as approved by the Parks and Recreation Commission. The trail will generally follow an existing path from Beaverbrook to the existing parking area and will follow the landscaped boulevard through this parking area to the west entrance of the Recreation Centre. From there, the trail will follow along the Cameron Street frontage to terminate at the main entrance plaza of the Library and Recreation Centre.
- c) The proposed trail standard within Cameron Park is a joint-use shared asphalt trail 4.0 m wide. As well, the trail will be complemented by other walkways planned for the park.
- d) Selective thinning of vegetation along the trail route within the park will be required to increase overall visibility and safety on the trail.
- e) For night use of the trail, an alternate route is available for pedestrians via the existing sidewalks on Beaverbrook Drive and Cameron Street where existing street lighting and greater visibility from the roadways will offer increased safety. As well, it is recommended that walkway lighting be given consideration for installation along the trail within the park subject to approval of the Parks and Recreation Commission.

### **3.0 SCHEDULE AND COSTS**

It is proposed that Phase Two of the Burnaby Mountain Urban Trail be constructed in two stages:

Stage I - from Shellmont Street to Production Way is proposed for development in 1994. Upon Council approval of funding, the final design and construction of Stage I will commence this summer and will be pursued toward a scheduled completion in the spring of 1995. Stage I is approximately 2.5 km in length and is estimated to cost \$450,000 including trail construction, landscaping, signage and related trail improvements.

Stage II - from Production Way to Cameron Library and Recreation Centre is proposed for implementation in 1995. Funding approval for Stage II will be the subject of a future report to Council. Stage II is approximately 1.5 km in length and is estimated to cost \$350,000.

### **4.0 FINANCING**

In order to proceed with the design and construction of the Burnaby Mountain Urban Trail between Shellmont Street and Production Way as outlined in this report, it is recommended that Council bring down a bylaw in the amount of \$450,000 from the Capital Works Machinery & Equipment Reserve Fund. The 1994 Capital Budget includes sufficient funds for this work under the Urban Trails Program.

### **5.0 SUMMARY/CONCLUSIONS**

In summary, it is recommended that Council approve the staged implementation of Phase Two of the Burnaby Mountain Urban Trail between Shellmont Street and the Cameron Library and Recreation Centre, as outlined in this report.

It is also recommended at this time that Council approve funding for the design and construction of Phase Two - Stage I of the trail from Shellmont Street to Production Way as outlined in this report. If approved by Council, implementation will be pursued as a cooperative joint project with the Engineering, Parks and Planning Departments.

BURNABY MOUNTAIN  
URBAN TRAIL - PHASE TWO  
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Various residents living adjacent the Phase Two trail route have written to Council to offer suggestions and comments regarding planning of the trail. It is recommended that these residents, including the Stoney Creek Residents Committee, be sent a copy of this report for their information.

