



Eco-Transit Centre: “Banff Starts Here”

Innovative Green Transit Arrival Centre, Community Hub, Visitor Services Destination

Visitor and Vehicle Management Proposal - Banff Town Council

March 25, 2019

Banff Eco-Transit Centre – Hub for Sustainable Transportation Systems - Summary

Liricon Capital, a local family owned company, is seeking community input into their planned transformation of the Banff Train Station into the Banff Eco-Transit Centre, a hub to facilitate sustainable transportation systems to improve visitor management in the Town and Park.

- **Liricon’s “3Rs” guiding development principles (Reduce, Restore, Reconfigure).**
 - Reduce Visitor Vehicle Impact – Decrease Vehicle Environment Impact Across Park, Pedestrianize Banff
 - Reconfigure Station Lands: - Leverage Convenient Location to Enhance Visitor Management
 - Restore Train Station and Surrounding Lands – Return to role as Historic Arrival Centre and Transit Hub
- **Town and Park Facing Visitor Management Challenges**
 - Vehicle congestion in the Banff townsite and points of interest across the Park, cascade wildlife corridor impaired, maintaining high quality visitor experience
- **Liricon Potential Solutions So Far**
 - Intercept parking, aerial transit to Norquay, passenger rail
 - Drawing inspiration from other busy mountain towns (e.g. Zermatt) and National Parks (e.g. Yosemite)
- **Liricon’s Proposal to Banff Town Council**
 - Town implements “Resident Only Vehicle Pass”; Liricon provides Town 2,500 parking stalls, rent-free for 30 years, when Gondola opens (which will provide revenue stream to finance free parking)
- **Liricon Seeking Community Input on Eco-Transit Centre**
 - Railway Lands currently going through Area Redevelopment Plan with Town of Banff
 - Looking for feedback on “Resident Only Vehicle Pass” and other ideas on how Eco-Transit Centre could improve visitor management

Eco-Transit Centre – Visitor Management to Address Growing Visitation - Summary

Vehicles in the Park present challenges to both the environment and visitor experience which the Eco-Transit Centre is designed to help provide innovative solutions.

Visitor Management Challenges Due to Park Visitation Growing

- Challenge 1 – Vehicle Congestion Growth
 - Town of Banff vehicle congestion increasing
 - Points of Interest in the Park (PIPs)(Johnston Canyon, Moraine Lake, Lake Louise, Lake Minnewanka, etc.) experiencing worse congestion over time degrading areas' ecological integrity
- Challenge 2 - Norquay access road impairing Cascade Wildlife Corridor
- Challenge 3 - Banff businesses need to continue to provide high-quality visitor experience

Banff Eco-Transit Centre – Liricon's Focus Thus Far to Address Visitor Management Realities

- Solution #1 - Intercept Lot - First-ever intercept lot opening summer 2019 (500 stalls)
- Solution #2 - Potential Norquay Gondola – Move ski area parking to Station, reduce traffic on access road, shrink ski area lease
- Solution #3 – Potential Passenger Rail - Expanding to include airport link, understanding CP Rail requirements, assembling financing capital costs

Eco-Transit Centre – Visitor Management to Address Growing Visitation - Summary

To further enhance visitor management in the Town and across the Park, should Council implement a “Resident Only Vehicle Pass”, then Liricon will provide a total of 2,500 stalls to the Town rent-free when the Gondola opens.

Banff Eco-Transit Centre – Proposal to Council

- Should Council implement “Resident Only Vehicle Pass” then Liricon will provide an additional 2,000 stalls (for a total of 2,500 stalls) and a Banff & Park Bus/Shuttle area rent-free for 30 years when Gondola opens
- Aerial Transit’s Dual Benefits
 - Primary benefit: Ecological gain from reducing traffic on Norquay access road
 - Secondary benefit: Revenue stream to help finance expanded intercept parking
- “Resident Only Vehicle Pass” Benefits
 - Day visitors park at Intercept Lots, hotel guests park in hotel lots
 - Intercept Parking concentrates visitors for shuttles to Points of Interest across Town and Park

