

ENVIRONMENT COMMITTEE

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

**SUBJECT: BURNABY MOUNTAIN GONDOLA TRANSIT PROJECT - BUSINESS
CASE**

RECOMMENDATION:

1. THAT a copy of this report be forwarded to the Transportation Committee for information.

REPORT

Burnaby City Council, at the Open Council meeting held on 2011 January 31, received the *attached* report and adopted the recommendations contained therein:

1. “**THAT** Council authorize staff to work with the project proponent (TransLink), the project’s funding partner (Ministry of Transportation and Infrastructure), and the project’s partner agencies (Simon Fraser University Community Trust, Simon Fraser University) toward a suitable concept plan for the Burnaby Mountain gondola project, to ensure that significant issues are identified early and addressed to the greatest extent possible throughout the project development process, including that undertaken as part of the Business Case work, prior to Council giving consideration to endorsing the project at a later date.
2. **THAT** Council send a copy of this report to:
 - the Burnaby Parks, Recreation and Cultural Commission;
 - the Burnaby Environment Committee;
 - Jeffery Busby, Manager, Infrastructure Planning, TransLink;
 - Ed Storm, Manager, TransLink Initiatives, Ministry of Transportation and Infrastructure (Mot);
 - Gordon Harris, President and CEO, Simon Fraser University Community Trust; and

To: His Worship, the Mayor and Councillors
From: Environment Committee
Re: Burnaby Mountain Gondola Transit Project -
Business Case
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- Lee Gavel, Chief Facilities Officer/University Architect, Simon Fraser University.”

The Environment Committee, at its meeting held on 2011 February 15, received the report and requested that a copy be forwarded to the Transportation Committee for information.

Respectfully submitted,

Councillor D. Johnston
Chair

Councillor S. Dhaliwal
Vice Chair

Councillor A. Kang
Member

Copied to: City Manager Director Planning & Building Director Engineering

TO: CITY MANAGER **DATE:** 2011 January 19

FROM: DIRECTOR PLANNING AND BUILDING **FILE:** 90300-20
*Reference: Burnaby Mountain Gondola
Transit Project*

**SUBJECT: BURNABY MOUNTAIN GONDOLA TRANSIT PROJECT – BUSINESS
CASE**

PURPOSE: To seek authorization from Council to work toward a suitable concept plan for the Burnaby Mountain gondola project with the project proponent (TransLink), the project's funding partner (MoT), and the project's partner agencies (Simon Fraser University Community Trust, Simon Fraser University).

RECOMMENDATIONS:

1. **THAT** Council authorize staff to work with the project proponent (TransLink), the project's funding partner (Ministry of Transportation and Infrastructure), and the project's partner agencies (Simon Fraser University Community Trust, Simon Fraser University) toward a suitable concept plan for the Burnaby Mountain gondola project, to ensure that significant issues are identified early and addressed to the greatest extent possible throughout the project development process, including that undertaken as part of the Business Case work, prior to Council giving consideration to endorsing the project at a later date.
2. **THAT** Council send a copy of this report to:
 - the Burnaby Parks, Recreation and Cultural Commission;
 - the Burnaby Environment Committee;
 - Jeffery Busby, Manager, Infrastructure Planning, TransLink;
 - Ed Storm, Manager, TransLink Initiatives, Ministry of Transportation and Infrastructure (Mot);
 - Gordon Harris, President and CEO, Simon Fraser University Community Trust; and
 - Lee Gavel, Chief Facilities Officer/University Architect, Simon Fraser University.

REPORT

1.0 INTRODUCTION

The purpose of this report is to request that Council authorize staff to work with the project proponent (TransLink), the project's funding partner (MoT), and the project's partner agencies (Simon Fraser University Community Trust, Simon Fraser University) toward a suitable concept plan for the Burnaby Mountain gondola project. The definition of the project concept for the Burnaby Mountain gondola would include identification of a preferred technology, preferred alignment, lower terminus, upper terminus, location of towers, ancillary facilities, and other key essential elements. Staff participation in the development of the project concept is being recommended to ensure that significant issues are identified early and addressed to the greatest extent possible throughout the project development process, including that undertaken as part of the Business Case work, prior to Council giving consideration to endorsing the project at a later date.

The preparation of this report has relied heavily on the following TransLink documents:

- *"Request for Proposal for SFU Gondola Business Case"*, dated 2010 September 21;
- *"Project Management Plan for the Burnaby Mountain Gondola Transit"*, dated 2010 November 29;
- *"Communications and Public Consultation Plan"*, dated 2010 November;
- the summary of the public consultation undertaken to date contained within TransLink's letter of 2010 December 13 to the City of Burnaby; and
- *"Burnaby Mountain Gondola Transit Project Background"*, dated 2010 December.

