



## Memorandum

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**To** Holly Foxcroft, Project Manager, TransLink

**From:** Steve Dorau, Senior Project Manager

**Date:** October 19, 2020

**Project:** 1418.04 Burnaby Mountain Gondola

**Subject** Gondola System Vandalism

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SCJ Alliance prepared this memorandum to provide comments to TransLink regarding the recent news that the Sea-to-Sky Gondola in British Columbia was vandalized for a second time in just over a year. SCJ understands that the vandalism is concerning to both TransLink and the public, especially in light of the developing plans for the Burnaby Mountain Gondola (BMG). In concert with the gondola advisory services that the SCJ and Leitner-Poma Canada team are providing to TransLink, SCJ Alliance offers our ropeway transportation experience in evaluating this issue. We hope we can both reassure rightful concerns and provide recommendations for use in the gondola planning process. SCJ believes that through comprehensive planning, careful design and the active management of risk, the BMG can be protected from similar vandalism. This is especially important as the BMG may cross over a number of properties and structures, where it would be unacceptable for a similar event to occur. SCJ hopes the suggestions in this memo inspire brainstorming during the planning process. Every situation is unique and so are the possible solutions.

### *Could this Happen to the BMG?*

More than 700 ski areas dot North American alpine landscapes with thousands of ski lifts and gondolas in use at any given time. These lifts, gondolas and cable cars transport hundreds of thousands of passengers per day without incident. While vandalism is not unheard of, it is very uncommon. The scale of the damage to the Sea-to-Sky Gondola is exceptional in our industry. The fact that there was clear intention to cause such damage makes this a completely unprecedented situation.

This is not the work of a typical vandal. The culprits would have had to know the terrain well enough to traverse it at night, be physically fit, be equipped with powerful tools and possess the ability and knowledge to use these tools to sever the cable without harming themselves. That alone should provide some comfort. The public should gain further relief from the fact that such vandalism would be virtually impossible to accomplish while the gondola system was operating due to the difficulty in cutting a moving cable. Further, in a transit environment, the best defense against vandalism is observant passengers, employees and pedestrians notifying authorities of suspicious behavior.

So, the answer is “no” in the case of the BMG. Since this system is still being contemplated and planned, TransLink can make design choices as the project progresses that will make the likelihood of this type of vandalism nearly zero. The following page describes some mitigation strategies that can be employed.

### *Potential Mitigation Strategies*

The solution to this type of destructive vandalism centers on controlling and monitoring access to a gondola system's stations, towers and, most importantly, the cables used to propel and support the gondola cabins.

- Firstly, all system access points should be monitored via closed circuit cameras and motion detection systems.
- Secondly, design implementations such as physical barriers, gates and locks should be used to impede access to system critical components so that authorities have sufficient time to reach the site in the event that a vandal gains access to the system.
- Finally, stations and towers should be designed in a way that eliminates the possibility of unauthorized persons accessing critical system components, specifically the system's cables. Stations are buildings and typical barriers to entry and security systems are adequate to protect the system's cables. With regards to towers, rather than constructing lattice-type towers similar to power transmission towers, unclimbable tubular towers can be installed. Additionally, instead of placing maintenance ladders on the exterior of towers, ladders can be placed on the inside as is done with wind turbine towers. In this configuration, tower access would be controlled by lockable doors and monitored with a security system. A similar arrangement was implemented on an urban cable car system in Ankara, Turkey.