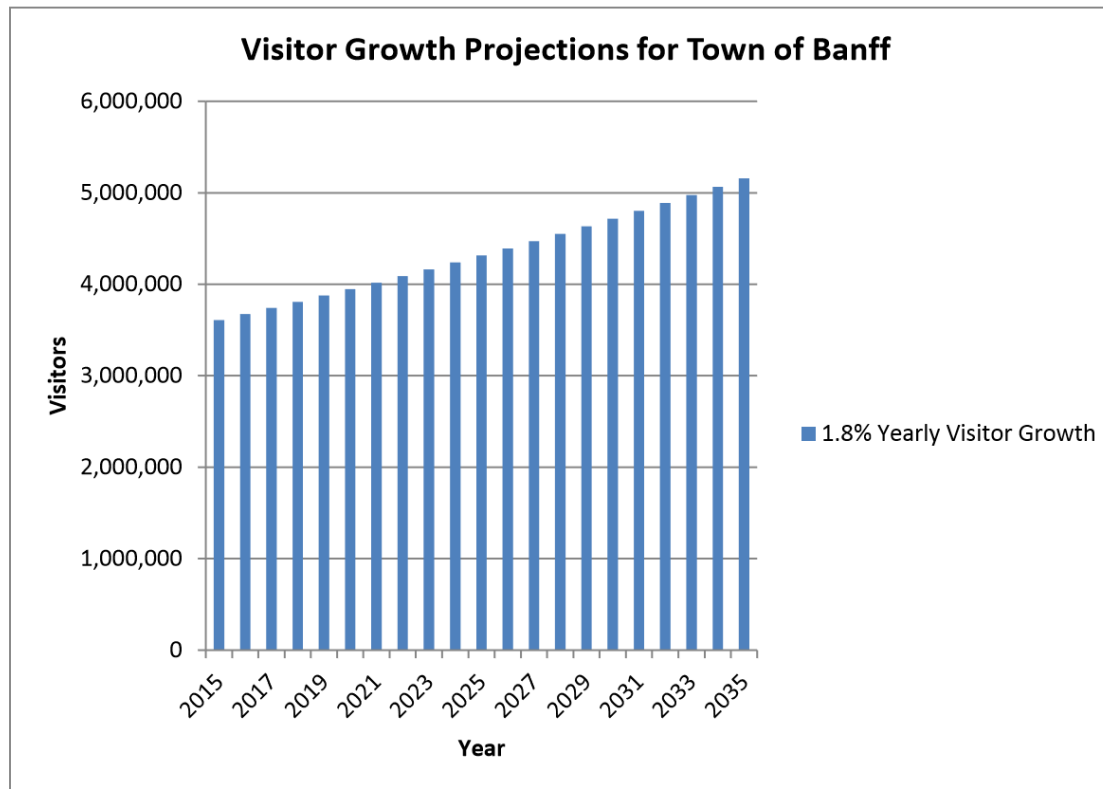
Banff Visitor Growth – Expected to Continue

Visitor growth to Banff National Park has been increasing and is expected to continue to grow.

- 4.2 million visitors in 2017-18, expected to be 5 million + within 15 years
- In 2016, Town of Banff retained Stantec to study Banff's traffic congestion and develop solutions

BANFF LONG TERM TRANSPORTATION STUDY

Figure 2.2 Potential future visitation to Banff



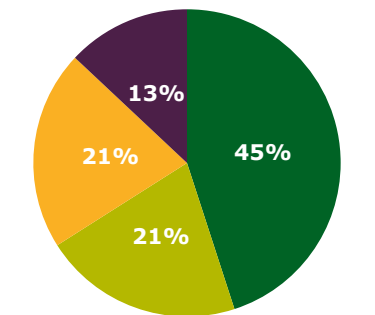
Challenge #1 - Growing Banff Visitation Causing Traffic Congestion

Banff's increasing number of visitors, almost all of which come by personal vehicle, is leading to environmentally degrading traffic congestion and harming the visitor experience

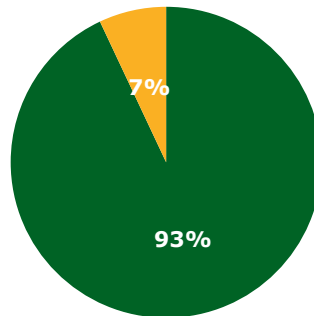
- Banff Experiencing Increasing Vehicle Volumes**

- The townsite's road system beyond capacity during peak periods
- Total annual volume of 6.5 million vehicles in 2020, increase of 8% over 5.9 million in 2015
- At Bow Bridge, 4.2 million vehicles creating a "choke point" backing up vehicles on Mountain Avenue and Spray Avenue
- Vehicles crossing Bow Bridge roughly match total visitation – expected to grow to 5.3 million by 2035
- ***Goal: move people, not cars***

Banff Visitor Origins



■ Alberta ■ Rest of Canada
■ USA ■ International



■ Personal Vehicle ■ Bus

Banff Ave



Mountain Ave



Challenge #1 - Forecasted Congestion - Annual

By 2020, the increased visitation is expected to lead to 4 months/year of congestion as road network reaching its design capacity.

