COPPER MOUNTAIN RESORT

MASTER DEVELOPMENT PLAN

2024

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CHAPTER 1. INTRODUCTION

Copper Mountain Resort (CMR) is a destination resort in the White River National Forest (WRNF) that offers mountain adventure for guests of all abilities. In the winter, Copper's celebrated terrain provides skiers and riders access to over 2,500 acres of **developed** skiing and riding. Each summer, the mountain transforms into a playground for hikers, mountain bikers, and outdoor enthusiasts. Year-round CMR plays host to a variety of events and competitions, from world-class races to family fun. Three centralized pedestrian villages provide a vibrant atmosphere at the base of the mountain, complete with slope-side lodging, dining, shopping, and activities. CMR is also home to Woodward Copper and the U.S. Ski Team Speed Center, which facilitate year-round training for athletes of all levels.

A. PLAN VISION AND GOALS

Periodic updates to the resort's Master Development Plan (MDP) are a requirement of CMR's Special Use Permit (SUP) with the WRNF. This MDP is preceded by the 2011 MDP, which was amended in 2015 and 2021.

In the next ten years, CMR's goal is to capitalize on the tremendous potential of the resort's existing Special Use Permit Area (SUP) to meet the ever-growing demand for developed recreational skiing as a regional and destination resort. Copper plans to expand its operational boundary within the current SUP area and upgrade the guest experience with numerous mountain facility upgrades.

CMR's operational objectives are:

- To improve and expand lift served skiing and riding with new operations within the existing SUP.
- To improve on-mountain circulation with lift upgrades and terrain improvements.
- To add guest services outlets commensurate with lift and terrain upgrades.
- To modernize lift and base area infrastructure.
- To expand on the existing summer offerings and trail network.

B. SUMMARY OF THE UPGRADE PLAN

The upgrade plan works to improve circulation around the mountain with updated lift infrastructure, as well as provide guests with access to new and unique terrain within Copper's existing SUP area.

1. LIFT UPGRADES

- Upgrade Timberline Express to a detachable six-person lift (previously approved, planned for 2024 construction)
- Upgrade and realign Lumberjack with a detachable six-person lift (previously approved)
- Upgrade Super Bee to a detachable eight-person lift with a mid-station
- Upgrade and realign Rendezvous to a detachable quad
- Upgrade Excelerator to a detachable six-person lift and extend it downhill
- Upgrade Blackjack to a detachable quad
- Upgrade Mountain Chief to a fixed-grip triple
- Upgrade and extend Alpine to a detachable quad (previously approved)

2. NEW LIFTS

- Thunderbird fixed-grip triple
- Jacque East detachable quad
- Sail Away detachable quad
- Superpipe surface lift in Center Village
- Terrain Park lift in Central Park
- Union Meadows detachable quad

3. TERRAIN IMPROVEMENTS

- Develop new terrain pods in *Tucker Gulch*, *Jacque East* and *Sail Away*
- Glading projects in *17 Glades*, *Sail Away Glades*, *Lyman Glade*, *Enchanted Forest, Union Meadows, Timberline,* and *Seadog* areas
- Realign the catwalk between the Aerie and the new bottom terminal of Rendezvous
- Superpipe grading (previously approved)
- Widen and develop *Copperopolis*, *Carefree*, Clear Cut, *Ptarmigan*, *Upper Main Vein* and *Sail Away* runs
- Various clearing, grading, widening and improvement projects

4. GUEST SERVICES

- T-Rex Grill replacement
- Woodward Summer Camp restrooms and improvements
- R-Saddle Warming Hut (previously approved)
- Flyer's Restaurant replacement

5. OPERATIONS

- 29-Yard maintenance building
- Remote Avalanche Control (RAC) system in *Tucker Gulch*
- *Jacque Peak* and *Copper Bowl* Ski Patrol Outposts
- Various permanent snow fence installations

6. UTILITIES & INFRASTRUCTURE

- Power trenching in western *Copper Bowl*, *Tucker Ridge, West Ridge, and Tucker Gulch*
- Power trenching from Excelerator to Rendezvous (previously approved)
- Extend mountain road to top of Storm King
- Extend utilities from Koko's Restaurant to T-Rex Grill

7. SUMMER

- MTB trail network upgrade (previously approved, under construction)
- The Aerie Summer Activities Center at the top of the American Eagle Lift
- 2019 hiking trail network (previously approved)
- R/S Camping (previously approved)

CHAPTER 2.
EXISTING CONDITIONS

This chapter contains discussion and analysis of existing facilities at CMR. This inventory includes physical resources, lifts, terrain, capacity, guest services, parking and resort access, and operational infrastructure.

The overall balance of the existing resort is evaluated by calculating the capacities of various facilities and then comparing these capacities to the resort's current comfortable carrying capacity (CCC), discussed later in this section. This examination highlights CMR's strengths, weaknesses, opportunities, and constraints as a resort and identifies potential improvements that would bring the existing facilities into better equilibrium. The analysis of existing conditions correlates with Figures two through six.

Creating a thoughtful upgrade plan helps the resort to meet the ever-changing expectations of its market. Progressive implementation of this plan will result in a well-balanced resort that provides an adequate array of services and experiences capable of satisfying guests' expectations for a high-quality recreation experience.

A. TOPOGRAPHY

CMR's topography is defined by four main peaks: *Copper Mountain, Union Peak, Tucker Mountain*, and *Jacque Peak*. At an elevation of 13,205', *Jacque Peak* is the dominating feature in the area. The east ridge of *Jacque Peak* gradually splits to form the north and south sides of *Copper Bowl*, known as *Union Peak* and *Tucker Mountain*. As opposed to the prominence of *Jacque Peak*, these mountains are characterized by their long undulating ridgelines, which offer a variety of skiing on numerous aspects. The east ridge of *Union Peak* drops down to the picturesque Rendezvous saddle before climbing back up to the summit of *Copper Mountain*. The vast northern slopes of *Copper Mountain* and *Union Peak* are home to most of the developed skiing at CMR, including a variety of beginner, intermediate and advanced trails.

B. EXISTING GUEST EXPERIENCE

CMR's success as a world class mountain resort is rooted in its physical characteristics, which are well-suited to a variety of outdoor activities, from skiing to hiking and downhill mountain biking. Regardless of the season, the topography of the resort coupled with its developed infrastructure make CMR a great venue for outdoor adventure.

CMR has three village base areas (West, Center, and East) that are generally new, well-designed, and well-built. Base area lodging options, restaurants, and shopping are plentiful. The existing terrain at CMR has long, consistent fall-lines, topographical separation of terrain of different ability levels, and some of the best teaching terrain in the industry. The lift system is generally efficient and effective. CMR typically receives good snowfall but also has a robust snowmaking system to

expedite the opening of terrain and provide more consistent snow coverage during periods of low snowfall.

In the winter, the primary activity at CMR is alpine skiing. The resort offers high quality skiing for guests of all ability levels—from high alpine bowls to world-class terrain parks to picturesque beginner terrain. The resort offers skiing on all aspects over a large elevation band, giving guests a variety of terrain options. A robust snowmaking system allows for a consistent start to the winter and a durable and dependable snow surface. While wintertime operations focus on downhill skiing and riding, they also include a variety of alternatives to these sports, such as snow tubing, ice skating, cross-country skiing, and uphill ski touring.

In the summer, CMR offers an ever-increasing variety of activities for families, adventure seekers, and those desiring a relaxing vacation. Mountain activities include lift-served downhill mountain biking, hiking and scenic lift rides. Other unique experiences are the on-snow Woodward Summer Camps, the Woodward Wrecktangle obstacle course, a zip-line and go-cart track.

Year-round, CMR operates the Woodward Copper Barn and the Rocky Mountain Coaster. The Woodward Copper Barn is an indoor action sports playground where athletes can improve their skills on indoor progression features. The Rocky Mountain Coaster is an outdoor mountain coaster in the Center Village which operates in both winter and summer. Throughout the year, CMR also operates a variety of supporting amenities. These include guest-service facilities in all three base areas as well as resort-operated dining facilities both in the base areas and on-mountain. CMR also provides several indoor and outdoor locations for conferences, competitions, weddings, and other events.

Despite these attributes, some imbalances exist. These include opportunities for improvements in on-mountain circulation between east and west, a limited amount of intermediate terrain relative to comparable resorts, limited summer activities and limited on-mountain guest service facilities. In the following sections, these deficiencies are described in greater detail.

C. EXISTING LIFT NETWORK

1. SUMMARY OF THE EXISTING LIFT NETWORK

CMR's lift network consists of 25 ski lifts, seven of which are located entirely on private land. Table 1 summarizes the technical specifications for the existing lifts. These lifts include:

- One high-speed detachable hybrid six-passenger chairlift and eight-passenger gondola lift[1]: American Eagle
- Two high-speed detachable six-passenger lifts: Super Bee and American Flyer
- Four high-speed detachable four-passenger lifts: Kokomo Express, Woodward Express, Timberline Express, and Excelerator
- Five fixed-grip triple lifts: Resolution, Lumberjack, Rendezvous, Three Bears and Sierra
- Four fixed-grip double lifts: Alpine, Pitchfork, Blackjack, and Mountain Chief
- Three surface lifts: Storm King (T-bar), Gem (platter) and Celebrity Ridge (platter)
- Four conveyors: The Glide, Easy Rider, Rugrat, and Slingshot

CMR also operates a conveyor lift for its tubing operation, named "Stinger Too," and a conveyor only used in summer for terrain park access, named "Super Tube", bringing its total number of operated lifts to 25. These conveyor lifts are not included in this analysis since they are not used for winter skiing and riding operations.

[1] Typically called a "chondola," "Telemix," or Hybrid Lift

Table 1. Lift Specifications – Existing Conditions

Lift Name/Type	*Top Elevation (ft.)*	*Bottom Elevation (ft.)*	*Vertical Rise (ft.)*	*Slope Length (ft.)*	*Avg. Grade (%)*	*Actual Capacity (pph.)*	*Rope Speed (fpm)*	*Carrier Spacing (ft.)*	*Lift Maker/ Year Installed*
Alpine/C2	11,521	9,787	1,734	5,613	32%	1,067	500	56	Yan 1979
Resolution/C3	11,970	10,549	1,421	4,450	34%	1,200	500	75	Poma 1985
*Gem/S1**	9,804	9,750	54	468	11%	491	406	50	Poma 1972
*Pitchfork/C2**	9,812	9,751	61	535	12%	960	400	50	Yan/Heron 1979
*The Glide/C**	9,819	9,810	9	120	12%	1,500	160	6	Magic Carpet 2017
Excelerator/DC4	12,022	11,182	840	3,217	27%	2,450	1,100	108	Poma 1998
*Easy Rider/C**	9,770	9,762	8	94	8%	720	80	7	Magic Carpet 2000†
American Eagle/TM6/8	11,236	9,760	1,476	6,027	24%	3,372	1,000	125	Poma 2018
Woodward Express/DC4	10,816	9,808	1,008	4,979	21%	2,400	1,000	100	Doppelmayr 2011
Timberline Express/DC4	11,580	10,480	1,101	4,926	22%	2,400	1,100	110	Doppelmayr 1994
Kokomo/DC4	10,172	9,822	350	2,850	12%	1,800	800	107	Doppelmayr 2017
Lumberjack/C3	10,820	10,130	690	4,307	16%	1,800	500	50	Poma 1981
Storm King/S2	12,312	11,850	462	2,034	24%	977	600	74	Doppelmayr 2013
American Flyer/DC6	11,661	9,770	1,891	9,836	19%	3,200	1,000	113	Poma 2018
Rendezvous/C3	11,877	11,354	524	3,400	16%	1,800	500	50	Yan 1982
*RugRat/C**	9,822	9,812	10	60	10%	1,500	115	5	Magic Carpet 2017
Sierra/C3	12,119	11,377	741	3,014	25%	1,200	500	75	Yan 1983
Super Bee/DC6	11,996	9,710	2,286	8,870	27%	2,980	1,100	133	Poma 1998
*Slingshot/C**	9,843	9,834	9	120	6%	1,500	160	6	Magic Carpet 2017
Blackjack/C2	11,926	11,167	758	2,352	33%	1,200	500	50	Yan 1973†
Mountain Chief/C2	12,293	11,498	795	2,490	34%	1,200	500	50	Yan 1977†
Celebrity Ridge/S	12,288	12,025	263	879	31%	513	300	35	Doppelmayr 2013
Three Bears/C3	12,327	11,165	1,162	3,219	39%	1,200	500	75	Poma 2019
Super Tube/C	10,593	10,382	211	964	22%	1,200	160	8	Magic Carpet
*Stinger Too/C**	9,770	9,710	60	361	17%	1,960	160	5	Sun Kid 2005

2. EXISTING LIFT NETWORK SUMMARY

Optimal lift design serves the available ski terrain in an efficient manner, while being sensitive to environmental considerations. A myriad of factors are considered in lift placement, including wind conditions, visual impacts, wetlands, round-trip skiing, access needs, interconnect ability between other lifts and trails, and the need for circulation space at the lower and upper terminal sites.

Since the 2011 Copper Mountain MDP, the construction of the Woodward Express, Storm King, Celebrity Ridge, Kokomo Express, American Flyer, American Eagle and Three Bears lifts has improved guest transport out of the base areas, facilitated skier circulation on-mountain, and provided access to new terrain. The bottom terminals of Alpine and Blackjack lifts have also been replaced to similar ends.

One ongoing challenge with the lift network is skier circulation between the Copper and Union Peak areas (both east-to-west and west-to-east). This can force skiers to frequently return to the base area lifts or stay on one side of the mountain. It can also lead to constraints at the limited on-mountain guest service facilities, forcing many skiers and riders to descend to the base area for services and use the base area lifts to ski and ride.

The following sections provide a qualitative description of CMR's existing lift network. Lifts are grouped by the following locations: West Village, Center Village, East Village, Frontside of *Copper Mountain*, Frontside of Union Peak, and Copper Bowl.

A) WEST VILLAGE

West Village is CMR's beginner- and novice-oriented base area. West Village also serves as the primary base for guests accessing the Woodward terrain parks. Two chairlifts and three carpet conveyors serve beginners, and an additional chairlift and carpet conveyor serve low intermediate riders and terrain park users.

Woodward Express

Woodward Express is the main out-of-base lift for the West Village. The lift was constructed in 2011 and accesses novice and low intermediate terrain, as well as the resort's primary terrain parks. In addition, Woodward Express is the main connection for skiers travelling from West to Center Village. Woodward Express is one of the two lifts utilized for downhill mountain biking access in the summer.

Kokomo Express

Kokomo Express is an out-of-base lift that is used by novice skiers and riders. It effectively serves as both an access lift to Lumberjack Lift and as a step in the beginner progression for skiers and riders who are ready to move on from the West Village carpet conveyors. Kokomo Express was upgraded to a high-speed detachable quad in 2017. Koko's Restaurant is located adjacent to the top terminal of Kokomo Express.

Lumberjack

Lumberjack Lift is accessed primarily via Kokomo Express. It serves as the next step in the progression for beginner and novice skiers and riders looking to advance their skills. It is a fixed-

grip triple constructed in 1981. Lumberjack is antiquated and underutilized and was approved for extension and replacement in 2021.

West Village Carpet Conveyors

Three carpet conveyors (Rugrat, Slingshot and Glide) ascend sequentially on terrain adjacent to the Copper Mountain Schoolhouse. These carpets are used for beginner and children's lessons.

Super Tube

Super Tube is a carpet conveyor lift located about halfway up Woodward Express, on the edge of the *Central Park* terrain park. This conveyor is exclusively operated in the late spring and early summer months as part of Woodward's summer training program. Since this conveyor does not operate during CMR's winter season, it is not shown on the existing condition figures or included in the capacity analysis.

B) CENTER VILLAGE

Center Village is CMR's main base area. Both of the Center Village out-of-base lifts have recently been upgraded and generally serve their functions well. However, the combinations of challenging on-mountain circulation and lack of on-mountain facilities can still result in occasional congestion on busy days.

American Flyer

American Flyer is the longest lift at CMR. Replaced in 2018, this high-speed detachable six-person bubble chair provides out-of-base capacity and access to popular repeat-ski terrain. American Flyer's primary constraint is its popularity. This lift experiences high demand in the morning and after lunch, since many guests use this lift to access upper-mountain lifts but must return to a base area for lunch. American Flyer's recent upgrade has alleviated some of this issue.

American Eagle

American Eagle is the other lift out of Center Village. It provides out-of-base access to popular intermediate-level repeat-ski terrain. In 2018, the American Eagle was upgraded to a detachable hybrid gondola and six-person chairlift. This upgrade increased capacity and improved access for non-skiing winter guests to Solitude Station, an on-mountain restaurant located near the lift's upper terminal. The top terminal is designed to interface directly with The Aerie mid-mountain lodge. The American Eagle is used in the summer months for scenic chairlift rides, and access to hiking, mountain biking and wedding venues.

Teaching Lifts in Center Village

Pitchfork, Gem, and Easy Rider are a fixed-grip double chairlift, a surface tow, and a carpet conveyor, respectively. They are located on private property adjacent to Center Village and provide additional options for beginner skiers. They are the main areas for beginner skiing in the early season when the West Village base area has not yet opened.

C) EAST VILLAGE

The third of CMR's three base areas, East Village primarily services advanced and expert terrain. Historically, the out-of-base capacity of the East Village has exceeded the number of guests

staging from this area. However, this portal has recently increased in popularity. The East Village is also home of the U.S. Ski Team Speed Center and Alpine Technical Center.

Super Bee

Super Bee is the primary out-of-base lift in the East Village. It is popular as both an access lift and as a means to lap the intermediate and advanced trails below it. Installed in 1998, Super Bee is among the oldest detachable lifts on the mountain.

Alpine Lift

The Alpine Lift is located to the southeast of East Village and is among the oldest lifts at CMR. Alpine Lift is a fixed-grip double that is over a mile long and has the longest ride time at CMR. It accesses advanced- and expert-level terrain and serves the important function of providing upper-level skiers with a good option when weather conditions limit access to the upper mountain. There are currently no guest service facilities at the base of the lift. Due to these factors the Alpine Lift is generally underutilized. Alpine Lift was approved for replacement and extension in 2006.

The private property surrounding the bottom terminal of Alpine Lift is currently under redevelopment.

D) FRONTSIDE OF COPPER MOUNTAIN

Above East and Center Villages is the peak of *Copper Mountain*. Its terrain is primarily accessed from the villages by riding Super Bee or American Eagle. Much of the skiing in this area is advanced and expert terrain, and the circulation provided by its lifts is mostly acceptable for the more advanced skiers and riders.

Resolution Lift

The Resolution Lift serves expert terrain on the east-facing slope of *Copper Peak*. The lift was constructed in 1985 and is over 4,000 feet in length. This fixed-grip triple is an older lift and has a longer ride, yet the lift is in good condition and effectively serves its terrain.

Storm King Surface Lift

Storm King is a T-bar that provides access to the upper reaches of *Copper Mountain*. This lift serves a small amount of terrain for repeat-skiing, but it is primarily used to access the *Spaulding Bowl* area, which is repeat-skied in a two-lift circuit that includes the Resolution and Storm King lifts. The Storm King Lift is also one of three ways to access the *Copper Bowl* area from the frontside of CMR. It was replaced in 2013 and serves its function effectively.

Excelerator Lift

Built in 1998, the Excelerator lift accesses intermediate and advanced terrain on the north to northwest-facing slopes of *Copper Mountain*. Both the lift and its terrain see high levels of use. Excelerator functions well for repeat-skiing and is easily accessed from Super Bee and American Eagle/Solitude Station. Excelerator is used as the primary lift for spring and fall race training.

E) FRONTSIDE OF UNION PEAK

Above the West Village is *Union Peak*. The northern reaches of *Union Peak* provide diverse terrain for skiers of all ability levels. While the lift network in this zone does an acceptable job of fulfilling

guest expectations, it does not facilitate easy access to large areas of skiable terrain (such as *Union Meadows*) within CMR's current operational boundary.

Timberline Express

Timberline Express is the most popular intermediate-level lift at CMR. It provides access to numerous long, consistent, fall-line intermediate trails and is a natural progression from Kokomo and Lumberjack lifts. This detachable quad was built in 1994 and is the oldest detachable lift at Copper. Timberline Express was approved for replacement in 2023 and construction is planned for Summer 2024.

Rendezvous Lift

Constructed in 1982, the Rendezvous Lift is a fixed-grip triple that serves novice through intermediate-level terrain on the upper-mountain. Rendezvous is exceptional in that it provides novice and intermediate skiers access to high alpine terrain. The lift is also one of three ways to access the *Copper Bowl* area, and it is the only way to do so for intermediate skiers and riders.

Sierra Lift

The Sierra Lift is a fixed-grip triple constructed in 1983. It accesses advanced and expert terrain off of *Union Peak*. The top terminal of the lift is located well below the top of *Union Peak*. To access *Copper Bowl* from Sierra, skiers must hike or use the Celebrity Ridge surface lift.

Celebrity Ridge

Celebrity Ridge is a platter surface lift that transports guests from the *Far West* run below Sierra to the top of *Union Peak*. Its upper terminal is adjacent to that of the Mountain Chief Lift. Celebrity Ridge is primarily a transport lift: it enables guests to access *Copper Bowl* from Sierra without taking Rendezvous or Storm King. The lift also provides access to the upper section of the *Union Meadows* terrain area.

F) COPPER BOWL

Copper Bowl is a high-alpine area that offers a unique experience with stunning views, expert terrain, and a remote feel. It can be accessed via Rendezvous, Celebrity Ridge platter, or the Storm King T-bar. All of the lifts in Copper Bowl are fixed-grip.

Blackjack Lift

Blackjack is a fixed-grip double chairlift installed in 1996 which provides access to the lower elevation terrain on the northeast side of *Copper Bowl*. Blackjack also serves as a primary egress lift from *Copper Bowl* to the frontside of the resort. A top-to-bottom intermediate run allows non-expert skiers to experience *Copper Bowl*.

Mountain Chief

Installed in 1995, Mountain Chief is a fixed-grip double chairlift that accesses the top of *Union Peak* in *Copper Bowl*. From the summit, skiers can hike west towards *Jacque Peak* to access various parts of *Copper Bowl* or ski the north facing aspect of *Union Peak*.

Three Bears

Installed in 2019, Three Bears is the most recent addition to CMR's lift network. It is a fixed-grip triple that ascends from a location adjacent to the bottom terminal of Blackjack up Tucker Mountain on the south side of *Copper Bowl*. It exclusively provides access to north- facing expert terrain. This lift effectively serves the expert skiers and riders who use it.

D. EXISTING TERRAIN NETWORK

CMR's current SUP with the United States Forest Service (USFS) covers 7,343 acres. Within its SUP, CMR has established an operational boundary. This boundary delineates the extent of the presently developed, maintained, and patrolled ski area. In some areas, the operational boundary is contiguous with the SUP boundary; in other areas, it is not. CMR's existing operational boundary encompasses approximately 3,641 total acres within the SUP—of this area 1,909 acres are "developed" or regularly skied and maintained (including CMR's developed high alpine terrain). For details about the existing condition terrain specifications, refer to Appendix A.

1. TERRAIN NETWORK

Evaluating a terrain network requires consideration of terrain variety and of distribution of terrain by ability level. Terrain ability level designations in this document are based on slope gradients and terrain features. Ability level designations for this analysis are based on the maximum sustained gradient calculated for each trail. Short sections of a trail can be more or less steep without affecting the overall run designation. For example, novice skiers are typically not intimidated by short, steeper pitches of slope, but a sustained steeper pitch may cause the trail to be classified with a higher difficulty rating.

CMR's existing trail network accommodates the entire range of skier ability levels from beginner to expert. Within this area is approximately 1,909 acres of developed ski trails—named, defined, lift-served, maintained runs and also much of CMR's high alpine terrain as shown in Appendix A. The remaining 629 acres are made up of comparatively undeveloped gladed areas throughout the resort.

TERRAIN TYPOLOGY AT COPPER

1. DEVELOPED ALPINE TERRAIN — The existing developed, or formalized, alpine terrain network at CMR consists of the resort's named, defined, lift-serviced, maintained trails. Despite the importance of undeveloped, alternate-style terrain, formalized runs represent the baseline of the terrain at ski areas, as they are where the majority of guests ski and/or ride. As such, the developed trail network represents an accurate picture of the acreage utilized by the average skier or rider on a consistent basis, as well as that used by virtually all guests during the early season and in inclement weather. Thus, the full capacity of the resort must be accommodated by the total acreage of the developed terrain network, rather than relying on undeveloped terrain (which is not always available). Out of the 1,909 acres of total developed terrain, 1,200 acres falls under this category.

2. DEVELOPED HIGH ALPINE TERRAIN — CMR's high-alpine terrain has become a signature of the resort. Due to its accessibility both from lift infrastructure and operational maintenance, this terrain is regularly skied by guests of a variety of ability levels and is more in-line with Developed

Alpine Terrain than Undeveloped Terrain although it may feature some chutes, bowls, or glades. This terrain is most suitable for advanced to expert guests. The remainder of developed terrain at Copper is considered "high alpine" terrain (approximately 709 acres).

3. UNDEVELOPED TERRAIN — Undeveloped terrain consists of unnamed terrain that is routinely skied but less accessible by mountain operations or lifts. The topography within the existing ski area includes steeper terrain and glades intermingled within, and outside of, the developed and maintained terrain network or regularly accessed high alpine terrain. There are also densely treed and less accessible gladed areas, consisting primarily of the natural (non-thinned or maintained) forested areas between the defined skiing areas and ski runs, and also accounts for some of the less accessible treed areas at CMR. Approximately 1,732 acres are considered undeveloped terrain.

4. UNDEVELOPED TERRAIN OUTSIDE THE OPERATIONAL BOUNDARY— This terrain type consists of the terrain within the SUP boundary but outside of the operational boundary. This also includes developed areas within the SUP boundary such as parking lots. This consists of approximately 3,702 acres of terrain.

2. SUMMARY OF THE EXISTING TERRAIN NETWORK

CMR's terrain is generally divided between the *Frontside Terrain*, which is directly skied from the different base areas, *Union Peak*, *Copper Mountain* and *Copper Bowl*. Cross-mountain circulation can be challenging due to topographic constraints. This results in skiers and riders needing to take multiple lifts or descend to the base area to get from one side to the other or staying largely on one side of the mountain. *Copper Bowl* is a separate terrain pod that can be accessed from both the *Copper Mountain* and *Union Peak* areas.

A) WEST, CENTER, AND EAST VILLAGES

CMR's current trail system accommodates skiers and riders of all ability levels. West Village offers most of the resort's beginner trails, Center Village primarily serves intermediate terrain, and East Village caters to advanced skiers and riders.

B) COPPER MOUNTAIN

The upper portions of *Copper Mountain* include advanced and expert terrain in *Resolution Bowl*, *Spaulding Bowl*, and the steep glades connecting the Storm King Platter with the Rendezvous Lift. On *Copper Mountain's* frontside, numerous intermediate trails and one novice trail allow lower-level skiers and riders to experience this area.

C) UNION PEAK

The upper portions of *Union Peak* include the advanced and expert terrain served by the Sierra Lift, as well as the intermediate trails served by the Rendezvous Lift. With some effort, skiers and riders may traverse west and access the relatively undeveloped *Union Meadows* area. This area funnels

into a run called *Waterfall Road,* which feeds into the popular pod of intermediate terrain served by the Timberline Express.

D) COPPER BOWL

South of *Union Peak* lies *Copper Bowl*—CMR's lift-served expert skiing. Most of this terrain is above tree line, and the bowl has a distant, adventurous feel. A single intermediate run allows intermediate-level skiers to experience this terrain.

3. UNDEVELOPED TERRAIN OUTSIDE THE EXISTING OPERATIONS BOUNDARY

Terrain that is located outside of CMR's existing operational boundary accounts for the remaining 3,702 acres of CMR's SUP. Portions of this area, including Jacque Peak and the terrain on the southside of Tucker Mountain, are well-suited to future lift-served developed skiing. Other areas are utilized for ancillary operations, such as parking in the Far East Lot and cross-country skiing.

The entire SUP is within USFS Management Area 8.25 ("Ski Based Resorts, Existing and Potential") as designated within the 2002 Revised White River National Forest Land and Resource Management Plan (Forest Plan). As such, all portions of the CMR SUP boundary have been established in the Forest Plan as being allocated to lift-served Alpine skiing opportunities.

Presently, there is one Forest Service access point along CMR's operational boundary located along the skier's left edge of West Ten Mile trail. This access point provides an established exit for skiers wishing to access terrain within the Guller Creek drainage. This is additionally the principal access route for skiers heading to "Janet's Cabin," which is operated by the Summit Huts Association.

IMPORTANCE OF TERRAIN VARIETY

Terrain variety is considered the key factor in evaluating the quality of the actual skiing and riding guest experience (as opposed to total acreage, vertical, grooming, or any other factor).

Terrain variety is consistently ranked as one of the most important criteria in skiers' choice of a ski destination, typically behind only snow quality, and ahead of such other considerations as lifts, value, accessibility, resort service, and others. This is a relatively recent industry trend, representing an evolution in skier/rider tastes and expectations. The implication of the importance of terrain variety is that a resort must have a diverse, interesting, and well-designed developed trail system, but also must have a wide variety of alternate-style terrain, such as mogul runs, bowls, gladed trees, open parks, in-bounds "backcountry-style" (i.e., hike-to) terrain, and terrain parks and pipes. At resorts across the nation, there is a growing trend favoring these more natural, unstructured types of terrain, since the availability of this style of terrain has become one of the more important factors in terms of a resort's ability to retain guests, both for longer durations of visitation and for repeat business.

To provide the highest quality guest experience, resorts should offer groomed runs of all ability levels and some level of each of the undeveloped terrain types. Undeveloped terrain is primarily used by advanced and expert level skiers/riders during desirable conditions (e.g., periods of fresh snow, spring corn, etc.). Even though some of these types of terrain only provide skiing/riding opportunities when conditions warrant, they represent the most intriguing terrain, and typically are the areas that skiers/riders strive to access.

4. TERRAIN DISTRIBUTION BY ABILITY LEVEL

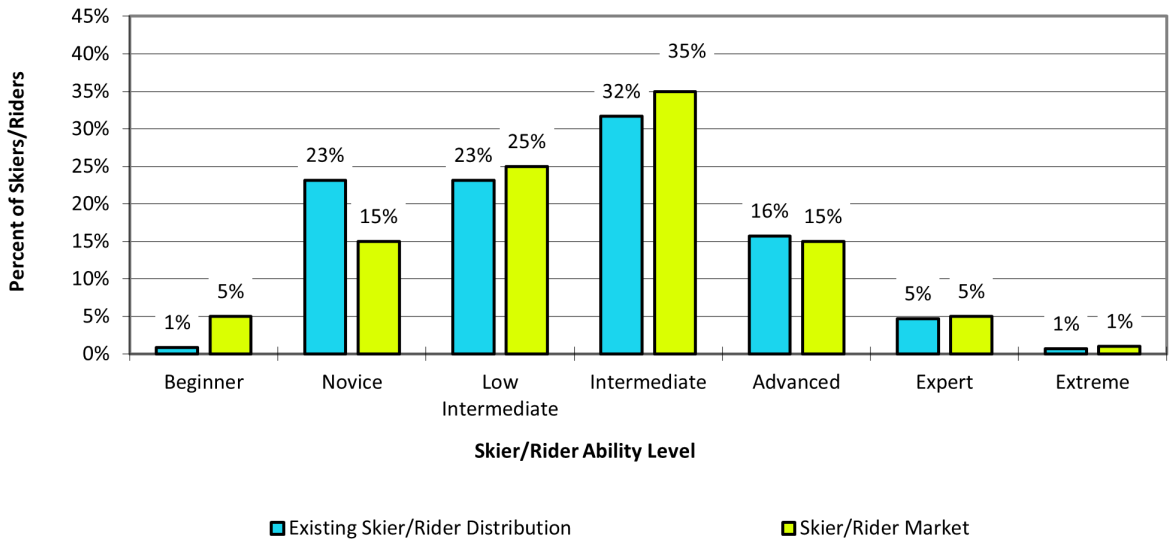
This terrain distribution analysis considers the 1,909 acres within the developed terrain network at CMR. The table below compares Copper's skier ability breakdown to the ideal skier ability breakdown. The current terrain distribution at CMR shows a shortage of beginner and intermediate terrain, and a surplus in novice terrain. Low intermediate, advanced and expert terrain are roughly aligned with the ideal skier ability breakdown.

Table 2. Terrain Distribution by Ability Level – Existing Conditions

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	3.1	94	1%	5%
Novice	158.6	2,538	23%	15%
Low Intermediate	253.7	2,537	23%	25%
Intermediate	433.7	3,469	32%	35%
Advanced – *Traditional*	226.5	1,359	16%	15%
Advanced – B*owl/Hike To*	363.7	364		
Expert – *Traditional*	120.0	240	5%	5%
Expert – *Bowl/Hike To*	275.2	275		
Extreme - *Traditional*	5.2	5	1%	1%
Extreme – *Bowl/Hike To*	69.3	69		
TOTAL	**1,909.1**	**10,950**	**100%**	**100%**

Source: SE Group

Chart 1. Terrain Distribution by Ability Level – Existing Conditions



E. EXISTING CAPACITY ANALYSIS

1. COMFORTABLE CARRYING CAPACITY

As required by CMR's SUP, a detailed calculation of CMR's existing CCC was completed for this MDP, as shown in the following table. Under existing conditions, CMR's CCC is calculated at 12,940 guests.

WHAT IS COMFORTABLE CARRYING CAPACITY?

In ski area planning, a "comfortable carrying capacity" (CCC) is established, which represents a daily guest population to which all ski resort functions are balanced. CCC is a planning parameter that is used to establish the recommended size of the primary facilities of a ski resort: ski lifts, ski terrain, guest services, restaurant seats, building space, utilities, parking, etc.

