SUN PEAKS CROSS COUNTRY MOUNTAIN BIKE TRAIL DEVELOPMENT PLAN

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Photo 1. Alpine meadows at Sun Peaks. Photo from www.sunpeaksresort.com

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1.0   Introduction

McElhanney Consulting was engaged to improve the cross country (XC) mountain bike riding experience at Sun Peaks. The need for improvement was brought to the attention for the following reasons:

- Sun Peaks Resort was receiving complaints from users that the XC trail network consists of poor quality trails and false advertising. Many logging resource roads and winter cross country ski trails are currently shown on the map as trails, when they are really roads. The modern day mountain bike tourist travelling across BC is expecting purpose built single track trails for mountain biking, and these are few and far between in the current XC network.
- SPRTA (Sun Peaks Recreational Trails Association) is a group of motivated locals who are looking for trails close to the Village of Sun Peaks to pedal for enjoyment and exercise, particularly during seasons and hours when the bike park is closed.
- The Sun Peaks Mountain Resort Municipality (SPMRM) recognizes that quality recreation can have a dramatic effect on its community and can improve quality of life, staff retention, and become a deciding factor drawing new residents to the area.

Reference maps related to the text are included in Section   5.

2.0 Design Process

To accomplish a concise trail design plan for the Sun Peaks Area, McElhanney Staff Matt Hadley and Tyler Wilkes travelled to Sun Peaks September 17th -19th 2017. The first day was spent with Barney Mouat reviewing the current lift accessed trails in the bike park and then pedaling the xc alpine network and the Big Rock Ride trails.

A brainstorming session was held that evening with numerous ideas discussed and sketched on the maps to capture the ideas. The following members were in attendance:

- Barney Mouat, Director of Outside Operations, Sun Peaks Resort
- Jase Peterson (SPRTA Club President)
- Mike Sleziak (SPRTA Vice President)
- Paul Berry (Spoke N' Motion bike shop owner, mountain and road bike racer, & Kamloops Bike Rider Association [KBRA] member
- Kristine Berry (Reservoir Coffee owner and road and mountain bike racer)
- Ted Morton (Operations Manager BC Enduro Series and KBRA member)
- Tyler Wilkes (McElhanney Consulting Trail Technician)
- Matt Hadley (McElhanney Consulting Trail Technician)

Day 2 was spent on the trails with Matt, Mike, and Pate Neuman (KBRA member, Adventure Business and Entrepreneurship grad) assessing the current xc trail network and potential offering of the Sun Peaks area. Day 3, Barney and Matt travelled the remaining areas to determine connectivity between current and proposed housing development and the existing trail system. On Day 3 Barney, Erik Meertens (Mountain Operations Manager), Mike Sleziak, and James Jefferies (Bike Park Coordinator) met to discuss preliminary findings and connectivity to the existing bike park.

Photo 2. conceptual trail ideas captured during brain storming session

Prior to arriving on site, Kamloops locals Keith Wilson and Catherine Pendrel, Canadian National Team were consulted regarding their view of the gaps in the current trail system and vision for the trails at Sun Peaks Resort.

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3.0   Goals for the Trail Network

Out of the brain storming sessions and meetings, the following goals for the trail network were highlighted:

- Provide a network for locals to recreate on for enjoyment and exercise close to the village.

- Provide an XC network for tourists to either extend their stay, following a day at the bike park, or to diversify the riding available for a family unit. Part of the family could ride the lift and others could ride the XC trail network.

- Stay within the resort boundary wherever possible to reduce the delays and work required by permitting.

- Construct trails outside of the areas slated for future housing and village development.

- Make cross country mountain bikers feel welcome – develop an excellent trail network integrated into the village core, not just the remote trail network that currently exists.

- Seamless connectivity between single track segments is paramount to the success of the network, both for enjoyment of users and to simplify signage and navigation.

- Develop youth, beginner, and lesson friendly mountain bike single track and facilities close to the village core to make mountain biking accessible to these user groups.

- Finish and connect the "Big Rock Ride" trail into the village with single track.

- Add to the existing "Altitude" Alpine Ride to;

    o Develop a climbing or descending trail to join the Altitude trail via the Burfield area.

    o Loop the Altitude trail back to the mid mountain lodge to entice users to purchase food and beverages mid ride.

    o Develop quality single track from the top of the lift west to bypass the current road section.

    o Long term extend the Alpine loop to create an "epic ride" with "Three Peaks, Three Lakes", connecting together Mt Tod, Tod Lake, Mt Sundance, McGillivary Lake, Little McGillivary Lake, and Mount Morrisey.

- Focus most trails in dry south facing terrain to allow for as early an opening date as possible.

- Develop a trail extending to the Burfield area to allow residents trails to ride close to home. On the Mt Morrisey side, make use of any of the old Masters Race course possible, and keep this trail in the shade for cool summer riding.

- Investigate the feasibility of creating a long distance bike packing route connecting Barrier, Sun Peaks, Harper Mountain, and Kamloops.