- The number of months of congestion will move from 4 to 5 months by 2025.

BANFF LONG TERM TRANSPORTATION STUDY

Executive Summary

Year	Years from 2015	Months of congestion without action	Entrance counter vehicle volume	Bridge counter vehicle volume	Annual visitation	Vehicles required to be removed to resolve congestion (per day at peak)
2015	0	2	5,938,349	3,824,117	3,609,637	7,414
2020	5	4	6,455,697	4,151,704	3,946,412	8,710
2025	10	5	7,021,191	4,509,498	4,314,607	10,073
2030	15	5	7,639,507	4,900,421	4,717,155	11,505
2035	20	5	8,315,788	5,327,688	5,157,261	13,010
2040	25	8	9,055,690	5,794,832	5,638,427	14,592
2045	30	9	9,865,437	6,305,742	6,164,486	16,254

Challenge #1 - Recommended Solution: Intercept Parking

The Stantec Study (2016) recommends the development of intercept parking lots as the best method of managing visitor traffic.

- The Study recommended building 1,000 stalls immediately & more than 2,000 stalls within 20 years.
- Intercept Parking was first adopted as official policy by Town Council in 1979 (0 stalls built to date).

BANFF LONG TERM TRANSPORTATION STUDY

Possible Solutions

Intercept lot stall requirements:

Year	Years from 2015	Months of congestion without action	Intercept lot stalls required
2015	0	2	927
2020	5	4	1,089
2025	10	5	1,259
2030	15	5	1,438
2035	20	5	1,626
2040	25	8	1,824
2045	30	9	2,032



Challenge #1 - Visitors Drive Almost 90% Parking Demand

Downtown Banff experiences congestion and parking pressures throughout the summer months with average public parking occupancy of 72% and Peak Occupancy of 94%.

- There are 1,220 stalls in downtown Banff (593 Off Street, 627 On Street)
- Currently residents require less than 200 stalls whereas visitor demand is approximately 1,400 stalls

Town of Banff Parking Study 2016
August 2016



INDIGO

2.4 Current & Future Parking Surplus/Shortfall using assumptions from Bunt & Associates 2012 Transportation Master Plan

Parking Zone	Existing	10-Year	20-Year
Residential Demand	193	193	193
Visitor Demand	1174	1409	1644
Expected Demand	1367	1602	1837
Existing Practical Supply ^a	1242	1242	1242
Practical Shortfall	-125 ¹⁰	-360	-595

Bunt & Associates 2012 Transportation Master Plan Estimate Future Parking Deficiency

Challenge #1 - Points of Interest Across Park – Increasing Vehicle Congestion

Points of interest across the Park (Johnston Canyon, Moraine Lake, Lake Louise, Lake Minnewanka, etc.)(PIPs) are also becoming increasingly congested with vehicles thus affecting the ecological integrity of the areas and degrading the visitor experience.

The Park's PIPs Increasingly Vehicle Congested

- Limited parking at Johnston Canyon, Moraine Lake, Lake Louise, Lake Minnewanka, etc.

Wildlife in the Park's PIPs are Unprotected to Vehicles

- PIPs located outside of TransCanada highway wildlife fencing

Parks Canada Has Started Shuttles to PIPs

- Multiple pick-up spots in Banff but visitors parking across entire Banff townsite limiting shuttle use



Moraine Lake



Johnston Canyon

Challenge #1 – PIPs Vehicle Congestion - Yosemite Vehicle Management System

Yosemite National Park, which has experienced similar vehicle congestion problems as Banff, has developed a vehicle management system which includes encouraging visitors to park for the day, queuing vehicles in a central parking lot, and free shuttles to Points of Interest (PIPs)

Yosemite has a similar number of visitors to Banff (4 million+ visitors/year)