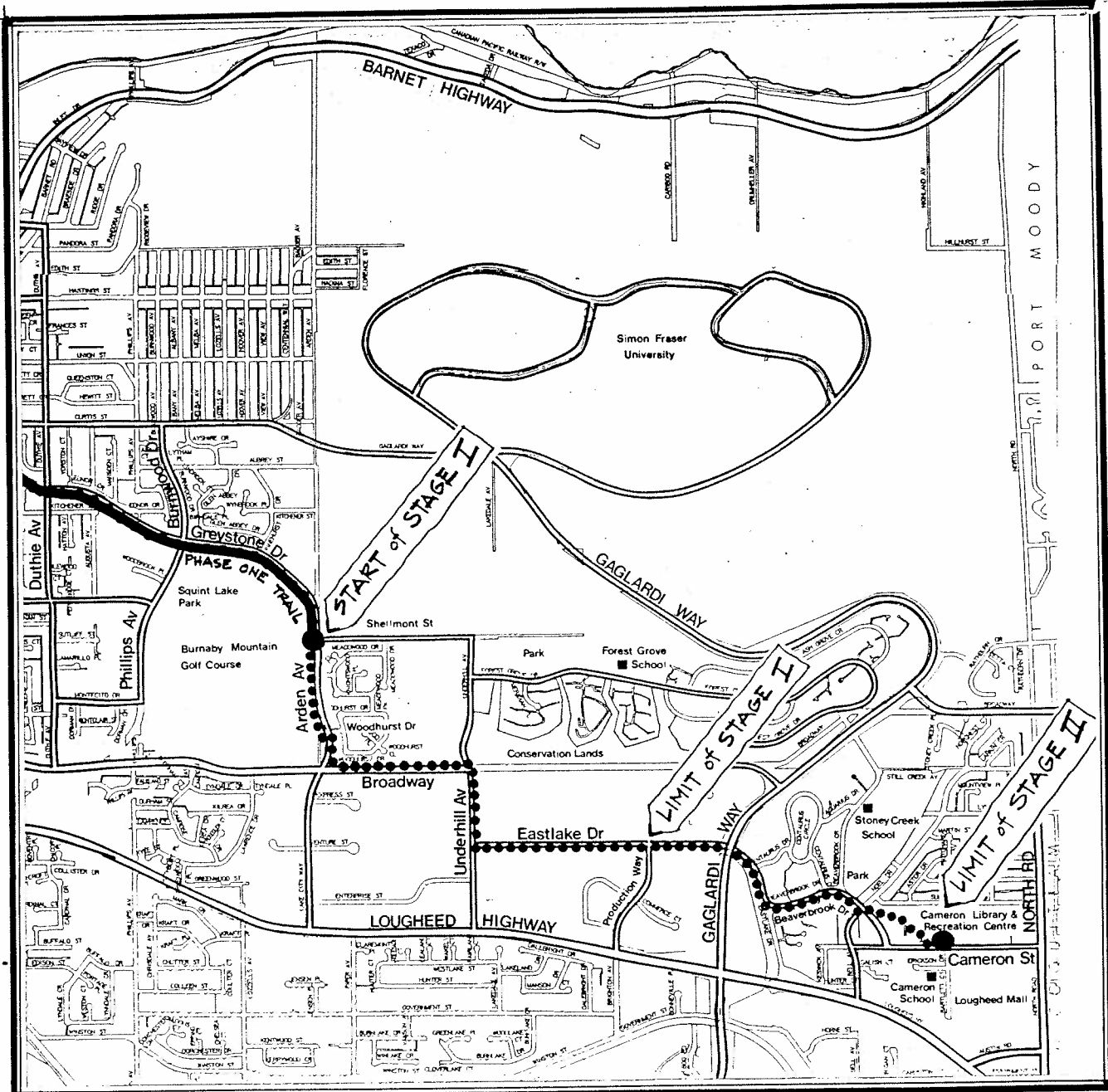
The Phase Two alignment has been discussed with the Bicycle Advisory Committee and it is recommended that a copy of this report be sent to the Committee for its information.




D. G. STENSON  
DIRECTOR  
PLANNING AND BUILDING

KR/lf  
Attachments

cc: Director Engineering  
Director Finance  
Director Recreation and Cultural Services