2.0 BACKGROUND

2.1 Simon Fraser University

Simon Fraser University's (SFU's) Burnaby campus is located atop Burnaby Mountain at an elevation of approximately 350 m. The nearest SkyTrain (rail rapid transit) station is approximately 2.8 km from the campus but 290 m lower in elevation.

The Campus currently attracts over 18,000 full-time equivalent students and this is projected to grow to 25,000 in future. Adjacent to the campus is the award-winning UniverCity sustainable urban community being developed by the Simon Fraser University Community Trust. While UniverCity currently houses approximately 2,000 residents, this is expected to grow to 10,000 at build-out.

The existing academic and residential community at SFU generates as many as 25,000 transit trips daily and this is expected to grow to an estimated 40,000 in future. About

half of the transit ridership to and from the Campus uses bus route #145, which provides the most direct link between SFU and SkyTrain via Gaglardi Way. Bus route #145 is serviced with 10 buses leaving at frequent intervals (every 2-4 minutes, 21 trips/hour) during peak hours and this bus route has a one-way travel time of about 15 minutes.

Bus service to SFU is interrupted or delayed about 12 to 15 days each year due to winter weather. When this occurs, these transit service disruptions are a major inconvenience for students, staff, faculty and residents using transit to and from the SFU community.

2.2 Burnaby Mountain Gondola – Preliminary Feasibility Study (2008-2009)

In 2008 and 2009, the Simon Fraser University Community Trust led a preliminary feasibility study, with technical assistance provided by TransLink. This feasibility study was completed by Bryce Tupper P.Eng. and investigated the potential to use a high-capacity gondola system to potentially link between SFU and the Production Way – University SkyTrain station.

This study suggested that a high-quality rapid transit-type gondola service be used to replace bus route #145 (and also anticipated attracting riders from the other three bus routes serving the campus - #135, #143, #144).

More specifically, this study suggested that:

- A high-capacity¹ three-cable² type gondola system, similar to the Peak-2-Peak gondola at Whistler-Blackcomb, would be appropriate for the market.
- A “reference alignment” with the upper terminus located near the existing Transit Exchange and proposed Transit Hub on University High Street and the lower terminus being located at Production Way - University SkyTrain station.
- The travel time of the proposed gondola system was thought to be about half of that of the current bus service.
- The system could offer significant potential reductions in greenhouse gas (GHG) emissions (net potential reduction of over 1,700 Tonnes per year).
- This type of system could be delivered for approximately \$70 million.

2.3 TransLink’s 10-Year Plan

Before considering the gondola option, TransLink had expected to meet all present and future demand to Burnaby Mountain with the continued use of standard and articulated diesel buses.

¹ The proposed gondola system was proposed to have a capacity of over 3,000 passengers per hour in each direction.

² Also known as a “3S type” system.

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On the basis of the outcome of the preliminary feasibility study, TransLink included the project in its 10-Year Plan, which states,

“Under the Plan, TransLink will work with SFU Community Trust to further develop their concept for a high frequency and high capacity gondola service between the Millennium Line and Burnaby Mountain that would replace a portion of diesel bus service to the Mountain. A business case for implementation will be developed. Subject to a positive business case and no net (of existing service) financial contribution by TransLink, the project will be considered for implementation in the 2011 Base Plan. If there is a positive business case and TransLink funding is required, the project will be advanced for consideration when sufficient funding is available.”

The Business Case will determine if there is a net total savings to TransLink if they were to replace a significant amount of the bus service to SFU³ with a gondola (i.e., is there enough cost savings expected from reducing bus service to at least cover the cost of the gondola – the combined life-cycle capital and operating cost in both cases). If the Business Case finds an overall savings, then the gondola project could be implemented based on its own merits. If the savings are not enough to cover the cost of the project and additional funding is required, then the gondola project would have to compete with the long list of all of TransLink’s other capital projects. Therefore, the findings of the Business Case will have a significant influence on the potential timing of the gondola project.

3.0 BUSINESS CASE

According to the “*Request for Proposal for SFU Gondola Business Case*”, dated 2010 September 21, TransLink has assumed responsibility for the development of a Business Case for the gondola. This Business Case is intended to confirm and build on the preliminary feasibility study and support an application for funding and further project development from Public-Private Partnerships Canada.

In September of 2010, TransLink issued a Request for Proposal (RFP) seeking the services of a qualified consultant to develop a Business Case for a high-capacity gondola system. In addition to the “reference alignment” connecting to Production Way – University SkyTrain Station identified in the feasibility study, it is our understanding that two other alignments will be given consideration – one which would connect to Lake City Way Station and the second which would connect to the future Burquitlam Station on the proposed Evergreen Line.

³ The Feasibility Study identified the following potential bus route changes (all a result of estimated travel time improvements made possible by introducing the gondola): elimination of route #143, elimination of route #145, and shortening route #144 to terminate in the Hastings/Duthie area (so it would not longer climb Burnaby Mountain).