Accordingly, the design capacity does not indicate a maximum level of visitation or a "cap" on visitation, but rather the number of visitors that can be "comfortably" accommodated on a daily basis. It is understood that peak day visitation will always exceed the resort's CCC. Peak days, or days when the visitation level exceeds the CCC, typically occur approximately 10 days per year, with the highest peak day visitation at most resorts being at around 10% - 25% higher than the design capacity.

The accurate estimation of the CCC of a mountain is a complex issue and is the single most important planning criterion for the resort. Related skier services, including restaurant seating, restrooms, parking, and others, are planned around the mountain's capacity.

CCC is derived from the resort's supply of uphill lift capacity and demand for vertical feet of skiing, and it factors in the total amount of time spent waiting in the lift line, on the lift itself, and in the descent.

Table 3. Comfortable Carrying Capacity – Existing Conditions

Lift Name/Type	*Slope Length (ft.)*	*Vertical Rise (ft.)*	*Actual Capacity (pph)*	*Operating Hours (hrs.)*	*Up-Mtn Access Role (%)*	*Misload/ Lift Stoppages (%)*	*Adjusted Hourly (pph)*	*VTF/ Day (000)*	*Vertical Demand (ft./day)*	*CCC (guests)*
Alpine/C2	5,613	1,734	1,067	7.00	0	5	1,014	12,302	22,057	560
Resolution/C3	4,450	1,421	1,200	6.50	0	5	1,140	10,531	19,623	540
Gem/S1	468	54	491	7.00	0	5	467	175	4,308	40
Pitchfork/C2	535	61	960	7.00	0	15	816	349	2,764	130
The Glide/C	120	9	1,500	7.00	0	0	1,500	89	1,596	60
Excelerator/DC4	3,217	840	2,450	6.75	20	5	1,838	10,416	13,862	750
Easy Rider/C	94	8	720	7.00	0	0	720	40	1,209	30
American Eagle/TM6/8	6,027	1,476	3,372	7.00	25	20	1,855	19,164	13,688	1,400
Woodward Express/DC4	4,979	1,008	2,400	7.00	25	5	1,680	11,854	12,949	920
Timberline Express/DC4	4,926	1,101	2,400	6.75	10	5	2,040	15,155	13,194	1,150
Kokomo/DC4	2,850	350	1,800	7.00	30	10	1,080	2,646	3,988	660
Lumberjack/C3	4,307	690	1,800	6.75	10	30	1,080	5,034	7,720	650
Storm King/S2	2,034	462	977	6.25	20	10	684	1,975	10,610	190
American Flyer/DC6	9,836	1,891	3,200	7.00	25	10	2,080	27,526	12,097	2,280
Rendezvous/C3	3,400	524	1,800	6.50	15	10	1,350	4,594	7,254	630
Rugrat/C	60	10	1,500	7.00	0	0	1,500	100	2,902	30
Sierra/C3	3,014	741	1,200	6.75	5	5	1,080	5,404	16,064	340
Super Bee/DC6	8,870	2,286	2,980	7.00	25	5	2,086	33,377	20,851	1,600
Slingshot/C	120	9	1,500	7.00	0	0	1,500	95	1,690	60
Blackjack/C2	2,352	758	1,200	6.25	0	5	1,140	5,403	21,067	260
Mountain Chief/C2	2,490	795	1,200	6.25	0	5	1,140	5,668	17,180	330
Celebrity Ridge/S	879	263	513	6.25	75	5	103	169	12,896	10
Three Bears/C3	3,219	1,162	1,200	6.00	0	5	1,140	7,948	24,708	320
Total	**73,860**		**37,430**				**29,031**	**180,014**		**12,940**

2. DENSITY ANALYSIS

The density analysis in this section compares the uphill and downhill capacities at CMR. At any one time, skiers and riders are dispersed throughout the ski area, using guest facilities and milling areas, waiting in lift mazes, riding lifts, or descending on ski terrain. For the trail density analysis, 25% of each lift's CCC is presumed to be "inactive" (i.e., using guest service facilities or milling areas and otherwise not actively skiing or riding lifts).

BALANCING UPHILL AND DOWNHILL CAPACITIES

An important aspect of resort design is the balancing of uphill lift capacity with downhill trail capacity. Trail densities are derived by comparing the uphill, at-one-time capacity of each individual lift pod (CCC) with the trail acreage associated with that lift pod. The trail density analysis considers only the acreage associated with the developed trail network. A high trail density can restrict skiing space, degrade snow conditions, and detract from the recreational experience. A low trail density can indicate under-utilization of the existing terrain and inefficient operations.

Trail density is calculated for each lift pod by dividing the number of guests on the trails by the amount of trail area within the lift pod. The trail density analysis provides each lift pod with a "density index" score, comparing the calculated trail density for each lift pod to the desired trail density for that pod (i.e., the product of the ideal trail density for each ability level and the lift's trail distribution by ability level). This density index is then averaged across lift pods, resulting in a density index for the ski area.

An optimal density index is 100%, as lift and terrain capacity are perfectly balanced in this condition. A lift pod density index above 100% indicates that the lift can serve more guests than its terrain can comfortably accommodate. A lift pod density index below 100% indicates that terrain can comfortably accommodate more guests than its lift can serve. Note that density analysis is not performed on carpet conveyor lifts or lifts with an exclusively up-mountain access role.

The following table shows that CMR's average density index is 61%, indicating that CMR's existing terrain could comfortably accommodate more guests than its lifts can serve. It is not uncommon for ski areas to have an average density index below 100%, as lower trail densities generally reflect higher quality recreation experiences. This low-density index can be partially attributed to the amount of open bowl and hike-to terrain routinely skied and included in the analysis. These types of terrain do not incur the same costs as traditional developed terrain because there is not grooming or snowmaking in these areas. However, CMR's low density index indicates that its terrain is underutilized—particularly its upper-mountain terrain. Maintaining a higher quantity of terrain than necessary results in inefficient resource allocation. To improve its resource allocation and density index, CMR should increase the capacities of its existing lifts or add new lifts, particularly on its upper-mountain terrain.

Table 4. Density Analysis – Existing Conditions

Lift Name	*CCC*	*Support Fac./Milling (guests)*	*In Lines (guests)*	*On Lift (guests)*	*On Terrain (guests)*	*Terrain Area (acres)*	*Terrain Density (guests/ac.)*	*Desired Density (guests/ac.)*	*Diff. (+/-)*	*Index (%)*
Alpine/C2	560	140	34	190	196	80.0	2	5	-3	40%
Resolution/C3	540	135	95	169	141	124.6	1	2	-1	48%
Pitchfork/C2	130	33	27	18	52	3.2	16	16	0	100%
Excelerator/DC4	750	188	214	90	258	78.6	3	6	-3	46%
American Eagle/TM6/8	1,400	350	309	186	555	115.6	5	9	-4	56%
Woodward Express/DC4	920	230	140	139	411	85.7	5	11	-6	46%
Timberline Express/DC4	1,150	288	238	152	472	148.6	3	9	-6	33%
Kokomo/DC4	660	165	126	64	305	15.0	20	16	4	129%
Lumberjack/C3	650	163	36	155	296	67.8	4	15	-11	26%
Storm King/S2	190	48	80	39	23	100.7	0.2	6	-6	4%
American Flyer/DC6	2,280	570	347	341	1,022	127.9	8	11	-3	71%
Rendezvous/C3	630	158	45	153	274	47.9	6	10	-4	60%
Sierra/C3	340	85	54	109	92	156.0	1	4	-3	24%
Super Bee/DC6	1,600	400	243	280	677	149.2	5	7	-2	67%
Blackjack/C2	260	65	38	89	68	60.1	1	3	-2	35%
Mountain Chief/C2	330	83	95	95	57	63.0	1	1	0	84%
Celebrity Ridge/S	10	2	0	5	3	176.9	0.02	1	-1	2%
Three Bears/C3	320	48	38	122	112	305.1	0.4	1	-1	35%
TOTAL	**12,720**	**3,151**	**2,159**	**2,396**	**5,014**	**1,905.9**	**5.3**	**9**	**-3**	**61%**

Source*: SE Group*

Notes*:* Lift Types: Conv = carpet conveyor / S1 = platter surface lift / S2 = T-bar surface lift / C2 *= fixed-grip double chairlift /* C3 *= fixed-grip triple chairlift /* DC4 *= detachable four-passenger chairlift / DC6 = detachable six-passenger chairlift / DT6+8 = detachable Telemix 6-chair & 8 gondola lift*

3. LIFT AND TERRAIN NETWORK EFFICIENCY

CMR places high value on overall resort efficiency. This relates not only to energy efficiency and operational efficiency, but also to efficiency of the design and layout of the resort. The concept is to have a well-balanced lift and trail network (i.e., the uphill lift capacity balances with the downhill trail capacity that it serves) that is efficiently served by its lifts, while maintaining desired CCC rates, circulation routes, and service to the full spectrum of skier ability levels and types.

A) LIFT NETWORK EFFICIENCY

Within the context of ski area design, the term "lift network efficiency" refers to the amount of effort and cost required to operate and maintain the lift network, as compared to the number of guests served (i.e., the daily capacity or CCC). The energy and costs related to the ski area efficiency include, but are not limited to power use, operational labor, maintenance costs and labor, increased indirect administrative costs, and various direct and indirect costs associated with higher staff levels to perform these tasks. From this standpoint, the most efficient scenario is to have the fewest number of lifts possible that can comfortably and effectively serve the capacity and circulation requirements of the resort, while creating a balance of capacity with the available terrain.

One way to analyze "lift network efficiency" is to calculate the average CCC per lift at a given resort. While this calculation does not relate to the overall capacity of the resort, it can indicate if: 1) the resort is not getting maximum utilization out of its lifts, or 2) there are more lifts than necessary for the capacity levels of the resort. When calculating this average, conveyors and surface tows are not included, as the CCC calculations (and operating costs) for them are so low that it would skew the overall average. Optimally, and as a planning goal, the average CCC per lift would likely be close to 1,000. Industry-wide, the average CCC per lift is approximately 650. The average CCC per lift at CMR is about 706. This indicates that CMR has a better than average lift network efficiency, and that there is likely a somewhat lower lift cost, in terms of both energy use and financial/operational cost, per skier than most resorts. Primary contributing factors to this include: the well-designed, effective lift layout; the length and functionality of the primary lifts; and the fact that all lifts can be skied (there are no transport-only lifts).

B) TERRAIN NETWORK EFFICIENCY

Terrain Network Efficiency refers to the amount of effort required to properly maintain the terrain (snowmaking costs, grooming costs, energy costs, ski patrol costs, summer trail maintenance costs, increased administrative costs, costs associated with higher staff levels to perform these tasks, etc.). From this standpoint, the most efficient scenario is to have a quantity of terrain that closely meets the target density requirements, as shown in the table above. CMR scores less well in this analysis, as the overall density index is only at 61%. This indicates that more terrain is maintained than can be effectively served by the existing lift network. This can be partly explained by large portions of the *Union Meadows* and *Copper Bowl* terrain being included in the Terrain Network Efficiency and the low index for Storm King, Sierra, Blackjack, Celebrity Ridge and Three Bears.

F. EXISTING GUEST SERVICES FACILITIES, FOOD SERVICE SEATING & SPACE USE ANALYSIS

1. GUEST SERVICES

Guest service facilities constitute an essential component of the recreation experience at ski areas. These facilities provide guests with shelter from the elements, bathrooms, food and beverages, and more. Understanding the capacity of these facilities is important in understanding whether the needs of visitors are being met.

Base area staging locations, or portals, have three main functions:

- Receiving arriving guests (from a parked car, a bus, or from adjacent accommodations)
- Distributing the skiers and riders onto the mountain's lift and trail systems
- Providing necessary guest services (e.g., tickets, rentals, food and beverages, and restrooms)

CMR currently offers portal-related skier services in its three base area staging locations: East Village, Center Village, and West Village.

On-mountain skier service facilities are generally used to provide restaurant seating and restrooms, as well as ski patrol and first aid services, in closer proximity to upper-mountain ski terrain. The main function of these on-mountain facilities is to augment the guest experience at the resort. At CMR, on-mountain dining services are currently provided at four locations: Aerie, Flyers, T-Rex Grill, and Koko's Hut. Restrooms and ski patrol locations are also dispersed across the mountain to service guests.

SPACE USE PLANNING

To provide a balanced resort experience, sufficient guest service space should be provided to accommodate the existing resort CCC. The distribution of the CCC is used to determine guest service capacities and space requirements at base area and on-mountain facilities. The CCC should be distributed between each guest service facility location according to the number of guests that use the lifts and terrain associated with each facility.

In addition to distributing the CCC amongst the base area and on-mountain facilities, guest service capacity needs, and the resulting spatial recommendations are determined through a process of reviewing and analyzing the current operations to determine specific guest service requirements that are unique to the resort. CMR's Guest Service Requirements include:

Restaurant Seating: All areas designated for food service seating, including restaurants, cafeterias, and brown bag areas. Major circulation aisles through seating areas are designated as circulation/waste, not seating space.

Kitchen/Scramble: Includes all food preparation, food service, and food storage.

Bar/Lounge: All serving and seating areas designated as restricted use for the serving and consumption of alcoholic beverages. If used for food service, seats are included in seat counts.

Restrooms: All space associated with restroom facilities (separate women, men, and employees).

Guest Services: Services including resort information desks, kiosks, and lost and found.

Adult Ski School: Includes ski school booking area and any indoor staging areas. Storage directly associated with ski school is included in this total.

Kid's Ski School: Includes all daycare/nursery facilities, including booking areas and lunch rooms associated with ski school functions. Storage and employee lockers directly associated with ski school are included.

Rentals/Repair: All rental shop, repair services, and associated storage areas.

Retail Sales: All retail shops and associated storage areas.

Ticket Sales: All ticketing and season pass sales areas and associated office space.

Public Lockers: All public locker rooms. Any public lockers located along the walls of circulation space are included, as well as the 2 feet directly in front of the locker doors.

Ski Patrol/First Aid: All first aid facilities, including clinic space. Storage and employee lockers directly associated with ski patrol are included in this total.

Administration/Employee Lockers & Lounge/Storage: All administration/ employee/storage space not included in any of the above functions.

A) BASE AREA FACILITIES

At present, most day guests park in CMR's Alpine and Far East Lots, then shuttle to one of its three base areas. Guest services that are offered across the three base areas include: food service, bars/lounges, restrooms, guest services, ski school, rental/repair shops, retail, ticket sales, public lockers, ski patrol/first aid, and administrative offices. These three base areas offer similar types of guest services. However, the majority of CMR's guest service space is in the East and Center Villages. Much of CMR's learning terrain is accessed from West Village, and therefore most ski school facilities are located in this base area. Center Village also has a moderately sized ski school facility. Ski school does not stage from the East Village.

B) ON-MOUNTAIN FACILITIES

There are four on-mountain guest services facilities at CMR (not including standalone restrooms and ski patrol huts). The Aerie, completed in the fall of 2023, is the main on-mountain restaurant facility. Other facilities are typically smaller with limited capacity. Part of the reason for the limited on-mountain facilities can be attributed to the large amount of ski-in/ski-out accommodations where skiers and riders can return to their lodging for lunch, the large number of third-party vendors in the base areas, or skiers and riders prefer to stay longer on the mountain to avoid lunchtime crowds and opt for après ski.

The Aerie

Solitude Station served as Copper's primary on-mountain restaurant since the resort opened in 1972. New for the winter of 2023-2024, the Aerie will replace and dramatically improve the mountain dining experience at CMR. The new facility interfaces directly with the American Eagle Lift, allowing gondola passengers to unload directly on the plaza of the building. Offerings include a food court, table-service restaurant, two bars and a coffee shop. Restrooms are located on both floors of the new building. The Aerie provides abundant outdoor seating that benefits from sunlight and is protected from predominant winds. The Aerie will be the consummate dining experience for guests at CMR.

Koko's Hut

Built in 2018, Koko's Hut is located at the top of Kokomo Express. Koko's is geared towards novice and beginner skiers using Kokomo and Lumberjack lifts. Similar to the Aerie, Koko's offers both indoor and outdoor seating.

Other On-Mountain Dining

Two other facilities, Flyer's and T-Rex Grill, provide additional food service options for guests. These on-mountain food service outposts offer an alternative food and beverage experience to the standard indoor, sit-down dining. As a result, this attracts an adventurous skier and rider looking for a refreshment and a quick bite to eat. Flyer's is located near the tops of American Flyer and the Timberline Express, while T-Rex Grill is located at the bottom of the Timberline Express. Both facilities offer primarily outdoor dining.

Other On-Mountain Facilities

In addition to the dining facilities discussed above, CMR has a variety of restrooms and ski patrol facilities dispersed throughout the mountain.

2. SPACE USE ANALYSIS

Sufficient guest service space should be provided to accommodate the existing resort CCC of 12,940 guests per day. The distribution of the CCC is utilized to determine guest service capacities and space requirements for skier services at base area portals and on-mountain facilities. The CCC is distributed between each guest service facility location according to the number of guests that utilize the lifts and terrain associated with each facility.

In addition to distributing the CCC amongst the base area and on-mountain facilities, guest service capacity needs and the resulting spatial recommendations are determined through a process of reviewing and analyzing the current operations to determine guest service requirements that are specific to the resort.

The table below compares the current space use allocation of the guest service functions at CMR to industry norms for a ski area of a similar market orientation and regional context. The recommended ranges are determined based on CMR's calculated CCC of 12,940 plus an additional 5% for non-skiing or riding guests and subtracting 10% to account for skiers and riders not using guest service facilities. The 10% represents the fact that Copper attracts skiers and riders that tend to have higher ability levels and generally needing or wanting less services compared to other resorts.

Overall, CMR provides sufficient guest service for its CCC. Nevertheless, there are some shortages, most notably in public locker, rental, and ticketing space. The overall space use summary also does not reflect the shortage of on-mountain guest service space. Tables in Appendix A show service space recommendations for each facility. These tables clearly demonstrate that CMR does not currently provide sufficient space in on-mountain facilities.

Table 5. Space Use Recommendations – Existing Conditions – Resort Total

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	13,007	16,890	20,640
Public Lockers	2,363	8,730	10,670
Rentals/Repair	12,290	17,470	21,350
Retail Sales	12,019	6,110	7,470
Bar/Lounge/Restaurant Seating	66,105	47,690	58,280
Kitchen/Scramble	26,811	12,100	14,810
Restrooms	12,448	7,160	8,750
Ski Patrol	9,340	4,410	5,370
Administration	6,565	6,120	7,470
Employee Lockers/Lounge	4,470	2,450	2,990
Mechanical	3,882	3,500	5,190
Storage	9,886	5,810	8,650
Circulation/Waste	18,762	13,850	20,790
Total Square Feet	**197,948**	**152,290**	**192,430**

Source: SE Group
Note: The above table includes 9,386 square feet of space not included in the Appendix A tables. This includes 8,050 square feet of standalone ski patrol space and 1,336 square feet of standalone restroom space across the mountain.

3. FOOD SERVICE SEATING

Another way by which guest services are evaluated is the quantity of seats available for guest use. Throughout the typical lunch window (11am to 2pm), several guests can be expected to use a single seat. The table below shows the calculated capacity of CMR's existing seating configuration and compares it to the resort's CCC. Outdoor seats are typically only used on pleasant, warmer days.

TURNOVER RATES

A key factor in evaluating restaurant capacity is the turnover rate of its seats, or the number of times a seat will be utilized in a day. Several factors influence the turnover rate including the ski resort's climate, market orientation, and the type of food service provided. For example, colder weather results in guests spending longer periods of time in the lodge, resulting in lower turnover rates. Also, cafeteria-style dining will have a faster turnover rate than fine dining. At CMR, a venue-specific seat turnover rate of either 3.5 or 4 has been assumed.

CMR has a total of 4,722 seats (3,198 indoor seats, 1,524 outdoor seats). Of these, 1,067 seats are in on-mountain facilities.

Table 6. Restaurant Seats – Existing Conditions

	East Village	Center Village	West Village	Solitude Station	T-Rex Grill	Flyers	Koko's Hut	Total
Lunchtime Capacity	2,012	5,715	1,195	2,081	357	602	266	12,228
Average Seat Turnover	3.5	3.5	3.5	3.5	4	4	3.5	-
Existing Indoor Seats	558	1,828	254	477	-	9	72	3,198
Existing Outdoor Seats	198	817	-	142	227	70	70	1,524
Total Existing Seats	756	2,645	254	619	227	79	142	4,722
Required Seats	575	1,633	341	595	89	150	76	3,460
Difference	181	1,012	-87	24	138	-71	66	1,262

Source: SE Group

As shown above, there is a deficit of indoor seating across CMR. This deficit is particularly acute in the West Village and at three of CMR's four on-mountain guest service facilities. The addition of outdoor seating works to mitigate this problem.

Since Center Village presently contains a surplus of seating, many skiers and riders return to Center Village for lunch. The presence of third-party vendors and accommodations in the East and Center Villages supplements seating in these locations. However, the lunchtime and end-of-day funneling of skiers through Center Village can result in circulation challenges.

To mitigate this crowding and minimize the skiing disruptions caused by traversing to and from Center Village, CMR should increase their seating capacity in the West Village and across its on-mountain locations.

G. EXISTING PARKING AND RESORT ACCESS

Guests can access CMR in a variety of ways. The majority of day guests arrive at CMR via personal vehicle and park in one of the outlying lots. Additional options include the Summit Stage bus, part of Summit County's free public transportation network, and the Snowstang bus from Denver, a partnership between CMR and Colorado Department of Transportation (CDOT). Destination guests may choose to stay in accommodations within walking distance of the resort (approximately 0.25 miles from base area lifts). To maintain a comfortable guest experience, a resort should consider all methods of access and seek to balance resort access with lift capacity and demand.

All day skier parking is located along Copper Road and SR-91. CMR operates a total of 11 separate parking lots, two of which are on public land within CMR's SUP (the Far East Lot and North Ten Mile Lot), and the other nine of which are on private land. There are approximately 4,350 parking spaces available throughout CMR.

Free parking is primarily available in the Alpine and Far East Lots, which together have a total of 3,114 spaces.[2] Guests who park at these lots, which are accessed from SR-91 and located further from base areas, typically take the resort-provided shuttles to one of the three villages. These resort-provided shuttles distribute guests to the base area of their choice, balancing the surplus of East Village parking with the deficits of Center and West Village parking that are shown in the table below.

Six other lots provide paid parking. They are (from east to west), Wheeler, Chapel, Ten Mile, Beeler, Flyer, and Union Creek. The Powder and Maintenance Yard Lots are additional day use parking areas typically reserved for Employees and Volunteers. The Elevation Lot is reserved for employees living in resort housing.

Table 7. Parking Locations – Existing Conditions

Location	Parking Spaces
Private Land	
Beeler Lot	126
Chapel Lot	144
Union Creek Lot	91
B-Lot	100
Alpine Lot	1,728
Maintenance Lot	106
Powder Lot	183
Wheeler Lot	29
Flyer Lot	53
North Ten Mile	52
Public Land	
North Ten Mile (Conoco)	360
Far East Lot (pre-2023)	1,386
Total	**4,358**

Source: Copper Mountain Resort

The following table shows the balance of resort access and capacity. It identifies parking requirements based on CMR's CCC and the proportion of guests expected to arrive via personal vehicle. As shown below, the combination of parking capacity and transit options presently provide sufficient access capacity.

[2] Far East Lot was expanded in the summer of 2023. New parking space totals are reflected in the Upgrade Plan.

Table 8. Parking and Required Spaces – Existing Conditions

	East Village	Center Village	West Village	Total
CCC + Other Guests				13,587
Percent Staging at Portal	30%	55%	15%	100.0%
Number of guests staging at Portal	4,076	7,473	2,038	13,587
Percent from Accommodations	20%	25%	20%	
Number of guests from Accommodations	815	1,868	408	3,091
Percent from Transit	5%	5%	-	
Number of guests from Transit	204	374	0	578
Percent from Charter Buses	-	5%	-	
Number of guests from Charter Buses	-	374	-	374
Percent Parking at Portal	75%	65%	80%	2
Number of guests Parking at Portal	3,057	4,857	1,630	9,544
Required Car Parking Spaces (average 2.4 guests per car)	1,290	2,049	688	4,027
Required bus parking spaces (35 guests per bus; 1 bus = 4.5 cars)	-	11	-	11
Required Employee Car Parking Spaces (assumes 4% of CCC; 2 employees per car)	163	149	82	393
Total required spaces	1,453	2,248	769	4,470
Existing parking spaces	1,484	2,217	649	4,350
Surplus/Deficit	**31**	**-31**	**-120**	**-120**

Source: SE Group

H. EXISTING RESORT OPERATIONS

1. SNOWMAKING

Snowmaking is integral to CMR's operation, as it assures that adequate snow coverage is present in the most popular areas of the resort. Snowmaking both facilitates terrain opening at the start of the season and also extends the spring season by creating a more substantial base of snow. In recent years, CMR has earned a reputation for its elite Alpine ski racer training, much of which occurs from late-October through mid-December. This training requires a "race-prepared surface," which is reliant on the compacted density of machine-made snow. Thus, by extending both the fall and spring seasons, snowmaking allows CMR to host a world-renowned race training program and achieve a more consistent operating schedule.

CMR's most accurate snowmaking calculations are reflected in CMR's overall Water Use/Snowmaking Map, which was updated in the 2021 Lumberjack Chairlift Replacement CE/DM (2021 CE/DM). These calculations have been incorporated into the map in Appendix D. Relevant snowmaking information can also be found in the 2019 Snowmaking and Summer Uses DN/FONSI (2019 DN/FONSI). In the summer of 2023, CMR constructed approved snowmaking on Upper Soliloquy/Moon Island. Per the 2021 CE/DM, CMR's existing snowmaking system covers approximately 373 acres (refer to Appendix D). An additional 227 acres of snowmaking are previously approved but not yet constructed; however, Copper forfeited 48.0 of those acres in the 2021 CE/DM and installed 6.2 acres of snowmaking on *Soliloquy* trail in 2023, leaving CMR with 171.3 acres of previously approved not-yet-built snowmaking at this time. The 2023 MDP also maintains the 7.9 acres of planned snowmaking that have not been previously approved. It should be noted that the actual snowmaking acreage number may vary because snowmaking may not cover an entire trail until it is groomed.

Table 9. Snowmaking Coverage – Existing Conditions

Trail	Trail Acreage	Trail	Trail Acreage
American Flyer	23.1	I Dropper Lower	1.7
Andy's Encore Lower	10.9	Loverly Lower	8.9
Andy's Encore Upper	20.3	Loverly Upper	14.5
Base Area	3.4	Main Vein Lower	7.5
Bittersweet Lower	4.2	Main Vein Upper Rhapsody	23.2
Bittersweet Upper	8.0	Minor Matter	4.9
Bouncer Lower	5.4	Oh No Lower	8.4
Bouncer Upper	13.1	Ore Deal	5.9
B-Spur	2.4	Ptarmigan	8.9
Carefree Lower	7.4	Rosi's Run	18.6
Carefree Middle	7.4	Roundabout Lower	10.8
Carefree Upper	7.4	Scooter Lower	4.3
Collage Lower	2.4	Skid Road	11.5
Collage Mid	7.6	Tubing Hill	4.3
Collage Upper	12.0	Vein Glory Lower	6.0
Copperopolis	15.5	Vein Glory Upper	13.0
Coppertone Middle	6.3	West Encore	8.6
Fair Play	9.6	Windsong	15.9
Hidden Vein Lower	2.6	Upper Soliloquy	4.9
High Point	26.7	Soliloquy (Moon Island)	1.3
TOTAL		378.8	

2. MAINTENANCE FACILITIES

A) BASE AREA MAINTENANCE FACILITIES

CMR's base area maintenance facilities are comprised of several buildings located on private land. They include: a vehicle maintenance building, a warehouse for rental/repair, a lift/electrical facility, a carpentry shop, a base area operations shop, two warehouse buildings, food and beverage storage, and a mechanical maintenance shop. In addition, four smaller facilities are: the transportation office, transportation staff lockers, a vehicle maintenance storage area and a rental/retail storage area. The base area vehicle maintenance building has twelve bays: seven for rubber tire maintenance, four for tracked vehicles, and one for slope and grooming maintenance. There are two employee lockers/lounge spaces in the complex.

B) MOUNTAIN MAINTENANCE FACILITIES

- The Eagle Maintenance Shop is located just south of the top terminal of the American Eagle Lift.
- Control Building 1 is located under the American Flyer lift-line, just west of the intersection of *Coppertone* and *Carefree* trails.
- Control Building 2 is located at the intersection of B-Road and *Coppertone*.
- Control Building 3 is located south of the Eagle Maintenance Shop
- Numerous lift maintenance facilities are located adjacent to the top or bottom terminal of all detachable chairlifts (except the Excelerator lift).

C) FUEL STORAGE FACILITIES

Fuel storage is located adjacent to the base area vehicle maintenance complex on private land, at Control Building 1, and at the Eagle Maintenance Shop. Additionally, all lifts have auxiliary power supply fuel tanks. All tanks fully comply with applicable codes and are adequate for current demand.

3. INFRASTRUCTURE AND UTILITIES

Existing utilities include domestic water, sewer, gas, electricity, and communications to on-mountain facilities, including restaurants, lifts, duty stations, and snowmaking. These utilities are adequately sized and include sufficient supply loads for existing infrastructure. Existing capacities sufficiently cover peak days.

Xcel Energy is the main provider of electric power and gas to CMR.

The domestic water system for all base area buildings and facilities is a public system operated by the Copper Mountain Consolidated Metropolitan District (CMCMD). The CMCMD water source is three wells in the valley. Together, CMCMD's storage tanks can hold 1 million gallons: 250,000 gallons at the lower Mein Vein tank and 750,000 gallons at the Lewis Ranch tank. The three valley wells presently produce 1,700 gallons per minute (gpm) primarily for fire protection. A fourth well, at 500 gpm, is planned and approved for the future as a backup. Koko's Hut is the only on-mountain facility currently served by the municipal water system.

Domestic water for the Aerie comes from a private well located to the north of the building. The well was redrilled and re-permitted in 2018 to maximize its productivity for the new facility. The water is treated on-site and permitted by the Colorado Department of Public Health and Environment. To support The Aerie, CMR installed six new underground water storage tanks adjacent to the existing water tanks. The new tanks add an additional 162,000 gallons of storage to the existing 50,000 gallons that supported Solitude Station (50,000 gallons of potable water storage and 162,000 gallons for fire suppression).

The community wastewater system is also operated by the CMCMD. The sewage plant is designed and approved for 1.1 million gallons per day. This quantity is considered adequate for all current and possible future use, and it is consistent with the industry standard of seven to ten gallons per person per day. The Aerie and Koko's Hut are the only on-mountain facilities connected to the municipal sewer system.

4. AVALANCHE MITIGATION

Ski Patrol currently utilizes three explosives storage magazines and associated "make-up rooms" to facilitate avalanche mitigation. Ski patrol also maintains three avalauncher towers. These facilities are sufficient for current operations.

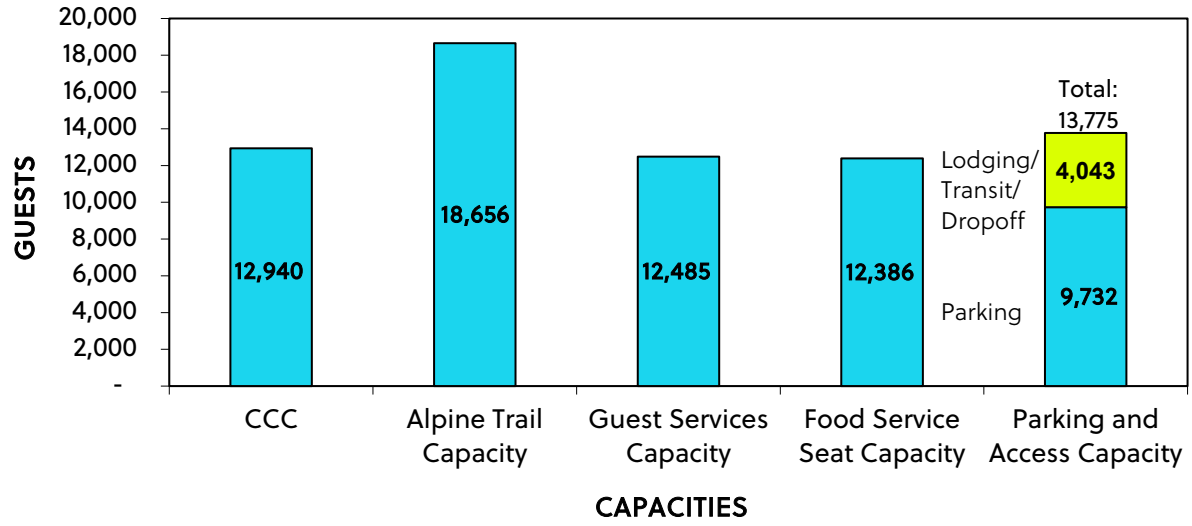
5. MOUNTAIN ROADS

Approximately 18.3 miles of mountain roads currently exist within CMR's SUP. Overall, the mountain road network is adequate for the resort's current operations.

I. EXISTING RESORT CAPACITY BALANCE AND LIMITING FACTORS

The overall balance of the existing resort is evaluated by calculating the capacities of the resort's various facilities and comparing those facilities to the resort's CCC. Given a CCC of 12,940 skiers per day, there is a surplus of terrain relative to CMR's other capacities. The chart below illustrates the need for additional guest services and food service seating capacity at CMR. However, it masks the uneven distribution of CMR's food service seating, which is currently concentrated in Copper's three base areas. While CMR's base areas all contain sufficient seating (and Center Village is supplemented by ample third-party vendors), CMR's upper-mountain venues offer insufficient seating and guest service space. This deficit is exacerbated on inclement and peak days, compelling guests to travel to base areas (often Center Village) for lunch and other services. This results in base area congestion and long out-of-base lift lines. Thus, CMR should emphasize indoor on-mountain guest services and food service seating space to improve its resort-wide guest experience.