- Also experiences traffic congestion problems at its PIPs as it also has limited parking at its PIPs

Day visitors are encouraged to park their vehicles for the duration of their stay

- Yosemite offering free shuttle to PIPs from central parking location

To Reduce Congestion at PIPs, Vehicles now queued in central location several kilometres away when PIPs busy

- Vehicles incrementally sent to PIPs to minimize congestion at PIPs



Yosemite National Park



Yosemite National Park – Vehicles Queuing

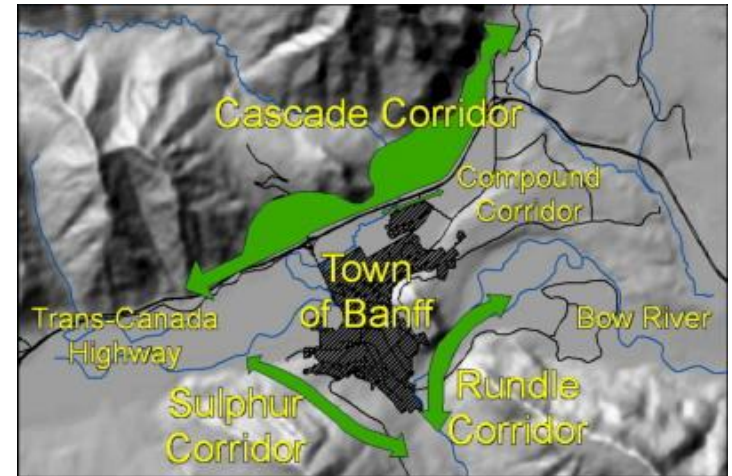


Challenge #2 - Cascade Wildlife Corridor Impaired

The Cascade Wildlife Corridor is an important link for wildlife, particularly large carnivores, moving east and west across the park that Parks Canada has taken several steps to improve its environment including removing several man-made structures and restricting use of others.

Cascade Wildlife Corridor Major East-West Wildlife Link

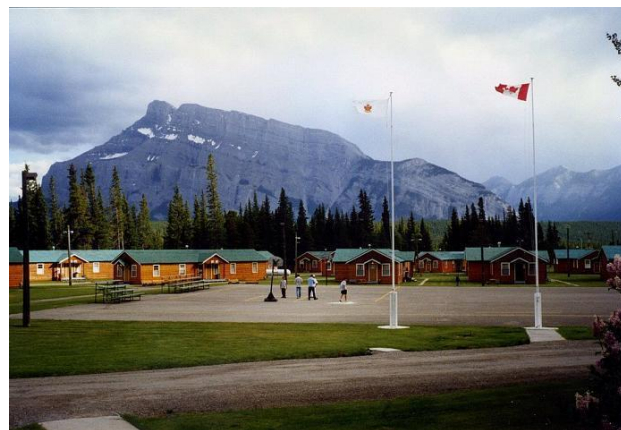
- Allows wildlife to move safely between areas of suitable habitat (avoids habitat fragmentation)
- Especially important for wide range species such as large carnivores including grizzly bears, cougars and wolves
- Since 1993, Parks has taken several steps to reduce impact of man-made impediments
 - Removed cadet camp, bison paddock, horse pasture
 - Restricted use of airstrip



Parks Canada



Banff Airstrip (use restricted)



Cadet Camp (since removed)

Challenge #2 - Cascade Wildlife Corridor Impaired

The Norquay Access Road is 1 of 2 remaining major man-made impediments in the Cascade Wildlife Corridor. Over the last several years, Norquay has taken a number of steps to limit the rate of growth of vehicle traffic to Norquay.

- The access road remains a major impediment given its large size (168 acres relative to Norquay's 190 skiable acres) and substantial traffic (330,000 2-way traffic/year).
- Norquay has taken a number of steps to limit road traffic road including providing free bus shuttles to and from Town, encouraging car pooling on select days, etc.
- Result is Norquay has been able to limit the 5 year rate of vehicle growth (2013 – 2017) to Norquay to 4%/year – which is in line with vehicle growth for Banff - despite the fact that Norquay re-started summer sight-seeing in 2014



Norquay Access Road and Norquay Parking



Norquay Access Road

Solution #2 – Aerial Transit to Norquay Enhances Cascade Wildlife Corridor

The second prong of the Eco-Transit Centre is the construction of a gondola from the Train Station to Norquay which allows Norquay's parking to be moved from the alpine to the Train Station. In doing so, Parks Canada has the opportunity to limit traffic on the Norquay access road.

