

PROGRESSIVE TRAIL DESIGN AND PROGRESSIVE BIKE RAMPS PRESENTS

FROST FIRE BIKE PARK

MASTER PLAN

FROST FIRE BIKE PARK- MASTER PLAN WALHALLA, ND

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OVERVIEW

The Forst Fire Bike Park is located outside Walhalla, ND in the Pebrina River Gorge. The designed trails will be located on a 80 acre area within the ski area boundary. The trail are mountain bike specific downhill trails that will be served by the ski lifts. In addition to the lift access trails there will be climbing trail that will access the top of the mountain.

Progressive Trail Design and Progressive Bike Ramps were hired by The Frost Fire Ski Area to develop a Master Plan for the trails. The following Frost Fire Bike Park Master Plan is intended to provided recommendations for the overall trails, and an appropriate phasing plan. The Frost Fire Bike Park Master Plan is a valuable planning tool that will provide a strategic guide for future trails.

SITE ASSESSMENT

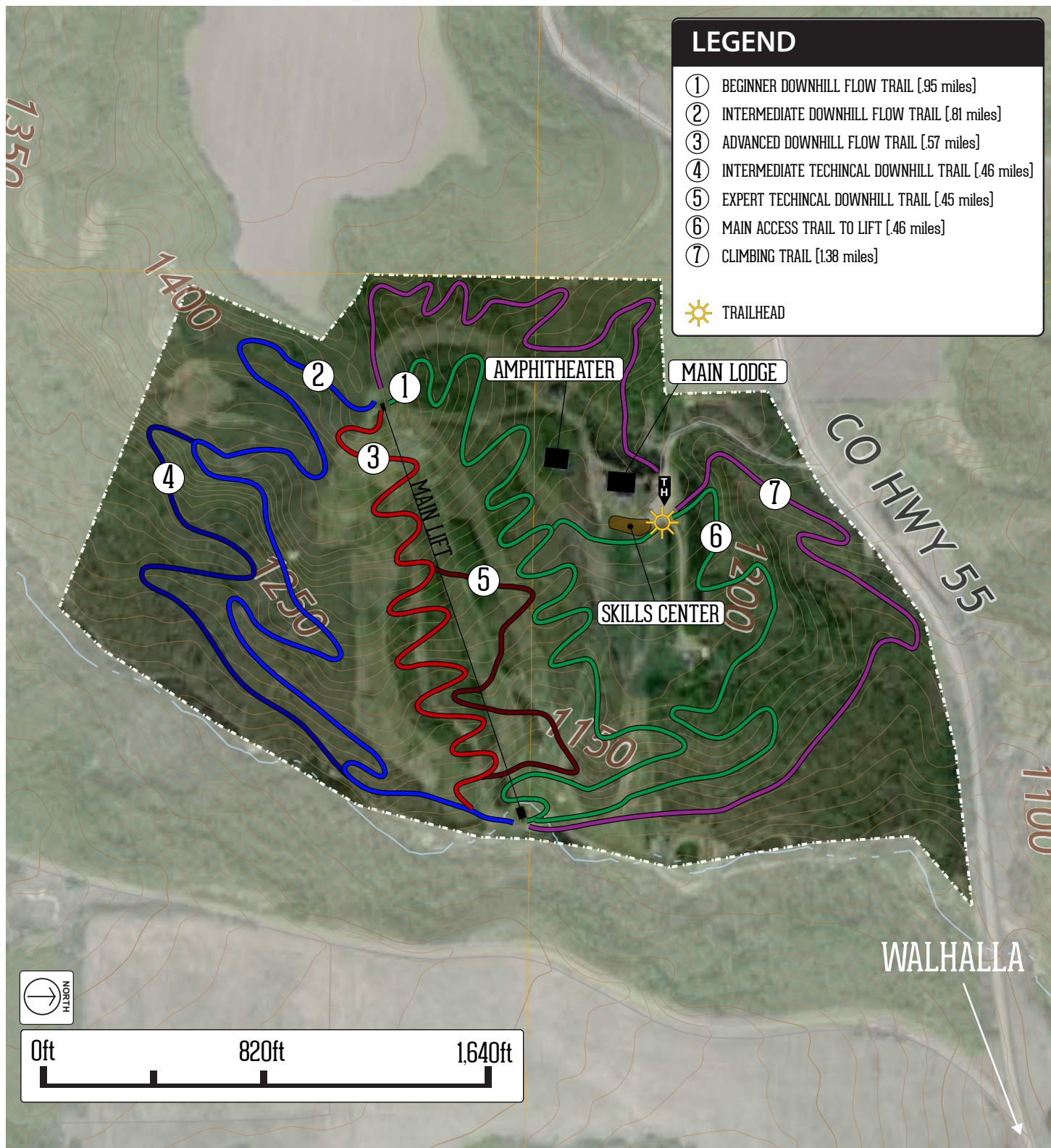
The Frost Fire Ski Area is in the heart of the Pembina River Gorge with beautiful views overlooking the Pembina River. The ski area consists of 2 lifts and 1 magic carpet with 9 ski runs ranging from green [beginner] to black [advanced] in difficulty. The bike park is designed around the triple chair lift and all the gravity trails will begin there. With 300 feet of elevation the ski area provides many opportunities to build a high quality bike park with multiple trails for all levels of riders. The sandy and shale like soils do not provide the best soil types for flow trails, however the use of prefabricated features will provide a low maintenance alternative. There is ample side slopes and wooded areas to provide a variety of trails and draw riders for the surrounding areas to come out and enjoy.