Chart 2. Resort Capacity – Existing Conditions



J. EXISTING SUMMER AND MULTI-SEASON RECREATION

Non-skiing year-round and summer recreational activities are an important aspect of CMR's operations. These activities provide an opportunity for additional guests to experience Copper and the WRNF. Non-skiing recreational opportunities take place on both Forest Service and private lands. These non-skiing recreational activities offered at CMR are categorized as: 1.) *Year-Round Activities* 2.) *Winter-Only Activities* and 3.) *Summer-Only Activities*.

1. YEAR-ROUND ACTIVITIES

A) WOODWARD BARN

Located on private land, this 19,400 sq ft facility serves as the central hub of the Woodward Copper campus and is CMR's action sports playground. This indoor space provides athletes the opportunity to progress their skills and learn new disciplines. This facility presently serves its desired purpose but may require modifications as Woodward Copper's programs continue to experience annual growth.

The Woodward Barn is the primary indoor facility for Woodward Copper: an operation that offers year-round action sports training for athletes of all levels. Throughout the winter, Woodward Copper offers outdoor terrain park lessons at CMR in addition to its indoor offerings at the Woodward Barn.

B) ROCKY MOUNTAIN COASTER

The Rocky Mountain Coaster is a thrilling adventure ride which winds through the forested area above Center Village. The coaster operates for the duration of the ski season, then again when CMR reopens for summer activities.

C) SCENIC LIFT RIDES

The American Eagle Telemix is open for scenic lift rides in both summer and winter seasons. In summer, guests may ride on either chairlifts or in gondola cabins, while in winter, scenic riders are expected to use the gondola cabins exclusively. In summer, CMR also operates Woodward Express for scenic lift rides and bike haul (discussed below).

2. WINTER-ONLY ACTIVITIES

In winter, CMR provides an excellent terrain mix for skiers and riders of all ability levels. Nevertheless, some guests may wish to experience the mountain without skiing or riding, or may wish to take a day off from the main sport on offer. For these guests, CMR provides several alternatives.

A) TUBING

The CMR tubing hill is located adjacent to East Village and the Super Bee Lift. Guests can use the Stinger Too carpet conveyor to get to the top of the well-maintained and regularly groomed tubing hill and enjoy one of the four tubing lanes.

B) SNOW MAZE

The Copper Snow Maze is a maze constructed out of snow in East Village. This activity is primarily for children and operates in winter when conditions permit.

3. SUMMER-ONLY ACTIVITIES

Starting in June of each year, CMR operates a variety of summer mountain adventure activities. These activities provide an opportunity for guests of all ages and skill levels to experience summer in the mountains of the WRNF. In addition to the Rocky Mountain Coaster and Scenic Lift Rides (discussed above) CMR operates the following activities in the summer. Existing activities and facilities which are operational in the summer are illustrated in Figure 6.

A) HIKING

A variety of trails are found throughout CMR's SUP area. These trails are freely accessible to the public and maintained in collaboration between CMR and the WRNF. Guests who purchase scenic lift haul tickets in the summer can also choose to go hiking from the top of the lift before either riding or hiking back down. CMR has one designated hiking-only trail (Chickaree Way), a two-mile trail, and is in the process of constructing new hiking-only trails near the Aerie.

B) MOUNTAIN BIKING

CMR is in the process of reimagining mountain biking at the resort. Focusing on lift-served downhill mountain biking, a new network of trails emanating from American Eagle and Woodward Express chairlifts will redefine the summer guest experience. Currently the resort has approximately nine miles of mountain bike trails, with new sections of trail being constructed every summer.

C) WOODWARD SUMMER CAMPS

In the late spring and early summer, Woodward Copper hosts on-snow summer camps that operate within the winter footprint of Central Park. The Super Tube conveyor, which currently provides terrain park access to Woodward summer camp participants, operates exclusively for this purpose.

D) COPPER CREEK GOLF COURSE

CMR operates Copper Creek Golf Course. The 18-hole course, located between East Village and Center Village, provides splendid views of the Tenmile Range. CMR also operates a nine-hole disc golf course freely open to the public.

E) ADVENTURE ACTIVITIES

CMR operates a variety of adventure activities on the private land surrounding Center Village. These activities include, but are not limited to:

- Woodward Wrecktangle Challenge Course
- Quad Power Jump
- Go Karts
- Zip Line
- Bumper Boats

These activities provide fun and challenge to both kids and adults, and they make CMR an excellent destination for families. Further details on specific activities can be found on CMR's website.

4. THE ZONES CONCEPT

Summer Activity Zones are designed to guide decisions about where various summer activities do and don't belong. Using the resort's physical resources and built infrastructure as a guide, they divide a resort's SUP area into distinct polygons. Each polygon is scored along four categories: access, remoteness, naturalness, and infrastructure. Then, scores are summed to designate each polygon's "Zone." There are five levels of Summer Activity Zones, with Zone 1 being most impacted by human activity and Zone 5 being least impacted. The Zone designations in this MDP originate from the CMR 2015 Master Development Plan Amendment (2015 MDPA).

5. EXISTING SUMMER ACTIVITY ZONES

CMR has a total of 23 existing Summer Activity Zones. They are distributed as follows: five Zone 1 areas, three Zone 2 areas, six Zone 3 areas, four Zone 4 areas, and five Zone 5 areas. Refer to Appendix A for the scoring of each Zone. Refer to Appendix B for a detailed explanation of each Zone's setting, desired experiences, and compatible activities and facilities.

A) ZONE 1

Five areas within CMR's SUP were designated as Zone 1: Areas 7, 16, 18, 21, and 22. Respectively, these areas are located adjacent to the base area, the top of the American Eagle lift, the tops of the Super Bee and Excelerator lifts, the top of the American Flyer lift, and along SR-91.

Center Village hosts many multi-season recreation activities and events. These are intended to attract guests from private lands onto National Forest System (NFS) lands. CMR's three Zone 1 areas that are not base area or highway-adjacent serve as on-mountain hubs. From these areas, guests may access surrounding activities and refuel between adventures. Most guests access these Zone 1 areas via out-of-base lifts. However, some may choose to access Zone 1 under their own power from the surrounding trail network.

B) ZONE 2

Three areas within CMR's SUP were designated as Zone 2: Areas 14, 15, and 17. In these regions, summer trails, roads, and chairlift infrastructure presently exist. The middle portion of the ski area, which is heavily developed, is also designated Zone 2. Many of CMR's summer guests are accessing the WRNF for the first time, and Zone 2 provides a comfortable environment for them to do so. Most guests will access Zone 2 from Zone 1, in areas surrounding Area's 16, 18, and 21.

The scoring of Zone 2 areas varies by characteristic, as it does in Zones 3 and 4. For example, Area 17 is more natural than Areas 14 or 15, but it also contains more lift infrastructure.

C) ZONE 3

Six areas within CMR's SUP were designated as Zone 3: Areas 6, 8, 13, 19, 20, and 23. Most guests will initially view Zone 3 areas during a scenic chairlift ride from private lands to Zone 1. This "fly over" experience allows guests to see diverse vegetation types and topographic features, as well as views of the Tenmile Range. On the ground, access to Zone 3 typically occurs via Zones 1 and 2. However, guests may also access Zone 3 from private lands or Zones 4 and 5.

Like areas in Zones 2 and 4, not all Zone 3 areas score equally across characteristics. For example, Area 20 is less accessible and more remote than Area 13. However, both locations scored in the acceptable Zone 3 range and are thus characterized as such.

D) ZONE 4

Four areas within CMR's SUP were designated as Zone 4: Areas 5, 9, 11, and 12. Similarly to areas in Zones 2 and 3, Zone 4 areas vary by characteristic. For example, Area 9 includes the ski trails and glading in Resolution Bowl, but its development is limited, and large tree islands dominate the landscape. Area 11 includes Copper Bowl's lift infrastructure, but it possesses a strong feeling of remoteness due to the nature and topography of its terrain.

E) ZONE 5

Five areas within CMR's SUP were classified as Zone 5: Areas 1, 2, 3, 4, and 10. Of these, the first four have been classified as such because they are difficult to access, highly remote, highly natural, and contain no lift infrastructure. Area 10 meets these first three criteria but contains some lift infrastructure. However, it was classified as Zone 5 in the CMR 2015 MDPA due to the 2006 CMR Trails and Facilities Improvements ROD, which established improvements for Copper Bowl in Table ROD-4 under the Resource Category: Wildlife, Lynx Diurnal Security Habitat, requirement numbers 8 and 15.

CHAPTER 3. PREVIOUSLY APPROVED, NOT YET IMPLEMENTED PROJECTS

The projects detailed in this section have been previously analyzed and approved through the National Environmental Policy Act (NEPA) process but have not yet been implemented. Prior to project implementation the Forest Service will review project consistency with Forest Plan standards and guidelines and determine if additional analysis is warranted due to new or changed conditions.

Several documents over the past two decades include authorizations for projects that have not yet been implemented by CMR. Specifically, the following documents include authorization of the projects enumerated in the following table:

- 2023: Copper Mountain Resort Timberline Express Replacement and Mountain Biking Upgrade Project Categorical Exclusion (CE), Decision Memo (DM)
- 2021: Copper Mountain Resort Lumberjack Chairlift Replacement Categorical Exclusion, Decision Memo, 2023 Letter to File
- 2020: Copper Mountain Resort Main Vein Halfpipe Regrade Memo
- 2019: Copper Mountain Resort Tucker Ridge Avalauncher, B-Road Snowmaking Road and A-Net Safety System Categorical Exclusion
- 2019: Copper Mountain Resort Snowmaking and Summer Uses Environmental Assessment, Decision Notice and Finding of No Significant Impact (EA/DN/FONSI)
- 2018: Copper Mountain Resort Tucker Lift Improvements, Decision Memo
- 2016: Copper Mountain Resort Recreation Enhancement Projects Environmental Assessment, Decision Notice and Finding of No Significant Impact
- 2015: Copper Mountain Resort Mountain Bike Trail Categorical Exclusion, Decision Memo
- 2013: Copper Mountain Resort 2013 Mountain Improvements Project Environmental Assessment, Decision Notice and Finding of No Significant Impact
- 2008: Copper Mountain Resort Tenmile Creek Facilities Improvements and Restoration Project, Environmental Assessment, Decision Notice and Finding of No Significant Impact
- 2006: Copper Mountain Resort Trails and Facilities Improvements Final Environmental Impact Statement and Record of Decision (FEIS/ROD)
- 2002: Copper Mountain Resort Kokomo Lift and Teaching Terrain Improvements Environmental Assessment, Decision Notice and Finding of No Significant Impact

Significant previously approved not yet implemented projects are summarized in Table 10. More detailed discussions of the previously approved changes that are planned for implementation in the next decade are included in Chapter 4 alongside not-yet-approved planned changes.

Table 10. Previously Approved, Not Yet Implemented Projects

Project Name	Approved In	Alignment with 2023 MDP
Timberline Express DC6 Upgrade Updated Mountain Biking Trail Network (22.06 miles of new trails)	2023 Timberline Express Replacement and Mountain Biking Upgrade Project CE/DM	Under Construction
Lumberjack Chair DC6 Upgrade Middle Roundabout Bypass Trail and Lumberjack Snowmaking	2021 Lumberjack Chairlift Replacement CE/DM	Planned for implementation
Halfpipe Regrade	2020 Main Vein Halfpipe Regrade Memo to File	Planned for implementation
Frontside Snowmaking Expansion (73.4 Acres)[1] Hiking Trail Network Expansion (13.9 Miles) Rendezvous Camping Site Construction and Operation	2019 Snowmaking and Summer Uses DN/FONSI	Planned for implementation
A-1 Road Extension		Not currently planned for implementation
Tucker Ridge Comms. Tower	2018 Tucker Lift Improvement CE/DM	Planned for implementation
Alpine Lift Upgrade Rendezvous Warming Hut Storm King Power Extension South Copper Trail (CB-02) Snowmaking Expansion Various Trail Additions[2]	2006 CMR Trails and Facilities Improvement FEIS/ROD	Planned for implementation
North Cabin Chute & Upper Cabin Chute Trails Sierra Lift Replacement		Not currently planned for implementation
Snowmaking Extension[3] Sewer Line Extension	2002 Kokomo and Terrain Improvements DN/FONSI	Planned for implementation
Kokomo Gondola Teaching Lift & Surface Conveyor Lifts		Not currently planned for implementation

[1] A complete list of trails authorized for snowmaking can be found in Table DN-1 on page DN-3 of the 2019 DN/FONSI.
[2] A complete list of authorized trail additions and improvements can be found starting on page ROD-7 on the 2006 FEIS/ROD.
[3] A complete list of trails authorized for snowmaking can be found on page DN/FONSI-9 of the 2002 DN/FONSI

CHAPTER 4.
UPGRADE PLAN

CMR's upgrade plan is the product of infrastructure analysis, operational goals, guest input, and on the ground observations. The upgrades are located completely within the resort's existing SUP boundary and center around expanded terrain options, lift upgrades and new lifts, and improved on-mountain food and beverage options. The goal is to better accommodate visitation and position CMR to remain competitive in the Colorado mountain resort market. As part of the planning process, CMR has worked to ensure long-term resort balance, as well as the alignment of planned changes with both the resort's design criteria and forest service policy direction. This upgrade plan correlates with Figures 7 through 10.

Summary of the Upgrade Plan:

- Improve and expand lift served skiing and riding within the existing SUP.
- Improve on-mountain circulation with lift extensions and realignments, terrain improvements and base area upgrades.
- Add guest-service outlets commensurate with lift and terrain upgrades.
- Modernize lift and base area infrastructure.
- Expand on the existing summer offerings and trail network.

The upgrade plan accomplishes these goals through strategic changes to CMR's lift network, terrain, and guest services. Improvements to CMR's utilities, an increase in parking capacity, and changes to its summer operations will further facilitate this vision. Planned improvements have been balanced to increase operational efficiency and improve the guest experience.

UPGRADE PLAN HIGHLIGHTS

Terrain Expansion: Expand the operational boundary within the existing SUP to provide access to exceptional new terrain on Jacque Peak.

Improved Skier Circulation: Trail improvements that will improve connectivity between different parts of the mountain, making the guest experience more fun and efficient.

Lift Improvements: An array of new lifts (like the Union Meadows Express, Sail Away and a Terrain Park Lift) and lift upgrades (like Rendezvous, Lumberjack and Super Bee) that will dramatically improve how skiers are able to access terrain and reduce base area congestion.

Improved Mountain Dining: Led by the Aerie mid-mountain lodge and bolstered by new and imaginative dining outposts, CMR plans to provide on-mountain dining for every type of guest.

A. UPGRADED LIFT NETWORK

1. SUMMARY OF THE UPGRADED LIFT NETWORK

CMR's lift network upgrades align with the resort's strategic goals and objectives to 1) improve and expand lift served skiing and riding with new operations within the existing SUP and to 2) improve on-mountain circulation with lift upgrades and terrain improvements. Proposed changes include:

- Upgrade eight existing lifts (Alpine, Excelerator, Timberline, Lumberjack, Rendezvous, Super Bee, Blackjack, Mountain Chief), four of which will be extended or realigned (Alpine, Excelerator, Lumberjack, and Rendezvous)
- Three new detachable lifts (Sail Away, Union Meadows, Jacque East)
- Two new fixed-grip lifts (Terrain Park Lift and Thunderbird)
- One new surface lift (SuperPipe)

Lift upgrades are necessary to replace aging infrastructure. They will also improve the guest experience by reducing ride times and improving mountain circulation. New lifts will reduce pressure on detachable out-of-base lifts, enable skiers to remain on-mountain for longer portions of their day, and improve east/west on-mountain circulation. Both upgraded and proposed lifts will also facilitate access to new terrain.

Table 11. Lift Specifications – Upgrade Plan

Lift Name/Type	*Top Elevation (ft.)*	*Bottom Elevation (ft.)*	*Vertical Rise (ft.)*	*Slope Length (ft.)*	*Avg. Grade (%)*	*Actual Capacity (pph)*	*Rope Speed (fpm)*	*Carrier Spacing (ft.)*	*Lift Maker/ Year Installed*
Alpine/DC4	11,690	9,788	1,902	6,555	31%	2,200	1,000	109	***Extended/Upgraded***
Resolution/C3	11,970	10,549	1,421	4,450	34%	1,200	500	75	Poma 1985
Gem/S1	9,804	9,750	54	468	11%	491	406	50	Poma 1972
Pitchfork/C2	9,812	9,751	61	535	12%	960	400	50	Heron 1979
The Glide/C	9,819	9,810	9	120	12%	1,500	160	6	Sunkid 1998
Excelerator/DC6	12,030	11,158	872	3,529	26%	3,200	1,100	124	***Upgraded***
Easy Rider/C	9,770	9,762	8	94	8%	720	80	7	Magic Carpet 2000
American Eagle/TM6/8	11,236	9,760	1,476	6,027	24%	3,372	1,000	125	Poma 2018
Sail Away/DC4	11,238	10,270	968	4,294	23%	2,400	1,000	100	***Newly Installed***
Woodward Express/DC4	10,816	9,808	1,008	4,979	21%	2,400	1,000	100	Doppelmayr 2011
Timberline Express/DC6	11,600	10,475	1,125	5,058	23%	3,000	1,100	132	***Upgraded***
Union Meadows/DC4	12,371	11,005	1,366	7,959	18%	2,400	1,000	100	***Newly Installed***
Kokomo/DC4	10,172	9,822	350	2,850	12%	1,800	800	107	Doppelmayr 2017
Lumberjack/DC6	10,897	10,140	757	4,818	16%	2,800	1,000	129	***Upgraded***
Storm King/S2	12,312	11,850	462	2,034	24%	977	600	74	Doppelmayr 2013
American Flyer/DC6	11,661	9,770	1,891	9,836	19%	3,200	1,000	113	Poma 2018
SuperPipe/S1	10,031	9,796	234	825	30%	500	500	60	***Newly Installed***
Rendezvous/DC4	11,855	11,001	854	4,989	17%	2,400	1,000	100	***Extended/Upgraded***
Rugrat/C	9,822	9,812	10	60	10%	1,500	115	5	Magic Carpet 2000
Sierra/C3	12,119	11,377	741	3,014	25%	1,200	500	75	Yan 1983
Super Bee/DC8	12,000	9,710	2,290	8,953	27%	3,400	1,100	155	***Upgraded***
Slingshot/C	9,843	9,834	9	120	6%	1,500	160	6	Kaiser 2002

Lift Name/Type	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Rise (ft.)	Slope Length (ft.)	Avg Grade (%)	Actual Capacity (pph)	Rope Speed (fpm)	Carrier Spacing (ft.)	Lift Maker/ Year Installed
Terrain Park Lift/C2	10,243	10,685	442	2,489	18%	960	500	63	***Newly Installed***
Jacque East/DC4	13,150	11,576	1,574	5,947	28%	2,000	1,000	120	***Newly Installed***
Thunderbird/C3	12,277	11,411	866	2,617	35%	1,200	500	75	***Newly Installed***
Blackjack/DC4	11,910	11,170	740	2,384	33%	2,400	1,000	100	***Upgraded***
Mountain Chief/C3	12,310	11,486	824	2,498	35%	1,800	500	50	***Upgraded***
Celebrity Ridge/S1	12,288	12,025	263	879	31%	513	300	35	Doppelmayr 2013
Three Bears/C3	12,327	11,165	1,162	3,219	39%	1,200	500	75	Poma 2019
Stinger Too/C	10,593	10,382	211	964	22%	1,200	160	8	Magic Carpet
Super Tube/C	9,770	9,710	60	361	17%	1,960	160	5	Magic Carpet

Notes*:* Lift Types: C = carpet conveyor / S1 = platter surface lift / S2 = T-bar surface lift / C2 *= fixed-grip double chairlift /* C3 *= fixed-grip triple chairlift /* DC4 *= detachable four-passenger chairlift / DC6 = detachable six-passenger chairlift / DT6+8 = detachable Telemix 6-chair & 8 gondola lift*

Stinger Too is primarily used for tubing and Super Tube exclusively operates in late spring and early summer when the remainder of the resort is closed.

2. UPGRADED LIFT NETWORK

The following sections provide a qualitative description of CMR's upgraded lift network. Only new and upgraded lifts are discussed in detail, though the prescribed changes to CMR's lift network are designed to benefit lifts that are not directly affected. For example, though changes are not planned for American Eagle, the addition of the Sail Away lift will reduce crowding at American Eagle's base.

Descriptions of CMR's upgraded lift network are grouped as follows: a) *Jacque Peak and the High Alpine*, b) *Guest Circulation Improvements*, c) *Terrain Access Improvements*, and d) *Out-of-Base Improvements*.

A) JACQUE PEAK AND THE HIGH ALPINE

This MDP recommends the expansion of CMR's operational boundary to include skiing on the east face of Jacque Peak, all of which falls inside of Copper's existing SUP boundary. This expansion would elevate CMR's appeal to expert skiers and include the new highest lift in North America.

Upgrades to the *Copper Bowl* area will improve the efficiency of circulation between CMR's frontside and *Copper Bowl*.

Jacque East

The Jacque East detachable lift would provide access to expert, advanced and intermediate skiing on the southeast-facing slopes of *Jacque Peak* in the *Tucker Gulch* drainage. As proposed, Jacque East will be the highest lift in North America. The top terminal of the lift is planned to sit on a natural bench below the summit on the south ridge of *Jacque Peak* at just above 13,000' in elevation. By locating the top terminal below and south of the summit, the lift will outlet guests centrally within the expanded operations boundary but minimize temptation to access unauthorized areas outside of the resort boundary and preserve the summit of *Jacque Peak*. The lift is proposed as a detachable lift due to the anticipated demand and to increase functionality in high-alpine winds.

No summer road access is proposed to the top terminal location. The lift is strategically positioned to reduce potential impacts to known wetland areas with its alignment and minimize habitat impacts with its location above tree line, while still providing exceptional access to high alpine terrain.

Thunderbird

The Thunderbird fixed-grip triple supports the Jacque East lift by providing another way for guests to return from *Tucker Gulch* to *Tucker Mountain*, and eventually back to CMR's base areas. This lift is essential for egress from *Tucker Gulch* but also provides access to repeat skiing on new advanced and expert terrain on the south aspect of *Tucker Mountain*.

Blackjack and Mountain Chief Lifts

At present, Blackjack and Mountain Chief are fixed-grip doubles that were built in the 1970's. This upgrade plan recommends their replacement with a detachable quad and a fixed-grip triple, respectively. In addition to ensuring the viability of these lifts for years to come, these upgrades will

increase the speed at which guests can return to the frontside of *Union Peak* on days when queues are present. This is important for two reasons: 1) pressure on Blackjack and Mountain Chief will increase with the development of new terrain, and 2) *Colorado Boulevard* is narrow with limited space for queueing.

B) GUEST CIRCULATION IMPROVEMENTS

Planned upgrades to lifts on the frontside of *Copper Mountain* will improve on-mountain circulation and lessen the frequency with which skiers must return to base areas. They provide increased capacity in popular areas and ways for skiers to stay high on the mountain. These improvements will particularly benefit Center and West Villages, which can experience heavy crowding throughout the day.

Timberline Express

Since the Timberline Express is the most popular intermediate-level lift at CMR, it often has a long lift line. Upgrades to the T-Rex Grill, which are needed to increase CMR's on-mountain guest services, could draw more people to this area. A 2023 Decision Memo authorized the upgrade of Timberline Express to a high speed six-person lift and construction is planned for the summer of 2024.

Excelerator Lift

The Excelerator lift is recommended to be replaced with a detachable six-person chairlift. Its new lower terminal will be relocated further downhill to reduce crowding and cross-skier traffic in one of CMR's busiest intersections.

Sail Away Lift

The new Sail Away detachable quad will reduce crowding in Center Village, improve on-mountain circulation by providing an alternative west-to-east route from the *Union Peak* area to the *Copper Mountain* area. It will also provide beginner access to the Aerie and add to CMR's intermediate terrain.

SuperPipe

The new SuperPipe surface lift will service the halfpipe above Center Village. Skiers and riders currently access the halfpipe by hiking or riding American Eagle. The lift will separate user groups and improve the halfpipe experience. The lift will also reduce traffic on the American Eagle and on busy runs like *Main Vein* and *Fairplay* that are currently used to access the halfpipe.

C) TERRAIN ACCESS IMPROVEMENTS

Improvements to CMR's lift network on the frontside of *Union Peak* will improve access to terrain in this zone that is currently difficult to reach or inconvenient to repeat-ski. These upgrades and planned lifts are key contributions to CMR's goals, as they will disperse skiers throughout skiable acreage that is currently underutilized.

Lumberjack

Located on the far west side of the resort, Lumberjack lift will be upgraded from a fixed-grip triple to a detachable six-person lift and extended to service the previously approved terrain above its existing upper terminal as well as further activate this part of the mountain. Detachable technology will reduce its long ride time and provide a more comfortable loading/unloading experience for beginners. This upgrade was approved as a detachable quad in the 2021 Lumberjack Chairlift Replacement CE/DM and has since been reapproved as a detachable six-pack.

Rendezvous Lift

Constructed in 1982, Rendezvous is one of the oldest lifts at CMR. Upgrading the Rendezvous lift to a detachable quad and extending its current alignment will improve access to the *Copper Bowl* area while still providing an incredible beginner experience in the high-alpine. In combination with planned run *AF-X*, which will take skiers and riders from the top of American Eagle to the planned lift base, Rendezvous will provide a more direct connection to Sierra Lift and Copper Bowl from both the east and west sides of the resort. Upgrading the lift to a high-speed detachable will also shorten the lift's long ride time and reduce pressures on both American Flyer and the Timberline Express.

Union Meadows Express

One of the most significant proposed lifts, the Union Meadows detachable quad will improve access to *Union Meadows*, *Copper Bowl* and *Tucker Gulch*. The terrain it will serve is a vast area within CMR's current operational boundary, but accessing it currently requires traversing and/or hiking. As such the unique intermediate terrain is significantly underutilized. The Union Meadows lift will strategically disperse skiers through the area, giving new access to *Gold Digger*, *Retreat* and *Far West* trail and transforming the Union Meadows experience while preserving its undeveloped qualities. The bottom terminal is located just south of the new top terminal of Lumberjack and requires a short road and utility extension on *Upper Roundabout trail*.

Terrain Park Lift

The Terrain Park fixed-grip double will replace the Super Tube surface lift and enhance the terrain park experience. The lift would operate in the winter and summer and provide terrain park skiers and riders a quicker turnaround. The lift would also alleviate congestion in the West Village base area, by reducing the number of guests riding the Woodward Express Lift.

D) OUT-OF-BASE IMPROVEMENTS

The following improvements increase CMR's out-of-base capacity and facilitate better on-mountain circulation.

Super Bee

Super Bee will continue to serve the U.S. Ski Team Speed Center during the early season and race training and general public access during the winter. It is planned to be upgraded from a detachable six-person lift to a detachable eight-person lift with a mid-station near the top of *Rosie's Run*. This mid-station will improve the efficiency of CMR's extensive racing program off the Super Bee Lift. Terrain improvements may be needed to support these operations. It will also help separate racers from the public. As the only lift directly serving East Village, the increased capacity with help accommodate increased skier demand.

Alpine Lift

The Alpine lift was built in 1979 and is the most underutilized of all CMR's base area lifts. Its planned replacement is a detachable quad that extends above the lift's existing upper terminal. Detachable technology will reduce the lift's long ride time, and a higher upper terminal will improve on-mountain circulation. The new lift will also provide an improved out-of-base experience for the new development currently under construction at its base. An intermediate run is proposed in the Alpine pod, which will increase the lift's accessibility to non-expert skiers. This upgrade was approved in the 2006 CMR Trails and Facilities Improvement FEIS/ROD.

B. UPGRADED TERRAIN NETWORK

Relative to CMR's existing terrain, the upgraded trail network is more closely aligned with the ideal skier ability breakdown, per industry standards. For details about the upgrade terrain specifications, refer to Appendix A. The terrain specifications table (Table A-10) only includes developed terrain, as this constitutes the resort's most reliable offerings.

1. SUMMARY OF THE UPGRADED TERRAIN NETWORK

A) JACQUE PEAK EAST AND THE HIGH ALPINE

The planned *Jacque Peak East* terrain will be CMR's most notable terrain addition within this MDP. This area is located on the east face of *Jacque Peak* and the east and north faces of Rose Mountain in a drainage known as *Tucker Gulch*. The expansion consists of approximately 500 acres of high alpine terrain accessed from the new Thunderbird and Jacque East Lifts. Most of the terrain is advanced and expert-level, adding to CMR's growing appeal to this demographic, but the area is also unique in that it is accessible for strong intermediate skiers.

Reaching elevations above 13,000 feet, the *Jacque East* terrain would be among the highest lift-served terrain in North America, making it a "bucket list" experience for many skiers and riders visiting the WRNF. The terrain includes open bowls, steep couloirs, and a rolling valley floor. An intermediate traverse will follow the ridge connecting *Jacque Peak* to *Copper Bowl*. At the top of the Union Meadows lift, intermediate guests can ski back to the base of the Jacque East lift or return to the frontside, using intermediate trails in either scenario.

The *Tucker Gulch* expansion is designed to emphasize the high alpine experience. The vast majority of the terrain is above treeline, lee to the predominant westerly winds, and well-suited to provide a breath-taking but accessible guest experience. Due to the high elevation and remoteness of the terrain, CMR anticipates the need for some operational support infrastructure such as remote avalanche control systems (RACs), permanent snowfence, a ski patrol outpost, and permanent boundary markers. The primary purpose of these measures would be to enhance the guest experience in the area by facilitating safe access to the terrain rather than significantly altering the terrain itself.

B) GUEST CIRCULATION IMPROVEMENTS

The frontside of *Copper Mountain* will experience three significant changes in the upgrade plan.

The first is the addition of a novice-level connector trail, *AF-X*, from Aerie and the top of American Eagle to the bottom of the extended Rendezvous lift. Though a connector trail already exists in this area, it is underutilized due to its difficulty to access and not having enough pitch for skiers to effectively use the connector trail. The extension of the Rendezvous lift will add to AF-*X*'s appeal, as it reduces skiers' and riders' east-west and front-back circulation time.

The second addition to *Copper Mountain*'s frontside trail network includes two new trails in the Sail Away Lift pod: one intermediate and one expert. These will supplement CMR's existing racing terrain, which is exclusively served by Super Bee, at present. During the early season when limited terrain is open, snowsports athletes flock to CMR for training, causing the closure of crucial lower

mountain runs near the East Village. The addition of these two *Sail Away* trails will offer Copper's athletes more training variety, and they will allow CMR's guests to enjoy the lower runs in the Super Bee pod more frequently.

The third improvement to the frontside of *Copper Mountain* includes the maintenance and formalization of tree skiing areas. These include the *17 Glade*, the *Sail Away Glades*, *Lyman Glades*, *Enchanted Forest, Timberline Glades,* and the *Seadog Glades*, all of which are routinely skied today. Work in these areas will focus on hazard tree and small tree removal to improve the skiing experience.

Relative to the lower-mountain and the frontside of *Copper Mountain, Union Peak's* terrain changes will alter skier and rider distribution. Minor changes in this area include the additions of *AF-01* and *AF-02*, which will facilitate better upper-mountain west-east circulation.

Above the East Village, an intermediate trail will be added to offer intermediate-level skiers and riders an alternative to the crowded *Skid Road* run, which currently provides CMR's only intermediate access to the East Village. Other terrain improvements may be needed to support the U.S. Ski Team Training Center off Super Bee Lift.

C) NEW TERRAIN ACCESS

Changes to the West Village include the incorporation of four existing but currently inaccessible novice trails at the top of the proposed Lumberjack alignment and the addition of a short, novice connector trail (*LJ_05*) midway down the Lumberjack lift (known as the *Roundabout Bypass trail*). In the same area, *Clear Cut* will be widened to enhance circulation from Lumberjack to Timberline.

Other glading will occur in the *Lyman Glades* below the T-Rex Grill, *Seadog Glades* between *High Point* and *Coppertone*, Timberline Glades between *American Flyer* and *The Moz,* and the *Union Meadows* area, all of which are routinely skied at present. Like the glading done in other areas on *Copper Mountain*, this work will focus on hazard tree and small tree removal to improve the skiing experience. Glading is planned for overgrown areas of the existing *Upper Enchanted Forest*, *Sail Away*, and *17-Glades* areas. Terrain improvements in *Copper Bowl* include the addition of a previously approved expert run, *BJ-02,* and adjacent glading.

2. TERRAIN NETWORK

No changes to CMR's SUP boundary are proposed in this upgrade plan. However, the operations boundary and the resort's existing terrain typology allocation will be updated. These changes are described and quantified below:

- Lift-accessed, developed runs and high alpine terrain for beginner, intermediate, advanced, and expert skiers and riders, increases from 1,909 acres to approximately 2,144 total acres.
- Undeveloped terrain that is routinely skied within CMR's expanded operations boundary increased from 1,732 acres to approximately 2,010 acres. This designation may include glades between developed runs and areas that are too flat, too steep, or occupied by buildings and other resort infrastructure.
- Undeveloped terrain within the SUP boundary but outside the expanded operational boundary decreases from 3,702 acres to 2,933 acres.

This upgrade plan will increase the entire area within CMR's operational boundary to about 4,150 acres (previously 3,641 acres). In summary, the upgrade plan recommends the development of a higher proportion of terrain within CMR's SUP boundary as shown in Table 12 below.

