Burnaby Mountain Gondola

Public Engagement

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TRANSLINK

Planning for the Future

- We are living through an extraordinary time.
- Current ridership levels are not indicative of long-term demand.
- TransLink continues to plan for the future and public engagement is an important element of our planning work.
- Continuing project development work will ensure that projects such as the Burnaby Mountain Gondola can qualify for future funding from senior levels of government.

The Challenge of Moving Up and Down Burnaby Mountain

Ridership continues to grow

- 25,000 daily trips between Burnaby Mountain and SkyTrain
- SFU is a growing university and an economic hub for the region
- SFU is already the largest transit destination in Burnaby outside of the SkyTrain

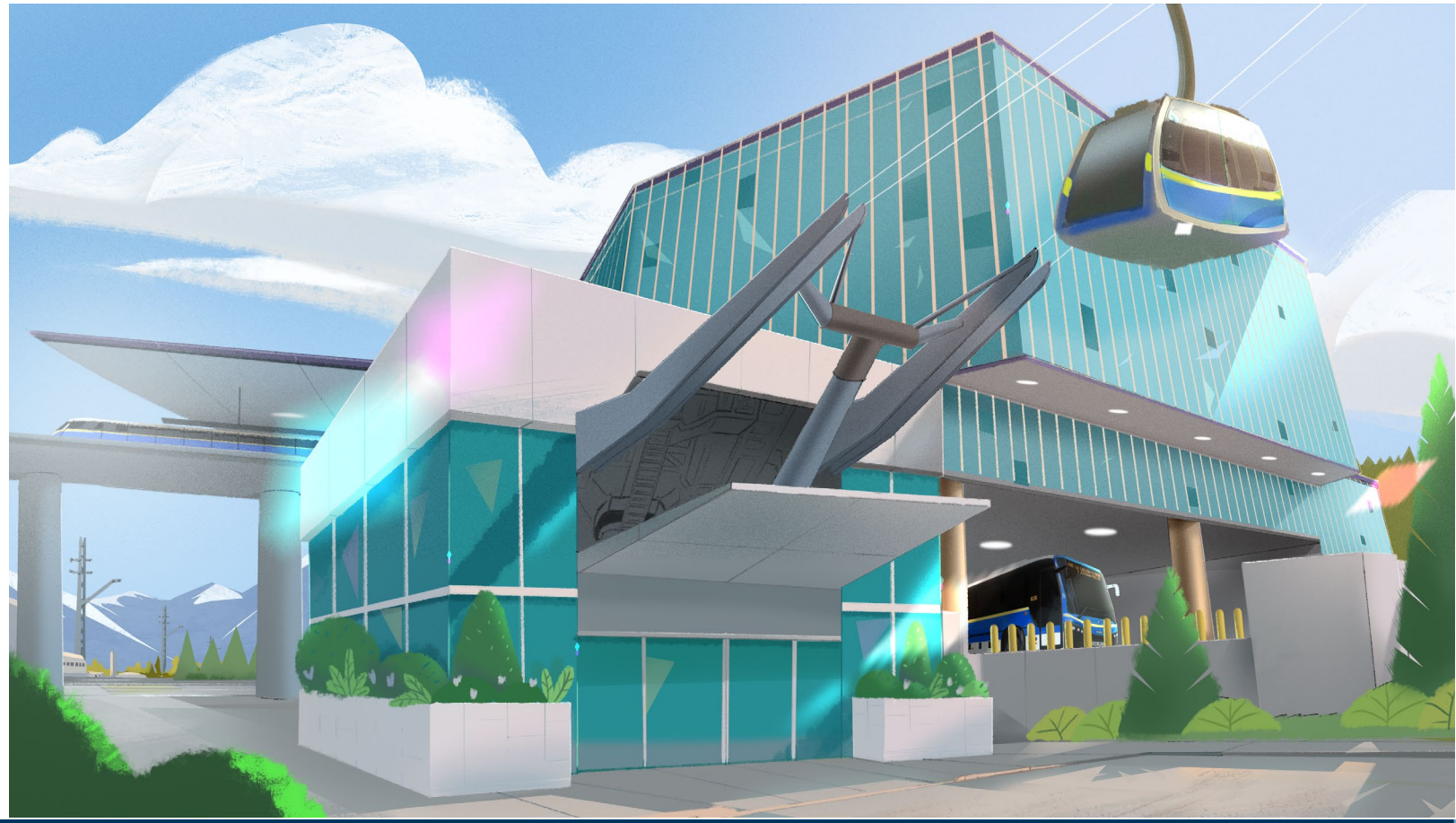
Daily pass-ups, unreliable travel times

- Buses cannot keep up with ridership demand
- Travel to Burnaby Mountain is overcrowded
- 2-3 bus wait can often add 20 minutes to travel to/from Burnaby Mountain
- Service disruptions due to weather