4.0 Benefits and Value of Trails

There are many benefits of trails, including the obvious health benefits that come from physical activity. There are also benefits to an entity interested in trail development to create Trail development plan and outlining a logical path to trail development and summarizing the reasons why it should happen. The following sections outline the benefits of trails from the different important perspectives.

4.1 Health & Recreation Benefits

An interesting way to look at the added value economics of trail development is to consider the increased health benefits of trail users within the context of reduced health care costs. In *A Cost-Benefit Analysis of Physical Activity Using Bike/Pedestrian Trails* (Wang, G. et al., 2004), it was estimated that for each dollar spent on building, maintaining, and using trails, nearly three dollars were realized in reduced health care costs by the trail users due to improvements in their health.

4.2 Safety Benefits

When trails are built to last with the user's needs in mind, a venue is created to provide an acceptable level of safety for trail users. Technical trail features (TTFs) are an example where their inclusion in the design of advanced mountain biking trails can be viewed as a safety benefit. Experienced riders enjoy the technical challenges provided by the TTFs, however, a lack of TTF opportunities within a trail system may lead to the creation of unauthorized trails with poor quality features which can create major safety risks for trail users.

4.3 Education Benefits

Trails can provide excellent opportunities for users to experience nature, history, and culture in an "outdoor" classroom. Interpretive signage, guided tours, or programming result in educational benefits when trail development is sensitive to the opportunities presented by the environment, historical context, and location of the trail.

4.4 Environmental Sustainability Benefits

Trails also provide an opportunity for people to interact and experience the environment in an immersive way. Paired with interpretive signage and other educational information, trail users become more aware of the value they place on protecting the wilderness areas around their communities. The existence and use of trails are both catalysts for this heightened sense of environmental awareness.

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Current research looking at non-motorized trail usage suggests that, when properly built, shared use trails can be constructed and maintained with minimal environmental impacts. Protection of the environment typically has more to do with the location, alignment, construction, and maintenance of the trail rather than the actual trail usage itself. Another by-product of a great trail network is that it should be so enthusiastically received by users that will naturally reduce the amount of unauthorized trails. (Managing Mountain Biking, IMBA's Guide to Providing Great Riding, 2007)

4.5   Economic Benefits

Wellness tourism, recreational tourism, and other forms of tourism are popular and growing around the world. These trends show that sports and adventure tourism are often combined with wellness tourism and developing facilities to cater to these trends can have significant economic benefit.

One of the fastest growing forms of recreational tourism is mountain bike tourism. In fact, this industry is booming in Western Canada and other parts of North America. Part of the reason is due to the evolution of bikes with geometry and suspension that make trail riding easier. In addition, trail building with IMBA providing standards for sustainable development, have improved the rideability and "fun" factor.

The economic benefits of catering to mountain bikers in both trail development and community facilities is well documented. One of the most compelling confirmations is the document, *Mountain Bike Tourism – The essential guide to developing, managing, and marketing mountain bike tourism product in BC*, was prepared by Destination British Columbia in June 2015. In relation to "traveler motivation studies" and "economic impact research", the following conclusions are provided in the document:

- "Mountain biking IS a travel motivator and people WILL travel to destinations specifically to go mountain biking; and
- Mountain bikers ARE well educated, affluent and the majority of them are over 30 years of age."

Other recent literature speaks to the benefits. "It turns out that mountain bikers who destination travel spend comparable amounts per day, as much time and are willing to travel as far as other groups, such as golfers." quoted a 2014 study released by Pinkbike on the *Economic Impacts of Mountain Biking Tourism*. To give some context to this finding, we can refer to the *Economic Impact & Sustainability Analysis* conducted by Tourism Kamloops that stated, "Mountain biking generated $3.5 million for the local economy in Kamloops during the 2015 riding season."

To further the case that catering to mountain bike tourism will enhance the economy of a region, we provide the following case study from British Columbia. This is but one study and as referenced above, there are others with similar statistics.
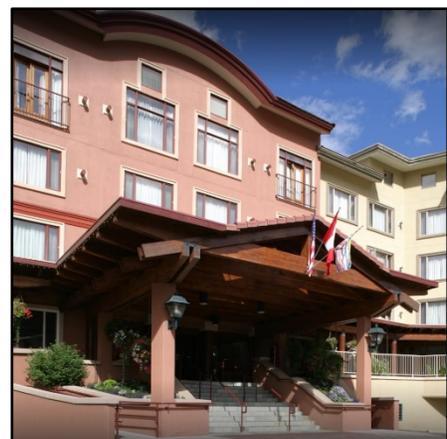
Example of Accommodation in Sun Peaks

### 4.5.1 Sea to Sky Mountain Biking Economic Impact Study

Documented in the 2009 "Sea to Sky Mountain Biking Economic Impact Study," the trails around North Shore, Squamish and Whistler, British Columbia are some of North America's most popular and challenging mountain biking trails and collectively, generate $10.3 million in spending from riders that live outside of the host community over the period from June 4 to September 17, 2006.

Squamish saw over $1.7 million as a result of non-resident riders visiting the trail system as well as training and participating in the popular Test of Metal mountain bike race held in mid-June each year.