Table 12. Terrain Typology Breakdown

	Developed Terrain	Undeveloped Terrain – Inside Ops. Boundary	Undeveloped Terrain – Outside Ops. Boundary	Totals
Existing Conditions	1,909 acres	1,732 acres	3,702 acres	7,343 acres
Upgrade Plan	2,144 acres	2,010 acres	2,933 acres	7,343 acres

3. TERRAIN DISTRIBUTION BY ABILITY LEVEL

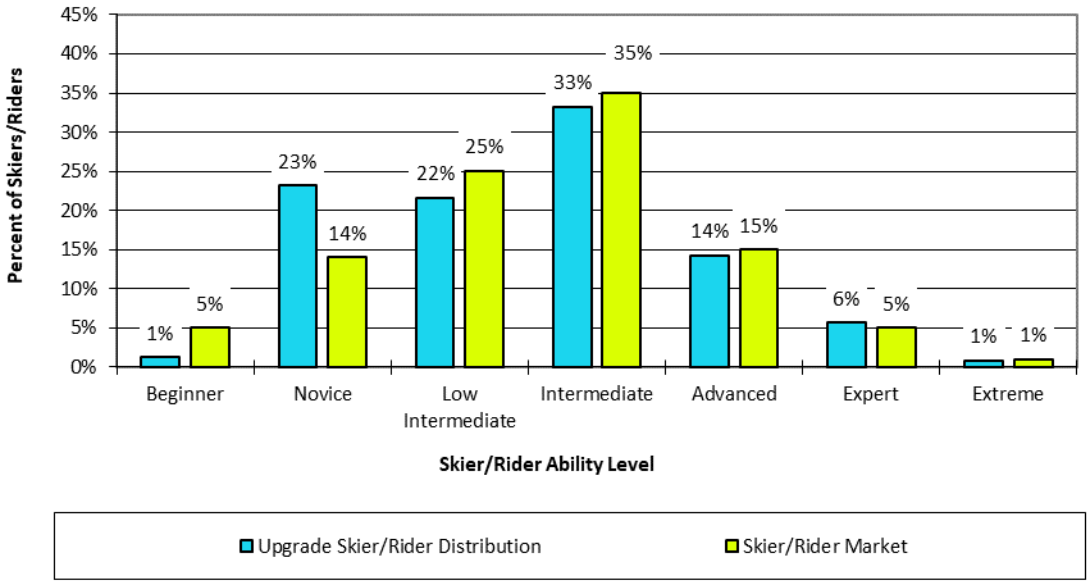
This terrain distribution analysis considers the 2,144 acres within the proposed developed terrain network at CMR. The table below compares Copper's skier ability breakdown to the ideal skier ability breakdown based on the typical skier market. CMR's existing terrain distribution reflects a shortage of beginner and true intermediate terrain, and a surplus in novice and advanced terrain. These conditions are lessened/alleviated in the upgrade plan, as shown below.

Table 13. Terrain Distribution by Ability Level – Upgrade Plan

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	4.9	147	1%	5%
Novice	170.2	2,723	23%	14%
Low Intermediate	254.1	2,541	22%	25%
Intermediate	489.3	3,914	33%	35%
Advanced – *Traditional*	216.0	1,296	14%	15%
Advanced – *Bowl/Hike To*	379.6	380		
Expert – *Traditional*	131.8	264	6%	5%
Expert – *Bowl/Hike To*	401.4	401		
Extreme - *Traditional*	5.2	5	1%	1%
Extreme – *Bowl/Hike To*	91.4	91		
TOTAL	**2,143.8**	**11,762**	**100%**	**100%**

Source: SE Group

Chart 3. Terrain Distribution by Ability Level – Upgrade Plan



C. UPGRADED CAPACITY ANALYSIS

1. COMFORTABLE CARRYING CAPACITY

A detailed calculation of CMR's upgraded CCC was completed for this MDP, as shown in the table below. In the upgrade plan, CMR's CCC is calculated at 17,860 guests—an increase of 4,920 from its existing CCC of 12,940 guests.

Table 14. Comfortable Carrying Capacity – Upgrade Plan

Lift Name/Type	*Slope Length (ft.)*	*Vertical Rise (ft.)*	*Actual Capacity (pph)*	*Operating Hours (hrs.)*	*Up-Mtn Access Role (%)*	*Misloading / Lift Stoppages (%)*	*Adjusted Hourly (pph)*	*VTF/ Day (000)*	*Vertical Demand (ft./day)*	*CCC (guests)*
Alpine/DC4	6,555	1,902	2,200	7.00	0	5	2,090	27,827	25,538	1,090
Resolution/C3	4,450	1,421	1,200	6.50	0	5	1,140	10,531	18,928	560
Gem/S1	468	54	491	7.00	0	5	467	175	4,308	40
Pitchfork/C2	535	61	960	7.00	0	15	816	349	2,764	130
The Glide/C	120	9	1,500	7.00	0	0	1,500	89	1,596	60
Excelerator/DC6	3,529	872	3,200	6.75	10	5	2,720	16,016	13,141	1,220
Easy Rider/C	94	8	720	7.00	0	0	720	40	1,209	30
American Eagle/TM6/8	6,027	1,476	3,372	7.00	30	20	1,686	17,422	13,688	1,270
Sail Away/DC4	4,294	968	2,400	7.00	50	10	960	6,502	12,949	500
Woodward Express/DC4	4,979	1,008	2,400	7.00	25	5	1,680	11,854	12,949	920
Timberline Express/DC6	5,058	1,125	3,000	6.75	10	10	2,400	18,227	13,234	1,380
Union Meadow/DC4	7,959	1,366	2,400	6.50	10	5	2,040	18,116	14,753	1,230
Kokomo/DC4	2,850	350	1,800	7.00	30	10	1,080	2,646	3,988	660
Lumberjack/DC6	4,818	757	2,800	6.75	20	20	1,680	8,584	9,749	880
Storm King/S2	2,034	462	977	6.25	20	10	684	1,975	10,610	190
American Flyer/DC6	9,836	1,891	3,200	7.00	25	10	2,080	27,526	12,097	2,280
SuperPipe/S1	825	234	500	7.00	0	10	450	739	18,228	40
Rendezvous/DC4	4,989	854	2,400	6.50	30	10	1,440	7,989	10,165	790
Rugrat/C	60	10	1,500	7.00	0	0	1,500	100	2,902	30
Sierra/C3	3,014	741	1,200	6.75	5	5	1,080	5,404	18,492	290
Super Bee/DC8	8,953	2,290	3,400	7.00	25	5	2,380	38,151	20,847	1,830
Slingshot/C	120	9	1,500	7.00	0	0	1,500	95	1,690	60

Table 14. Comfortable Carrying Capacity – Upgrade Plan Continued

Lift Name/Type	*Slope Length (ft.)*	*Vertical Rise (ft.)*	*Actual Capacity (pph)*	*Operating Hours (hrs.)*	*Up-Mtn Access Role (%)*	*Misloading Lift Stoppages (%)*	*Adjusted Hourly (pph)*	*VTF/ Day (000)*	*Vertical Demand (ft./day)*	*CCC (guests)*
Terrain Park Lift/C2	2,489	442	960	7.00	0	10	864	2,673	11,395	230
Jacque East/DC4	5,947	1,574	2,000	6.00	0	5	1,900	17,946	24,702	730
Thunderbird/C3	2,617	866	1,200	6.00	25	5	840	4,364	21,995	200
Blackjack/DC4	2,384	740	2,400	6.25	0	5	2,280	10,546	25,359	420
Mountain Chief/C3	2,498	824	1,800	6.25	0	5	1,710	8,805	17,776	500
Celebrity Ridge/S1	879	263	513	6.25	75	5	103	169	18,349	10
Three Bears/C3	3,219	1,162	1,200	6.00	10	5	1,020	7,111	24,708	290
Total	**101,600**		**53,193**				**40,809**	**271,971**		**17,860**

Notes:
Lift Types: C = carpet conveyor / S1 = platter surface lift / S2 = T-bar surface lift / C2 = fixed-grip double chairlift / C3 = fixed-grip triple chairlift / DC4 = detachable four-passenger chairlift / DC6 = detachable six-passenger chairlift / DT6/10 = detachable Telemix 6-chair & 8 gondola lift
Stinger Too and Super Tube are not included in capacity calculations or terrain models. Stinger Too is primarily used for tubing and Super Tube exclusively operates in late spring and early summer when the remainder of the resort is closed.

2. DENSITY ANALYSIS

As shown in the following table, CMR's average density index in the upgrade plan is 84%—an improvement in utilization relative to CMR's current condition. Since this upgrade density index is still below 100%, CMR's guests will continue to enjoy a high-quality recreation experience. However, strategic lift additions and upgrades will increase the use of CMR's currently-underutilized terrain—particularly on the upper-mountain. This will result in more efficient resource allocation across the resort.

As discussed in Chapter 2, overall resort efficiency is becoming an increasingly important factor in the industry, relating not only to operational efficiency, but also efficiency of the design and layout of the resort. A balanced resort would ideally have a trail network served by the fewest lifts possible, while maintaining desired CCC rates, circulation routes, and service to all ability levels and types of skiers.

A) LIFT NETWORK EFFICIENCY

As previously discussed, the term Lift Network Efficiency refers to the amount of effort and cost required to operate and maintain the lift network compared to the amount of guests served. It is measured by the average CCC per lift. The Lift Network Efficiency with improvements from the Upgrade Plan increases from 706 to 719, remaining above the industry average of 650 and closer to the optimal average of 1,000.

B) TERRAIN NETWORK EFFICIENCY

Terrain Network Efficiency refers to the amount of effort required to properly maintain a resort's terrain. From this standpoint, the most efficient scenario is to have a quantity of terrain that closely meets the target density requirements. Terrain Network Efficiency also increases under the Upgrade Plan. The overall density index increases from 61% to 84%, and overall trail density increases from five skiers per acre to six skiers per acre. This implies that the lift network better serves the terrain network, and the terrain is better utilized with improvements from the Upgrade Plan. Pitchfork, Kokomo, and the Terrain Park Lifts all have a density index above 100%, which is not uncommon for lifts that serve mainly beginner to novice terrain. On the other hand, Jacque East, Union Meadows, and Mountain Chief also have a higher density index, but do not serve any novice terrain. Those lifts serve primarily advanced to extreme terrain, so target densities are much lower at one or two skiers per acre. A density index over 100% will not necessarily indicate overcrowding in those areas. Remaining lifts have densities below the target density.

Table 15. Density Analysis—Upgrade Plan

Lift Name	*CCC*	*Support Fac./Milling (guests)*	*In Lines (guests)*	*On Lift (guests)*	*On Terrain (guests)*	*Terrain Area (acres)*	*Terrain Density (guests/acre)*	*Desired Density (guests/acre)*	*Diff. (+/-)*	*Index (%)*
Alpine/DC4	1,090	273	70	228	519	90.4	6	6	0	106%
Resolution/C3	560	140	95	169	156	118.0	1	3	-2	37%
Pitchfork/C2	130	33	27	18	52	1.8	28	16	12	175%
Excelerator/DC6	1,220	305	317	145	453	82.5	5	7	-2	72%
American Eagle/TM6/10	1,270	318	281	169	502	97.4	5	9	-4	57%
Sail Away/DC4	500	125	80	69	226	135.2	2	3	-1	75%
Woodward Express/DC4	920	230	140	139	411	82.0	5	10	-5	48%
Timberline Express/DC6	1,380	345	280	184	571	139.0	4	11	-7	38%
Union Meadow/DC4	1,230	308	68	271	583	181.6	3	2	1	123%
Kokomo/DC4	660	165	126	64	305	8.8	35	14	21	258%
Lumberjack/DC6	880	220	28	135	497	68.7	7	14	-7	51%
Storm King/S2	190	48	80	39	23	85.1	0.3	5	-5	6%
American Flyer/DC6	2,280	570	347	341	1,022	150.9	7	11	-4	65%
Rendezvous/DC4	790	198	48	120	424	24.7	17	10	7	166%
Sierra/C3	290	73	18	109	90	119.9	1	5	-4	21%
Super Bee/DC8	1,830	458	278	323	771	146.2	5	8	-3	64%

Table 15. Density Analysis—Upgrade Plan Continued

Lift Name	*CCC*	*Support Fac./Milling (guests)*	*In Line (guests)*	*On Lift (guests)*	*On Terrain (guests)*	*On Terrain (acres)*	*Terrain Density (guests/acre)*	*Desired Density (guests/acre)*	*Diff (+/-)*	*Index (%)*
Terrain Park Lift/C2	230	58	0	72	100	6.6	15	10	5	150%
Jacque East/DC4	730	183	63	188	296	113.5	3	2	1	140%
Thunderbird/C3	200	50	28	73	49	172.6	0.3	2	-1	18%
Blackjack/DC4	420	105	76	91	148	80.8	2	3	-1	58%
Mountain Chief/C3	500	125	143	142	90	60.5	1	1	0	100%
Celebrity Ridge/S	10	1	0	5	4	32.5	0.1	1	-1	12%
Three Bears/C3	290	73	34	109	74	135.2	1	1	0	89%
TOTAL	**17,600**	**4,404**	**2,627**	**3,203**	**7,366**	**2,134.1**	**6**	**8**	**-1**	**84%**

Notes*:* Lift Types: S1 = platter surface lift / S2 = T-bar surface lift / C2 *= fixed-grip double chairlift /* C3 *= fixed-grip triple chairlift /* DC4 *= detachable four-passenger chairlift / DC6 = detachable six-passenger chairlift / DT6+8 = detachable Telemix 6-chair & 8 gondola lift*

Table does not include Gem, The Glide, Easy Rider, SuperPipe, RugRat, Stinger Too, and Slingshot

D. UPGRADED GUEST SERVICES FACILITIES, FOOD SERVICE SEATING & SPACE USE ANALYSIS

1. GUEST SERVICES

CMR's guest services upgrade plan centers around improving existing on-mountain locations, upgrading strategic base area facilities, and adding necessary on-mountain outlets. CMR's main on-mountain guest service facility, Solitude Station which opened in 1972, was replaced for the 2023-2024 season with a new facility called The Aerie. The Aerie will fundamentally change the guest experience at CMR, offering an array of dining options, indoor and outdoor seating, restrooms, employee lockers and storage space.

CMR also plans to upgrade the existing facilities at Flyer's Restaurant and T-Rex Grill. As dictated by future resort growth, Flyer's will be renovated and expanded, and T-Rex Grill will be replaced by a larger, more comprehensive, and accessible restaurant facility.

A) BASE AREA FACILITIES

At present, Center Village and East Village function well on Copper's peak days. In the upgraded condition, they are expected to continue functioning well. Should CMR opt to upgrade guest services in the East Village, its facilities could be redesigned to use space more efficiently. For example, its functions that currently occupy more space than necessary, such as circulation, could be reallocated to services that would benefit from more space, such as public lockers. In the upgrade plan, Center Village has an overall slight deficit in guest service space. Some of this deficit is offset by third-party vendors and accommodations, which offer retail, food, and storage space to guests. Other functions, such as ski patrol, may require additional space to accommodate CMR's upgraded CCC.

CMR's West Village is space-constrained in its existing state, and its need for additional services will be exacerbated in the upgrade plan. Unlike the East and Center Villages, the West Village does not have significant accommodations and third-party vendors to offset its guest service space deficit. Thus, while it will continue to have sufficient space for food service seating, kitchens, and restrooms, its other service functions would benefit from additional space in the upgraded condition.

B) ON-MOUNTAIN FACILITIES

Unlike CMR's base areas, which will require few changes to accommodate the upgrade condition, Copper's on-mountain facilities should be expanded significantly. Of the four current on-mountain guest service venues, two do not offer indoor seating (T-Rex Grill and Flyers), which renders them unusable on inclement days. Of the other two, Koko's Hut was constructed recently and is expected to function well in the upgrade plan. The Aerie includes sufficient space for the upgrade plan and has been shifted to facilitate better skier circulation.

THE AERIE

The existing Solitude Station has served as Copper's primary on-mountain restaurant since the resort opened in 1972. Planned to open for the winter of 2023-2024, The Aerie will replace and dramatically improve the mountain dining experience at CMR. The new facility interfaces directly with the American Eagle Lift, allowing gondola passengers to unload directly on the plaza of the building. Offerings include a food court, table-service restaurant, two bars and a coffee shop. Restrooms are located on both floors of the new building. The Aerie provides abundant outdoor seating that benefits from sunlight and is protected from predominant winds. The Aerie will be the consummate dining experience for guests at CMR.

At present, CMR has strategic ski patrol huts and restrooms distributed throughout its upper-mountain. On-mountain restrooms are located at the Aerie, Koko's, and the T-Rex Grill, just below the top terminal of Super Bee, and near the bottom of Rendezvous, Sierra and Mountain Chief lifts. To meet the demands of the upgrade condition, Copper plans additional locations for these facilities. One such location is at R-Saddle warming hut, which was approved in the 2006 CMR Trails and Facilities Improvement FEIS/ROD. The facility could be up to 1,900 square feet and include a steel deck, 125 indoor seats, and 125 outdoor seats. Another facility location is near the

top of the Terrain Park lift. This would include restrooms and potentially a small shelter. It would provide additional facilities to service the Woodward summer operations. CMR may also deploy temporary/mobile food and beverage services throughout its upper-mountain to meet demand on peak days.

CMR currently has limited guest service facilities in *Copper Bowl* or on *Tucker Mountain*. There is a restroom near the bottom terminal of Mountain Chief and ski patrol huts are available as warming huts. Relative to lower parts of the resort, fewer guest services are needed in these areas since they cater to expert skiers. These types of skiers tend to spend a longer time skiing and riding, and should this terrain experience increased visitation, Copper may consider adding a small restroom or warming hut facility near *Copper Bowl*, *Tucker Mountain*, or *Tucker Gulch*.

2. SPACE USE ANALYSIS

In the upgrade plan, sufficient guest service space should be provided to accommodate the upgrade resort CCC of 17,860 guests per day. The table below illustrates the amount of space that CMR would need to add to comfortably accommodate its upgraded CCC plus an additional 5% for non-skiing or riding guests, per industry norms. As shown, CMR's public lockers, guest services/tickets/ski school, and rentals/repair space will be most notably undersized in the upgrade condition. However, this summary table does not reflect the shortage of on-mountain guest service space throughout the resort. Tables in Appendix A illustrate this disparity.

Table 16. Space Use Recommendations – Upgrade Plan – Resort Total

Service Function	Existing Total (square feet)	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	13,007	23,310	28,490
Public Lockers	2,363	12,060	14,730
Rentals/Repair	12,290	24,110	29,470
Retail Sales	12,019	8,440	10,310
Bar/Lounge/Restaurant Seating	70,607	65,220	72,050
Kitchen/Scramble	27,336	16,720	20,420
Restrooms	13,190	9,870	12,070
Ski Patrol	9,340	6,090	7,440
Administration	6,565	16,720	20,420
Employee Lockers/Lounge	3,194	3,380	4,130
Mechanical	3,882	4,800	6,860
Storage	10,740	8,000	11,450
Circulation/Waste	20,761	19,180	27,450
Total Square Feet	**205,294**	**209,620**	**255,190**

Source: SE Group

3. FOOD SERVICE SEATING

The table below shows the calculated capacity of CMR's upgraded seating configuration and compares it to the resort's CCC. As in the existing condition, outdoor seats are infrequently used on inclement days.

Table 17. Restaurant Seats – Upgrade Plan

	East Village	Center Village	West Village	The Aerie	T-Rex Grill	Flyers	Koko's Hut	Other On-Mt	Total
Lunchtime Capacity	1,969	6,786	1,487	2,350	1,830	1,129	562	765	18,753
Average Seat Turnover	3.5	3.5	3.5	3.5	4.0	4.0	3.5	4.0	
Existing Indoor Seats	558	1,828	254	480	-	9	72	-	3,201
Existing Outdoor Seats	198	697	-	187	227	70	70	-	1,449
Total Existing Seats	756	2,525	254	667	227	79	142	-	4,650
Required Seats	563	1,939	425	672	457	282	160	191	4,689
Difference	**193**	**586**	**-171**	**-5**	**-230**	**-203**	**-18**	**-191**	**-39**

Source: SE Group

CMR's existing seating deficit will be exacerbated in the upgrade condition. Seating constraints generally mirror Copper's space use constraints, so CMR may be able to address certain deficiencies together. Deficits will be easiest to address in CMR's base areas, which are located on private land and contain the necessary infrastructure for food services. Adding indoor restaurant seating gets more complicated on-mountain, where infrastructure is sparse and other constraints restrict the capacities of structures. As mentioned above, the replacement of T-Rex Grill and the previously approved warming hut at R-Saddle will add needed seats to the mountain. A renovation and upgrade to Flyer's, with the addition of vault restrooms, is also anticipated. CMR may also deploy temporary/mobile food and beverage services to meet demand on peak days. Through strategic improvements, CMR hopes to alleviate the lunchtime and end-of-day funneling of skiers through Center Village.

E. UPGRADED PARKING AND RESORT ACCESS

To accommodate CMR's upgrade capacity, Copper will need to expand its day use parking, incentivize public transit ridership, and encourage guests to carpool to increase CMR's average vehicle occupancy (AVO).

The following table shows the balance of resort access and capacity. It identifies parking requirements based on CMR's CCC and the proportion of guests expected to arrive via personal vehicle. As shown below, the combination of parking capacity and transit options presently provides sufficient access capacity to Copper.

The numbers in the table below assume that the percentage of guests staging at each portal will remain the same in the upgrade condition as the existing condition. They assume a slight decrease in the percentage of guests who stay in accommodations within comfortable walking distance of the slopes, since the number of units in CMR's base area is not expected to change significantly in the near term. They assume a slight increase in the percentage of guests arriving via public transit and no change in the percentage of guests arriving via charter bus. CMR's AVO for personal and employee vehicles is expected to remain the same.

To supplement its eleven existing parking lots, CMR recently completed the previously approved expansion of the Far East Lot. This project added 861 parking spaces to the existing lot and represent the final stage of the phased expansion that was approved in the 2008 Tenmile Creek Facilities Improvement and Restoration Project DN/FONSI.

Copper also plans to improve circulation from the Far East parking lot to the Alpine lift by providing an alternative route for skiers and riders to the mountain. This would require a pedestrian underpass or overpass on SR-91. The new route would decrease the number of people needing to ride the shuttle to East, Center or West Villages and increase utilization of the Alpine lift for out-of-base capacity. This project would likely occur after the Far East Lot expansion is constructed and the A-Lift development is largely constructed.

Table 18. Parking and Required Spaces – Upgrade Plan

	East Village	Center Village	West Village	Total
CCC + Other Guests				18,753
Percent Staging at Portal	30%	55%	15%	100.0%
Number of guests staging at Portal	5,626	10,314	2,813	18,753
Percent from Accommodations	20%	20%	20%	
Number of guests from Accommodations	1,125	2,063	563	3,751
Percent from Transit	5%	10%	0%	
Number of guests from Transit [a]	281	1,031	0	1,312
Percent from Charter Buses	0%	5%	0%	
Number of guests from Charter Buses	0	516	0	516
Percent Parking at Portal	75%	65%	80%	
Number of guests Parking at Portal	4,220	6,704	2,250	13,174
Required Car Parking Spaces (average 2.4 guests per car)	1,758	2,793	938	5,489
Required bus parking spaces (35 guests per bus; 1 bus = 4.5 cars)	0	68	0	68
Required Employee Car Parking Spaces (assumes 8% of CCC; 2 employees per car)	225	263	113	600
Total required spaces	1,983	3,123	1,050	6,157
Existing and planned parking spaces	1,845	2,828	744	5,417
Surplus/Deficit	**-138**	**-295**	**-306**	**-740**

Source: SE Group
[a] – Transit numbers include Summit Stage and Snowstang ridership

As shown in the table above, CMR may need to pursue additional parking options to accommodate its upgrade capacity. Such options could include parking structures, or "decks," above CMR's existing lots. These decks would most likely be located on private land and would only be pursued if other strategies fail to prove sufficient. Before seriously considering these decks, CMR will incentivize guests to carpool (to increase its AVO) and/or use public transit.

F. UPGRADED RESORT OPERATIONS

1. SNOWMAKING

As referenced previously, CMR's existing snowmaking system covers 373 acres. An additional 177.5 acres of snowmaking are previously approved but not yet constructed. There are 54 acres of other planned snowmaking outlined in Figure 8. This includes key circulation routes (*A-01*, *Upper Main Vein,* lower *Coppertone*, *AF-X*, *Soliloquy, Roundabout, Rattler, Union Park, Lyman Lane, Timber Road,* and *The Moz*. Other snowmaking connections may be needed if demand warrants it. CMR plans to construct this previously approved not-yet-built snowmaking and undergo the necessary permitting for its planned snowmaking that has yet to be approved.

2. MAINTENANCE FACILITIES

Under the upgrade plan conditions, CMR plans to construct a facility at the 29 Yard adjacent to the terrain park to support terrain park and Woodward operations in the winter and summer. The facility would largely use the existing cleared footprint where equipment and terrain park features are currently stored. This is an ideal location for these operations due to the proximity to the terrain park, it is a previously cleared and disturbed area, it is adjacent to the CB-01 maintenance facility that is at capacity, and it will help support the growing on-mountain operations on the westside of Copper.

3. INFRASTRUCTURE AND UTILITIES

CMR's domestic water, sewer, gas, electricity, fuel storage, and communications capacities are anticipated to generally continue to meet CMR's needs in the upgrade plan. CMR plans to extend utilities from Koko's Hut to T-Rex Grill to support upgraded operations. The corridor would use existing ski runs *Fairway* and *Timber Road*. CMR also plans to install previously approved buried power from the top of Resolution Lift to the top of Rendezvous Lift. This east-west connection will increase redundancy and reliability for existing and planned infrastructure at the south end of the resort. In Tucker Gulch, a utility corridor is planned from the bottom of Mountain Chief lift to the bottom of Thunderbird and Jacque East lifts to supply power to the bottom terminals. Other similar utility corridor extensions may be needed to provide services at other up-mountain locations to meet existing and future on-mountain guest service and lift infrastructure needs. When possible, these utility corridors will be installed in existing or planned mountain access.

CMR's culinary water and wastewater treatment capacities are anticipated to continue to meet CMR's needs in the upgrade plan. CMR should consider expanding both services up-mountain to meet existing and future on-mountain guest service needs.

4. AVALANCHE MITIGATION

CMR plans to install remote avalanche control systems (RACs) in avalanche prone areas primarily in expansion terrain. These systems provide the ability to conduct avalanche mitigation work remotely and in a variety of weather conditions, increasing both the margin of safety for guests and employees and the efficiency of mitigation work. The ridgeline between *Jacque Peak* and *Rose Mountain* in *Tucker Gulch* is one area that is conducive to RACs.

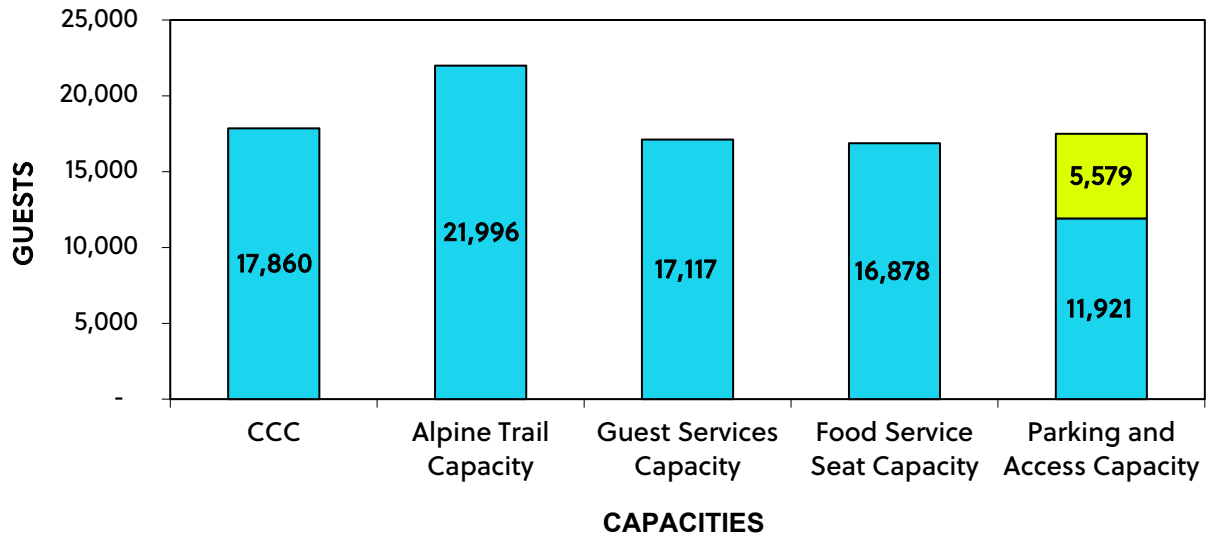
5. MOUNTAIN ROADS

The upgrade plan requires an additional approximately four miles of mountain roads to be constructed within CMR's SUP. These include segments to connect from the top of Lumberjack Lift to the bottom of Union Meadows Lift a previously approved segment extending the existing A-1 road. When added to Copper's 18 miles of existing mountain roads, CMR will have approximately 22 miles of mountain roads. These roads are anticipated to adequately serve CMR's operational needs.

G. UPGRADED RESORT CAPACITY BALANCE AND LIMITING FACTORS

With a CCC of 17,860 skiers per day, CMR will maintain its relative surplus of terrain and high-quality skiing experience. CMR's guest services and food service seating will be slightly undersized, even when the changes discussed (replacing Solitude Station with The Aerie, replacing T-Rex Grill, constructing the new R-Saddle warming hut) are considered. This deficit can be accommodated by third party vendors in the base area; however, it is a better guest experience to provide on-mountain guest services and food service seating space. As shown in the chart below in yellow, lodging, transit and drop-offs are expected to continue to contribute to CMR's parking and access capacity. As CMR continues to grow, it may also need to consider alternate strategies to increase its parking and access capacity, such as incentives to increase AVO and public transit use.

Chart 4. Resort Capacity – Upgrade Plan



H. UPGRADED SUMMER AND MULTI-SEASON RECREATION

CMR's upgrade plan continues to prioritize non-skiing year-round and summer recreational activities, alongside its primary winter offerings of skiing and snowboarding.

CMR currently offers on-snow recreation for eleven months of the year. Moving forwards, the goal will be to continue to blur the lines of winter and summer, with race training, on-snow summer camps and events. The Rocky Mountain Coaster, the Woodward Barn and Scenic Lift Rides will continue to be offered year-round. On-mountain summer activities will utilize the American Eagle and Woodward Express Lifts.

A) WOODWARD COPPER

Woodward Copper's seasonal activities are expected to continue as well transitioning from winter coaching and training to spring training to on-snow camps and events. Should Woodward Copper continue along its current trajectory of annual growth, additional indoor space may be required to facilitate its expanded operations. This space could include restrooms, and food and beverage operations in the existing summer terrain park area. These facilities could also include a warming hut to serve terrain park users throughout the winter and late spring/early summer.

B) MOUNTAIN BIKING

CMR has partnered with Gravity Logic to design and construct a preeminent downhill bike park, which capitalizes on the mountain's terrain and lift network. Approved in a 2023 Decision Memo, the network utilizes the American Eagle and Woodward Express Lifts to provide a variety of downhill mountain bike experiences—from single track to flow trails to large jump trails—with trails for all ability levels.

C) HIKING

A network of hiking trails was approved in the 2019 Snowmaking and Summer Uses DN/FONSI. CMR plans to progressively build trails emanating from The Aerie. The American Eagle Lift will expedite access to trails that take guests into the high alpine and progressively connect to planned camping and event experiences in the area of Rendezvous Lift.

D) THE AERIE

To improve CMR's on-mountain guest experience in the summer, Copper may operate certain on-mountain facilities. The Aerie will serve as an on-mountain event venue complete with food and beverage services, restrooms, event space, and walking paths. This facility may be used by hikers or scenic lift riders, and it will also host weddings and other on-mountain events. The area around The Aerie has also been identified for future adventure activities such as obstacles courses, zip-lines, and ropes courses.

E) RENDEZVOUS AREA

The area around Rendezvous Lift is planned as an additional hub of summer activities. This area was approved in the 2019 Snowmaking and Summer Uses DN/FONSI for camping and summer activities. Approved hiking trails will connect this area to The Aerie and the American Eagle Lift. Once built, the R-Saddle warming hut may also be available to hikers and bikers in the summer.

Since it has no direct lift access and will contain minimal infrastructure, it could serve as a destination and/or shelter for adventurous guests exploring CMR's high alpine terrain.

F) T-REX GRILL

CMR plans for continued and expanded events at the base of Timberline Express. Access to this area is convenient from existing hiking and mountain biking trails, and the future replacement of this facility will provide restrooms, shelter and food and beverage options to summer guests.

2. UPGRADE SUMMER ACTIVITY ZONES

CMR's upgrade plan maintains 23 Summer Activity Zones. However, some areas fall into a different Zone designation, and some Zone boundaries have been modified to accommodate planned upgrades. CMR's upgraded summer zones are distributed as follows: five Zone 1 areas, three Zone 2 areas, seven Zone 3 areas, five Zone 4 areas, and three Zone 5 areas. Refer to Appendix A for the scoring of each Zone. Refer to Appendix B for a detailed explanation of each Zone's setting, desired experiences, and compatible activities and facilities.

A) ZONE 1

Five areas within CMR's SUP are still designated as Zone 1: Areas 7, 16, 18, 21, and 22. The boundaries and scoring of these areas has not changed from CMR's existing condition; however, all five Zone 1 areas will contain additional or updated ski area infrastructure in the upgrade plan.

B) ZONE 2

Three areas within CMR's SUP will remain designated as Zone 2: Areas 14, 15, and 17. Of these, Areas 15 and 17 will maintain their existing boundaries. Area 14 expands slightly in the upgrade plan to accommodate the T-Rex Grill and the base of the Timberline Express, which may be used for future summer events. The scoring of Area 14 has been updated to reflect this additional infrastructure, and the scoring of Area 17 has also been updated to reflect the new lift infrastructure shown in the upgrade plan. The scoring of Area 15 remains the same, and all three areas remain in Zone 2.