The proposed trails consist of 6 downhill mountain bike trails, 1 climbing trail, and a skills center. The downhill mountain bike trails are designed for different levels of experience from beginner to expert. The climbing trail will allow for riders to access the top of the lift using their own strength. The skills center, located at the main lodge and parking, will allow users to work on their skills before dropping into the trails.

SITE PHOTOS



PROPOSED TRAILS - FROST FIRE BIKE PARK



INTRODUCTION

There are 6 downhill trails, a climbing trail, pumptrack and skills course.

DOWNHILL MOUNTAIN BIKE TRAILS

- 6 distinct mountain bike specific directional downhill trails.
- Beginner downhill flow trail
- Intermediate downhill flow trail
- Expert downhill flow trail
- Intermediate downhill technical trail
- Expert downhill technical trail

CLIMBING TRAIL

- Climbing only trail designed for riders who want to pedal to the top of the mountain instead of using the lift.

SKILLS CENTER

- SKILLS COURSE: Short loop trail with features designed for beginner and novice riders. Near the main lodge and parking.
- PUMP TRACK: Designed as a continuous loop. Custom concrete pumptrack for all level of riders.

It is important to note that all the proposed trails in this plan are conceptual alignments based on fieldwork. They are all subject to be further refined on the ground during the pre-construction final design phase. This plan is to be used as a guide for the future development of the Frost Fire Bike Park.

The trails and skills center final tread will be "Natural Surface" that will range in width and character. They are proposed to provide a diverse experience for a variety of users, introducing difficulty level progression by adding beginner, intermediate, and advanced options. The following pages are a description with support images of the different types of the proposed trails and amenities.



Frost Fire Bike Park
MASTER PLAN
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GRAVITY DOWNHILL TRAILS

The area off of the triple chair offers great opportunities for lift access trails. The trails will all begin at the top of the lift and finish at the bottom utilizing the tree islands as much as possible. The intermediate trails will use the area just outside the ski boundary to the south. This area has not been clear cut for ski runs and provides more opportunities for trails winding through the woods. The other trails will wind through the tree islands in between the ski runs. Due to the low quality soils prefabricated features will be used to provide a low maintenance alternative to dirt jumps and features. On the more technical trails rock will be brought in to create drops and rock gardens throughout the trail.

BEGINNER DH FLOW TRAIL

The Beginner DH flow trail will have small rollers, berms, and dirt jumps built at a beginner level. All of the obstacles on this trail are "rollable" meaning that no matter how fast or slow one rides the trail: one can roll over or roll through the trail with relative ease.

INTERMEDIATE DH FLOW TRAIL

The Intermediate DH flow trail will have larger rollers, berms, prefabricated jumps and technical features throughout the trail. PBR prefabricated kickers will be used for all the jumps with dirt landings. All features will be built at an intermediate level and will not have any mandatory gaps. The intermediate line is designed to be a progressive step up from the beginner line, which will prepare the rider for the expert line.