The Whistler Bike Park, the most visited mountain bike park in North America, generated $16.2 million in revenue from non-resident visitors while the Crankworx Mountain Bike Festival attracted over 55,000 new visitors in 2006 bringing in over $11.5 million in non-resident spending.

The same study also demonstrates that trails in Whistler Valley generate more economic activity than informal trails in Squamish and the North Shore due to having created and promoted an authorized, public and commercially certain, municipal trail system with associated services (bike rentals, guides, camps, etc.). The study concludes that the Valley Trails were a significant stand-alone attractor separate from the Whistler Bike Park.

Apart from actual tourist spending, the study also indicated, "The combined expenditures of non-resident riders on the trail systems in the three communities resulted in a total of $9.3 million in new economic activity (GDP) and supported 194 jobs through the payment of just over $6.3 million in wages and salaries."
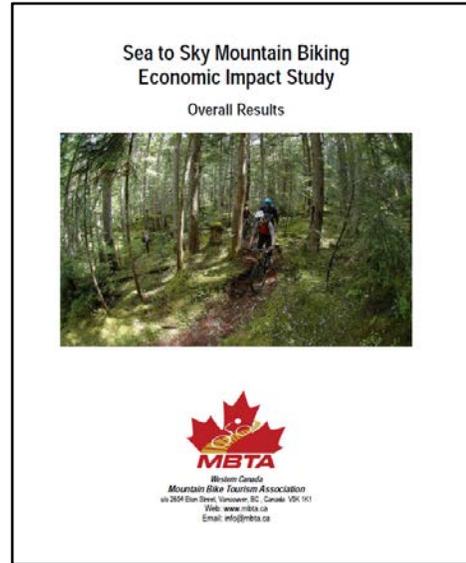
4.5.2 Destination Attractiveness

Trail systems are a key attraction for visitors to the region. Visitors are drawn not only to the quality and array of trails available but also because of the experience they have on the trails. In addition, the amenities provided are key. At the 2015 Western Canada Mountain Bike Tourism Symposium in Williams Lake, BC, Zachary Cole, from the University of North Carolina Greensboro, Bryan School of Business and Economics, presented the adjacent slide when discussing the "ideal mix of attributes" that make for a mountain biking destination. Based on his research, the larger the letters, the more important was the attribute to having an economically viable mountain bike experience. In looking at other mountain bike destinations and data from other studies, there is some commonality in the research.

5.0 Trail Management Objective

In designing a trail plan for Sun Peaks, the desires of the trail user weigh heavily into the decision making of the style, width, feel, and location of the trail placement. To quantify these desires, the Bureau of Land Management in the USA has developed a list of Trail User Objectives. For each new trail the Trail User Objectives from Table 1 have been identified. Trail user objectives are on a range, from none to total, or poor to excellent. Additionally, the big picture Trail Management Objectives for each trail are identified including parameters such as trail tread width, difficulty rating, surface roughness, and average grade.

Trail User Objectives	Description
Nature	Connection to nature. This can be anything from being among a few trees in the middle of the city to remote backcountry. Nature is an important factor for many riders.
Escape	Something that takes you away from your daily grind, allows you to get lost in the experience of riding. Often means getting away from the urban environment, but a bike park, even indoors, can provide this as well.
Solitude	Getting away from the urban environment and people; being active, alone, and quiet in the outdoors.
Challenge	Seeking to improve technical abilities, to solve a difficult problem, "clean" a trail feature or segment; sense of accomplishment.
Risk	Exposure to danger, harm, or loss; intentional interaction with uncertainty. The perception of risk creates a thrill for many trail users. It can be a positive or negative part of the trail experience, depending on user expectations and risk tolerance.
Fun	Amusing or enjoyable experience. When you are trying to build fitness and/or skill, you may do many rides without "fun" being a primary objective. Ideally, one doesn't have to sacrifice fun for challenge or exercise.
Play/Playfulness	Engaging in the activity purely for the enjoyment, bringing a childlike wonder to the pursuit, no destination. On a trail, this often means seeking features to enhance, alter the experience, rather than simply riding from point to point. Playfulness is a hugely important characteristic in mountain bike trails, and distinguishes trail experiences from many other trail user goals (hikers, equestrians).
Exercise	Health and fitness are part of the sport. For some this is a primary goal, for others a bonus, for some an obstacle. Defining the physical fitness needed for a particular ride is important in setting user expectations appropriately. Recognition that some riders have high skill and low fitness (and vice versa) plays a role in trail planning.
Variety	Multiple trail options, diversity of experience within a trail or trail system. Variety should be in several forms, where possible: skill, features, surface, setting, grade, etc. While all the trails within a system may have a particular feel based on its environmental factors, it can still have variety within those constraints. Also possible at the regional level to provide variety of experiences if limited opportunities exist within a particular system.
Connectivity	Series of loops and/or trail segments linked by other trails or transportation routes. Allows for a customized experience, change of plans, adding on to a ride. Also allows for riders of different fitness or skill level to begin rides together.
Socializing	Provides a shared experience and enhances safety for riders. Mountain biking is often a social activity.
Safety/Security	This could range from trailhead security for parking to personal safety unrelated to recreational use.
Efficiency	Getting to a destination or accomplishing a task with the least amount of time or effort expended. Road climbs are very efficient, as are trails that ascend directly to a destination. Efficiency sometimes means compromising sustainability and fun/play. Hiking trails tend to be much more efficient than biking trails.