C) ZONE 3

Seven areas within CMR's SUP are now designated as Zone 3: Areas 6, 8, 12, 13, 19, 20, and 23. Area 12 is new to Zone 3, shifting down from Zone 4 due to the addition of the Union Meadows lift and the mountain road required to construct it. The boundaries of Areas 6 and 13 will be modified so that the T-Rex Grill and the base of the Timberline Express may fall into Area 14, which is designated Zone 2. Due to the shift of loss of infrastructure, Area 13's score changes slightly, but it remains in Zone 3. The boundaries of all other Zone 3 areas remain consistent, and the scoring of Areas 8, 19, 20, and 13 does not change.

D) ZONE 4

Four areas within CMR's SUP are now designated as Zone 4: Areas 3, 5, 9, and 11. A new Zone 4 area includes Area 3, which was previously Zone 5. Area 3 now receives a Zone 4 designation due to its proposed ski area infrastructure. Areas 9 and 11 expand to include proposed hiking trails.

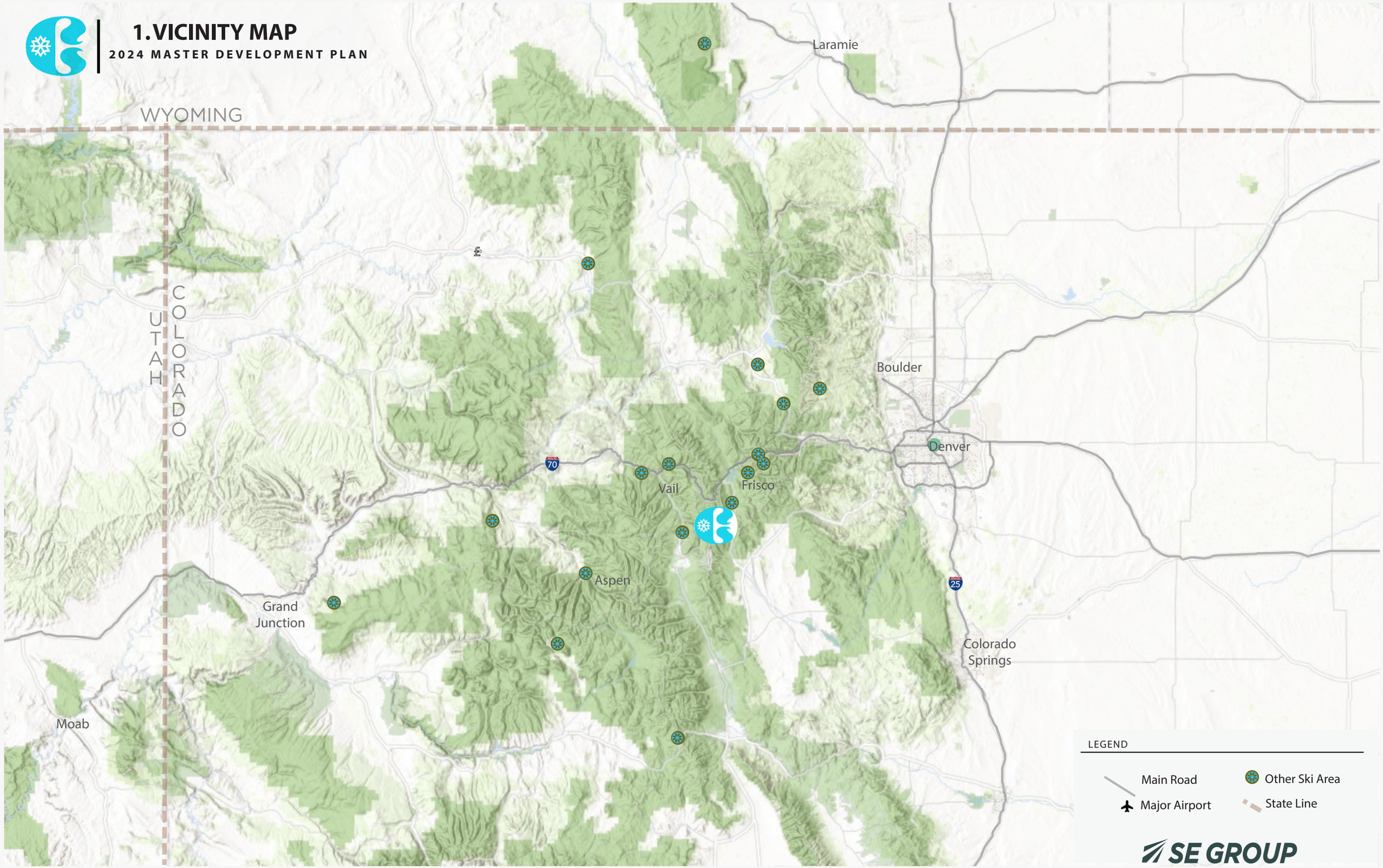
E) ZONE 5

Four areas within CMR's SUP remain designated as Zone 5: Areas 1, 2, 4, and 10. No changes have been made to the scoring of these areas, as they must receive the highest scores possible in each category to remain in Zone 5. However, due to the expansions of Areas 9 and 11, Areas 1 and 2 are smaller.

FIGURES

1. VICINITY MAP

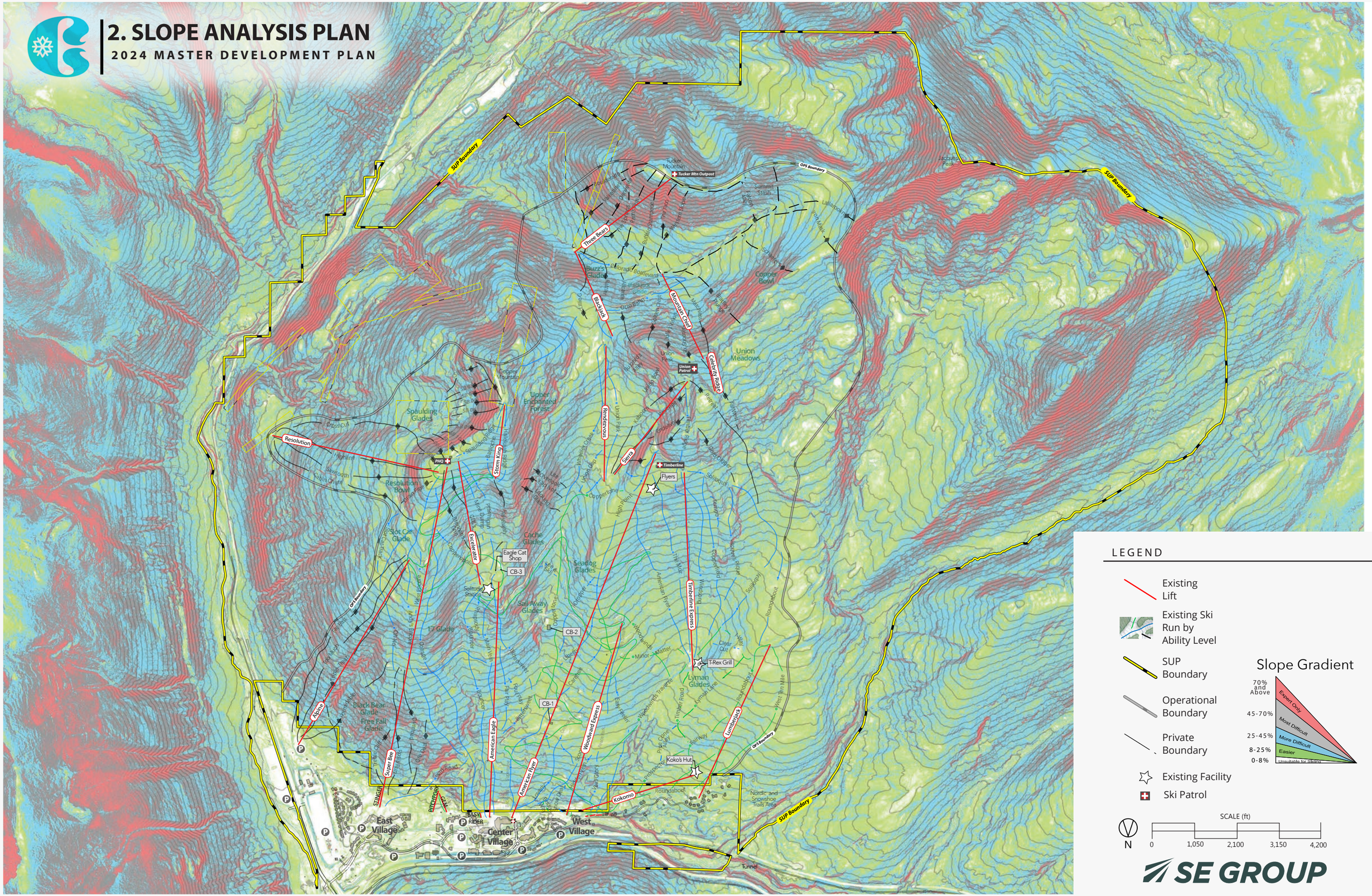
2024 MASTER DEVELOPMENT PLAN



SE GROUP

2. SLOPE ANALYSIS PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

- Existing Lift
- Existing Ski Run by Ability Level
- SUP Boundary
- Operational Boundary
- Private Boundary
- Existing Facility
- Ski Patrol

Slope Gradient

N

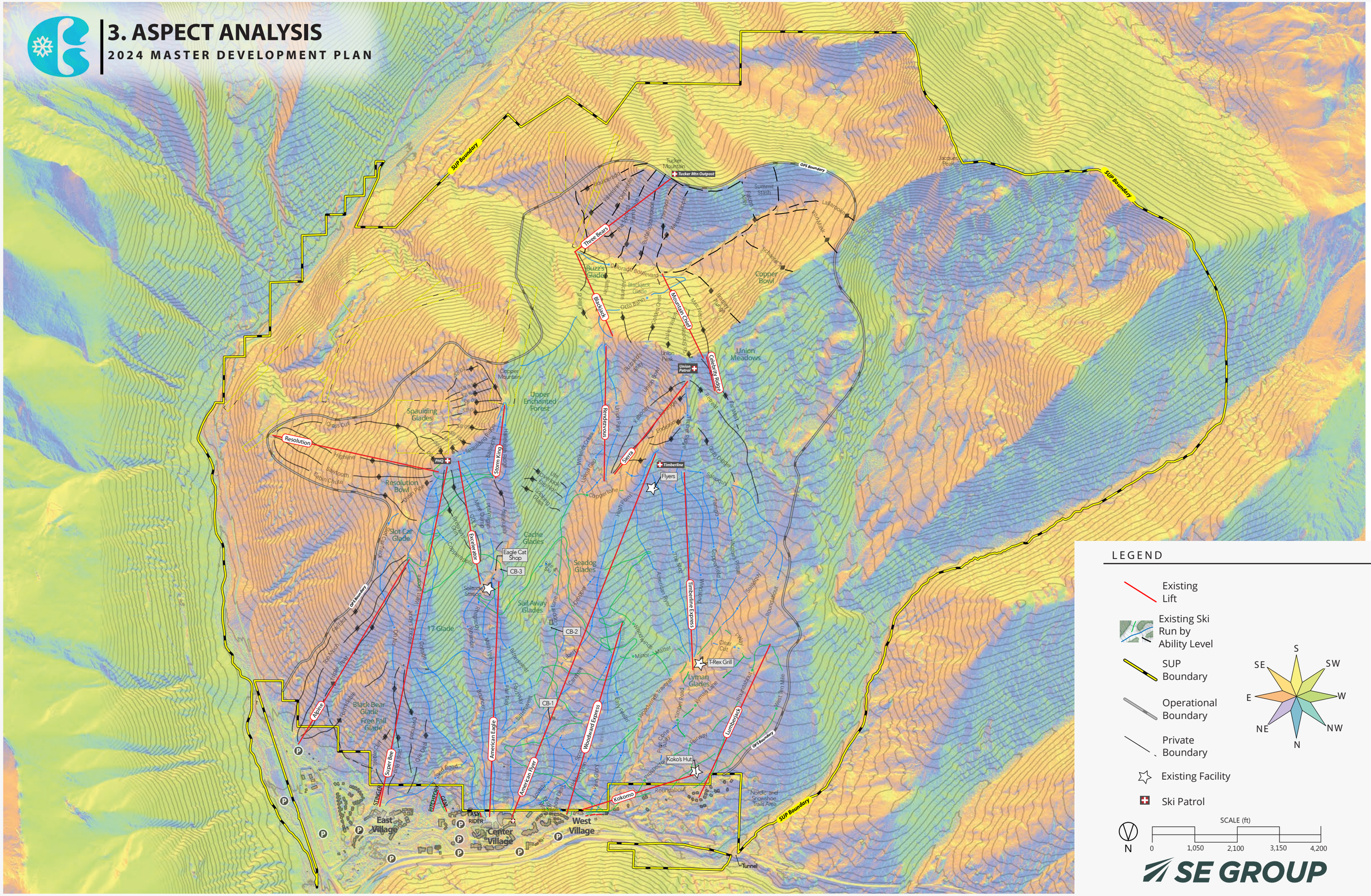
SCALE (ft)

0 1,050 2,100 3,150 4,200

SE GROUP

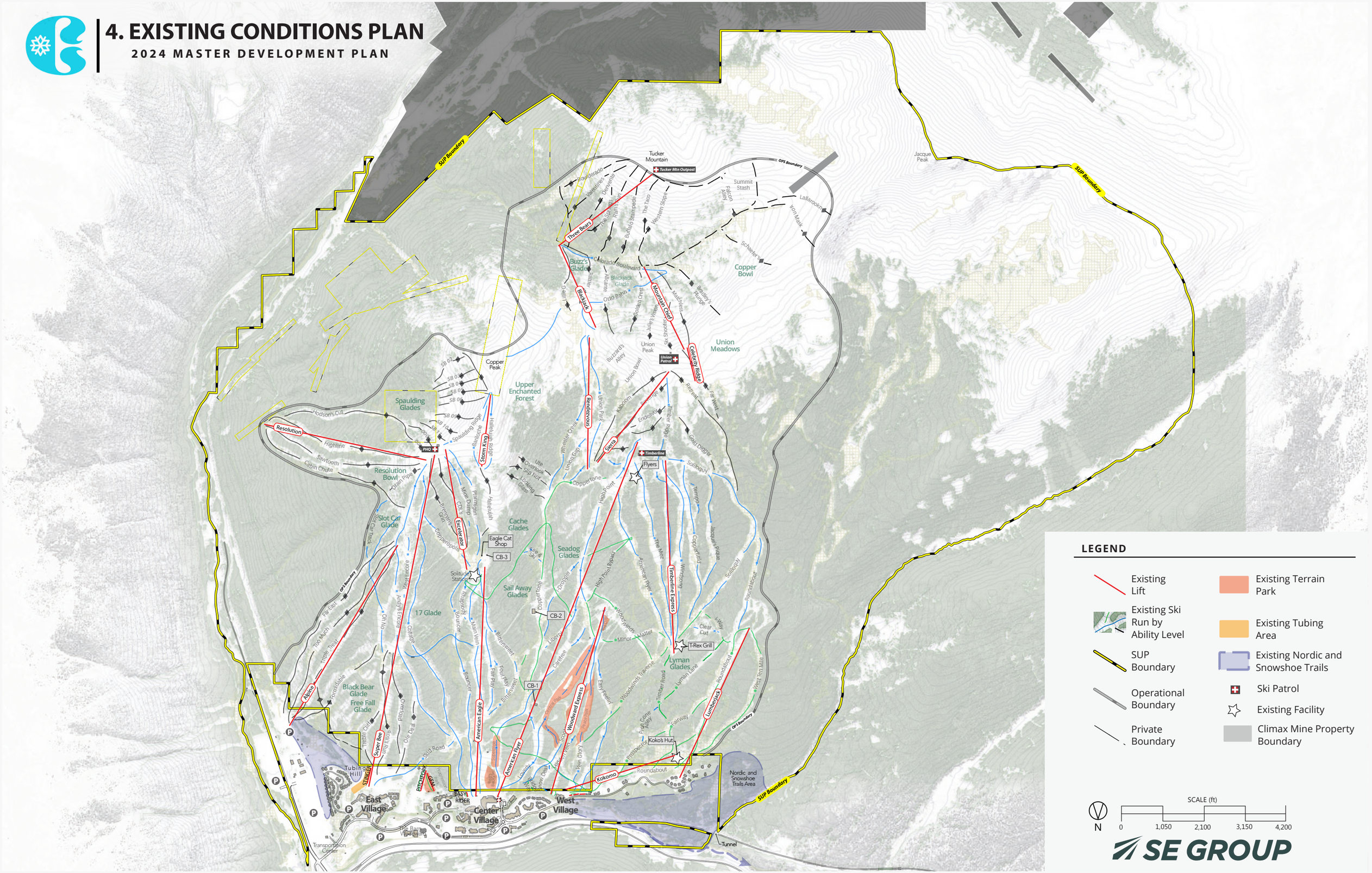
3. ASPECT ANALYSIS

2024 MASTER DEVELOPMENT PLAN



4. EXISTING CONDITIONS PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

- Existing Lift
- Existing Ski Run by Ability Level
- SUP Boundary
- Operational Boundary
- Private Boundary
- Existing Terrain Park
- Existing Tubing Area
- Existing Nordic and Snowshoe Trails
- Ski Patrol
- Existing Facility
- Climax Mine Property Boundary

N

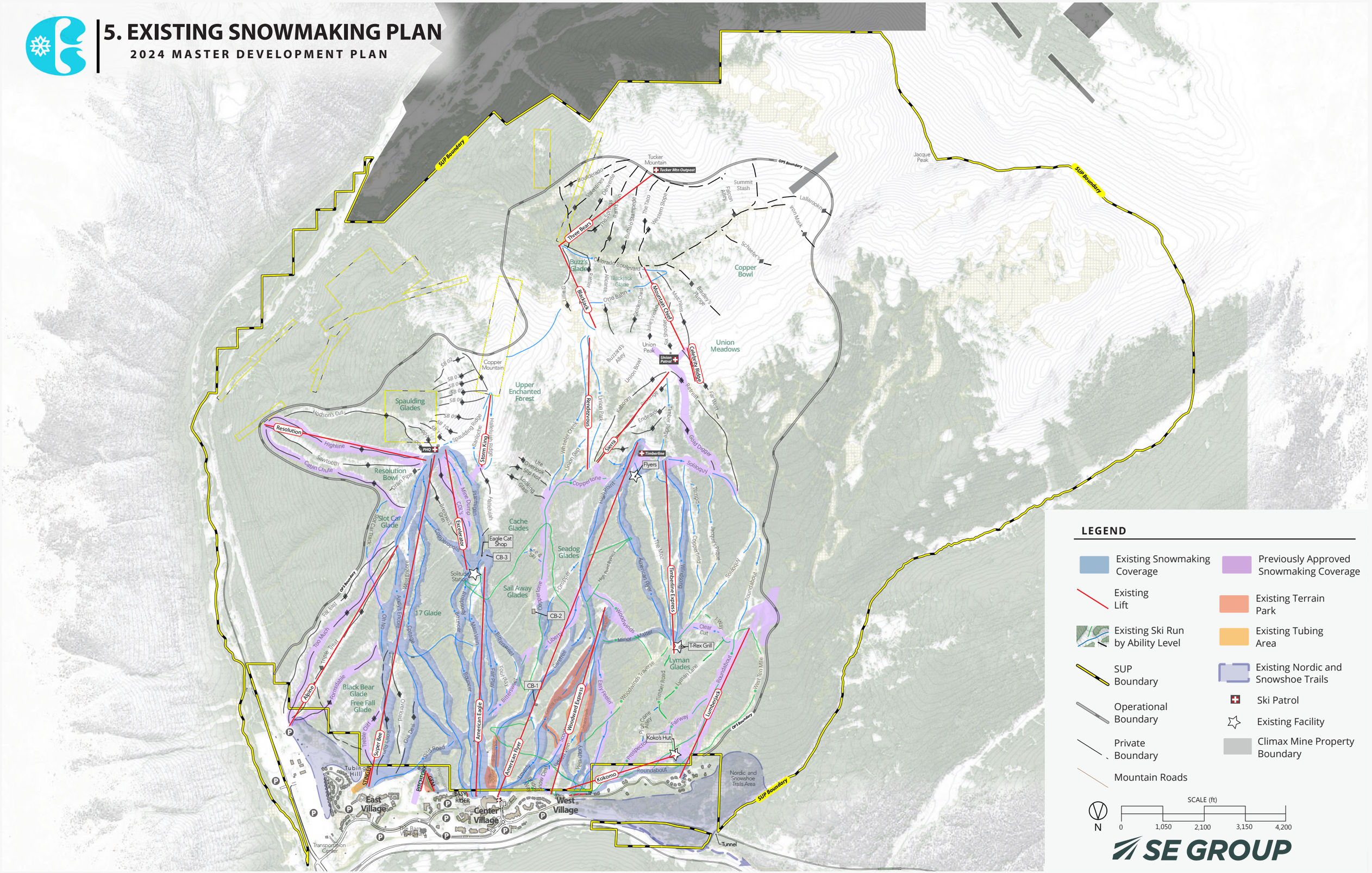
SCALE (ft)