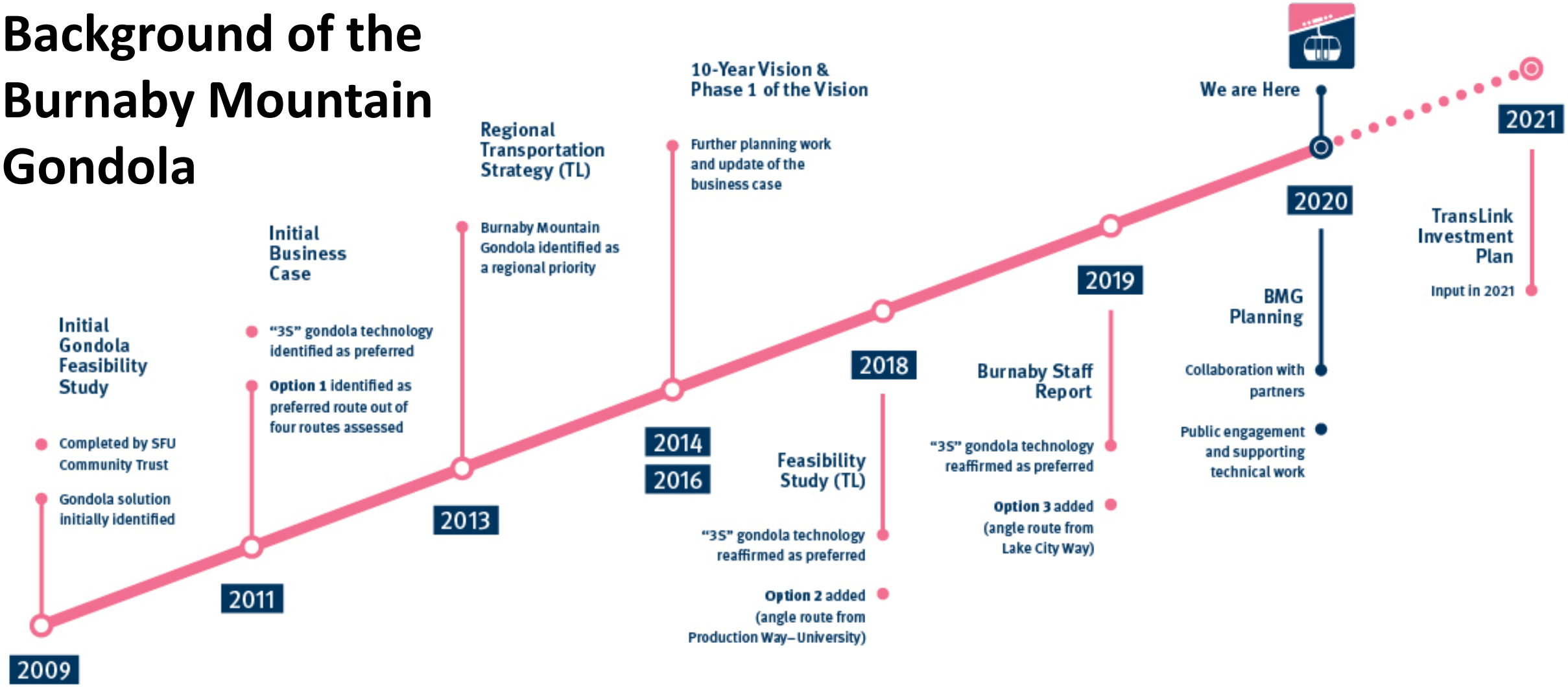
A Proposed New Gondola Service to Burnaby Mountain

TransLink is advancing the planning and project development of a Burnaby Mountain Gondola to connect SkyTrain to Burnaby Mountain

- Cabins departing every minute from station to station
- Fast, frequent, and reliable service between the SkyTrain and Burnaby Mountain
- 25,000 daily trips made by SFU students, staff, faculty, and residents of UniverCity



Background of the Burnaby Mountain Gondola



City of Burnaby's Core Principles for Developing a Gondola

TransLink is guided by five core principles developed by the City of Burnaby to assess a gondola service from SkyTrain to Burnaby Mountain:

Residents: Minimize impacts to residents living near the gondola

Environment: Minimize impacts to areas with high ecological values, such as fish-bearing streams and riparian areas

Compensation: Provide fair compensation to affected property owners for intrusion of the gondola, both for its physical footprint on their lands and its aerial passage over them

Options: All three options should be considered on an equal basis in the next stage of analysis and public consultation

Consultation: Engage the community in meaningful consultation, especially with respect to alignment options, and report back to Council on the results

Proposed Routes Connecting Burnaby Mountain with SkyTrain

TransLink's team has identified three potential routes that will be discussed in this presentation.