Solution #2 - Gondola from Station to Norquay's High Alpine

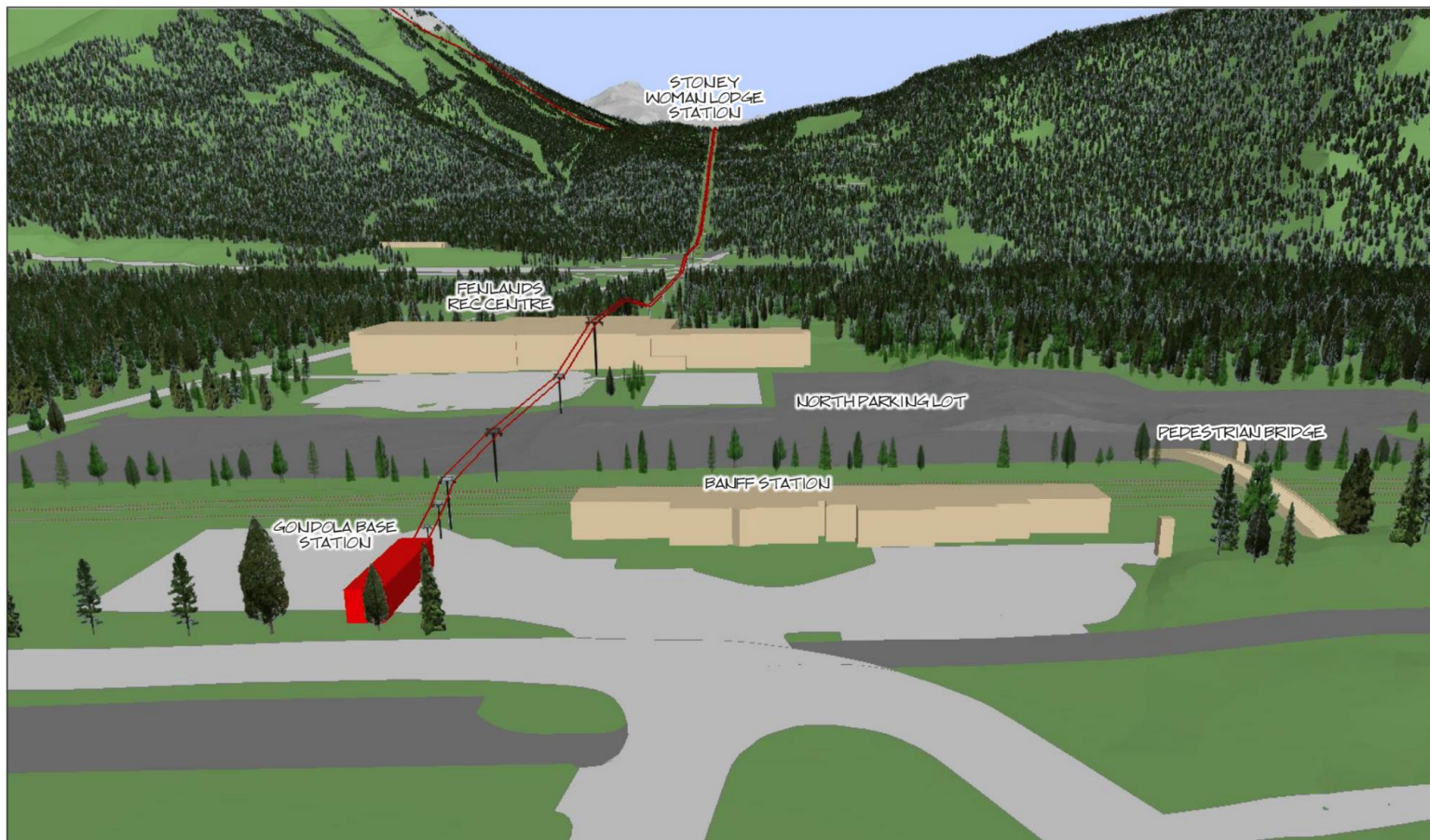
- Banff Management Plan 2010 and Norquay Site Guidelines 2013 both allow Norquay to pursue the feasibility of a gondola from Banff and Ski Area Management Guideline (2006) allow for the potential of ski areas to reconfigure their ski area boundaries if there is a "substantial environmental gain".