Table 1. Trail User Objectives. Table from BLM Guidelines for a Quality Trail Experience

5.1   Proposed Trail Overview

This section provides a big picture overview of the new trails and riding areas. Detailed information about each trail is found in Section 5.2. Maps showing these conceptual alignments are on the following pages.

The vision for the new trail network is to have the day lodge serve as the central hub for the trail network. From this hub, trails will branch out in a stacked loop pattern, meaning that beginner and intermediate difficulty trails will form loops closest to the hub, and more technically challenging advanced difficulty trails will be located as loops farther away from the hub.

The first loop system is denoted as polygon Area 1, or "A1". This area is seen as a main learning area for both beginner downhill rides and cross country riders. There will be a gentle single track climb on the east, and the magic carpet will serve as a way for many users to gain the elevation. A1 is envisioned to have 3- 4 downhill lines with a mix of green and blue difficulty trails and side features to allow riders to learn and progress their skills. Technical Trail Features such as rollers, berms, table top jumps, rock gardens, tree root sections, and a pump section should all be incorporated into this area. Ideally all these trails and features would be designed in a manner and location to not affect winter operations. Grades and trail design should be such to require minimal braking from a beginner rider.

The main trail network itself is envisioned to be located in the Orient Ridge area of the resort. This area is chosen due to its proximity to the central hub, south facing aspect leading to an earlier riding season and drier terrain, good cross slope angles for trail construction, and lack of future planned resort development. A series of intermediate and challenging trails should be constructed in this area with the general layout providing a starting trail along the top and a collector trail along the bottom with a series of loops, climbs, and descents in between.

Longer distance trails providing alpine riding are planned to build off the current Alpine Altitude XC and Big Rock Ride with quality single track climbs and descents. These should connect over to Mount Sundance and Mount Morrisey and back to the central hub. Along this trail route, numerous smaller loops and return routes to the hub would be made available.

The beginner area, Orient Ridge area, McGillivary Lake area, and Mt Morrisey area are all designed to feed back into a collector trail running alongside the creek. At the end, close to the central hub, an additional loop of beginner difficulty will be constructed to allow for additional learning opportunities with minimal elevation change and not requiring use of the magic carpet.