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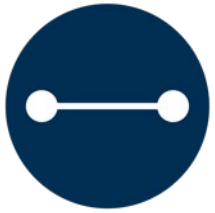
Why a Gondola Service?

Gondola Benefits



Direct Route

The most direct route connecting Skytrain with Burnaby Mountain

Capacity

Enough capacity to meet demand over the next 30 years

Environment

Reduce GHG emissions and air pollution

Reliable

Address overcrowding and weather-related reliability issues

Cost-Effective

Require less annual operating costs than current bus service

Customer Experience

Improve customer experience through reduced travel time and ease of travel

Urban Gondolas in Public Transit Worldwide

Urban gondola systems are becoming more common as a mode of public transit as land becomes less available and road congestion increases. Examples of systems and daily ridership:

Portland Aerial Tram: 10,000 trips/day

Voss, Norway: 25,000 trips/day

Koblenz, Germany: 91,000 trips/day

Gondola vs Bus

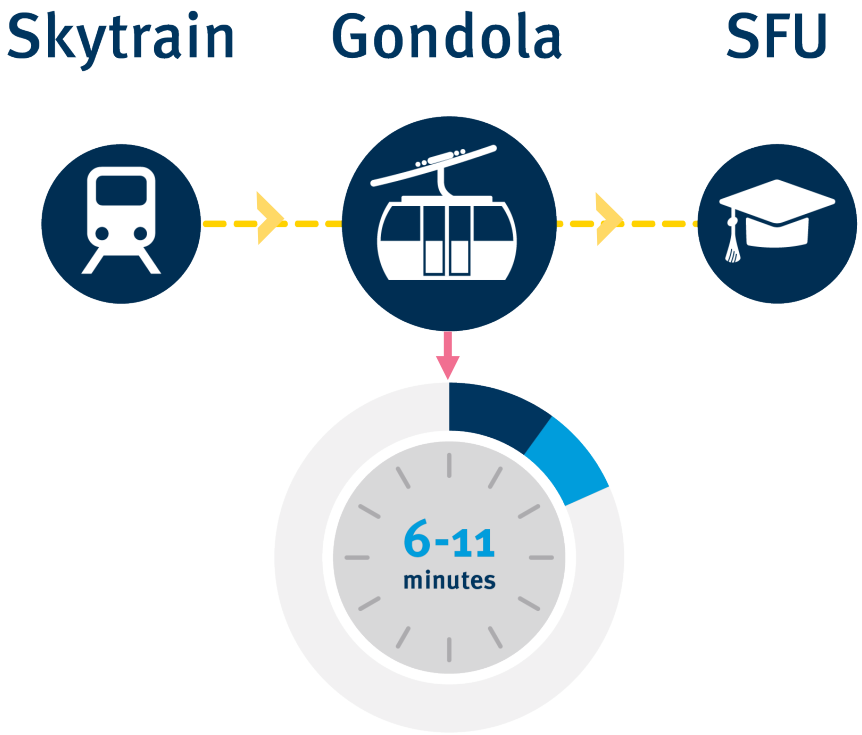
	GONDOLA	BUS (#145 Production Way–University to SFU)
Travel time	6-11 ± mins (varies by route)	15 mins
Frequency of peak service	Less than 1 min	5 mins
Vehicle capacity	35 passengers/cabin	100 passengers/bus* *60 ft. articulated bus
Total capacity per hour (per person per hour per direction [pphd])	2,000** ** Estimated opening day capacity. BMG system infrastructure can be designed to accommodate 4,000 pphd.	1,200
Projected annual disruptions due to snow/icy conditions	None	Approx. 10 days