0 1,050 2,100 3,150 4,200

SE GROUP

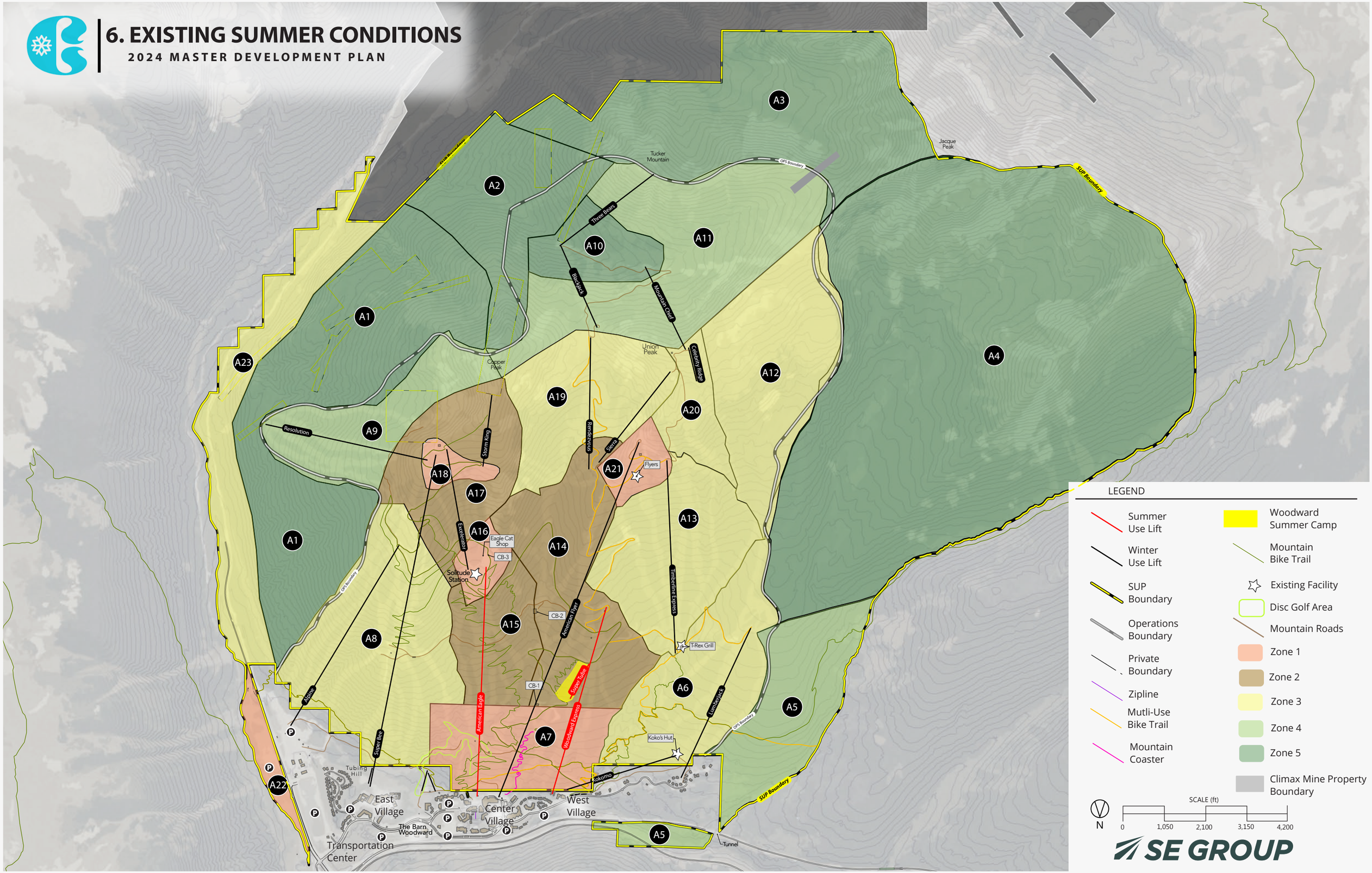
5. EXISTING SNOWMAKING PLAN

2024 MASTER DEVELOPMENT PLAN


SUP Boundary
OPS Boundary
Tucker Mountain
Tucker Mtn Outpost
Jacque Peak
Summit Stash
Falcon Alley
Lallarook
Von Mezek
Schaefer's
Copper Bowl
Boulderado
Valentine's
Dejavenia
The Slipstream
Buffalo Stampede
The Taco
Western Slope
Three Bears
Buzz's Glade
Colorado Boulevard
Rattler
Alicante
Blackjack Glade
Otto Bahn
Golden Crest
Mastiles
Bradley's Plunge
Blackjack
Mountain Chief
Union Peak
Union Patrol
Union Meadows
Buzzard's Alley
Union Bowl
Celebrity Ridge
Retreat
Far West
Copper Mountain
Upper Enchanted Forest
Spaulding Glades
Hodson's Cut
Resolution
Highline
Sawtooth
Cabin Chute
Resolution Bowl
Drain Pipe
PHQ
Spaulding Ridge
Banshee
Hallelujah Ridge
Storm King
Rendezvous
Wheeler Creek
Union Gap
Overlook
Slip Not
Looking Glass
Sierra
Timberline
Flyers
Timber Ridge
Gold Digger
Soliloquy
Tempo
Coppertone
High Point
Slot Car Glade
Cache Glades
Mine Dump
Paramount
Excelerator
CDLs
Eagle Cat Shop
CB-3
Seadog Glades
Solitude Station
Sail Away Glades
Rhapsody
Serenade
Main Vein
Coppertone
CB-2
Chopstick
Hallelujah
The Noz
American Piper
Timberline Express
Windshield
Coppertone Direct
Jacque's Attitude
Roundabout
17 Glade
Apres Ski Glade
West Explore
Corkscrew
Liberty
Woodwinds
Mirror
Water
Clear Cut
Way
T-Rex Grill
Lyman Glades
Lyman Line
Timber Road
Woodwinds Traverse
Easy Feelin'
Fairway
Dry Cone Alley
Prospector
Koko's Hut
Kokomo
Roundabout
Lumberjack
West Ten Mile
Nordic and Snowshoe Trails Area
Tunnel
Black Bear Glade
Free Fall Glade
Formidable
Alpine
Too Much
Triple Trail
Far Easy
Off Boundary
Treble Cliff
Super Bee
Lunch Rock
Overlook
Ore Dock
Skid Road
Tubing Hill
STINGER
PIECRUST
GEAR
EASY RIDER
East Village
Center Village
West Village
The Barn
Transportation Center
American Eagle
American Flyer
Lovejoy
Yellow Deck
Amber Horn
Woodward Express
Scorpio
Sagittarius
Gemini
Virgo
Glory
Corridor
Cirrus
Cumulus
Stratus
Nimbus
Cirque
Cyclone
Tornado
Hurricane
Typhoon
Monsoon
Zephyr
Breeze
Gale
Squall
Blizzard
Tempest
Aurora
Solstice
Equinox
Meteor
Comet
Asteroid
Galaxy
Nebula
Quasar
Pulsar
Supernova
Black Hole
Milky Way
Andromeda
Orion
Big Dipper
Little Dipper
Polaris
Constellation
Eclipse
Lunar
Solar
Orbit
Gravity
Momentum
Velocity
Acceleration
Friction
Inertia
Energy
Kinetic
Potential
Thermal
Radiant
Conduction
Convection
Insulation
Reflection
Absorption
Transmission
Refraction
Diffraction
Interference
Polarization
Wavelength
Frequency
Amplitude
Resonance
Harmonic
Vibration
Oscillation
Pendulum
Spring
Elastic
Plastic
Viscous
Density
Pressure
Buoyancy
Archimedes
Pascal
Bernoulli
Venturi
Reynolds
Laminar
Turbulent
Boundary Layer
Drag
Lift
Thrust
Weight
Mass
Force
Newton
Joule
Watt
Horsepower
Torque
Gear
Pulley
Lever
Fulcrum
Wedge
Screw
Wheel
Axle
Inclined Plane
Machine
Work
Power
Efficiency
Mechanical Advantage
Simple Machine
Compound Machine
Complex Machine
Perpetual Motion
Entropy
Thermodynamics
First Law
Second Law
Third Law
Zeroth Law
Heat
Temperature
Kelvin
Celsius
Fahrenheit
Rankine
Absolute Zero
Triple Point
Critical Point
Phase
Solid
Liquid
Gas
Plasma
Bose-Einstein Condensate
Fermionic Condensate
Quantum
Relativity
Einstein
Special Relativity
General Relativity
Spacetime
Curvature
Geodesic
Event Horizon
Singularity
Wormhole
Time Dilation
Length Contraction
Mass-Energy Equivalence
E=mc²
Photon
Electron
Proton
Neutron
Quark
Lepton
Boson
Fermion
Higgs Boson
Standard Model
Dark Matter
Dark Energy
Cosmological Constant
Big Bang
Inflation
Cosmic Microwave Background
Redshift
Hubble's Law
Expanding Universe
Multiverse
Parallel Universe
Alternate Reality
Simulation Hypothesis
Boltzmann Brain
Fermi Paradox
Drake Equation
Astrobiology
Extremophile
Panspermia
Abiogenesis
Primordial Soup
Miller-Urey Experiment
RNA World
Last Universal Common Ancestor
Endosymbiosis
Mitochondria
Chloroplast
Prokaryote
Eukaryote
Archaea
Bacteria
Domain
Kingdom
Phylum
Class
Order
Family
Genus
Species
Taxonomy
Cladistics
Phylogenetic Tree
Evolution
Natural Selection
Genetic Drift
Mutation
Gene Flow
Speciation
Adaptation
Fitness
Survival of the Fittest
Punctuated Equilibrium
Gradualism
Fossil Record
Stratigraphy
Geologic Time Scale
Precambrian
Paleozoic
Mesozoic
Cenozoic
Cambrian Explosion
Mass Extinction
Permian-Triassic Extinction
Cretaceous-Paleogene Extinction
Holocene Extinction
Anthropocene
Plate Tectonics
Continental Drift
Pangaea
Laurasia
Gondwana
Subduction
Seafloor Spreading
Mid-Ocean Ridge
Transform Fault
Convergent Boundary
Divergent Boundary
Earthquake
Seismic Wave
Richter Scale
Moment Magnitude
Epicenter
Hypocenter
Fault Line
San Andreas Fault
Ring of Fire
Volcano
Caldera
Magma
Lava
Pyroclastic Flow
Tephra
Volcanic Ash
Supervolcano
Yellowstone Caldera
Hotspot
Island Arc
Back-arc Basin
Forearc
Accretionary Wedge
Ophiolite
Metamorphic Rock
Igneous Rock
Sedimentary Rock
Rock Cycle
Mineral
Crystal
Quartz
Feldspar
Mica
Amphibole
Pyroxene
Olivine
Calcite
Halite
Gypsum
Clay
Sand
Silt
Gravel
Conglomerate
Sandstone
Shale
Limestone
Coal
Petroleum
Natural Gas
Fossil Fuel
Hydrocarbon
Reservoir Rock
Cap Rock
Trap
Seismic Survey
Drilling
Fracking
Hydraulic Fracturing
Shale Gas
Tight Oil
Oil Sands
Tar Sands
Peak Oil
Energy Crisis
Renewable Energy
Solar Power
Photovoltaic
Solar Thermal
Wind Power
Wind Turbine
Hydroelectric
Dam
Reservoir
Pumped Storage
Tidal Power
Wave Power
Geothermal Energy
Biomass
Biofuel
Ethanol
Biodiesel
Algae Fuel
Hydrogen Fuel
Fuel Cell
Battery
Lithium-ion
Supercapacitor
Energy Storage
Smart Grid
Microgrid
Net Metering
Feed-in Tariff
Carbon Footprint
Carbon Neutral
Carbon Offset
Carbon Capture and Storage
Greenhouse Gas
Global Warming
Climate Change
Paris Agreement
Kyoto Protocol
Cap and Trade
Carbon Tax
Emissions Trading
Sustainability
Circular Economy
Cradle to Cradle
Life Cycle Assessment
Ecological Footprint
Biocapacity
Overshoot
Earth Overshoot Day
Planetary Boundaries
Tipping Point
Feedback Loop
Albedo
Ice-Albedo Feedback
Permafrost
Methane Hydrate
Arctic Amplification
Polar Vortex
Jet Stream
Ocean Current
Thermohaline Circulation
El Niño
La Niña
Southern Oscillation
Pacific Decadal Oscillation
Atlantic Multidecadal Oscillation
North Atlantic Oscillation
Arctic Oscillation
Antarctic Oscillation
Madden-Julian Oscillation
Monsoon
Hurricane
Typhoon
Cyclone
Tornado
Waterspout
Thunderstorm
Lightning
Hail
Blizzard
Ice Storm
Freezing Rain
Sleet
Snow
Avalanche
Glacier
Ice Age
Glacial Period
Interglacial
Milankovitch Cycles
Axial Tilt
Precession
Eccentricity
Orbital Forcing
Solar Cycle
Sunspot
Solar Flare
Coronal Mass Ejection
Geomagnetic Storm
Aurora Borealis
Aurora Australis
Van Allen Belt
Magnetosphere
Ionosphere
Troposphere
Stratosphere
Mesosphere
Thermosphere
Exosphere
Ozone Layer
Ozone Hole
Chlorofluorocarbon
Montreal Protocol
Greenhouse Effect
Radiative Forcing
Climate Sensitivity
Feedback
Water Vapor
Clouds
Aerosol
Particulate Matter
Air Pollution
Smog
Acid Rain
Eutrophication
Algal Bloom
Dead Zone
Ocean Acidification
Coral Bleaching
Deforestation
Reforestation
Afforestation
Carbon Sink
Biodiversity
Habitat Loss
Invasive Species
Overfishing
Bycatch
Marine Protected Area
Conservation
Rewilding
Ecosystem Services
Natural Capital
Payment for Ecosystem Services
Environmental Impact Assessment
Strategic Environmental Assessment
Precautionary Principle
Polluter Pays Principle
Extended Producer Responsibility
Zero Waste
Recycling
Composting
Anaerobic Digestion
Landfill
Incineration
Waste-to-Energy
Plastic Pollution
Microplastics
Great Pacific Garbage Patch
Ocean Cleanup
Deposit Return Scheme
Single-use Plastic
Biodegradable
Compostable
Bioplastic
Circular Economy
Industrial Ecology
Material Flow Analysis
Urban Mining
Sharing Economy
Product-Service System
Design for Disassembly
Modular Design
Repairability
Right to Repair
Planned Obsolescence
Consumerism
Degrowth
Steady-State Economy
Doughnut Economics
Wellbeing Economy
Gross Domestic Product
Gross National Happiness
Human Development Index
Inequality
Gini Coefficient
Poverty
Universal Basic Income
Job Guarantee
Just Transition
Green New Deal
Environmental Justice
Climate Justice
Intergenerational Equity
Precautionary Principle
Risk Assessment
Risk Management
Hazard
Vulnerability
Resilience
Adaptation
Mitigation
Geoengineering
Solar Radiation Management
Carbon Dioxide Removal
Direct Air Capture
Enhanced Weathering
Ocean Fertilization
Cloud Seeding
Stratospheric Aerosol Injection
Marine Cloud Brightening
Albedo Modification
Terraforming
Planetary Engineering
Space Colonization
Mars Colonization
Lunar Base
Asteroid Mining
Space Resources
Space Debris
Kessler Syndrome
Orbital Mechanics
Hohmann Transfer
Gravity Assist
Slingshot
Ion Propulsion
Solar Sail
Nuclear Propulsion
Chemical Propulsion
Rocket Equation
Tsiolkovsky
Goddard
Oberth
Von Braun
Apollo Program
Saturn V
Space Shuttle
International Space Station
Commercial Crew
SpaceX
Blue Origin
Boeing
Lockheed Martin
NASA
ESA
Roscosmos
JAXA
CNSA
ISRO
Private Spaceflight
Suborbital
Orbital
Geostationary
Low Earth Orbit
Medium Earth Orbit
Geostationary Orbit
Polar Orbit
Sun-synchronous Orbit
Lagrange Point
Halo Orbit
Lissajous Orbit
Transfer Orbit
Escape Velocity
Delta-v
Specific Impulse
Thrust-to-weight Ratio
Payload
Launch Vehicle
Reusable Rocket
Expendable Rocket
Vertical Landing
Propulsive Landing
Aerobraking
Reentry
Heat Shield
Ablative
Thermal Protection System
Crew Dragon
Starship
Falcon 9
Falcon Heavy
New Glenn
New Shepard
Vulcan
Atlas V
Delta IV
Ariane 5
Ariane 6
Soyuz
Progress
Tiangong
Chang'e
Mars Rover
Perseverance
Curiosity
Ingenuity
Helicopter
Drone
Unmanned Aerial Vehicle
Autonomous Vehicle
Robotics
Artificial Intelligence
Machine Learning
Neural Network
Deep Learning
Computer Vision
Natural Language Processing
Generative AI
Large Language Model
Transformer
Attention Mechanism
Backpropagation
Gradient Descent
Loss Function
Overfitting
Regularization
Dropout
Batch Normalization
Activation Function
ReLU
Sigmoid
Softmax
Convolutional Neural Network
Recurrent Neural Network
Long Short-Term Memory
Generative Adversarial Network
Variational Autoencoder
Diffusion Model
Reinforcement Learning
Supervised Learning
Unsupervised Learning
Semi-supervised Learning
Self-supervised Learning
Transfer Learning
Federated Learning
Edge Computing
Cloud Computing
Quantum Computing
Qubit
Superposition
Entanglement
Quantum Gate
Quantum Circuit
Quantum Algorithm
Shor's Algorithm
Grover's Algorithm
Quantum Supremacy
Quantum Error Correction
Topological Quantum Computer
Quantum Annealing
Adiabatic Quantum Computation
Quantum Cryptography
Quantum Key Distribution
Post-quantum Cryptography
Blockchain
Cryptocurrency
Bitcoin
Ethereum
Smart Contract
Decentralized Finance
Non-fungible Token
Web3
Metaverse
Virtual Reality
Augmented Reality
Mixed Reality
Extended Reality
Haptic Feedback
Brain-computer Interface
Neuralink
Transhumanism
Cyborg
Bionic
Prosthetic
Exoskeleton
Wearable Technology
Internet of Things
5G
6G
Satellite Internet
Starlink
OneWeb
Kuiper
Low Latency
Bandwidth
Fiber Optic
Submarine Cable
Undersea Cable
Network Topology
Mesh Network
Peer-to-peer
Client-server
Protocol
TCP/IP
HTTP
HTTPS
DNS
IP Address
Packet Switching
Circuit Switching
Router
Switch
Modem
Firewall
Proxy Server
Load Balancer
Content Delivery Network
Edge Server
Data Center
Server Farm
Virtualization
Containerization
Docker
Kubernetes
Microservices
Monolithic Architecture
Serverless Computing
Function as a Service
Platform as a Service
Infrastructure as a Service
Software as a Service
API
REST
GraphQL
SOAP
JSON
XML
Database
SQL
NoSQL
Relational Database
Document Database
Key-value Store
Graph Database
Time Series Database
Data Warehouse
Data Lake
Big Data
Hadoop
Spark
Stream Processing
Batch Processing
ETL
Data Pipeline
Data Governance
Data Quality
Master Data Management
Metadata
Data Catalog
Business Intelligence
Data Visualization
Dashboard
Reporting
Analytics
Descriptive Analytics
Predictive Analytics
Prescriptive Analytics
Diagnostic Analytics
Real-time Analytics
Data Mining
Text Mining
Web Scraping
Sentiment Analysis
Recommendation System
Collaborative Filtering
Content-based Filtering
Hybrid Recommender
A/B Testing
Multivariate Testing
Conversion Rate Optimization
Search Engine Optimization
Search Engine Marketing
Pay-per-click
Cost per Acquisition
Customer Lifetime Value
Churn Rate
Net Promoter Score
Customer Satisfaction
Customer Experience
Customer Journey
Touchpoint
Omnichannel
Personalization
Segmentation
Target Audience
Buyer Persona
Market Research
Competitive Analysis
SWOT Analysis
PESTLE Analysis
Porter's Five Forces
Value Proposition
Unique Selling Proposition
Brand Identity
Brand Equity
Brand Awareness
Brand Loyalty
Marketing Mix
4Ps
Product
Price
Place
Promotion
Digital Marketing
Content Marketing
Social Media Marketing
Influencer Marketing
Email Marketing
Affiliate Marketing
Inbound Marketing
Outbound Marketing
Public Relations
Crisis Management
Reputation Management
Corporate Social Responsibility
Environmental, Social, and Governance
Triple Bottom Line
People, Planet, Profit
Stakeholder Theory
Shareholder Value
Agency Theory
Principal-agent Problem
Corporate Governance
Board of Directors
Executive Compensation
Shareholder Activism
Proxy Voting
Annual General Meeting
Initial Public Offering
Secondary Offering
Stock Exchange
Market Capitalization
Price-to-earnings Ratio
Dividend Yield
Earnings per Share
Revenue
Net Income
Operating Income
Gross Margin
Operating Margin
Net Margin
Return on Equity
Return on Assets
Return on Invested Capital
Debt-to-equity Ratio
Current Ratio
Quick Ratio
Working Capital
Cash Flow
Free Cash Flow
Capital Expenditure
Operating Expenditure
Depreciation
Amortization
Impairment
Goodwill
Intangible Asset
Patent
Trademark
Copyright
Intellectual Property
Trade Secret
Licensing
Royalty
Franchise
Merger
Acquisition
Leveraged Buyout
Private Equity
Venture Capital
Angel Investor
Seed Funding
Series A
Series B
Series C
Unicorn
Startup
Incubator
Accelerator
Business Model
Lean Startup
Minimum Viable Product
Pivot
Product-market Fit
Scalability
Disruption
Innovation
Creative Destruction
Technology Adoption Lifecycle
Crossing the Chasm
Early Adopter
Early Majority
Late Majority
Laggard
Diffusion of Innovations
Network Effect
Platform
Ecosystem
Two-sided Market
Winner-take-all
Economies of Scale
Economies of Scope
Learning Curve
Experience Curve
Barriers to Entry
Switching Cost
Lock-in
Moat
Competitive Advantage
Core Competency
Dynamic Capability
Resource-based View
Industry Analysis
Value Chain
Supply Chain
Logistics
Procurement
Outsourcing
Offshoring
Nearshoring
Reshoring
Just-in-time
Just-in-case
Inventory
Warehouse
Distribution
Last Mile
Reverse Logistics
Supply Chain Resilience
Supply Chain Risk
Bullwhip Effect
Demand Forecasting
Sales and Operations Planning
Production Planning
Capacity Planning
Lean Manufacturing
Six Sigma
Total Quality Management
Continuous Improvement
Kaizen
Kanban
Poka-yoke
Value Stream Mapping
Root Cause Analysis
Fishbone Diagram
5 Whys
Pareto Principle
80/20 Rule
Statistical Process Control
Control Chart
Process Capability
Design of Experiments
Taguchi Method
Robust Design
Tolerance Analysis
Failure Mode and Effects Analysis
Fault Tree Analysis
Reliability Engineering
Mean Time Between Failures
Mean Time To Repair
Availability
Maintainability
Preventive Maintenance
Predictive Maintenance
Condition Monitoring
Vibration Analysis
Thermography
Oil Analysis
Ultrasonic Testing
Nondestructive Testing
Radiography
Magnetic Particle Inspection
Dye Penetrant Inspection
Eddy Current Testing
Acoustic Emission
Structural Health Monitoring
Digital Twin
Simulation
Finite Element Analysis
Computational Fluid Dynamics
Multibody Dynamics
Kinematics
Dynamics
Statics
Strength of Materials
Stress
Strain
Young's Modulus
Poisson's Ratio
Shear Modulus
Bulk Modulus
Hooke's Law
Yield Strength
Ultimate Tensile Strength
Fatigue
Creep
Hardness
Toughness
Ductility
Brittleness
Elasticity
Plasticity
Viscoelasticity
Rheology
Newtonian Fluid
Non-Newtonian Fluid
Shear Thinning
Shear Thickening
Thixotropy
Rheopecty
Yield Stress
Bingham Plastic
Power Law Fluid
Herschel-Bulkley Fluid
Casson Fluid
Carreau Fluid
Cross Fluid
Generalized Newtonian Fluid
Constitutive Equation
Navier-Stokes Equations
Continuity Equation
Momentum Equation
Energy Equation
Conservation of Mass
Conservation of Momentum
Conservation of Energy
Conservation of Angular Momentum
Conservation of Charge
Maxwell's Equations
Gauss's Law
Gauss's Law for Magnetism
Faraday's Law of Induction
Ampère's Circuital Law
Electromagnetic Field
Electromagnetic Wave
Electromagnetic Spectrum
Radio Wave
Microwave
Infrared
Visible Light
Ultraviolet
X-ray
Gamma Ray
Wave-particle Duality
Photoelectric Effect
Compton Scattering
Pair Production
Annihilation
Antimatter
Positron
Antiproton
Antineutron
Antiquark
Antilepton
Antiboson
Antifermion
Higgs Field
Vacuum Energy
Zero-point Energy
Casimir Effect
Hawking Radiation
Black Hole Thermodynamics
Bekenstein-Hawking Entropy
Holographic Principle
AdS/CFT Correspondence
String Theory
M-theory
Supersymmetry
Supergravity
Kaluza-Klein Theory
Extra Dimensions
Brane
Braneworld
Loop Quantum Gravity
Spin Foam
Causal Set Theory
Quantum Gravity
Planck Length
Planck Time
Planck Mass
Planck Energy
Planck Scale
Grand Unified Theory
Electroweak Unification
Quantum Chromodynamics
Quantum Electrodynamics
Quantum Field Theory
Renormalization
Feynman Diagram
Path Integral
Lagrangian
Hamiltonian
Action
Principle of Least Action
Noether's Theorem
Symmetry
Gauge Symmetry
Lorentz Symmetry
CPT Symmetry
Parity
Time Reversal
Charge Conjugation
Spontaneous Symmetry Breaking
Goldstone Boson
Higgs Mechanism
Yang-Mills Theory
Gauge Boson
Gluon
Photon
W and Z Bosons
Graviton
Tachyon
Ghost
Instanton
Soliton
Monopole
Vortex
Domain Wall
Cosmic String
Texture
Inflaton
Slow-roll Inflation
Eternal Inflation
Bubble Universe
Pocket Universe
Anthropic Principle
Fine-tuning
Cosmological Principle
Homogeneity
Isotropy
Friedmann Equations
Lambda-CDM Model
Dark Energy Equation of State
Quintessence
Phantom Energy
Big Rip
Big Crunch
Heat Death
Cyclic Model
Ekpyrotic Universe
Conformal Cyclic Cosmology
Boltzmann Brain
Simulation Hypothesis
Fermi Paradox
Drake Equation
Rare Earth Hypothesis
Great Filter
Dyson Sphere
Kardashev Scale
Type I Civilization
Type II Civilization
Type III Civilization
Megastructure
Stellar Engineering
Star Lifting
Solar Sail
Interstellar Travel
Generation Ship
Cryonics
Mind Uploading
Whole Brain Emulation
Connectome
Neuromorphic Computing
Artificial General Intelligence
Artificial Superintelligence
Technological Singularity
Intelligence Explosion
Recursive Self-improvement
Friendly AI
AI Alignment
Value Alignment
Coherent Extrapolated Volition
Instrumental Convergence
Orthogonality Thesis
Paperclip Maximizer
Treacherous Turn
AI Box
Oracle AI
Tool AI
Agent AI
Reinforcement Learning from Human Feedback
Constitutional AI
Interpretability
Explainable AI
Black Box
White Box
Gray Box
Adversarial Example
Adversarial Training
Robustness
Generalization
Overfitting
Underfitting
Bias-variance Tradeoff
Cross-validation
Hyperparameter
Grid Search
Random Search
Bayesian Optimization
Ensemble Learning
Bagging
Boosting
Random Forest
Gradient Boosting
XGBoost
Support Vector Machine
Kernel Trick
Principal Component Analysis
Dimensionality Reduction
Clustering
K-means
Hierarchical Clustering
DBSCAN
Anomaly Detection
Time Series Forecasting
ARIMA
Exponential Smoothing
Prophet
Seasonality
Trend
Stationarity
Autocorrelation
Partial Autocorrelation
Granger Causality
Vector Autoregression
State Space Model
Kalman Filter
Particle Filter
Hidden Markov Model
Conditional Random Field
Bayesian Network
Markov Chain Monte Carlo
Gibbs Sampling
Metropolis-Hastings
Variational Inference
Expectation Maximization
Maximum Likelihood Estimation
Bayesian Inference
Prior
Posterior
Likelihood
Evidence
Marginalization
Conjugate Prior
Beta Distribution
Dirichlet Distribution
Gaussian Process
Kernel Function
Radial Basis Function
Matérn Kernel
Periodic Kernel
Linear Kernel
Polynomial Kernel
Sparse Gaussian Process
Inducing Point
Deep Gaussian Process
Bayesian Neural Network
Monte Carlo Dropout
Deep Ensemble
Uncertainty Quantification
Aleatoric Uncertainty
Epistemic Uncertainty
Calibration
Reliability Diagram
Brier Score
Log Loss
Cross-entropy
Kullback-Leibler Divergence
Jensen-Shannon Divergence
Wasserstein Distance
Earth Mover's Distance
Maximum Mean Discrepancy
Two-sample Test
Kolmogorov-Smirnov Test
Chi-squared Test
Anderson-Darling Test
Shapiro-Wilk Test
Levene's Test
Bartlett's Test
Mann-Whitney U Test
Wilcoxon Signed-rank Test
Kruskal-Wallis Test
Friedman Test
Post-hoc Analysis
Tukey's Honestly Significant Difference
Bonferroni Correction
Holm-Bonferroni Method
Benjamini-Hochberg Procedure
False Discovery Rate
Family-wise Error Rate
Power Analysis
Effect Size
Cohen's d
Pearson Correlation Coefficient
Spearman's Rank Correlation
Kendall's Tau
Partial Correlation
Multiple Regression
Logistic Regression
Poisson Regression
Negative Binomial Regression
Zero-inflated Model
Hurdle Model
Survival Analysis
Kaplan-Meier Estimator
Cox Proportional Hazards
Log-rank Test
Censoring
Left Censoring
Right Censoring
Interval Censoring
Competing Risks
Cumulative Incidence Function
Frailty Model
Accelerated Failure Time Model
Parametric Survival Model
Semi-parametric Model
Non-parametric Model
Weibull Distribution
Exponential Distribution
Log-normal Distribution
Gamma Distribution
Generalized Linear Model
Link Function
Canonical Link
Identity Link
Log Link
Logit Link
Probit Link
Complementary Log-log Link
Offset
Dummy Variable
One-hot Encoding
Label Encoding
Ordinal Encoding
Target Encoding
Feature Engineering
Feature Selection
Feature Importance
Permutation Importance
SHAP Values
LIME
Partial Dependence Plot
Individual Conditional Expectation
Accumulated Local Effects
Global Surrogate Model
Counterfactual Explanation
Model Card
Datasheet for Datasets
Fairness
Demographic Parity
Equalized Odds
Equal Opportunity
Predictive Parity
Calibration within Groups
Individual Fairness
Group Fairness
Disparate Impact
Adversarial Debiasing
Reweighing
Prejudice Remover
Fairness Through Unawareness
Differential Privacy
Epsilon-delta Privacy
Local Differential Privacy
Randomized Response
Laplace Mechanism
Exponential Mechanism
Gaussian Mechanism
Composition Theorem
Privacy Budget
Federated Learning
Secure Multi-party Computation
Homomorphic Encryption
Partially Homomorphic Encryption
Fully Homomorphic Encryption
Somewhat Homomorphic Encryption
Garbled Circuit
Oblivious Transfer
Zero-knowledge Proof
Secret Sharing
Shamir's Secret Sharing
Threshold Cryptography
Public Key Infrastructure
Certificate Authority
Digital Signature
Hash Function
SHA-256
MD5
Message Authentication Code
HMAC
Symmetric Encryption
Asymmetric Encryption
RSA
Diffie-Hellman Key Exchange
Elliptic Curve Cryptography
Advanced Encryption Standard
Data Encryption Standard
Triple DES
Block Cipher
Stream Cipher
Initialization Vector
Cipher Block Chaining
Galois/Counter Mode
Padding
Key Derivation Function
Password Hashing
Salt
Pepper
Rainbow Table
Brute Force Attack
Dictionary Attack
Credential Stuffing
Phishing
Spear Phishing
Whaling
Vishing
Smishing
Social Engineering
Pretexting
Baiting
Quid Pro Quo
Tailgating
Shoulder Surfing
Dumpster Diving
Malware
Virus
Worm
Trojan Horse
Ransomware
Spyware
Adware
Rootkit
Keylogger
Botnet
Command and Control
Advanced Persistent Threat
Zero-day Exploit
Vulnerability
Common Vulnerabilities and Exposures
Common Vulnerability Scoring System
Penetration Testing
Red Team
Blue Team
Purple Team
Bug Bounty
Responsible Disclosure
Full Disclosure
Security Information and Event Management
Intrusion Detection System
Intrusion Prevention System
Honeypot
Honeynet
Sandbox
Virtual Machine
Hypervisor
Type 1 Hypervisor
Type 2 Hypervisor
Containerization
Namespace
Cgroups
Seccomp
AppArmor
SELinux
Mandatory Access Control
Discretionary Access Control
Role-based Access Control
Attribute-based Access Control
Principle of Least Privilege
Defense in Depth
Zero Trust
Perimeter Security
Network Segmentation
Demilitarized Zone
Virtual Private Network
IPsec
OpenVPN
WireGuard
Tor
Onion Routing
Anonymity
Pseudonymity
Traceability
Non-repudiation
Integrity
Availability
Confidentiality
CIA Triad
Security Policy
Incident Response
Disaster Recovery
Business Continuity
Backup
Recovery Point Objective
Recovery Time Objective
Tabletop Exercise
Security Awareness Training
Compliance
GDPR
HIPAA
PCI DSS
SOX
ISO 27001
NIST Cybersecurity Framework
Risk Appetite
Risk Tolerance
Risk Register
Risk Matrix
Likelihood
Impact
Inherent Risk
Residual Risk
Control
Preventive Control
Detective Control
Corrective Control
Compensating Control
Administrative Control
Technical Control
Physical Control
Audit
Internal Audit
External Audit
Third-party Risk Management
Vendor Due Diligence
Service Level Agreement
Key Performance Indicator
Balanced Scorecard
Strategy Map
Objectives and Key Results
Agile
Scrum
Kanban
Sprint
Backlog
User Story
Epic
Daily Standup
Retrospective
Velocity
Burndown Chart
Definition of Done
Definition of Ready
Pair Programming
Code Review
Continuous Integration
Continuous Delivery
Continuous Deployment
Version Control
Git
Branching Strategy
Trunk-based Development
Feature Flag
Canary Release
Blue-green Deployment
Rolling Update
Rollback
Infrastructure as Code
Configuration Management
Ansible
Terraform
Puppet
Chef
Monitoring
Observability
Logging
Tracing
Metrics
Alerting
Service Level Indicator
Service Level Objective
Error Budget
Toil
Site Reliability Engineering
DevOps
DevSecOps
GitOps
Platform Engineering
Internal Developer Platform
Golden Path
Paved Road
Technical Debt
Refactoring
Code Smell
Design Pattern
Singleton
Factory
Observer
Strategy
Decorator
Adapter
Facade
Model-View-Controller
Model-View-ViewModel
Dependency Injection
Inversion of Control
Unit Test
Integration Test
End-to-end Test
Test-driven Development
Behavior-driven Development
Mocking
Stubbing
Code Coverage
Mutation Testing
Property-based Testing
Fuzzing
Static Analysis
Linting
Type System
Static Typing
Dynamic Typing
Strong Typing
Weak Typing
Duck Typing
Gradual Typing
Compiler
Interpreter
Just-in-time Compilation
Ahead-of-time Compilation
Bytecode
Virtual Machine
Garbage Collection
Memory Management
Stack
Heap
Pointer
Reference
Null
Exception
Error Handling
Logging
Debugging
Profiling
Benchmarking
Optimization
Concurrency
Parallelism
Thread
Process
Mutex
Semaphore
Deadlock
Race Condition
Livelock
Starvation
Atomic Operation
Lock-free
Wait-free
Memory Model
Happens-before
Sequential Consistency
Eventual Consistency
Strong Consistency
CAP Theorem
Consensus
Paxos
Raft
Byzantine Fault Tolerance
Gossip Protocol
Vector Clock
Lamport Timestamp
Distributed Transaction
Two-phase Commit
Saga Pattern
Event Sourcing
CQRS
Message Queue
Publish-subscribe
Event Bus
Webhook
Long Polling
WebSocket
Server-sent Events
HTTP/2
HTTP/3
QUIC
TLS
Certificate Pinning
HSTS
CORS
CSRF
XSS
SQL Injection
Input Validation
Output Encoding
Content Security Policy
Subresource Integrity
Same-origin Policy
Cookie
Session
Token
JWT
OAuth
OpenID Connect
SAML
Single Sign-on
Multi-factor Authentication
Biometrics
Passwordless
FIDO2
WebAuthn
Hardware Security Module
Trusted Platform Module
Secure Enclave
Secure Boot
Measured Boot
Attestation
Remote Attestation
Supply Chain Security
Software Bill of Materials
Dependency Management
Package Manager
Semantic Versioning
Lockfile
Vendoring
Monorepo
Polyrepo
Build System
Make
CMake
Bazel
Gradle
Maven
npm
Yarn
pnpm
Webpack
Vite
Rollup
Babel
Transpiler
Polyfill
Progressive Web App
Service Worker
Offline First
Local First
CRDT
Operational Transformation
Collaborative Editing
Real-time Collaboration
Presence
Cursor Sharing
Version History
Undo/Redo
Command Pattern
Event Loop
Callback
Promise
Async/await
Reactive Programming
Observable
Stream
Backpressure
Circuit Breaker
Retry
Exponential Backoff
Jitter
Rate Limiting
Throttling
Debouncing
Caching
Cache Invalidation
Content Delivery Network
Edge Computing
Load Balancing
Round Robin
Least Connections
Consistent Hashing
Sharding
Partitioning
Replication
Leader Election
Quorum
Split-brain
Failover
High Availability
Fault Tolerance
Graceful Degradation
Chaos Engineering
Load Testing
Stress Testing
Soak Testing
Capacity Planning
Auto-scaling
Horizontal Scaling
Vertical Scaling
Elasticity
Cost Optimization
Reserved Instance
Spot Instance
Serverless
Function as a Service
Backend as a Service
Jamstack
Static Site Generator
Server-side Rendering
Client-side Rendering
Hydration
Islands Architecture
Micro-frontend
Web Component
Shadow DOM
Custom Element
Design System
Component Library
Atomic Design
Accessibility
WCAG
ARIA
Screen Reader
Keyboard Navigation
Focus Management
Color Contrast
Responsive Design
Mobile First
Desktop First
Adaptive Design
Viewport
Media Query
Flexbox
CSS Grid
Box Model
Cascade
Specificity
Inheritance
Preprocessor
Sass
Less
PostCSS
Tailwind CSS
CSS-in-JS
Styled Components
Emotion
Theming
Dark Mode
Internationalization
Localization
Unicode
UTF-8
Character Encoding
Right-to-left
Pluralization
Date and Time Formatting
Time Zone
Daylight Saving Time
Leap Second
Epoch
Unix Time
ISO 8601
Currency Formatting
Number Formatting
Collation
Sorting
Search
Full-text Search
Inverted Index
Tokenization
Stemming
Lemmatization
Stop Words
TF-IDF
BM25
Relevance
Ranking
Faceted Search
Autocomplete
Typeahead
Fuzzy Matching
Levenshtein Distance
Soundex
Metaphone
Phonetic Algorithm
Geospatial
Geohash
Quadtree
R-tree
Spatial Index
Geocoding
Reverse Geocoding
Map Projection
Mercator Projection
Coordinate Reference System
Latitude
Longitude
Great-circle Distance
Haversine Formula
Vincenty's Formulae
Geofencing
Turn-by-turn Navigation
Routing
Dijkstra's Algorithm
A* Search
Contraction Hierarchies
Traffic Prediction
Isochrone
Isodistance
Map Matching
Dead Reckoning
Inertial Navigation
GPS
GNSS
Galileo
GLONASS
BeiDou
Differential GPS
Real-time Kinematic
Precise Point Positioning
Augmentation System
WAAS
EGNOS
Multipath
Ionospheric Delay
Tropospheric Delay
Clock Error
Ephemeris
Almanac
Satellite Constellation
Dilution of Precision
Position Fix
Time to First Fix
Assisted GPS
Cell Tower Triangulation
Wi-Fi Positioning
Bluetooth Beacon
Indoor Positioning
Ultra-wideband
Inertial Measurement Unit
Accelerometer
Gyroscope
Magnetometer
Barometer
Altimeter
Pedometer
Step Detection
Activity Recognition
Sensor Fusion
Kalman Filter
Extended Kalman Filter
Unscented Kalman Filter
Particle Filter
Simultaneous Localization and Mapping
Visual Odometry
Lidar
Radar
Sonar
Time of Flight
Structured Light
Stereo Vision
Depth Map
Point Cloud
Iterative Closest Point
Normal Estimation
Surface Reconstruction
Mesh
Voxel
Octree
Signed Distance Function
Marching Cubes
Photogrammetry
Structure from Motion
Bundle Adjustment
Feature Detection
SIFT
SURF
ORB
FAST
Harris Corner Detector
Optical Flow
Lucas-Kanade
Horn-Schunck
Image Segmentation
Semantic Segmentation
Instance Segmentation
Panoptic Segmentation
Object Detection
YOLO
R-CNN
Faster R-CNN
Mask R-CNN
SSD
Anchor Box
Non-maximum Suppression
Intersection over Union
Mean Average Precision
Image Classification
ResNet
VGG
Inception
MobileNet
EfficientNet
Vision Transformer
Pose Estimation
Human Pose Estimation
Hand Tracking
Face Detection
Face Recognition
Facial Landmark
Eigenface
Fisherface
Local Binary Patterns
Histogram of Oriented Gradients
Haar Cascade
Viola-Jones
Gesture Recognition
Sign Language Recognition
Lip Reading
Speech Recognition
Automatic Speech Recognition
Hidden Markov Model
Dynamic Time Warping
Mel-frequency Cepstral Coefficients
Spectrogram
Fourier

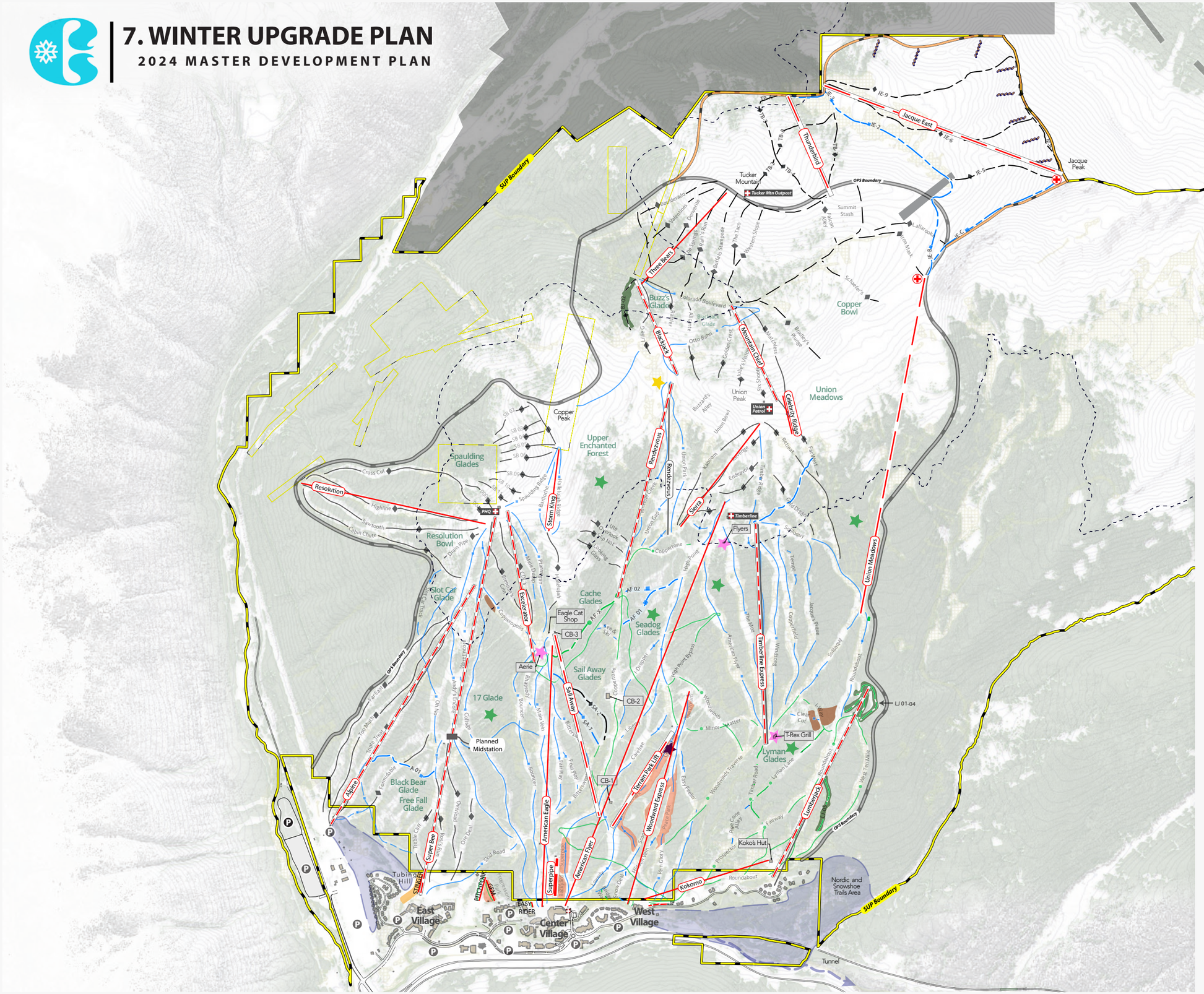
6. EXISTING SUMMER CONDITIONS

2024 MASTER DEVELOPMENT PLAN



7. WINTER UPGRADE PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

Planned

- Lift
- Lift Upgrade
- Lift to be Removed
- Operational Boundary
- Ski Run by Ability Level
- Previously Approved Ski Run
- Previously Approved Warming Hut
- Facility Upgrade
- Planned Facility
- Ski Patrol
- Snowfence
- Tree Clearing
- Gladed Skiing

Existing

- Lift
- SUP Boundary
- Private Boundary
- Operational Boundary
- Ski Run by Ability Level
- Facility
- Terrain Park
- Tubing and Snowplay Area
- Nordic and Snowshoe Trails
- Ski Patrol Post
- Wetland
- Parking
- 11,500' Contour Line
- Climax Mine Property Boundary