Based on submissions received in response to the RFP, TransLink subsequently awarded this consulting assignment to CH2M HILL (a global leader in full-service engineering, construction, and operations) in association with PricewaterhouseCoopers (providing the financial analysis).

In order to meet an application deadline with Public-Private Partnerships Canada, TransLink is hoping to conclude the Business Case work by 2011 March 15.

3.1 Key Questions to be Answered

The key questions the project’s proponents hope the Business Case will answer are:

1. *What is the best form of rapid transit to serve travel demand to and from Burnaby Mountain? Is a gondola, as recommended by the Trust’s study, the best option or is another technology more appropriate?*
2. *What would be the operating and capital costs of rapid transit to Burnaby Mountain and would TransLink’s potential capital and operating contribution to the project be the same or lower than the cost of running an expanded bus service?*
3. *What other benefits and impacts could be expected from the project, including travel time savings, environmental and community benefits and impacts?*
4. *If there is a case to proceed with the project, what would be the best way of delivering it? Are there programs that could assist TransLink with proceeding?*

3.2 Total Project Cost

As the Business Case is a test of financial affordability for TransLink, it is important to recognise the factors which will likely influence the total project cost, including:

- Technology selected (gondola is one of several technologies being considered including trolleybuses, SkyTrain, rack or funicular railways, etc.);
- Alignment (longer is generally more expensive, regardless of technology);
- Mitigative measures (can reduce net project impact, but can increase project cost); and
- Delivery method (design/tender/award, design/build, design/build/operate/maintain).

3.3 Net Project Cost

Once the total project cost is estimated, TransLink will also be looking for opportunities for partnership funding from senior levels of government to reduce TransLink’s net

project cost. The Business Case will examine a range of funding opportunities at the provincial and federal level, including the Public-Private Partnerships Canada fund.

3.4 Key Activities

Correspondence received from TransLink identified the following as the key activities to be undertaken as part of the Business Case:

- Review of alternatives (technologies and alignments)
- Conceptual design
- Capital, operating and maintenance cost estimates
- Investment analysis
- Procurement analysis

3.5 Considerations

To our understanding, based on preliminary discussions with TransLink staff, the following list of potential issues identified by City staff will be given consideration, at a conceptual level, as part of the Business Case work being completed by the consultant team:

- Community integration considerations
 - Land use plans
 - Transportation system integration
 - Major utility conflicts (requiring utility relocations)
- Environmental considerations
 - Approach to Canadian Environmental Assessment Act (CEAA)
 - Burnaby Mountain Conservation Area (impact and property requirements)
 - Watercourses and other environmental features
- Social considerations
 - Private property acquisition, including aerial rights-of-way over residential property (requirements and cost of acquisition)[†]
 - Privacy (overview of residential properties)
 - Safety

[†]TransLink staff have stated that property cost estimates prepared for property acquisition as part of the Business Case will be developed on the basis of typical approaches to property acquisition (e.g., negotiation and/or expropriation).

TransLink staff have also reassured City staff that although not part of the Business Case work, additional issues will be reviewed during next stages of the project, should it proceed, where more detailed information would be available as part of the preliminary design and detailed design work undertaken in advance of construction. The following are examples of issues outside of the scope of the Business Case, but which could be addressed during preliminary design and/or detailed design, as required:

- Community integration considerations
 - Urban design
- Environmental considerations
 - Canadian Environmental Assessment Act (CEAA)
- Social considerations
 - Noise and vibration
 - Visual intrusion
 - Light pollution (residential impact, wildlife impact)
 - Other community issues

3.6 Key Decision Points

TransLink has stated that the consultant is now approximately half way through the Business Case work and they anticipate the release of the following documents on or about the dates shown:

- Alternatives Assessment Report - end of January; and
- Draft final project report – early March.

The release of these documents represents key opportunities or decision points for the potential involvement of Burnaby Council and Committees of Council.

3.7 Public Consultation

The following is a summary of our understanding of the public consultation undertaken to date and the public consultation being planned for the future.

As shown in **Table 1** (below), TransLink and the SFU Community Trust have already engaged in a series of initial stakeholder consultations (Phase One – Pre Consultation) during October through December of 2010. This consultation appears to have been prompted by community and media interest in the release of the RFP for the Business Case in 2010 September and was focused on providing clarification on the current stage of work, gathering reactions to the project, and getting input on how future consultations could be made most effective. These sessions involved discussions with representatives of:

- the SFU Student Society;
- the UniverCity Community Association;
- Forest Grove strata council representatives;
- Burnaby Mountain Bike Association; and
- the Stoney Creek Environment Committee.