ADVANCED DH FLOW TRAIL

The Advanced DH flow trail is where each rider needs to be prepared for big moves. The Advanced DH trail will have large rollers, berms, prefabricated jumps, and technical features throughout. All the jumps will be dirt landing with PBR prefabricated kicker. The jumps will be table top, but the distance from lip to landing will be much larger than the intermediate lines. This level of trail will have mandatory drops, big features, and will create a lot of speed. If the "qualifier" [feature that starts each trail] is intimidating then one should reconsider riding this trail as it sets the tone for the trail, and prepares the rider for what lies ahead.





INTERMEDIATE

INTERMEDIATE TECHNICAL DH TRAIL

The Intermediate DH tech trail will be a narrow steep trail with technical rock features throughout. Rock drops and rock gardens will be built into the trail. All features will be built at an intermediate level and will not have any mandatory gaps. The intermediate line is designed to be a progressive step up from the beginner line, which will prepare the rider for the expert line.

EXPERT TECHNICAL DH TRAIL

The Expert DH trail will be steep and technical with large rock drops and rock gardens. This level of trail will have mandatory drops, big features, and will create a lot of speed. It will be built off of the Advanced DH flow trail which will prepare riders for a trail of this level of difficulty.



TECH



TRAIL

CLIMBING TRAIL

The Climbing Trail is designed for uphill mountain bike traffic only. It will be a natural surface single track trail ranging in width from two to three feet. It climbs up from the bottom of the lift and connect to the main lodge and continuing up to the top of the lift. It provides the main access to the downhill trails without taking the lift.



CLIMBING TRAIL



SKILLS COURSE

A Skills Course is a playground-like facility comprised of a variety of elevated features, such as "ladder bridges" and "skinny's", designed to teach balance and technical handling skills. They are commonly constructed in flat open areas. Along with pumptracks they are the core beginner amenities that promote basic bike handling skills before progressing to more advanced features.