Solution #2 – Aerial Transit – Move Norquay Parking to Eco-Transit Centre

The proposed Gondola would originate at the Eco-Transit Centre and cross over the Norquay bridge.

- Norquay's parking would be moved down to the Train Station and Norquay would return the existing parking to Parks Canada thus shrinking Norquay's overall lease.
- Gondola Feasibility Study submitted to Parks Canada May, 2018



Solution #2 – Aerial Transit – Environmental Study Concludes Wildlife Stand to Gain

Miistakis Institute, a leading environmental research organization, studied Norquay's gondola proposal and concluded there would be a positive gain for wildlife from the project.



WILDLIFE STAND TO GAIN UNDER PROPOSED GONDOLA DEVELOPMENT AT MOUNT NORQUAY, BANFF NATIONAL PARK, AB

Background: Mount Norquay Ski Hill is proposing to install a gondola from the townsite to the ski hill base, reduce the lease site at low elevation, and increase it at high elevation.

Opportunity: Under what conditions could changes in the way Mount Norquay Ski Hill is used help create an environmental gain for wildlife?

Approach: We undertook three key steps to help identify pathways towards this opportunity:

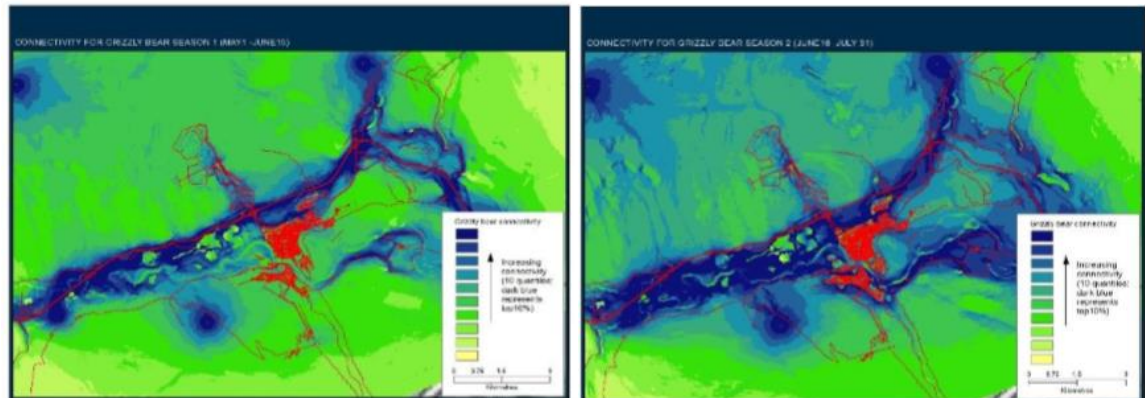
- 1) An expert workshop (Nov. 2, 2018) involving current and former staff from local wildlife, management, and conservation agencies to understand community concerns. **Key finding:** focus on impacts to grizzly bears, wolves, cougars, and bighorn sheep. Consider movement, conflict, and habitat security.
- 2) Statistical models of animal movement from GPS-tagged animals to measure wildlife connectivity. **Key finding:** Negative impacts of proposed changes are unlikely; positive impacts are possible for grizzly bear, wolves and cougars. Further study is needed on bighorn sheep.

- 3) Structured, expert opinion analysis to evaluate the effectiveness of management options. **Key finding:** reduce summer use of people on the skiing terrain and reduce use of people on the access road leading up to the Mount Norquay ski lodge.

Next steps: The specific mitigation measures needed to create a positive impact on biodiversity are not well known by science – but this can be fixed. Through a combination of a new, rigorously-designed biodiversity monitoring program at Mount Norquay and adaptive management by Mount Norquay, it will be possible to create a new vision for positive environmental changes in the Bow Valley.

For further information: Danah Duke, Miistakis Institute, 403-440-8444

Grizzly Bear connectivity maps derived from Step 2 of our approach for early spring (left) and mi-summer (right)



Solution #2 – Aerial Transit – Banff Study Identifies Gondola as Sustainable Transit

Aerial Transit was identified by the Stantec study (2016) as a possible solution to the Town of Banff's traffic problems.