Table 1
 Consultation and Communications Roles

	Timing Status	TransLink	SFU Community Trust	City of Burnaby
Consultation Plan Development	Nov 2010 complete	Joint	Joint	-
Phase One - Pre Consultation	Oct-Dec 2010 complete	Approve/Support	Lead	-
Phase Two – Project Definition	Spring '11 pending	Lead	Approve/Support	Review/ Input
Phase Three – Decision Forward	pending	Lead	Approve/Support	Review/ Input
Communication Strategy Development	ongoing	Joint	Joint	Review/ Input
Communications Execution	ongoing	Lead	Approve/Support	Review/ Input

In the spring of 2011, TransLink and the SFU Community Trust propose to share the results of the Business Case (Phase Two – Project Definition) in a series of public open houses and small group meetings (with similar stakeholder groups as Phase One) to raise general public awareness of the project, provide information, and solicit participation and feedback from the community. TransLink invited and encouraged City staff participation in these future discussions. City staff have stated that their role (subject to Council approval) in the public consultation process should be consistent with that of the local approving authority and should be limited to providing review and input to the development, execution and substance of the public consultation process (as shown in **Table 1** above).

If the Business Case is favourable, TransLink would pursue continued consultation (Phase Three – Decision Forward) with stakeholders and the general public to provide opportunities for input during preliminary engineering and environmental review. TransLink are proposing that this would include focused discussions with potentially impacted parties.

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It is our understanding that the SFU Community Trust took the lead in the public consultation work already undertaken and that TransLink will take the lead in the public consultation work to be undertaken in future (as shown in **Table 1** above).

3.8 City of Burnaby Approvals

TransLink staff have been informed that as with any major transportation project, the essential elements (e.g., preferred alignment, lower terminus, upper terminus, location of towers, ancillary facilities, etc.) of the Burnaby Mountain Gondola would have to be endorsed by Burnaby Council and this endorsement would be a prerequisite for any of the following:

- release of any land;
- approval of utility relocations;
- approval of development applications (subdivision, rezoning, PPA, ERC, etc.);
- approval of building permits.

In response, TransLink staff have advised that should the project be implemented by TransLink that TransLink would adhere to all of the typical City of Burnaby development approval processes, including those listed above. However, participation in these same development approval processes may not occur if the Province of BC were to implement the project, as they are a senior level of government. Should the Province take over the lead during project implementation, the City would continue to seek to ensure its interests were respected and protected to the greatest extent possible.

3.9 Process / Roles and Responsibilities

TransLink have invited City staff to sit as a resource on both the Executive Steering Committee for the Business Case (to advise on project design and approval requirements) and Project Advisory Committee (to advise on and review technical work). Given the compressed timeline of the Business Case, these two committees are only anticipated to meet 2-3 times. Subject to the approval of this report, staff will participate on these project committees as appropriate and again in the role of local approving authority. In short staff will work with TransLink in a manner similar to any other major project being proposed in the City.

4.0 CONCLUSION

The City of Burnaby has an interest and a responsibility to be involved in the early stages of the Burnaby Mountain gondola's conceptual planning, including that undertaken as part of the Business Case work. Therefore, the process needs to be structured to include engagement with the City following the requirements associated with the review of a

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major community development project. This would include early and ongoing consultation with staff, the public, Committees of Council, and Council to ensure that significant issues are identified early and addressed throughout the project development process (including the Business Case) to the greatest extent possible, prior to Council giving consideration to endorsing the project. This is of particular importance given the project has the potential to be implemented using a P3 design/build/operate concession.

To ignore this requirement would risk having the Business Case being developed and concluded upon a project concept which may not be supported by the City of Burnaby. If this were to be the case, the findings suggested by the Business Case itself (including the identification of a preferred alternative, project concept, cost estimates – capital, operating, maintenance, procurement method) may prove to be unsupportable and of limited use in advancing the project to implementation.

It is recommended that Council authorize staff to work with the project proponent (TransLink), the project's funding partner (MoT), and the project's partner agencies (Simon Fraser University Community Trust, Simon Fraser University) toward a suitable concept plan for the Burnaby Mountain gondola project, to ensure that significant issues are identified early and addressed to the greatest extent possible throughout the project development process, including that undertaken as part of the Business Case work, prior to Council giving consideration to endorsing the project at a later date.

It is also being recommended that Council circulate copies of this report to the Burnaby Parks, Recreation and Cultural Commission, the Burnaby Environment Committee, and to key staff contacts at TransLink, the Ministry of Transportation and Infrastructure, Simon Fraser University Community Trust; and Simon Fraser University.



B. Luksun, Director
PLANNING & BUILDING

DAC/

Copied to: Deputy City Managers
Director Parks, Recreation & Cultural Services
Director Finance
Director Engineering
OIC – RCMP
Fire Chief
City Solicitor
Chief Librarian