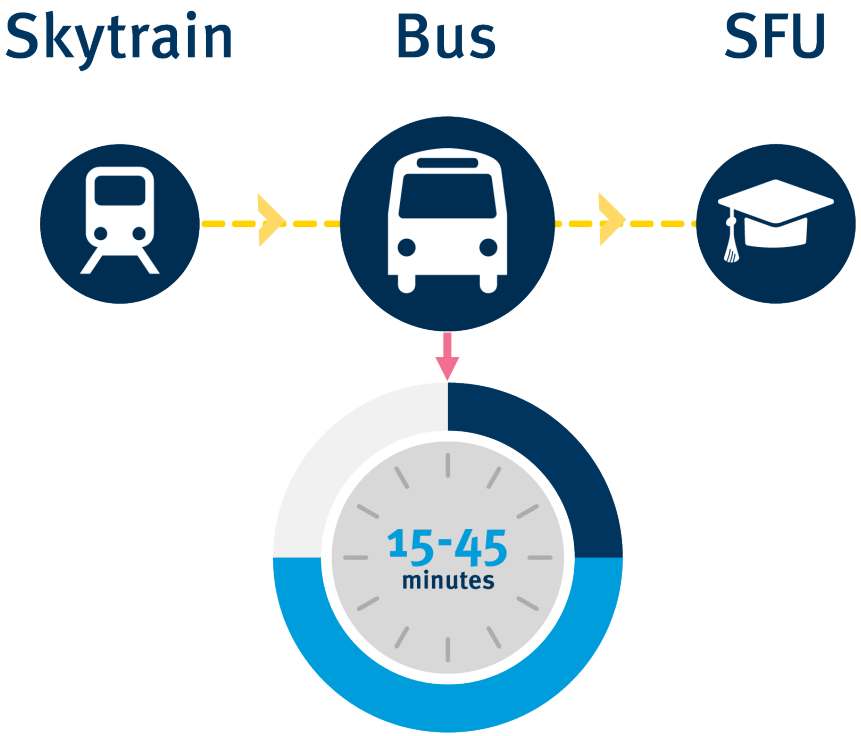
What About Electric Buses?

Electric buses are not an option for Burnaby Mountain service:

- Do not provide enough capacity to meet the needs of current and future demand
- Heavy rear battery may cause the bus to slide in winter, resulting in more trip cancellations
- May take longer to charge in colder weather

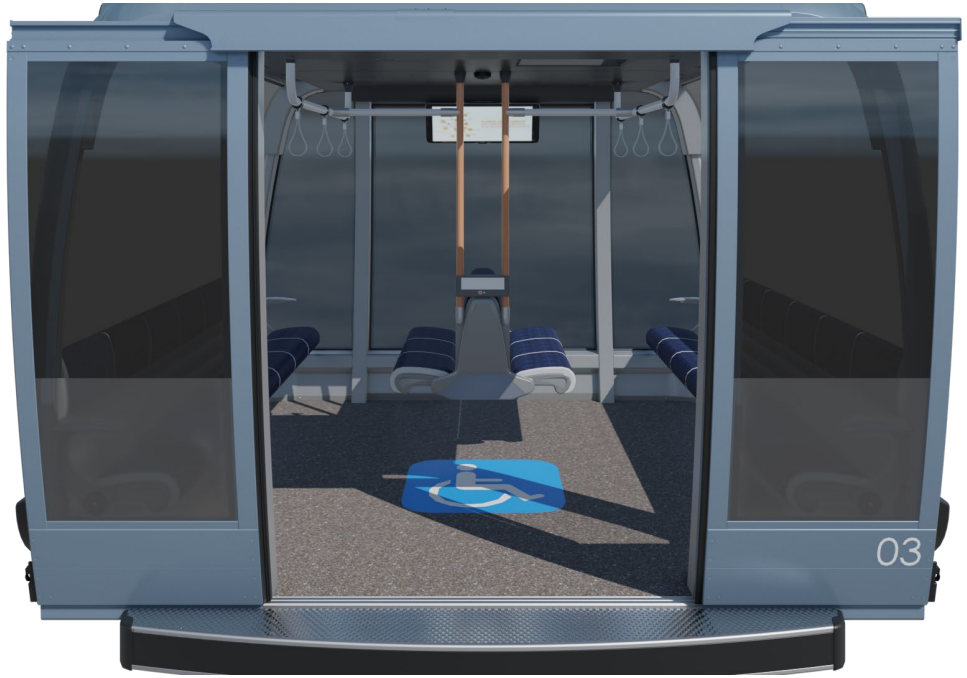
User Experience: Travel Time





Preferred 3S Gondola Technology for Burnaby Mountain

- Three-cable system (same as the Peak 2 Peak Gondola in Whistler Blackcomb)
- Comfortable cabins carry up to 35 passengers from station to station
- The number of cabins along the ropeway can be adjusted to match demand
- 3S can withstand high winds: the three-cable technology increases the stability of the gondola