- The original proposal was for Aerial Transit to go through town
- Broad public support for the project – 58% either “it might work” or “liked it a lot” and investigate further

BANFF LONG TERM TRANSPORTATION STUDY

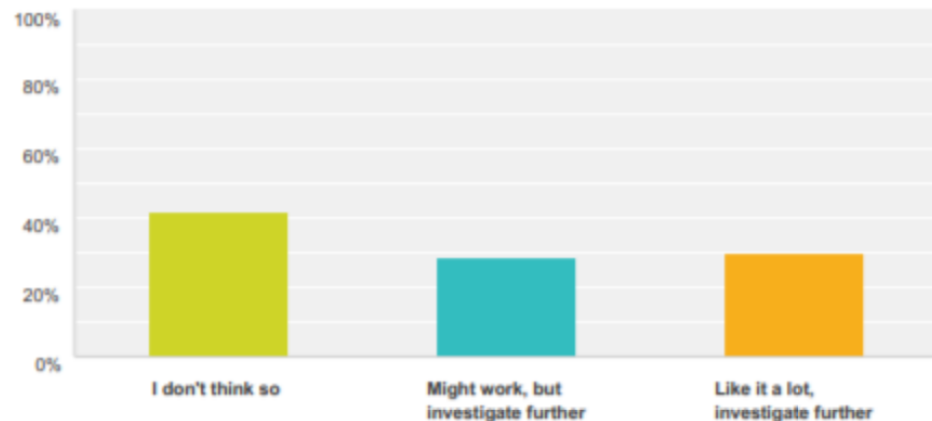
Possible Solutions

3.4 AERIAL TRANSIT

Aerial transit systems are designed to alleviate traffic congestion by providing grade-separated travel corridors which are not subject to congestion arising from capacity constraints and user conflicts that commonly occur with at-grade solutions (such as building new roads, street cars or conventional transit).

Experience from other aerial transit systems demonstrates that aerial transit is also a visitor experience in itself that - through fare revenue collection - can generate income to help offset or eliminate net operating costs and tax burden.

Examples of some aerial transit systems currently in operation are summarized below:



Telluride Gondola from Town to Ski Area Above Access Road

Town of Banff Survey on "Consider construction of aerial transit system"



LIRICON CAPITAL

Solution #3 - Calgary Airport to Banff, Passenger Rail

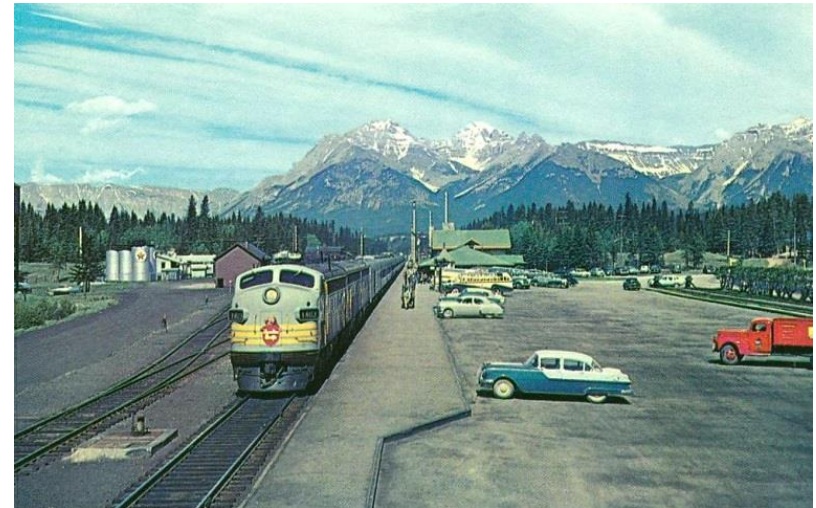
Third prong of the Eco-Transit Centre is the development of passenger rail between the Calgary Airport and Banff.

Solution #3 - Commuter Passenger Rail from Calgary Airport to Banff

- Mountain Tourist Towns Typically, and Historically, Accessed by Train
 - Example: Zermatt Switzerland's train service creates pedestrian friendly and environmentally sound town-centre
- Banff Historically Developed Around Train Travel
 - Up to 7 trains/day arrived in Banff before TransCanada Highway Built
- Calgary Largest City in North America with No Passenger Rail Service
 - VIA discontinued Rail Service from Calgary in 1990; population since has almost doubled
- Large Number of of Visitors Could be Accommodated by Passenger Rail
 - Bow Valley Mass Transit Feasibility Study estimates train ridership at 220,000 to 620,000 per year



Glacier Express (to Zermatt)



CPR Canadian (from Calgary)

Solution #3 - Calgary Airport to Banff Passenger Rail

A feasibility study on the development of passenger rail has recently been completed which allows governments to understand the funding requirements for the service.