Outside of the scope of this Trail Design Plan but still shown on the map is the construction of new beginner and intermediate lift accessed trails area for the bike park (A2). A main beginner difficulty trail #1B will feed over to the more gentle slopes of Mount Sundance where a series of beginner and intermediate difficulty downhill trails can be constructed. An agreement may be reached to allow for riders of the Altitude XC and Big Rock Ride trails to ride this area of the bike park by signing a waiver. James Jefferies (Bike Park Coordinator) has already developed a trail plan for A2 & A1.
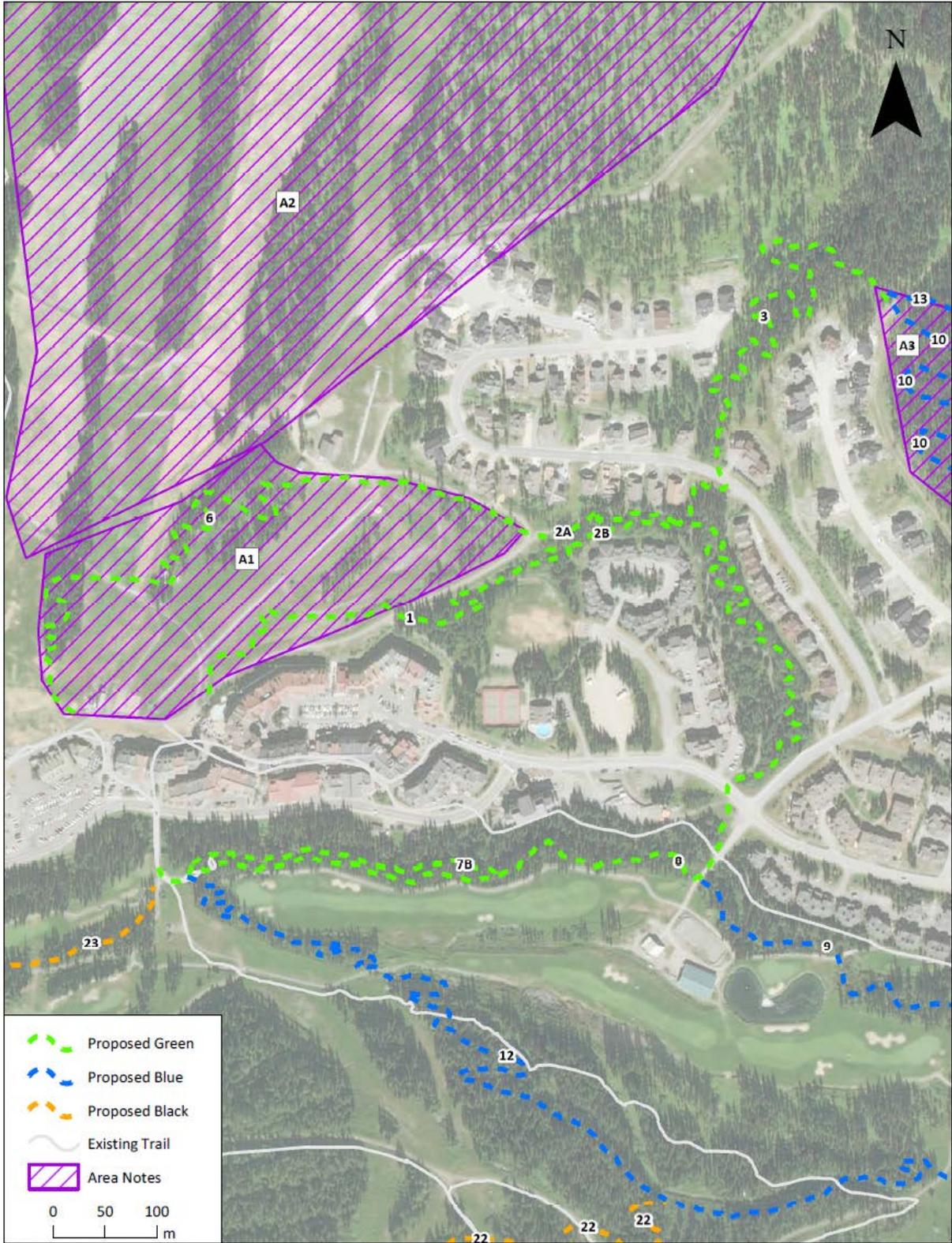
Map 1. Village Area
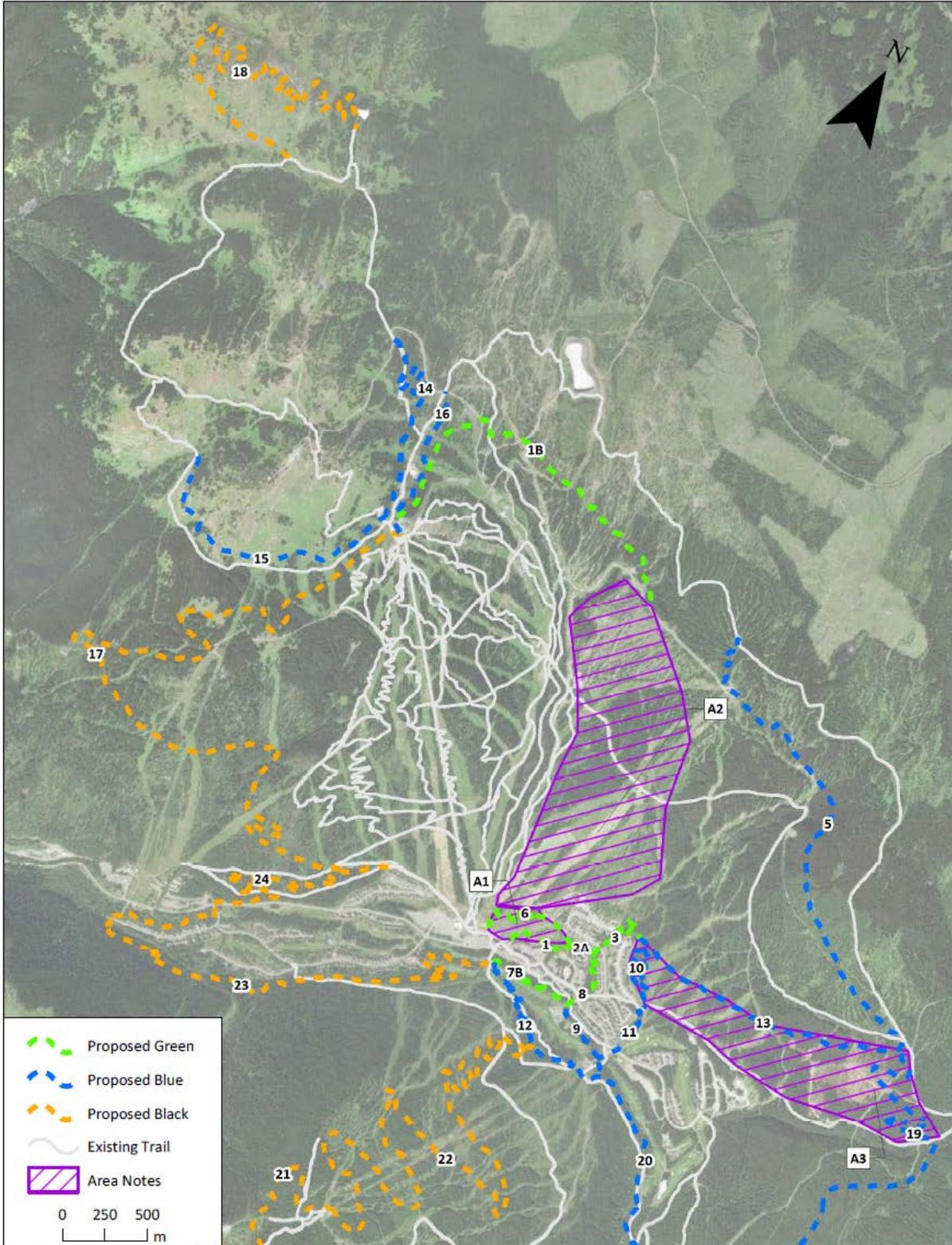
Map 2. Village Area and North
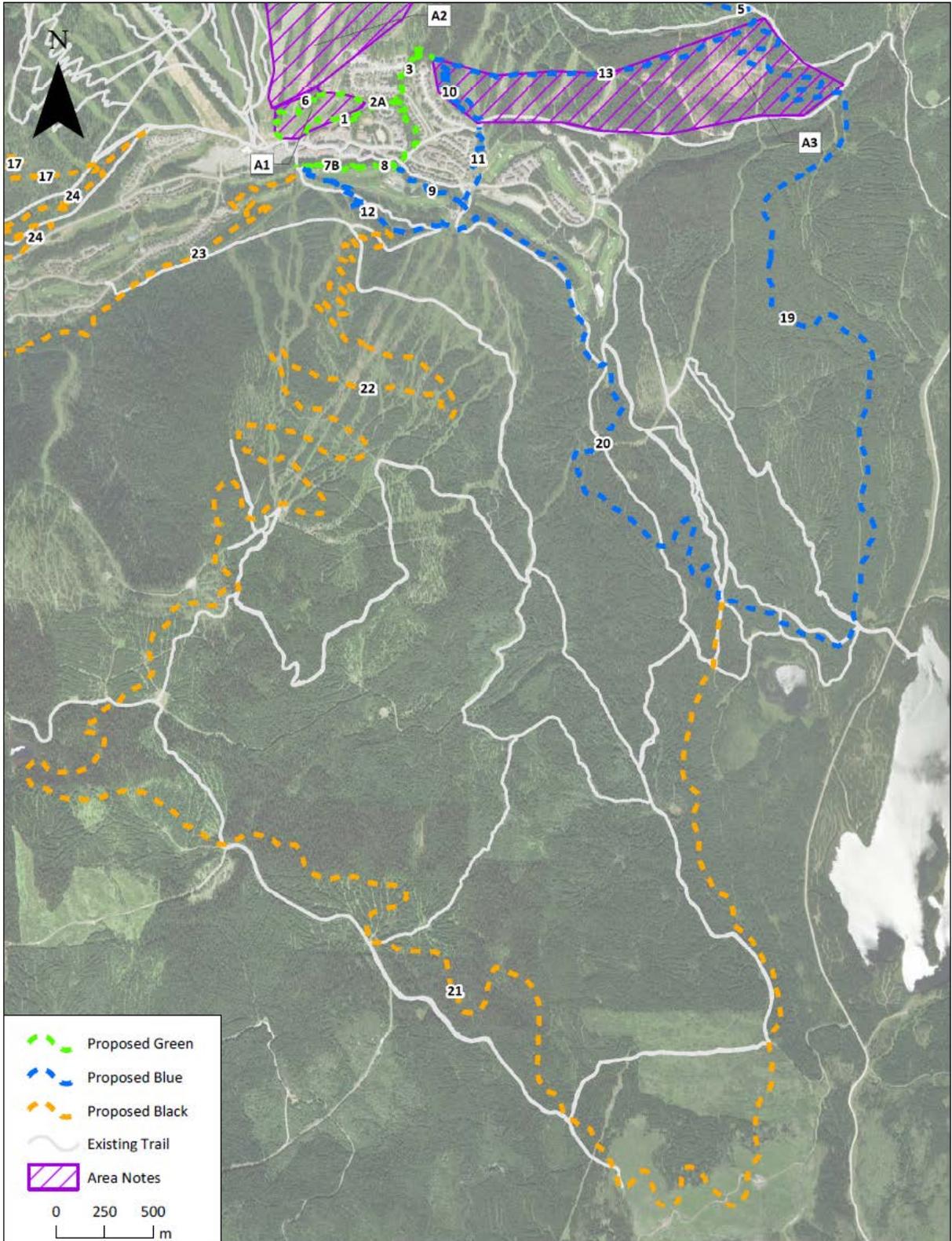
Map 3. Village Area and South