Date: 94 JULY 20

Scale: 1:750 

North

Drawn By: KR

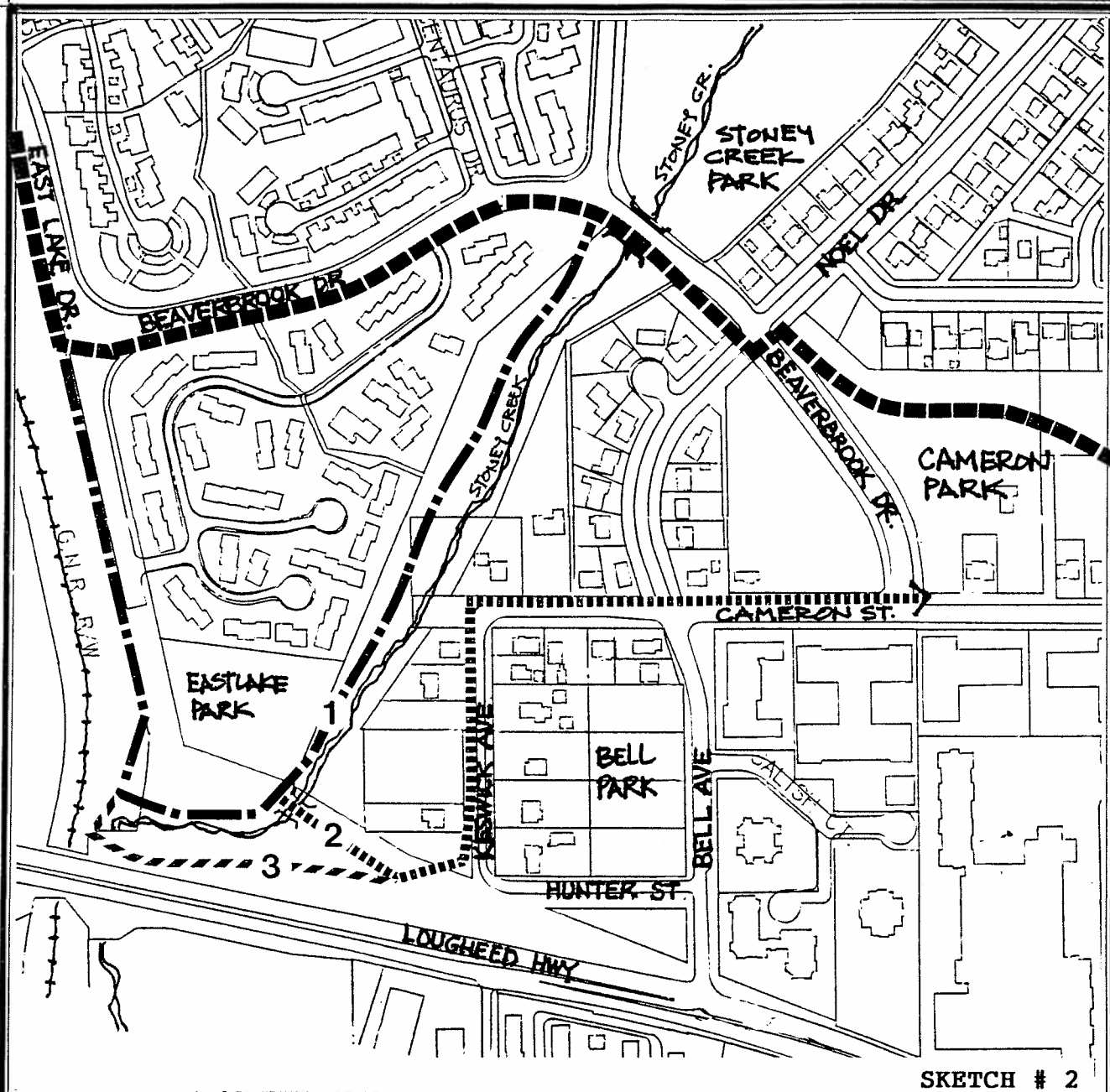


City of  
Burnaby  
Planning & Building Dept.

SKETCH # 1

BURNABY MOUNTAIN URBAN TRAIL  
- PHASE TWO  
PROPOSED ROUTE PLAN

●●●●● Proposed Phase Two Alignment



SKETCH # 2

Date: 94 July

BURNABY MOUNTAIN URBAN TRAIL  
- PHASE TWO  
BEAVERBROOK DRIVE ROUTE OPTIONS

Scale:   
NTS NORTH

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- ████████████████████ Proposed Alignment
- ..... Option #1
- Option #2
- ////// Option #3