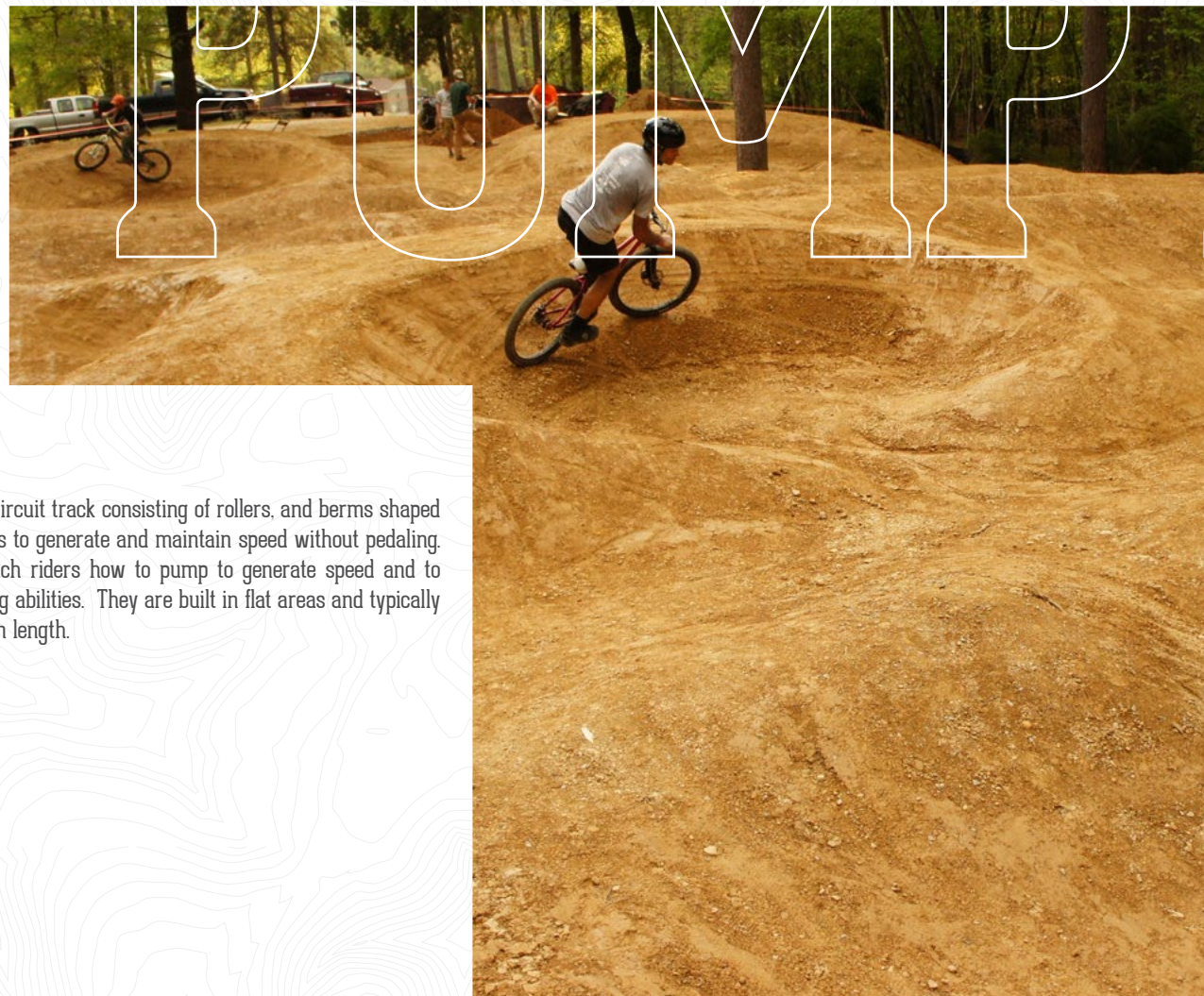


START A PUMP TRACK SKILLS COURSE





PUMPTRACK