Design Considerations

Design Considerations

Transportation

Gondola travel time, connection to SkyTrain lines, and to SFU campuses

Environmental

Critical habitat for species at risk, trees, riparian areas and streams

Residential

Visual impact, noise, and privacy of residential communities

Land Use

Redevelopment of properties near terminals

Utilities

BC Hydro, Fortis BC and Trans Mountain lines

Design Considerations: Transportation

- Travel time:
  - **Speed**: Cabins travel at 8m/second or about 27 km/hr.*
  - **Distance**:
    - Route 1 is 2.7 km
    - Route 2 is 3.7 km
    - Route 3 is 3.6 km
  - **Alignments:**
    - Route 1: straight alignment
    - Routes 2 and 3: angle alignment

Approximate travel times

Route 1: 6 minutes
Route 2: 11 minutes
Route 3: 10 minutes

**Note: Total travel time is impacted by infrastructure, such as angle stations, which require cabins to slow down.*

Design Considerations: Environmental

- Gondolas have smaller footprints than other forms of transportation infrastructure.
- Angle stations and top terminal locations require the cabins to travel down to and up from ground level, which requires a clear path of travel for the gondola.
- Designs minimize and mitigate impacts to:
  - Sensitive environmental areas (Burnaby Mountain Conservation Area)
  - Critical habitat for at-risk species
  - Riparian areas and streams
  - Tree loss

Design Considerations: Residential

- Gondola systems emit noise at two points – when cabins pass over towers and at stations. Locating towers outside of residential communities will limit gondola noise.
- The gondola system will pass over buildings. Visual impacts and privacy concerns can be mitigated through design and technological solutions.
- Designs minimize and mitigate impacts to residential communities:
  - Towers
  - Noise
  - Aerial rights
  - Visual impacts
  - Privacy

Design Considerations: Land Use Planning & Utilities

- There are two sites in the redevelopment process located near both lower terminal locations at Lake City Way and Production Way–University Stations.
- Designs minimize and mitigate impacts to potential site designs:
  - 3131 Lake City Way
  - 3100 Production Way

- Utilities restrict the route designs, because they are for the most part immovable
- Designs minimize and mitigate impacts to utilities:
  Sewer lines: Metro Vancouver trunk sewer
  Power lines: BC Hydro lower voltage distribution lines and higher voltage transmission lines
  Pipelines: Fortis BC, Trans Mountain

Route Options

Route Constraints

Connecting SkyTrain to Burnaby Mountain must consider existing land uses such as neighbourhoods, power lines, a golf course, tank farm, and a conservation area, and be situated appropriately on Burnaby Mountain.

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Previously Considered Routes

In 2011, we assessed four routes.

The three routes identified here were not feasible as they had significant impacts on sensitive conservation areas, and conflicts with various utilities.

One route advanced for further review (Route 1).

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Proposed Routes

The City of Burnaby requested two route alternatives be studied and presented to the public for consideration.

Route 1 was initially identified in 2011. Routes 2 and 3 have been developed as alternatives.

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Route Summaries

	Route Length	# of Towers	Gondola Travel Time	Travel time from BM to SFU Surrey	Time from BM to SFU Vancouver	Time from BM to Great Northern Way	Considerations
Route 1	2.7 km	5	6 mins	30 mins	43 mins	27 mins	• No stream or riparian impacts • Gondola would pass 50 m above Forest Grove neighbourhood
Route 2	3.7 km	7	11 mins	34 mins	45 mins	32 mins	• Angle station and multiple towers in Conservation Area • Potential impacts to redevelopment of 3100 Production Way • Pass under high voltage power lines • Angle station north-west of Rathburn neighbourhood
Route 3	3.6 km	7	10 mins	42 mins	43 mins	28 mins	• Towers in Burnaby Mountain Golf Course • Angle station in Conservation Area • Potential impacts to redevelopment of 3131 Lake City Way

We want to hear from you!

- The purpose of the current phase of work is to identify a route to submit to the Mayors' Council in 2021.
- Your feedback will help us determine the route of a possible gondola to Burnaby Mountain if the project proceeds.
- We will evaluate the three routes and share the results in a future round of public engagement. We'll ask for your feedback again at that time.
- Subject to Mayors' Council approval to proceed with the project, we would develop a business case. We would also need to secure funding prior to a decision to proceed with procurement and construction.

Have your say from September 1-30, 2020

Go to translink.ca/gondola to learn more and complete the online survey

Contact us:
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or 778-375-7220

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