Solution #3 - Commuter Passenger Rail from Calgary Airport to Banff

- **Feasibility Study Completed January, 2019**
 - Stakeholders include Calgary, Cochrane, Canmore, Banff, Lake Louise, Liricon, CP
 - Study only covered downtown Calgary to Banff
 - Municipalities (including Morley) would have stops along line
 - Study financed by Province of Alberta
 - Study focused on market demand (both visitor and commuter), schedule, capacity, construction and operating costs
 - New dedicated passenger line in CPR corridor ensures on-time performance, frequent departures
 - Liricon has been assembling the required \$700 million in capital to build the dedicated line to provide governments with funding option
- **Constructing Line and Operating Train Service Requires Government Funding**
 - All mass transit passenger rail service in North America receives government funding
 - All levels of government must financially support
- **Timing: Currently Seeking Government Support to Have Service Running 2022**
 - Town of Banff and Parks Canada working together to create long-term transportation solutions as part of Banff National Park's 2020 management plan
 - Passenger rail is the primary long-term mass transit solution recommendation of the plan

Challenge #3 – Vehicle Management Must Enhance Visitor Experience

Visitors to Banff identify the Town's traffic congestion as one of their top concerns. Visitors to other mountain towns such as Zermatt Switzerland have adjusted their behaviour through the use of mass transit and intercept parking.

Visitors Frustrated by Banff Traffic Congestion

- Surveys demonstrate traffic congestion among visitors' top concerns

Intercept Parking On its Own With No Stakeholder Support Can Be Less Convenient for Visitors

- Visitors Won't Walk Far (generally less than 10 minutes)

Visitors Prepared to Adjust Behaviour When See Benefits of Pedestrianization

- Zermatt Switzerland is a good example of a mountain town that has used intercept parking, shuttles and passenger rail to pedestrianize the town centre and become 1 of the world's top destinations.



Zermatt - winter



Zermatt - summer

Solution #3 –Stakeholder Support For Intercept Parking Key to Transformation

For Banff's Intercept Lots to be successful they need to be easily accessible, supported with shuttles and embraced by the business community.

Intercept Parking Requires Multiple Stakeholder Support to be Successful

- Easily accessible
 - Liricon to build pedestrian bridge across tracks
- Shuttle service to Points of Interest across Town and Park
 - Continue to expand mass transit
- Downtown Banff businesses need to cater to pedestrians
 - Outdoor cafes in summer, animate streets in winter – creates “sticky pavement” phenomena
- Resident Only Vehicle Pass to centralize day visitor arrival point

Pedestrianization Enhances Visitor Experience Increasing Downtown Banff Business

- Encourages visitors to linger in pedestrian malls
- Businesses on car-free malls perform better than nearby businesses on streets with cars



Eco-Transit Centre – 3 Integrated Green Transit Systems for Visitor Management

The combination of intercept parking and aerial transit will reduce traffic congestion including reducing bridge traffic, Banff's primary choke point.

- Bridge Choke Point Reduced - Visitors parking at Intercept Lot



Visitor Management Plan - Resident Only Vehicle Pass

Liricon has proposed to Banff Town Council that should it institute a Resident Only Vehicle Pass that Liricon, upon the Gondola becoming operational, will provide the Town with the 2,500 intercept lots rent-free, for 30 years.

Resident Only Vehicle Pass

- Only residents would be allowed to park in downtown Banff
- Hotel guests would park in hotel lots
- Day visitors would have to park in Intercept Lots
- Transformational change in vehicle congestion and visitor management in Points of Interest in the Park
- Increased ease for residents to park downtown

Gondola Primary and Secondary Benefits

- Primary benefit of the Gondola is to improve the environment of the Cascade Wildlife Corridor
- Secondary benefit of the Gondola is it provides Liricon a revenue stream to help pay for the Intercept Lots over time allowing Liricon to provide Intercept Lots rent-free, and free parking to all visitors