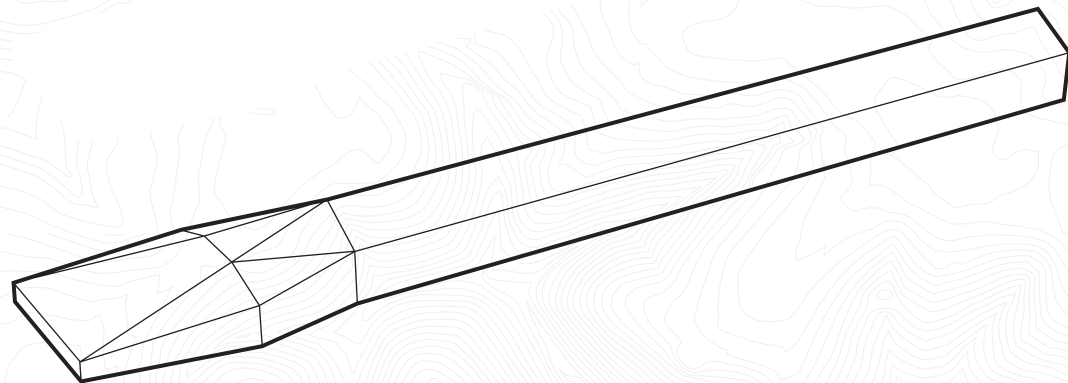
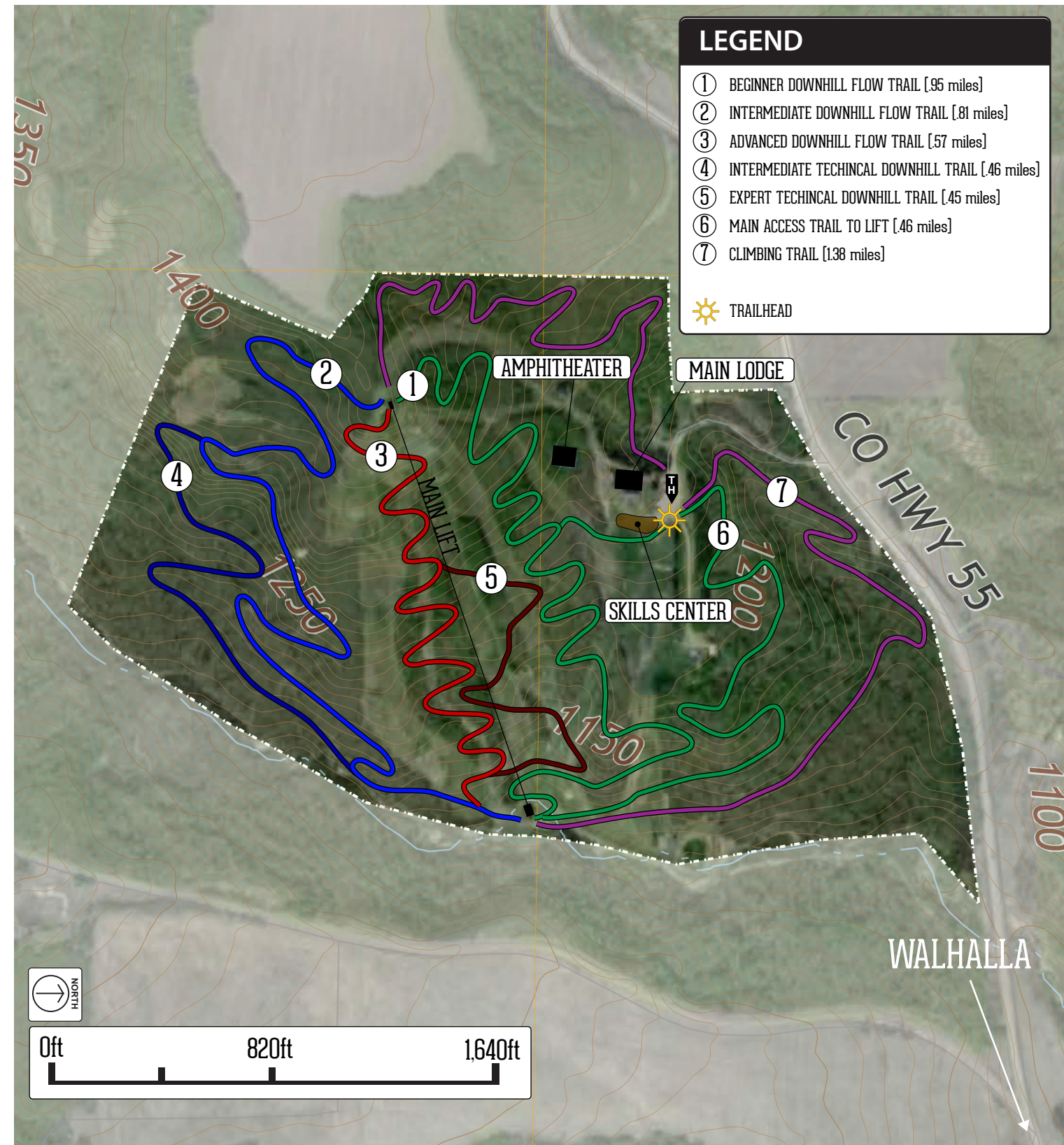