N

SCALE (ft)

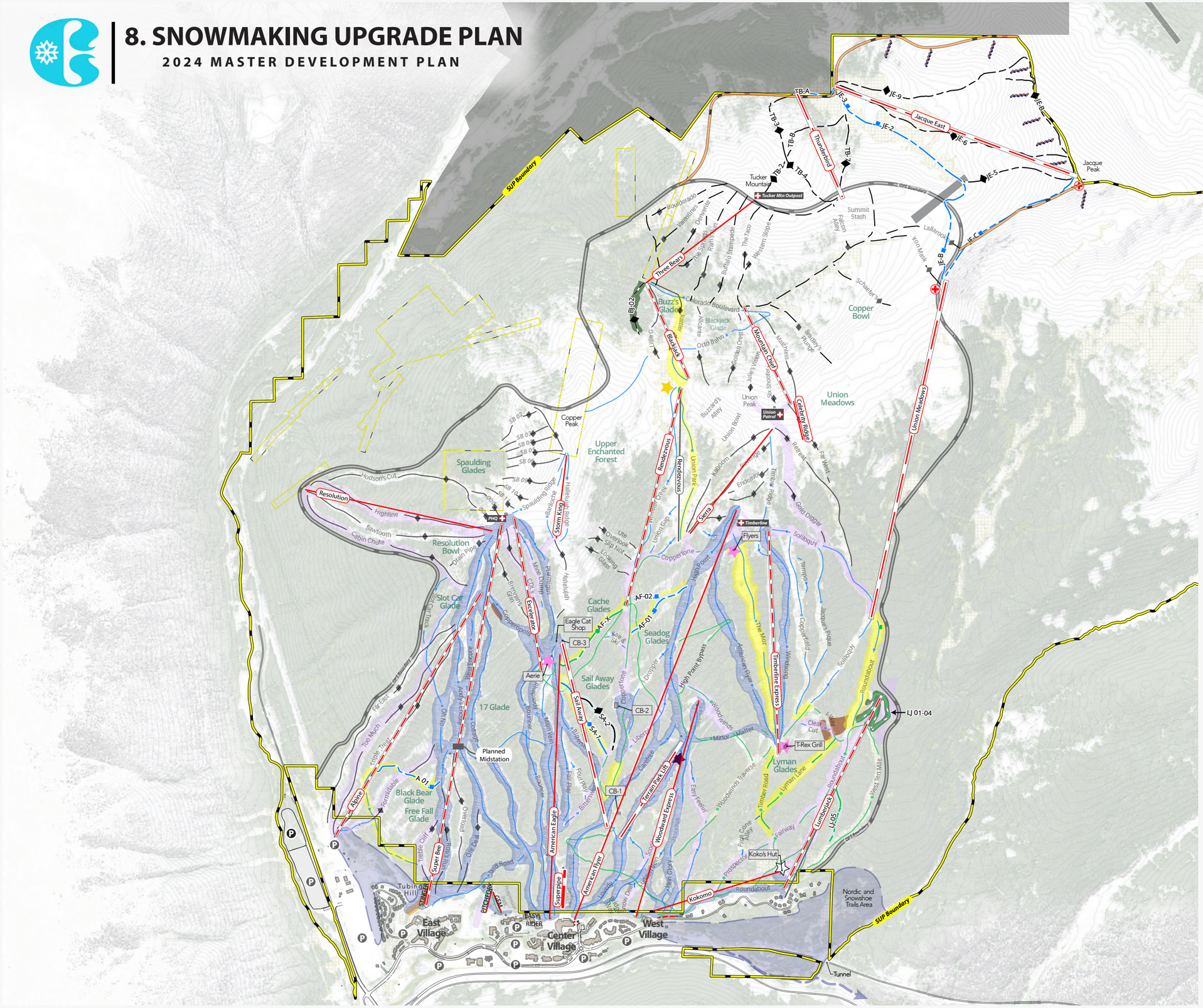
0 1,050 2,100 3,150 4,200

Prepared by:

SE GROUP

8. SNOWMAKING UPGRADE PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

Planned

- Snowmaking Coverage
- Lift
- Lift Upgrade
- Lift to be Removed
- Operational Boundary
- Ski Run by Ability Level
- Facility Upgrade
- Planned Facility
- Ski Patrol
- Snowfence
- Tree Clearing

Existing

- Snowmaking Coverage
- Existing Lift
- SUP Boundary
- Private Boundary
- Operational Boundary
- Ski Run by Ability Level
- Facility
- Tubing and Snowplay Area
- Nordic and Snowshoe Trails
- Ski Patrol Post
- Climax Mine Property Boundary

Previously Approved

- Previously Approved Snowmaking Coverage
- Previously Approved Ski Run
- Previously Approved Warming Hut

N

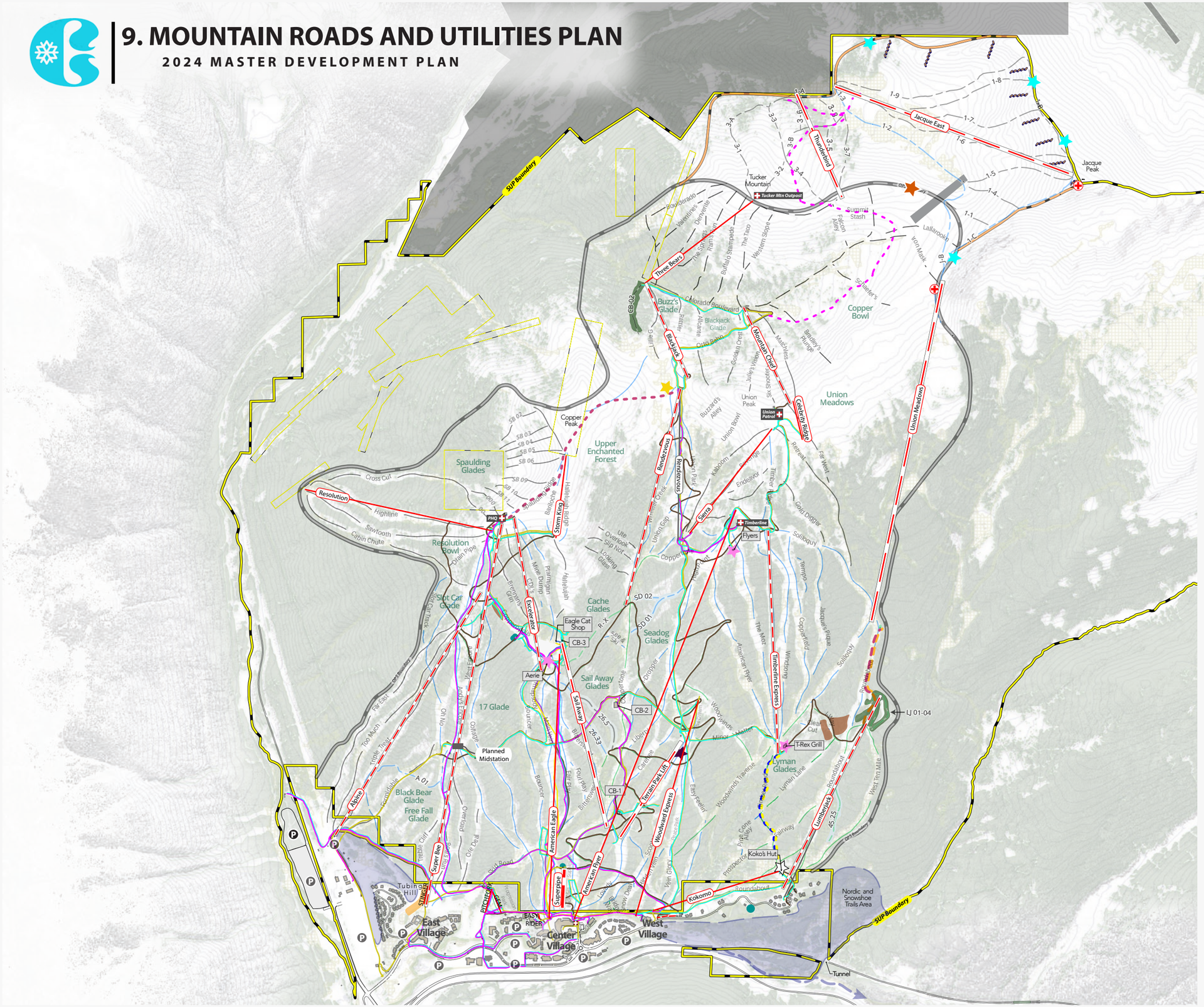
SCALE (ft)

0 1,050 2,100 3,150 4,200

SE GROUP

9. MOUNTAIN ROADS AND UTILITIES PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

Planned

- Water Line
- Sewer Line
- Power Line
- Mountain Access Road
- Lift
- Lift Upgrade
- Lift to be Removed
- Operational Boundary
- Facility Upgrade
- Planned Facility
- Ski Patrol
- Snowfence
- Remote Avalanche Control System
- Tree Clearing

Previously Approved

- Previously Approved Ski Run
- Previously Approved Warming Hut
- Mountain Access Road
- Utility Corridor

Existing

- Domestic Water Line
- Power Line
- Road
- Gas Line
- Communications Line
- Sewer Line
- Water Tank
- Existing Lift
- SUP Boundary
- Private Boundary
- Operational Boundary
- Ski Run by Ability Level
- Facility
- Tubing and Snowplay Area
- Nordic and Snowshoe Trails
- Ski Patrol Post
- Climax Mine Property Boundary
- Wetlands
- Avalauncher

N

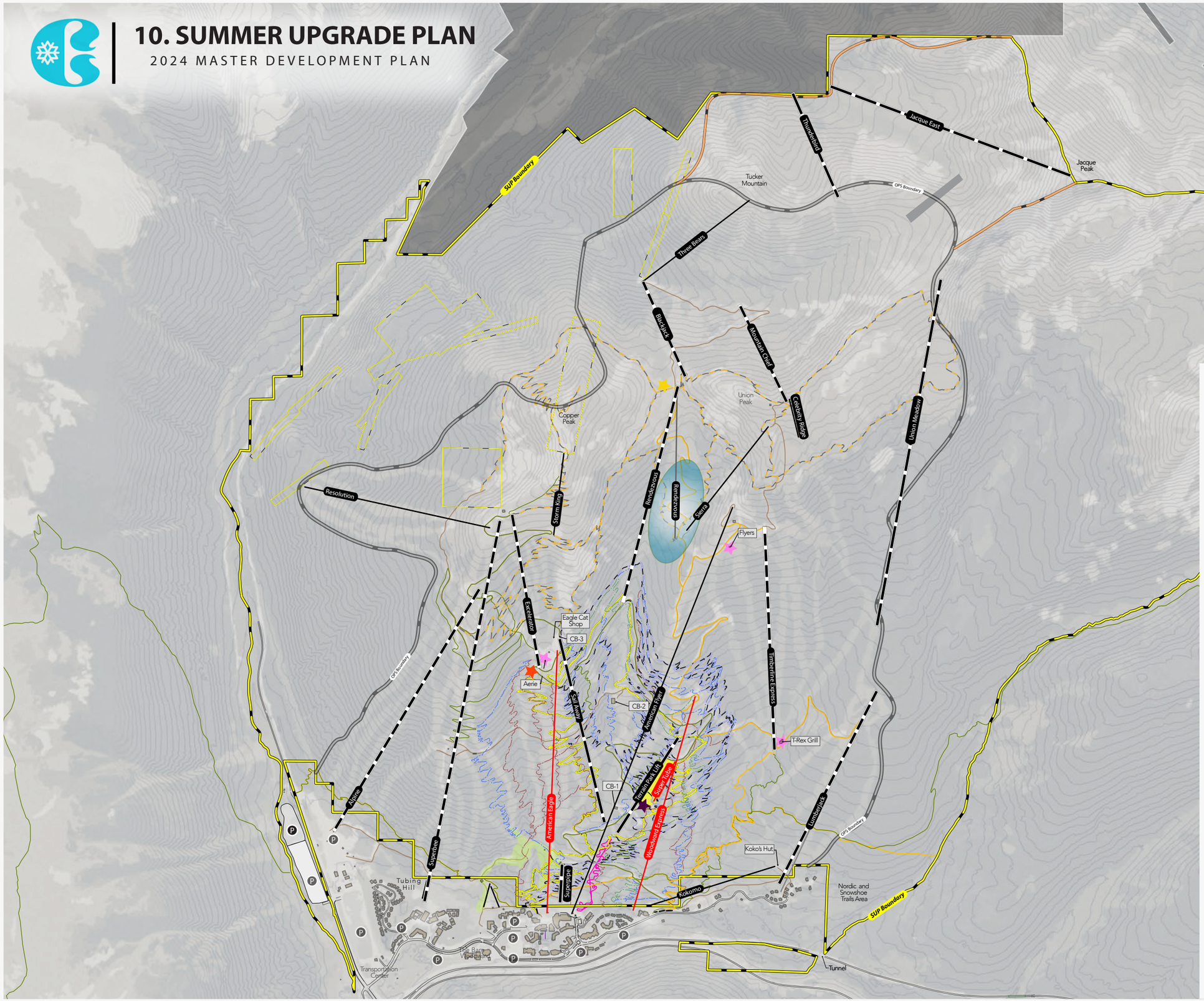
SCALE (ft)

0 1,050 2,100 3,150 4,200

SE GROUP

10. SUMMER UPGRADE PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

Planned

- Winter Use Lift
- Winter Use Lift Upgrade
- Lift to be Removed
- Operational Boundary
- Ski Run
- Planned Facility
- Facility Upgrade
- Previously Approved Facility
- Summer Activity Center
- Previously Approved Camping Area
- Previously Approved Hiking Trail
- Previously Approved Trail Reconstruction
- Previously Approved Mountain Bike Trail

Existing

- Summer Use Lift
- Winter Use Lift
- SUP Boundary
- Operational Boundary
- Private Boundary
- Mountain Coaster
- Woodward Summer Camp
- Mountain Bike Trail
- Mutli-Use Trail
- Existing Facility
- Disc Golf Area
- Zipline
- Parking
- Mountain Roads
- Climax Mine Property Boundary

N

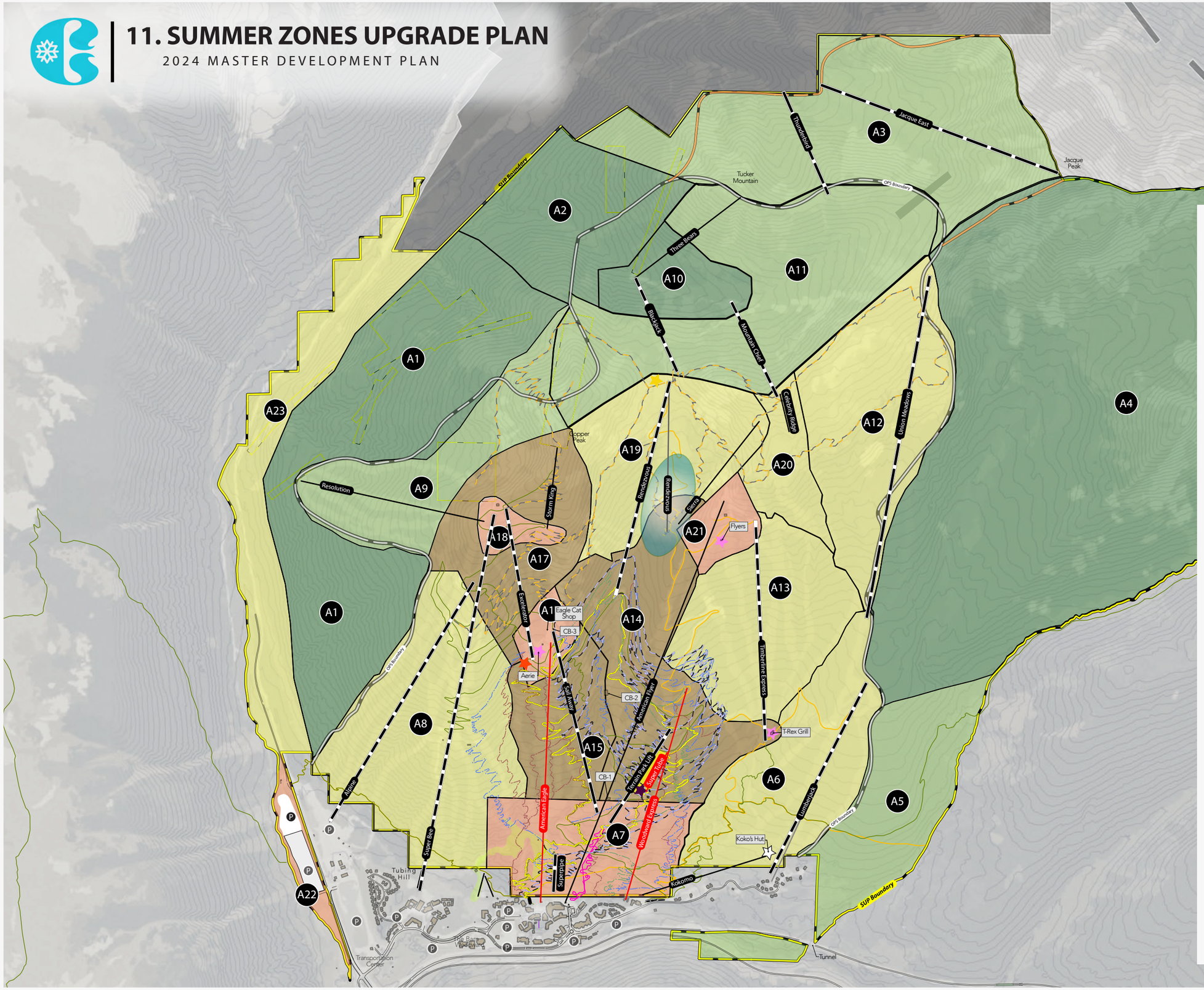
SCALE (ft)

0 1,050 2,100 3,150 4,200

SE GROUP

11. SUMMER ZONES UPGRADE PLAN

2024 MASTER DEVELOPMENT PLAN



LEGEND

Planned

- Winter Use Lift
- Winter Use Lift Upgrade
- Lift to be Removed
- Operational Boundary
- Ski Run
- Planned Facility
- Facility Upgrade
- Previously Approved Facility
- Summer Activity Center
- Previously Approved Camping Area
- Previously Approved Hiking Trail
- Previously Approved Trail Reconstruction
- Previously Approved Mountain Bike Trail

Existing

- Summer Use Lift
- Winter Use Lift
- SUP Boundary
- Operational Boundary
- Private Boundary
- Mountain Coaster
- Woodward Summer Camp
- Mountain Bike Trail
- Mutli-Use Trail
- Existing Facility
- Disc Golf Area
- Zipline
- Parking
- Climax Mine Property Boundary

Zones:

- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5

N

SCALE (ft)

0 1,050 2,100 3,150 4,200

SE GROUP

APPENDIX A.
ADDITIONAL TABLES

Table A - 1. Terrain Specifications – Existing Conditions

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Far East	11,511	9,790	1,721	5,721	154	20.2	32%	56%	Expert
Too Much	11,506	9,789	1,717	5,704	159	20.8	32%	52%	Advanced
Triple Treat	11,486	9,803	1,683	5,306	189	23.1	34%	47%	Advanced
Formidable	10,843	9,806	1,038	3,190	168	12.3	35%	50%	Advanced
Treble Cliff	10,303	9,801	502	1,660	143	5.4	32%	51%	Advanced
Rosi's Run	10,828	9,758	1,069	3,457	266	21.1	33%	50%	Advanced
Overlode	10,828	9,925	903	2,778	165	10.5	34%	48%	Advanced
Ore Deal	10,468	9,779	689	2,044	190	8.9	36%	49%	Advanced
Green Acres	9,814	9,750	64	588	234	3.2	11%	17%	Novice
Gem	9,798	9,751	47	460	174	1.8	10%	13%	Beginner
Oh No	11,664	10,802	862	3,934	169	15.3	23%	40%	Intermediate
Drain Pipe	11,943	11,604	338	1,035	349	8.3	35%	62%	Expert
Andy's Encore	11,957	10,091	1,867	7,840	224	40.3	25%	48%	Intermediate
Skid Road	10,053	9,717	336	2,461	251	14.2	14%	32%	Low Intermediate
West Encore	11,608	11,297	311	1,604	292	10.7	20%	31%	Intermediate
Slot Car Track	11,556	11,328	228	1,660	30	1.1	14%	27%	Intermediate
Upper Skid Road	10,455	10,427	28	286	85	0.6	10%	10%	Novice
Collage	11,921	9,785	2,136	8,946	140	28.8	25%	46%	Intermediate
Easy Rider	9,771	9,764	7	122	135	0.4	8%	8%	Beginner
Bouncer	11,181	9,760	1,421	6,250	158	22.7	23%	46%	Intermediate
Copperopolis	11,656	11,190	466	1,831	257	10.8	26%	43%	Intermediate
Brennan's Grin	11,981	11,291	691	2,428	124	6.9	30%	51%	Advanced
CDL's	11,974	11,249	725	2,541	205	11.9	30%	42%	Advanced

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Mine Dump	11,986	11,342	644	2,053	118	5.5	33%	40%	Intermediate
Ptarmigan	12,015	11,224	791	3,032	181	12.6	27%	42%	Intermediate
Hallelujah	11,865	11,291	575	1,965	388	17.5	31%	46%	Advanced
Looking Glass	11,673	11,098	575	1,315	160	4.8	49%	69%	Expert
Slip Not	11,693	11,172	521	1,210	110	3.0	48%	59%	Expert
Ute Overlook	11,635	11,216	419	1,037	126	3.0	44%	56%	Expert
Hallelujah Ridge	12,299	11,867	432	2,100	266	12.8	21%	39%	Intermediate
Bariloche	12,294	11,870	424	1,690	385	15.0	26%	37%	Intermediate
Spaulding Ridge	12,308	12,041	267	1,893	197	8.6	14%	37%	Intermediate
Rhapsody	11,157	10,881	276	1,091	144	3.6	26%	36%	Intermediate
Main Vein	11,166	9,760	1,405	5,646	266	34.4	26%	43%	Intermediate
Fair Play	10,801	10,231	570	2,208	191	9.7	27%	37%	Intermediate
Foul Play	10,556	10,320	236	935	166	3.6	26%	31%	Intermediate
Bittersweet	11,233	10,219	1,014	4,740	168	18.2	22%	46%	Intermediate
Upper Leap Frog	10,381	10,333	48	387	146	1.3	12%	16%	Novice
Lower Leap Frog	10,279	10,219	60	456	131	1.4	13%	17%	Low Intermediate
Lower Carefree	10,135	9,782	352	1,370	300	9.4	27%	35%	Intermediate
Upper Carefree	10,744	10,153	591	3,708	209	17.8	16%	25%	Low Intermediate
Liberty	10,908	10,514	394	1,690	180	7.0	24%	33%	Low Intermediate
Lower Loverly	10,034	9,807	227	1,273	209	6.1	18%	27%	Low Intermediate
Middle Loverly	10,305	10,042	264	1,357	230	7.2	20%	34%	Low Intermediate
Upper Loverly	10,699	10,313	386	2,102	274	13.2	19%	26%	Low Intermediate
Loverly Lane	10,250	10,148	102	604	72	1.0	17%	23%	Low Intermediate
Scooter	10,490	9,860	630	3,251	145	10.8	20%	35%	Low Intermediate

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Rugrat	9,823	9,811	11	127	116	0.3	10%	10%	Beginner
The Glide	9,818	9,810	8	97	125	0.3	12%	12%	Beginner
Slingshot	9,843	9,834	9	145	92	0.3	6%	6%	Beginner
Vein Glory	10,792	9,851	941	4,893	185	20.8	20%	34%	Low Intermediate
Hidden Vein	10,196	9,923	273	1,427	169	5.5	20%	32%	Low Intermediate
Lower Easy Feelin'	10,236	9,857	379	1,989	158	7.2	19%	26%	Low Intermediate
Upper Easy Feelin'	10,617	10,256	360	1,520	136	4.7	24%	31%	Low Intermediate
Coppertone	11,422	10,334	1,088	6,819	171	26.8	16%	25%	Novice
See and Ski	10,964	10,846	117	531	169	2.1	23%	30%	Low Intermediate
I-Dropper	11,128	10,551	577	2,237	133	6.8	27%	35%	Low Intermediate
Minor Matter	10,677	10,479	198	1,723	100	4.0	12%	18%	Novice
Woodwinds	10,908	10,427	481	2,367	163	8.9	21%	25%	Novice
Woodwinds Traverse	10,454	10,172	283	3,282	103	7.8	9%	15%	Novice
Lower High Point	10,875	10,704	171	920	219	4.6	19%	22%	Novice
High Point Bypass	11,165	10,885	280	3,298	35	2.6	9%	17%	Novice
Upper High Point	11,670	10,885	785	4,657	250	26.7	16%	43%	Intermediate
American Flyer	11,401	10,459	942	4,285	218	21.4	23%	34%	Low Intermediate
The Moz	11,554	10,482	1,072	4,707	241	26.0	23%	49%	Intermediate
Little Burn	11,544	10,720	823	3,098	127	9.1	28%	42%	Intermediate
Copperfields	11,523	10,545	978	4,176	208	20.0	24%	35%	Intermediate
Windsong	11,586	10,480	1,106	4,940	187	21.3	23%	39%	Intermediate
Tempo	11,370	11,163	207	844	74	1.4	25%	35%	Intermediate
Jacque's Pique	11,371	10,711	660	3,019	122	8.4	23%	45%	Intermediate
Lower Soliloquy	10,613	10,487	126	927	157	3.3	14%	21%	Novice

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Upper Soliloquy	11,586	10,620	965	5,732	179	23.6	17%	33%	Low Intermediate
Bruce's Way	10,289	10,196	93	601	152	2.1	16%	18%	Novice
Lower Roundabout	10,170	9,832	338	3,167	150	10.9	11%	22%	Novice
Middle Roundabout	10,823	10,172	651	4,025	248	22.9	16%	27%	Novice
Upper Roundabout	11,006	10,798	208	2,445	178	10.0	9%	19%	Low Intermediate
Fairway	10,491	10,081	410	2,522	222	12.8	17%	25%	Novice
Prospector	10,266	10,010	256	1,689	162	6.3	15%	21%	Novice
West Ten Mile	10,818	10,224	594	3,884	144	12.9	15%	27%	Novice
Clear Cut	10,711	10,548	163	704	486	7.9	24%	37%	Intermediate
I-Way	10,735	10,638	97	1,063	64	1.6	9%	19%	Novice
Wheeler Creek	11,849	11,127	722	4,295	218	21.5	17%	32%	Low Intermediate
Union Gap	11,412	11,198	214	1,022	184	4.3	21%	32%	Low Intermediate
Lower Sluice	11,348	11,231	117	551	164	2.1	22%	28%	Low Intermediate
Upper Sluice	11,562	11,440	122	372	118	1.0	35%	42%	Intermediate
Union Park	11,872	11,357	515	3,561	352	28.7	15%	35%	Low Intermediate
Indian Ridge	11,627	11,405	222	556	405	5.2	44%	71%	Extreme
Little Trees	11,943	11,606	336	992	201	4.6	37%	58%	Expert
Endeavor	12,005	11,589	416	1,128	193	5.0	40%	52%	Advanced
Revenge	12,088	11,373	716	2,815	249	16.1	27%	55%	Expert
Kaboom	12,131	11,369	762	3,167	205	14.9	25%	57%	Expert
Timber Ridge	12,106	11,583	523	2,259	345	17.9	24%	45%	Intermediate
Gold Digger	11,876	11,380	497	1,761	254	10.3	30%	45%	Advanced
Retreat	12,113	11,206	906	3,770	279	24.1	25%	42%	Advanced
Far West	12,288	11,674	615	2,085	467	22.4	31%	38%	Advanced

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Lower Easy Road Traverse	11,196	9,874	1,322	17,989	27	11.2	7%	25%	Novice
Upper Easy Road Traverse	12,002	11,197	804	10,476	9	2.2	8%	20%	Novice
Easy Road Too	11,155	10,721	433	5,268	30	3.7	8%	17%	Novice
Bee Road	10,844	10,710	134	2,066	27	1.3	7%	16%	Intermediate
Bee Traverse	10,139	9,859	280	2,194	92	4.6	13%	46%	Advanced
Road Home	9,803	9,714	89	353	55	0.4	26%	33%	Low Intermediate
Double Zero	11,989	11,641	348	892	343	7.0	43%	58%	Expert Bowl/Hike To
Triple Zero	12,015	11,639	375	970	301	6.7	43%	73%	Extreme Bowl/Hike To
Highline	11,964	10,561	1,403	4,366	232	23.2	34%	76%	Expert
Sawtooth	11,957	10,552	1,405	4,472	213	21.9	33%	76%	Expert
Cabin Chute	11,695	10,556	1,139	4,475	138	14.2	26%	50%	Advanced
Cross Cut	11,642	10,630	1,012	3,487	147	11.8	31%	50%	Advanced Bowl/Hike To
Lower Lillie G	11,770	11,187	583	1,801	278	11.5	35%	59%	Expert Bowl/Hike To
Upper Lillie G	12,289	11,760	529	2,042	597	28.0	27%	41%	Intermediate
Rattler	11,772	11,353	419	1,182	504	13.7	38%	51%	Advanced Bowl/Hike To
Allcante	12,086	11,387	698	1,924	507	22.4	39%	53%	Advanced Bowl/Hike To
Golden Crest	12,150	11,514	635	1,723	311	12.3	40%	55%	Expert Bowl/Hike To
Julie's Vision	12,200	11,633	568	1,630	418	15.6	37%	52%	Advanced Bowl/Hike To
Six Shooter	12,260	11,804	456	1,238	385	10.9	40%	51%	Advanced Bowl/Hike To
Matchless	12,300	11,561	739	2,240	447	23.0	35%	63%	Expert Bowl/Hike To
Otto Bahn	11,925	11,170	756	6,010	99	13.7	13%	25%	Low Intermediate
Boardwalk	12,344	12,213	132	1,173	152	4.1	11%	22%	Advanced
Park Place	12,214	11,810	404	1,120	529	13.6	39%	49%	Advanced Bowl/Hike To
Marvin Gardens	12,286	11,763	523	1,296	201	6.0	44%	60%	Expert Bowl/Hike To

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Calendar Chute	12,274	11,783	491	1,170	129	3.5	47%	59%	Expert Bowl/Hike To
Patrol Chute	12,344	11,793	551	1,370	216	6.8	45%	82%	Extreme Bowl/Hike To
Cornice Chute	12,312	11,796	516	1,312	294	8.9	44%	75%	Extreme Bowl/Hike To
So Fine	12,219	11,748	470	1,120	426	11.0	47%	85%	Extreme Bowl/Hike To
Pacific Cornice	12,101	11,710	391	902	310	6.4	49%	70%	Extreme Bowl/Hike To
Atlantic Cornice	12,051	11,678	373	884	197	4.0	47%	63%	Expert Bowl/Hike To
Tucker Cat Trail	12,301	12,244	57	2,026	34	1.6	3%	31%	Advanced
Tucker Cutback	11,396	11,210	186	1,634	48	1.8	12%	30%	Advanced
Boulderado	12,279	11,405	874	2,139	431	21.2	46%	77%	Extreme Bowl/Hike To
Valentine's	11,899	11,312	587	1,227	121	3.4	55%	64%	Expert Bowl/Hike To
Denverite	12,301	11,245	1,056	2,585	189	11.2	45%	67%	Expert Bowl/Hike To
The Springs	11,940	11,348	592	1,557	235	8.4	42%	70%	Extreme Bowl/Hike To
Ram's Run	12,320	11,366	954	2,917	266	17.8	36%	67%	Expert Bowl/Hike To
Buffalo Stampede	12,320	11,412	908	2,771	315	20.0	35%	68%	Expert Bowl/Hike To
Curecanti	12,299	11,496	803	2,539	352	20.5	34%	64%	Expert Bowl/Hike To
Western Slope	12,258	11,606	652	1,538	1,108	39.1	47%	64%	Expert Bowl/Hike To
Falcon Alley	12,191	11,845	347	1,035	1,062	25.2	36%	45%	Advanced Bowl/Hike To
Summit Stash	12,351	11,941	410	1,215	1,266	35.3	36%	51%	Advanced Bowl/Hike To
Lallarookn	12,445	12,026	419	1,821	617	25.8	24%	37%	Advanced Bowl/Hike To
Iron Mask	12,309	11,500	800	5,387	410	51.2	15%	30%	Advanced Bowl/Hike To
Schaefer's	12,340	11,794	546	1,713	1,108	43.6	34%	66%	Expert Bowl/Hike To
Bradley's Plunge	12,263	11,558	705	2,057	1,108	52.3	37%	67%	Expert Bowl/Hike To
Union Meadows	12,341	11,110	1,231	6,395	943	138.4	20%	40%	Advanced Bowl/Hike To
Timber Road	10,462	10,299	162	1,873	62	2.7	9%	18%	Novice

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Lyman Lane	10,716	10,375	341	2,315	111	5.9	15%	27%	Novice
Pine Cone Alley	10,360	10,173	187	1,026	71	1.7	19%	24%	Intermediate
SnoDeal	9,994	9,809	185	764	150	2.6	25%	32%	Low Intermediate
Bridgeway	9,863	9,808	55	282	72	0.5	20%	21%	Novice
Total				**369,113**		**1,909.1**			

Source: SE Group

Table A - 2. Space Use Recommendations – Existing Conditions – East Village

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	850	870	1,070
Public Lockers	378	2,620	3,200
Rentals/Repair	4,448	5,240	6,410
Retail Sales	4,197	1,830	2,240
Bar/Lounge/Restaurant Seating	17,460	9,090	11,110
Kitchen/Scramble	7,251	1,990	2,440
Restrooms	1,650	1,180	1,440
Ski Patrol	-	720	890
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	936	640	950
Storage	3,750	1,060	1,580
Circulation/Waste	5,266	2,540	3,800
Total Square Feet	**46,186**	**27,780**	**35,130**