5.2   Trail Description

The following tables provide a suggested order for trail construction. To meet the expectations of tourists, a days ride of at minimum, 25kms of quality single track will need to be provided prior to advertising the network. All trails drawn on the map are conceptual only and will need to be ground truthed and flagged out for detailed design. Proper detailed design will save on construction costs and maintenance costs by avoiding wet areas, routing to control user speeds and prevent braking bumps, and routing to provide trails truly enjoyable to the target user group.

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Phase # 1	Overview:	Serves to complete the single track experience of the Altitude XC and Big Rock Ride to the Central Hub of the Village Day lodge.				
Trail #	Trail Purpose & Trail User Objective (TUO)		Trail Management Objective			Length (m)
			Tread width (m)	Average grade %	Difficulty rating	
1	Designed as a climbing connector trail to access A1, the main network of trails at A3, and a way into the Big Rock Ride and Alpine Trails. TUO: Exercise, Connectivity, Efficiency		1.2	5	Green	555
2A	Part of a loop for beginners, as such some beginner appropriate TTF's should be constructed on the side of the trail. It will also connect to the main trail network at A3. TUO: Nature, Fun, Play, Connectivity		1.1	5	Green	155
3	Two way connector with a climbing focus to A3, located on a winter ski runout and forested gully. May require bridges to allow the switchbacks to function at an appropriate grade. TUO: Exercise, Connectivity, Efficiency, Nature		1.1	5	Green	720
13	Two way trail which will serve as the completion of the Big Rock Ride and the feeder trail for the network of trails located in riding area A3. TUO: Nature, Escape, Fun, Play, Exercise, Connectivity, should contain rollers and berms and where possible natural side TTF's.		1.1	7	Blue	1850
5	Downhill preferred single track extension of Big Rock Ride. This trail will be optimized to take users to any available viewpoints. It should be fast and flowy and relatively smooth. Berms, rollers, and TTF's on the side of the trail are appropriate.		0.9	8	Blue	3100
					Sub total	**6.4 km**

Phase # 2	Overview:	Construct stacked loop riding at the primary riding network at A3. Phase 1 & 2 together should provide for enough riding to satisfy most cross country riders for 1-1.5 days.				
Trail #			**Trail Management Objective**			Length
	Trail Purpose & Trail User Objective (TUO)		Tread width (m)	Average grade %	Difficulty rating	
A3	The trails located in this riding network should consist of a variety of intermediate and advanced difficulty trails. Some should be rocky and rooty and quite technical "old school" single track to provide the TUO of Challenge. Others should be machine built smooth single track with rollers to pump, berms, and table top jumps which can be rolled over, providing for a TUO of Fun, Play and Variety. One trail in this area could be rated double black, however the need for trails of this challenging a difficulty level will probably be met by the existing bike park.		0.5-1	5-15%	Blue to Double Black	12 km

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Phase # 3	Overview:	Complete the short loops and the exit from the main riding area. Provide trails for lessons and rider progression.				
Trail #	Trail Purpose & Trail User Objective (TUO)		Trail Management Objective			Length (m)
			Tread width (m)	Average grade %	Difficulty rating	
10	Trail 10 and 11 will serve as the shortest loop possible into the main riding area, as well as the predominate exit from A3 and the Big Rock Ride. These trails should be machine built with rollers and berms, and where fitting with the terrain some small table top jumps. TUO: Fun, Play, Connectivity		1.1	8	Blue	1100
11			1.1	8	Blue	640
9	Main collector trail along the creek as well as part of the intermediate loop described for 10 & 11. Machine built with grade reversals and meanders where the terrain allows with some rocks and roots and natural TTF's as permitted by the terrain. These trails along the river are expected to see multi use traffic with residents walking looking for Nature and Escape along the creek in the tall trees. TUO: Fun, Nature, Escape, Connectivity		1.1	5	Green	450
8	Beginner difficulty loop from the magic carpet area, will serve as a good lesson loop and the collector of all trails returning from A3 and McGillivary Lake area. The descending portion should have small rollers and berms. TUO: Fun, Nature, Escape, Connectivity		1.1	5	Green	1200
7B	Beginner practice loop – this loop will provide an area to learn single track riding skills close to the central hub with minimal elevation change. Riders will be able to cross the covered bridge and immediately enter the single track in the forest to achieve the TUO of Nature, Escape, and Solitude almost immediately adjacent to the village. For beginner skilled riders, some side TTF's should be constructed or natural roots and rocks made use of to provide Challenge and Variety.		1	5	Green	330
2B	The Beginner practice loop near the top of the magic carpet to learn skills provide variety to and from the main riding network. Side TTF's are appropriate. TUP Challenge, Variety, Fun.		1	5	Green	190
6	Forested single track downhill from the magic carpet – lesson area for instructors and area for youth to session. Area for progression of skills. Machine built with rollers, berms, and where appropriate rock gardens, tree roots, and constructed TTF's.		1.2	5	Green	900
					Sub total	4.8 km