PUMPTRACK

A Pumptrack is a closed circuit track consisting of rollers, and berms shaped and spaced to allow riders to generate and maintain speed without pedaling. They are designed to teach riders how to pump to generate speed and to improve a rider's cornering abilities. They are built in flat areas and typically 125 feet in length to 300' in length.



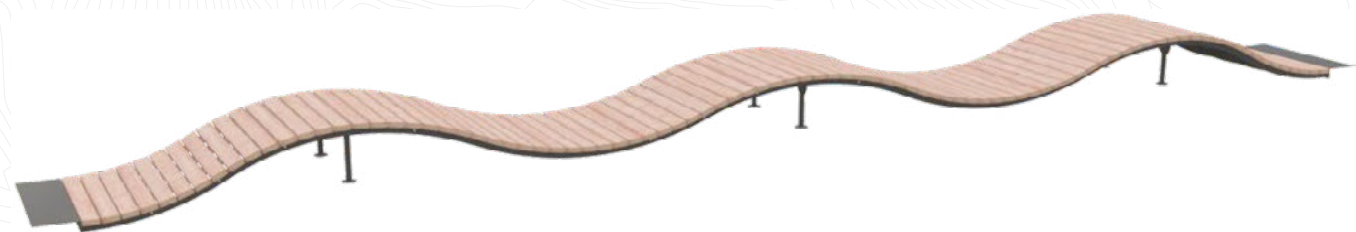
APPENDIX 1: OVERALL MAP



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APPENDIX 2: SKILLS FEATURES

NESSY 3 BUMPS



SLANT WALL



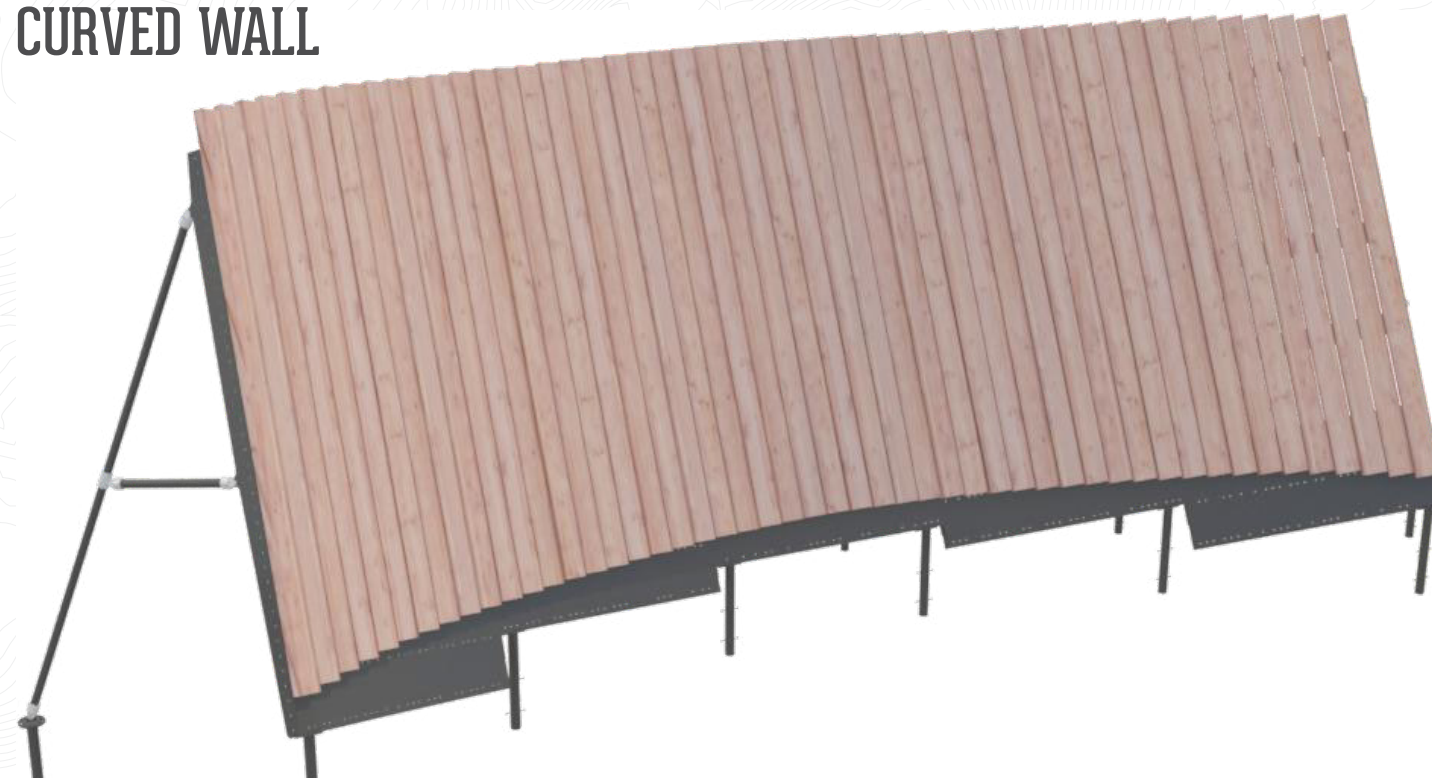
WOOD KICKER



NESSY 2 BUMPS



CURVED WALL



STRAIGHT LADDER



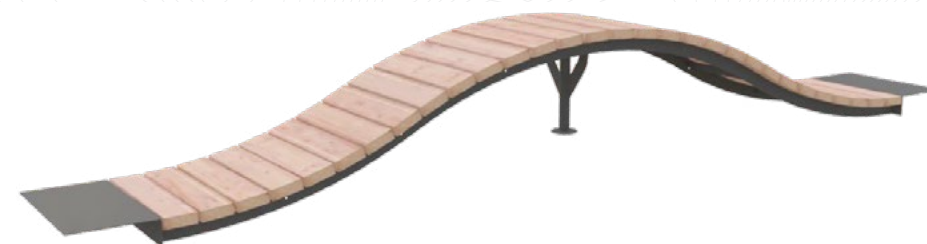
SPLIT DECISION



SKINNY STRAIGHT LADDER



ROLLER



SKINNY MOUNTAIN TOP TWIN PEAKS