Phase # 4	Overview:	Improve the quality of the Alpine Riding offering at Sun Peaks				
Trail #			Trail Management Objective			Length (m)
		Trail Purpose & Trail User Objective (TUO)	Tread width (m)	Average grade %	Difficulty rating	
15		This trail will improve the quality of the riding experience by providing riders with single track through Alpine meadows directly from the lift, thereby avoiding the current access road. The trail should undulate and meander and weave though the few patches of forest while still being fairly direct. TUO: Nature, Escape, Solitude, Fun	1	8	Blue	2 km
14		Trail 14 & 16 are designed to be quality trails to entice riders back to the Mid Mountain Lodge where they can access the food and beverage services. The trail should undulate and meander and have some rocks and roots and rollers where an advanced rider could find some air. TUO: Nature, Escape, Fun, Play	1	8	Blue	1.7 km
16			1	8	Blue	900m
17		An exciting new addition to the Sun Peaks Trail network. This trail will allow riders who enjoy the challenge of fitness and technical climbs to pedal to the Altitude XC loop as opposed to take the lift. This trail should end at the Mid Mountain Station for access to the food and beverage services as well as maximizing the amount of single track used on the alpine ride. Clear signage will be required to prevent lift access riders from descending this trail. The trail should be narrow and contain natural roughness of tree roots and rocky obstacles to challenge riders. TUO: Nature, Escape, Solitude, Challenge, Exercise	0.5- 0.8	11	Black	6.1 km
18		Mountain Bike riders as well as hikers have the goal of climbing to the top of Mountains. This trail will provide an enjoyable and sustainable grade climb to the summit of Mt Tod and back down to Tod Lake. The existing hiking trail should be signed no bikes. Rocks should be incorporated into this trail to provide a challenge.	0.5-0.8	11	Black	3.9 km
					Sub total	14.6 km

Phase # 5	Overview:	Provide long distance loops to key points of interest and challenging single track				
Trail #	**Trail Purpose & Trail User Objective (TUO)**		**Trail Management Objective**			**Length**
			Tread width (m)	**Average grade %**	**Difficulty rating**	
20	Single track access and return trail to McGillivary Lake, designed for two-way riding. TUO: Nature, Escape, Exercise, Connectivity.		0.6-1	8	Blue	3.6 km
19	Segment of the Alpine Epic ride connecting from the Big Rock Ride to McGillivary Lake. It is anticipated that riders can loop through trail 13, 19, and 20 for a loop or do the larger Altitude XC. Should have lots of small natural TTF's in the trail tread (rocks and roots). TUO: Nature, Escape, Exercise, Connectivity, Challenge		0.6-1	8	Blue	6 km
12	Intermediate difficulty old school single track with tree roots and rocks. Tall trees to provide shade on warm summer days. TUO: Nature, Challenge, Exercise		0.6-1	8	Blue	1.7 km
23	A mix of the historic routing of the Masters Race Course and new single track. Should be tight, twisty, and challenging single track with frequent natural obstacles. Being on a north aspect with large trees it should provide shade for warm summer days. TUO: Escape, Challenge, Exercise		0.4-0.8	12	Black	4.5 km
24	Quality single track completing the loop of #23, on a hillside with nicely spaced trees. Trail 23 & 24 will also allow residents with advanced skills to ride single track right from their door. A bike path and wide multi use trail will service this area for beginner to intermediate riders.		0.4-0.8	12	Black	2.2 km
					Sub total	**18 km**

Phase # 6	Overview:	Provide long distance epic loop with a high quality single track experience				
Trail #		**Trail Purpose & Trail User Objective (TUO)**	**Trail Management Objective**			**Length**
			Tread width (m)	**Average grade %**	**Difficulty rating**	
21		Trails 21 & 22 complete the single track experience of the Epic Alpine Loop to the top of Mt Morrisey and back to the village area. Will make use of existing single track where possible and maximize taking the trail to areas with view and points of interest. Trail should be a mix of old school single track and new machine built trail. Natural TTF's and obstacles should be incorporated wherever possible. TUO: Nature, Escape, Challenge, Exercise, Fun, Play.	0.4-1	12	Black	12.7km
22			0.4-1	12	Black	6.1km
					Subtotal	**18.8 km**

Summary of Phases		Length (km)
Phase 1:	Serves to complete the single track experience of the Altitude XC and Big Rock Ride to the Central Hub of the Village Day lodge.	6.4
Phase 2:	Construct stacked loop riding at the primary riding network at A3. Phase 1 & 2 together should provide for enough riding to satisfy most cross country riders for 1-1.5 days.	12
Phase 3:	Complete the short loops and the exit from the main riding area. Provide trails for lessons and rider progression.	4.8
Phase 4:	Improve the quality of the Alpine Riding offering at Sun Peaks	14.6
Phase 5:	Provide long distance loops to key points of interest and challenging single track	18
Phase 6:	Provide long distance epic loop with a high quality single track experience	18.8
Total		**74.6**

6.0   Conclusion

Sun Peaks has a big opportunity for trail improvement as shown by the feedback from the users. The feedback stems from the need of purpose built single track trails. The proposed trail network with a stack looped pattern and having the day lodge serving as the central hub will fulfill this need and more. It will also provide variability in difficulties to keep the rider challenged and with the addition of Technical Trail Features it will give the rider variety and an enjoyable experience.

With the improvement of Sun Peaks cross country mountain bike riding experience, it will benefit the community through the availability of quality recreation, health benefits, environmental awareness, as well as increasing the tourist attraction which can result in a significant economic benefit.

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7.0 Appendix

Appendix A: References

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