Source: SE Group

Table A - 3. Space Use Recommendations – Existing Conditions – Center Village

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	4,345	4,400	5,370
Public Lockers	1,687	4,800	5,870
Rentals/Repair	6,122	9,610	11,740
Retail Sales	7,092	3,360	4,110
Bar/Lounge/Restaurant Seating	34,749	23,050	28,170
Kitchen/Scramble	10,814	5,660	6,920
Restrooms	6,185	3,340	4,090
Ski Patrol	1,040	2,060	2,510
Administration	5,705	5,200	6,350
Employee Lockers/Lounge	2,920	2,080	2,540
Mechanical	2,180	1,720	2,560
Storage	3,250	2,860	4,270
Circulation/Waste	7,961	6,860	10,250
Total Square Feet	**94,050**	**75,000**	**94,750**

Source: SE Group

Table A - 4. Space Use Recommendations – Existing Conditions – West Village

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	7,812	11,620	14,200
Public Lockers	298	1,310	1,600
Rentals/Repair	1,720	2,620	3,200
Retail Sales	730	920	1,120
Bar/Lounge/Restaurant Seating	7,156	5,140	6,280
Kitchen/Scramble	3,507	1,180	1,450
Restrooms	1,748	700	850
Ski Patrol	-	430	530
Administration	860	920	1,120
Employee Lockers/Lounge	-	370	450
Mechanical	640	680	1,020
Storage	1,216	1,130	1,690
Circulation/Waste	2,003	2,720	4,070
Total Square Feet	**27,690**	**29,740**	**37,580**

Source: SE Group

Table A - 5. Space Use Recommendations – Existing Conditions – Solitude Station

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School		-	-
Public Lockers		-	-
Rentals/Repair		-	-
Retail Sales		-	-
Bar/Lounge/Restaurant Seating	8,340	6,550	8,010
Kitchen/Scramble	4,150	2,060	2,520
Restrooms	922	1,220	1,490
Ski Patrol		750	920
Administration		-	-
Employee Lockers/Lounge	1,550	-	-
Mechanical		290	430
Storage	1,460	480	710
Circulation/Waste	3,028	1,140	1,710
Total Square Feet	**14,950**	**12,490**	**15,790**

Source: SE Group

Table A - 6. Space Use Recommendations – Existing Conditions – T-Rex Grill

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	-	1,120	1,370
Kitchen/Scramble	208	350	430
Restrooms	207	210	260
Ski Patrol	-	130	160
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	50	70
Storage	-	80	120
Circulation/Waste	-	200	290
Total Square Feet	**415**	**2,140**	**2,700**

Source: SE Group

Table A - 7. Space Use Recommendations – Existing Conditions – Flyers

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	-	1,900	2,320
Kitchen/Scramble	231	600	730
Restrooms	-	350	430
Ski Patrol	-	220	260
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	80	120
Storage	-	140	210
Circulation/Waste	-	330	490
Total Square Feet	**231**	**3,620**	**4,560**

Source: SE Group

Table A - 8. Space Use Recommendations – Existing Conditions – Koko's Hut

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	2,900	840	1,020
Kitchen/Scramble	650	260	320
Restrooms	400	160	190
Ski Patrol	250	100	100
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	126	40	40
Storage	210	60	70
Circulation/Waste	504	60	180
Total Square Feet	**5,040**	**1,520**	**1,920**

Source: SE Group

Table A - 9. Summer Activity Zones – Existing Conditions

Area Boundaries	Score	Appropriate Zone
Area 1		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**
Area 2		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**
Area 3		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**
Area 4		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**

Area Boundaries	Score	Appropriate Zone
Area 5		
Access	2	
Remoteness	2	
Naturalness	3	
Infrastructure	3	
Total Score	**10**	**Zone 4**
Area 6		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	2	
Total Score	**8**	**Zone 3**
Area 7		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 8		
Access	2	
Remoteness	1	
Naturalness	2	
Infrastructure	2	
Total Score	**7**	**Zone 3**

Area Boundaries	Score	Appropriate Zone
Area 9		
Access	2	
Remoteness	3	
Naturalness	2	
Infrastructure	3	
Total Score	**10**	**Zone 4**
Area 10		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**
Area 11		
Access	2	
Remoteness	3	
Naturalness	3	
Infrastructure	2	
Total Score	**10**	**Zone 4**
Area 12		
Access	2	
Remoteness	3	
Naturalness	2	
Infrastructure	3	
Total Score	**10**	**Zone 4**

Area Boundaries	Score	Appropriate Zone
Area 13		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	2	
Total Score	**8**	**Zone 3**
Area 14		
Access	2	
Remoteness	1	
Naturalness	1	
Infrastructure	2	
Total Score	**6**	**Zone 2**
Area 15		
Access	2	
Remoteness	1	
Naturalness	1	
Infrastructure	2	
Total Score	**6**	**Zone 2**
Area 16		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**

Area Boundaries	Score	Appropriate Zone
Area 17		
Access	2	
Remoteness	1	
Naturalness	2	
Infrastructure	1	
Total Score	**6**	**Zone 2**
Area 18		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 19		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	1	
Total Score	**7**	**Zone 3**
Area 20		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	2	
Total Score	**8**	**Zone 3**

Area Boundaries	Score	Appropriate Zone
Area 21		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 22		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 23		
Access	2	
Remoteness	1	
Naturalness	2	
Infrastructure	3	
Total Score	**8**	**Zone 3**

Table A - 10. Terrain Specifications – Upgrade Plan

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Far East	11,511	9,790	1,721	5,721	154	20.2	32%	56%	Expert
Too Much	11,506	9,789	1,717	5,704	159	20.8	32%	52%	Advanced
Triple Treat	11,486	10,320	1,166	3,682	189	16.0	34%	47%	Advanced
Triple Treat Lower	10,320	9,803	517	1,613	189	7.0	34%	45%	Intermediate
Formidable	10,843	9,806	1,038	3,190	168	12.3	35%	50%	Advanced
Treble Cliff	10,303	9,801	502	1,660	143	5.4	32%	51%	Advanced
Rosi's Run	10,605	9,758	847	2,644	266	16.2	33%	50%	Advanced
Rosi's Run Upper	10,828	10,605	223	813	266	5.0	33%	45%	Intermediate
Overlode	10,828	9,925	903	2,778	165	10.5	34%	48%	Advanced
Ore Deal	10,468	9,779	689	2,044	190	8.9	36%	49%	Advanced
Green Acres	9,814	9,750	64	588	234	3.2	11%	17%	Novice
Gem	9,798	9,751	47	460	174	1.8	10%	13%	Beginner
Oh No	11,664	10,802	862	3,934	169	15.3	23%	40%	Intermediate
Drain Pipe	11,943	11,604	338	1,035	349	8.3	35%	62%	Expert
Andy's Encore	11,957	10,091	1,867	7,840	224	40.3	25%	48%	Intermediate
Skid Road	10,053	9,717	336	2,461	251	14.2	14%	32%	Low Intermediate
West Encore	11,608	11,297	311	1,604	292	10.7	20%	31%	Intermediate
Slot Car Track	11,556	11,328	228	1,660	30	1.1	14%	27%	Intermediate
Upper Skid Road	10,455	10,427	28	286	85	0.6	10%	10%	Novice
Collage	11,921	9,785	2,136	8,946	140	28.8	25%	46%	Intermediate
Easy Rider	9,771	9,764	7	122	135	0.4	8%	8%	Beginner
Bouncer	11,181	9,760	1,421	6,250	158	22.7	23%	46%	Intermediate
Copperopolis	11,656	11,190	466	1,831	257	10.8	26%	43%	Intermediate

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Brennan's Grin	11,981	11,291	691	2,428	124	6.9	30%	51%	Advanced
CDL's	11,974	11,249	725	2,541	205	11.9	30%	42%	Advanced
Mine Dump	11,986	11,342	644	2,053	118	5.5	33%	40%	Intermediate
Ptarmigan	12,015	11,224	791	3,032	181	12.6	27%	42%	Intermediate
Hallelujah	11,865	11,291	575	1,965	388	17.5	31%	46%	Advanced
Looking Glass	11,673	11,098	575	1,315	160	4.8	49%	69%	Expert
Slip Not	11,693	11,172	521	1,210	110	3.0	48%	59%	Expert
Ute Overlook	11,635	11,216	419	1,037	126	3.0	44%	56%	Expert
Hallelujah Ridge	12,299	11,867	432	2,100	266	12.8	21%	39%	Intermediate
Bariloche	12,294	11,870	424	1,690	385	15.0	26%	37%	Intermediate
Spaulding Ridge	12,308	12,041	267	1,893	197	8.6	14%	37%	Intermediate
Rhapsody	11,157	10,881	276	1,091	144	3.6	26%	36%	Intermediate
Main Vein	11,166	9,760	1,405	5,646	266	34.4	26%	43%	Intermediate
Fair Play	10,801	10,231	570	2,208	191	9.7	27%	37%	Intermediate
Foul Play	10,556	10,320	236	935	166	3.6	26%	31%	Intermediate
Bittersweet	11,233	10,219	1,014	4,740	168	18.2	22%	46%	Intermediate
Upper Leap Frog	10,381	10,333	48	387	146	1.3	12%	16%	Novice
Lower Leap Frog	10,279	10,219	60	456	131	1.4	13%	17%	Low Intermediate
Lower Carefree	10,135	9,782	352	1,370	300	9.4	27%	35%	Intermediate
Upper Carefree	10,744	10,153	591	3,708	209	17.8	16%	25%	Low Intermediate
Liberty	10,908	10,514	394	1,690	180	7.0	24%	33%	Low Intermediate
Lower Loverly	10,034	9,807	227	1,273	209	6.1	18%	27%	Low Intermediate
Middle Loverly	10,305	10,042	264	1,357	230	7.2	20%	34%	Low Intermediate
Upper Loverly	10,699	10,313	386	2,102	274	13.2	19%	26%	Low Intermediate

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Loverly Lane	10,250	10,148	102	604	72	1.0	17%	23%	Low Intermediate
Scooter	10,490	9,860	630	3,251	145	10.8	20%	35%	Low Intermediate
Rugrat	9,823	9,811	11	127	116	0.3	10%	10%	Beginner
The Glide	9,818	9,810	8	97	125	0.3	12%	12%	Beginner
Slingshot	9,843	9,834	9	145	92	0.3	6%	6%	Beginner
Vein Glory	10,792	9,851	941	4,893	185	20.8	20%	34%	Low Intermediate
Hidden Vein	10,196	9,923	273	1,427	169	5.5	20%	32%	Low Intermediate
Lower Easy Feelin'	10,236	9,857	379	1,989	158	7.2	19%	26%	Low Intermediate
Upper Easy Feelin'	10,617	10,256	360	1,520	136	4.7	24%	31%	Low Intermediate
Coppertone	11,422	10,334	1,088	6,819	171	26.8	16%	25%	Novice
See and Ski	10,964	10,846	117	531	169	2.1	23%	30%	Low Intermediate
I-Dropper	11,128	10,551	577	2,237	133	6.8	27%	35%	Low Intermediate
Minor Matter	10,677	10,479	198	1,723	100	4.0	12%	18%	Novice
Woodwinds	10,908	10,427	481	2,367	163	8.9	21%	25%	Novice
Woodwinds Traverse	10,454	10,172	283	3,282	103	7.8	9%	15%	Novice
Lower High Point	10,875	10,704	171	920	219	4.6	19%	22%	Novice
Middle High Point	11,161	10,882	279	1,200	254	7.0	24%	29%	Low Intermediate
Upper High Point	11,718	11,167	552	3,428	252	19.8	16%	43%	Intermediate
American Flyer	11,401	10,459	942	4,285	218	21.4	23%	34%	Low Intermediate
The Moz	11,554	10,482	1,072	4,707	241	26.0	23%	49%	Intermediate
Little Burn	11,544	10,720	823	3,098	127	9.1	28%	42%	Intermediate
Copperfields	11,523	10,545	978	4,176	208	20.0	24%	35%	Intermediate
Windsong	11,586	10,480	1,106	4,940	187	21.3	23%	39%	Intermediate
Tempo	11,370	11,163	207	844	74	1.4	25%	35%	Intermediate

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Jacque's Pique	11,371	10,711	660	3,019	122	8.4	23%	45%	Intermediate
Lower Soliloquy	10,613	10,487	126	927	157	3.3	14%	21%	Novice
Upper Soliloquy	11,586	10,620	965	5,732	179	23.6	17%	33%	Low Intermediate
Bruce's Way	10,289	10,196	93	601	152	2.1	16%	18%	Novice
Upper Roundabout Bypass	10,578	10,345	232	1,255	105	3.1	19%	25%	Novice
Lower Roundabout	10,170	9,832	338	3,167	150	10.9	11%	22%	Novice
Middle Roundabout	10,823	10,172	651	4,025	248	22.9	16%	27%	Novice
LJ-05	11,006	10,798	208	2,445	178	10.0	9%	19%	Low Intermediate
Fairway	10,491	10,081	410	2,522	222	12.8	17%	25%	Novice
Prospector	10,266	10,010	256	1,689	162	6.3	15%	21%	Novice
West Ten Mile	10,818	10,224	594	3,884	144	12.9	15%	27%	Novice
Clear Cut	10,711	10,548	163	704	486	7.9	24%	37%	Intermediate
I-Way	10,735	10,638	97	1,063	64	1.6	9%	19%	Novice
Wheeler Creek	11,849	11,127	722	4,295	218	21.5	17%	32%	Low Intermediate
Union Gap	11,412	11,198	214	1,022	184	4.3	21%	32%	Low Intermediate
Lower Sluice	11,348	11,231	117	551	164	2.1	22%	28%	Low Intermediate
Upper Sluice	11,562	11,440	122	372	118	1.0	35%	42%	Intermediate
Union Park	11,872	11,357	515	3,561	352	28.7	15%	35%	Low Intermediate
Indian Ridge	11,627	11,405	222	556	405	5.2	44%	71%	Expert +
Little Trees	11,943	11,606	336	992	201	4.6	37%	58%	Expert
Endeavor	12,005	11,589	416	1,128	193	5.0	40%	52%	Advanced
Revenge	12,088	11,373	716	2,815	249	16.1	27%	55%	Expert
Kaboom	12,131	11,369	762	3,167	205	14.9	25%	57%	Expert
Timber Ridge	12,106	11,583	523	2,259	345	17.9	24%	45%	Intermediate

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Gold Digger	11,876	11,380	497	1,761	254	10.3	30%	45%	Advanced
Retreat	12,113	11,206	906	3,770	279	24.1	25%	42%	Advanced
Far West	12,288	11,674	615	2,085	467	22.4	31%	38%	Advanced
Lower Easy Road Traverse	11,196	9,874	1,322	17,989	27	11.2	7%	25%	Novice
Upper Easy Road Traverse	12,002	11,197	804	10,476	9	2.2	8%	20%	Novice
Easy Road Too	11,155	10,721	433	5,268	30	3.7	8%	17%	Novice
Bee Road	10,844	10,710	134	2,066	27	1.3	7%	16%	Intermediate
Bee Traverse	10,139	9,859	280	2,194	92	4.6	13%	46%	Advanced
Road Home	9,803	9,714	89	353	55	0.4	26%	33%	Low Intermediate
Double Zero	11,989	11,641	348	892	343	7.0	43%	58%	Expert Bowl/Hike To
Triple Zero	12,015	11,639	375	970	301	6.7	43%	73%	Extreme Bowl/Hike To
Highline	11,964	10,561	1,403	4,366	232	23.2	34%	76%	Expert
Sawtooth	11,957	10,552	1,405	4,472	213	21.9	33%	76%	Expert
Cabin Chute	11,695	10,556	1,139	4,475	138	14.2	26%	50%	Advanced
Cross Cut	11,642	10,630	1,012	3,487	147	11.8	31%	50%	Advanced Bowl/Hike To
BJ-02	11,698	11,167	531	1,305	120	3.6	45%	60%	Expert
Lower Lillie G	11,770	11,187	583	1,801	278	11.5	35%	59%	Expert Bowl/Hike To
Upper Lillie G	12,289	11,760	529	2,042	597	28.0	27%	41%	Intermediate
Rattler	11,772	11,353	419	1,182	504	13.7	38%	51%	Advanced Bowl/Hike To
Allcante	12,086	11,387	698	1,924	507	22.4	39%	53%	Advanced Bowl/Hike To
Golden Crest	12,150	11,514	635	1,723	311	12.3	40%	55%	Expert Bowl/Hike To
Julie's Vision	12,200	11,633	568	1,630	418	15.6	37%	52%	Advanced Bowl/Hike To
Six Shooter	12,260	11,804	456	1,238	385	10.9	40%	51%	Advanced Bowl/Hike To
Matchless	12,300	11,561	739	2,240	447	23.0	35%	63%	Expert Bowl/Hike To

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Otto Bahn	11,925	11,170	756	6,010	99	13.7	13%	25%	Low Intermediate
Boardwalk	12,344	12,213	132	1,173	152	4.1	11%	22%	Advanced
Park Place	12,214	11,810	404	1,120	529	13.6	39%	49%	Advanced Bowl/Hike To
Marvin Gardens	12,286	11,763	523	1,296	201	6.0	44%	60%	Expert Bowl/Hike To
Calendar Chute	12,274	11,783	491	1,170	129	3.5	47%	59%	Expert Bowl/Hike To
Patrol Chute	12,344	11,793	551	1,370	216	6.8	45%	82%	Extreme Bowl/Hike To
Cornice Chute	12,312	11,796	516	1,312	294	8.9	44%	75%	Extreme Bowl/Hike To
So Fine	12,219	11,748	470	1,120	426	11.0	47%	85%	Extreme Bowl/Hike To
Pacific Cornice	12,101	11,710	391	902	310	6.4	49%	70%	Extreme Bowl/Hike To
Atlantic Cornice	12,051	11,678	373	884	197	4.0	47%	63%	Expert Bowl/Hike To
Tucker Cat Trail	12,301	12,244	57	2,026	34	1.6	3%	31%	Advanced
Tucker Cutback	11,396	11,210	186	1,634	48	1.8	12%	30%	Advanced
Boulderado	12,279	11,405	874	2,139	431	21.2	46%	77%	Extreme Bowl/Hike To
Valentine's	11,899	11,312	587	1,227	121	3.4	55%	64%	Expert Bowl/Hike To
Denverite	12,301	11,245	1,056	2,585	189	11.2	45%	67%	Expert Bowl/Hike To
The Springs	11,940	11,348	592	1,557	235	8.4	42%	70%	Extreme Bowl/Hike To
Ram's Run	12,320	11,366	954	2,917	266	17.8	36%	67%	Expert Bowl/Hike To
Buffalo Stampede	12,320	11,412	908	2,771	315	20.0	35%	68%	Expert Bowl/Hike To
Curecanti	12,299	11,496	803	2,539	352	20.5	34%	64%	Expert Bowl/Hike To
Western Slope	12,258	11,606	652	1,538	1,108	39.1	47%	64%	Expert Bowl/Hike To
Falcon Alley	12,191	11,845	347	1,035	1,062	25.2	36%	45%	Advanced Bowl/Hike To
Summit Stash	12,351	11,941	410	1,215	1,266	35.3	36%	51%	Advanced Bowl/Hike To
Lallarookn	12,445	12,026	419	1,821	617	25.8	24%	37%	Advanced Bowl/Hike To
Iron Mask	12,309	11,500	800	5,387	410	51.2	15%	30%	Advanced Bowl/Hike To

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Schaefer's	12,340	11,794	546	1,713	1,108	43.6	34%	66%	Expert Bowl/Hike To
Bradley's Plunge	12,263	11,558	705	2,057	1,108	52.3	37%	67%	Expert Bowl/Hike To
Union Meadows	12,341	11,110	1,231	6,395	698	102.5	20%	40%	Advanced Bowl/Hike To
Sail Away East	11,134	10,467	667	2,015	188	8.7	35%	45%	Intermediate
Sail Away West	10,941	10,478	463	1,642	146	5.5	29%	62%	Expert
Timber Road	10,462	10,299	162	1,873	62	2.7	9%	18%	Novice
Lyman Lane	10,716	10,375	341	2,315	111	5.9	15%	27%	Novice
Pine Cone Alley	10,360	10,173	187	1,026	71	1.7	19%	24%	Intermediate
SnoDeal	9,994	9,809	185	764	150	2.6	25%	32%	Low Intermediate
Bridgeway	9,863	9,808	55	282	72	0.5	20%	21%	Novice
A 01	10,595	10,343	252	1,578	37	1.4	16%	40%	Intermediate
JE-2	12,190	11,641	549	3,496	229	18.4	16%	41%	Intermediate
JE-3	11,625	11,575	49	482	159	1.8	10%	11%	Beginner
JE-5	13,153	12,057	1,096	2,806	342	22.1	43%	73%	Extreme Bowl/Hike To
JE-6	13,043	11,583	1,461	5,818	558	74.5	26%	70%	Expert Bowl/Hike To
JE-9	12,530	11,580	950	4,616	160	17.0	21%	57%	Expert Bowl/Hike To
JE-A	11,571	11,410	160	1,012	70	1.6	16%	27%	Intermediate
JE-B	13,152	12,545	607	3,074	38	2.7	20%	48%	Expert
JE-C	13,150	12,377	773	3,904	56	5.0	20%	51%	Intermediate
TB-2	12,314	11,826	488	1,204	524	14.5	45%	63%	Expert Bowl/Hike To
TB-3	11,802	11,406	396	1,812	649	27.0	28%	44%	Advanced Bowl/Hike To
TB-4	12,256	11,815	440	1,663	641	24.5	28%	49%	Advanced Bowl/Hike To
TB-7	12,285	11,640	645	1,968	448	20.2	36%	63%	Expert Bowl/Hike To
TB-B	11,811	11,635	175	1,853	33	1.4	10%	12%	Advanced

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
JE-B	12,368	12,197	171	2,110	31	1.5	8%	14%	Intermediate
AF-X	11,191	11,001	191	1,938	44	1.9	10%	13%	Novice
AF-01	11,333	10,903	430	1,694	148	5.8	26%	45%	Intermediate
AF-02	11,170	11,002	168	555	97	1.2	32%	45%	Intermediate
LJ 03	10,882	10,820	62	558	61	0.8	11%	15%	Novice
LJ 04	10,900	10,809	91	946	135	2.9	10%	15%	Novice
TOTAL				**419,638**		**2,143.8**			

Source: SE Group

Table A - 10. Space Use Recommendations – Upgrade Plan – East Village

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	850	`	1,470
Public Lockers	378	3,620	4,420
Rentals/Repair	4,448	7,230	8,840
Retail Sales	4,197	2,530	3,090
Bar/Lounge/Restaurant Seating	17,460	9,820	12,000
Kitchen/Scramble	7,251	1,950	2,380
Restrooms	1,650	1,150	1,410
Ski Patrol	-	710	870
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	936	730	1,140
Storage	3,750	1,220	1,900
Circulation/Waste	5,266	2,920	4,550
Total Square Feet	46,186	31,880	42,070

Source: SE Group

Table A - 11. Space Use Recommendations – Upgrade Plan – Center Village

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	4,345	6,070	7,420
Public Lockers	1,687	6,630	8,100
Rentals/Repair	6,122	13,260	16,210
Retail Sales	7,092	4,640	5,670
Bar/Lounge/Restaurant Seating	34,749	28,010	28,010
Kitchen/Scramble	10,814	6,720	8,210
Restrooms	6,185	3,970	4,850
Ski Patrol	1,040	2,440	2,990
Administration	5,705	7,170	8,770
Employee Lockers/Lounge	2,920	2,870	3,510
Mechanical	2,180	2,210	3,090
Storage	3,250	3,680	5,160
Circulation/Waste	7,961	8,830	12,370
Total Square Feet	**94,050**	**96,500**	**114,360**

Source: SE Group

Table A - 12. Space Use Recommendations – Upgrade Plan – West Village

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	7,812	16,030	19,600
Public Lockers	298	1,810	2,210
Rentals/Repair	1,720	3,620	4,420
Retail Sales	730	1,270	1,550
Bar/Lounge/Restaurant Seating	7,156	6,490	6,490
Kitchen/Scramble	3,507	1,470	1,800
Restrooms	1,748	870	1,060
Ski Patrol	-	540	650
Administration	860	1,270	1,550
Employee Lockers/Lounge	-	510	620
Mechanical	640	910	1,320
Storage	1,216	1,520	2,200
Circulation/Waste	2,003	3,660	5,270
Total Square Feet	**27,690**	**39,970**	**48,740**

Source: SE Group

Table A - 13. Space Use Recommendations – Upgrade Plan – Aerie (existing 2023-2024)

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	8,342	7,400	9,050
Kitchen/Scramble	4,675	2,330	2,840
Restrooms	1,664	1,370	1,680
Ski Patrol	-	850	1,030
Administration	-	-	-
Employee Lockers/Lounge	274	-	-
Mechanical	-	320	480
Storage	2,314	540	800
Circulation/Waste	5,027	1,290	1,930
Total Square Feet	**22,296**	**14,100**	**17,810**

Source: SE Group

Table A - 14. Space Use Recommendations – Upgrade Plan – T-Rex Grill

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	-	5,760	7,040
Kitchen/Scramble	208	1,810	2,210
Restrooms	207	1,070	1,310
Ski Patrol	-	660	810
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	250	380
Storage	-	420	630
Circulation/Waste	-	1,000	1,500
Total Square Feet	**415**	10,970	13,880

Source: SE Group

Table A - 15. Space Use Recommendations – Upgrade Plan – Flyers

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	-	3,560	4,350
Kitchen/Scramble	231	1,120	1,370
Restrooms	-	660	810
Ski Patrol	-	410	500
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	160	230
Storage	-	260	390
Circulation/Waste	-	620	930
Total Square Feet	**231**	**6,790**	**8,580**

Source: SE Group

Table A - 16. Space Use Recommendations – Upgrade Plan – Koko's Hut

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	2,900	1,770	2,160
Kitchen/Scramble	650	560	680
Restrooms	400	330	400
Ski Patrol	250	200	250
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	126	80	90
Storage	210	130	160
Circulation/Waste	504	310	380
Total Square Feet	**5,040**	**3,380**	**4,120**

Source: SE Group

Table A - 17. Space Use Recommendations – Upgrade Plan – Other On-Mountain

Service Function	Existing Total	Recommended Range	
		Low	High
Guest Services/Tickets/Ski School	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/Lounge/Restaurant Seating	-	2,410	2,950
Kitchen/Scramble	-	760	930
Restrooms	1,336	450	550
Ski Patrol	8,050	280	340
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	110	130
Storage	-	180	210
Circulation/Waste	-	420	520
Total Square Feet	**9,386**	**4,610**	**5,630**

Source: SE Group

Table A - 18. Summer Activity Zones – Upgrade Plan

Area Boundaries	Score	Appropriate Zone
Area 1		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**
Area 2		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**
Area 3		
Access	2	
Remoteness	3	
Naturalness	3	
Infrastructure	2	
Total Score	**10**	**Zone 4**
Area 4		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	3	
Total Score	**12**	**Zone 5**

Area Boundaries	Score	Appropriate Zone
Area 5		
Access	2	
Remoteness	2	
Naturalness	3	
Infrastructure	3	
Total Score	**10**	**Zone 4**
Area 6		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	2	
Total Score	**8**	**Zone 3**
Area 7		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 8		
Access	2	
Remoteness	1	
Naturalness	2	
Infrastructure	2	
Total Score	**7**	**Zone 3**

Area Boundaries	Score	Appropriate Zone
Area 9		
Access	2	
Remoteness	3	
Naturalness	2	
Infrastructure	3	
Total Score	**10**	**Zone 4**
Area 10		
Access	3	
Remoteness	3	
Naturalness	3	
Infrastructure	2	
Total Score	**11**	**Zone 4**
Area 11		
Access	2	
Remoteness	3	
Naturalness	3	
Infrastructure	2	
Total Score	**10**	**Zone 4**
Area 12		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	2	
Total Score	**8**	**Zone 3**

Area Boundaries	Score	Appropriate Zone
Area 13		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	2	
Total Score	**8**	**Zone 3**
Area 14		
Access	2	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**5**	**Zone 2**
Area 15		
Access	2	
Remoteness	1	
Naturalness	1	
Infrastructure	2	
Total Score	**6**	**Zone 2**
Area 16		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**

Area Boundaries	Score	Appropriate Zone
Area 17		
Access	1	
Remoteness	1	
Naturalness	2	
Infrastructure	1	
Total Score	**5**	**Zone 2**
Area 18		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 19		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	1	
Total Score	**7**	**Zone 3**
Area 20		
Access	2	
Remoteness	2	
Naturalness	2	
Infrastructure	1	
Total Score	**7**	**Zone 3**

Area Boundaries	Score	Appropriate Zone
Area 21		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 22		
Access	1	
Remoteness	1	
Naturalness	1	
Infrastructure	1	
Total Score	**4**	**Zone 1**
Area 23		
Access	2	
Remoteness	1	
Naturalness	2	
Infrastructure	3	
Total Score	**8**	**Zone 3**

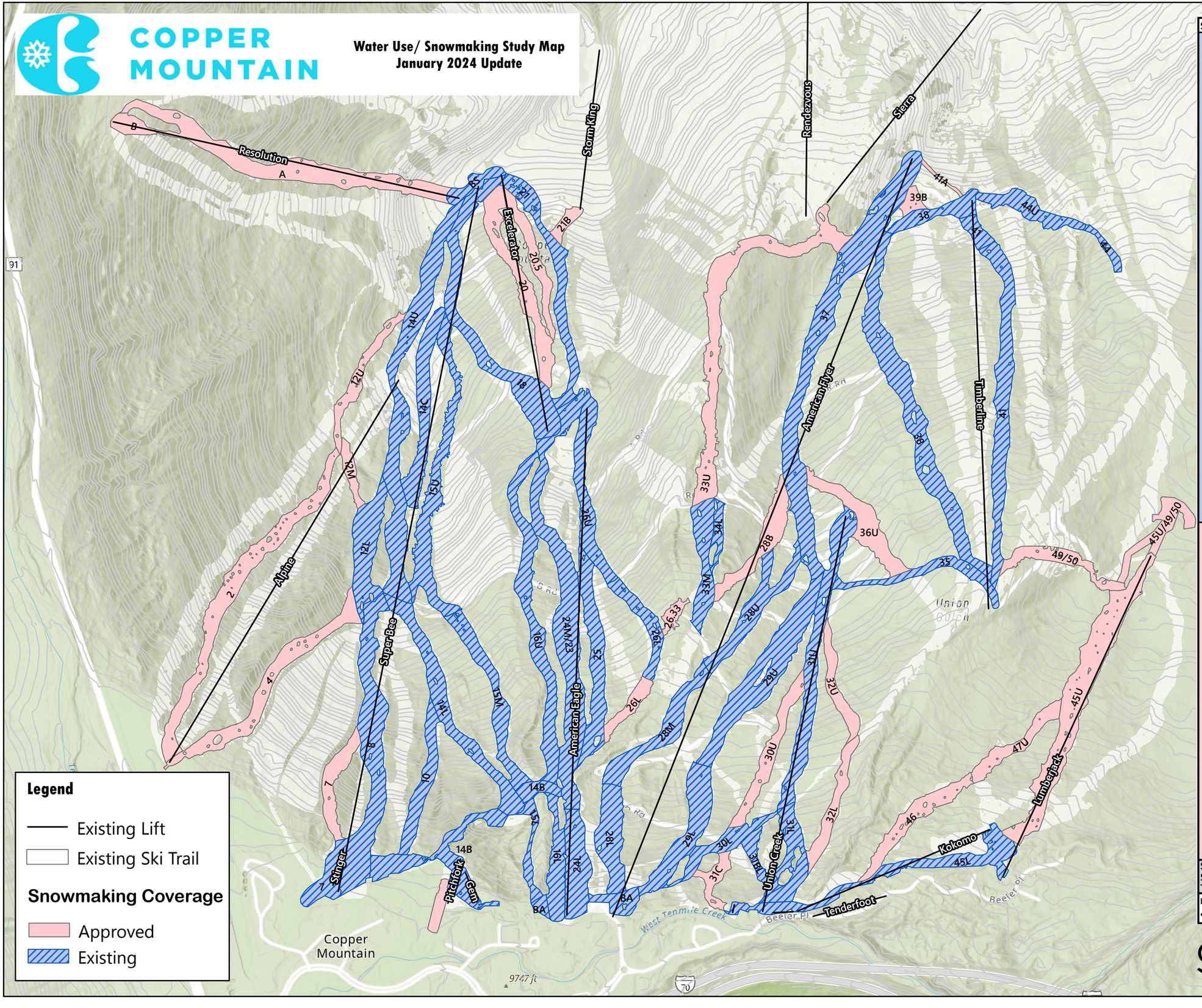
Source: SE Group

APPENDIX B.
WATER USE/SNOWMAKING MAP

CMR's most accurate snowmaking calculations are reflected in CMR's overall Water Use/Snowmaking Map, which was updated in the 2021 Lumberjack Chairlift Replacement CE/DM (2021 CE/DM). These calculations have been incorporated the following map and this MDP. Relevant snowmaking information can also be found in the 2019 Snowmaking and Summer Uses DN/FONSI (2019 DN/FONSI).

COPPER MOUNTAIN

Water Use/ Snowmaking Study Map
January 2024 Update



Legend

- Existing Lift
- Existing Ski Trail

Snowmaking Coverage

- Approved
- Existing

Status	Trail #	Name	Acres
Existing	BA	Base Area	3.4
	BS	B-Spur	2.4
	7	Tuber Hill	4.3
	8	Rosi's Run	18.6
	10	Ore Deal	5.9
	18	Copperopolis	15.5
	21	Ptarmigan	8.9
	25	Fair Play	9.6
	35	Minor Matter	4.9
	37	High Point	26.7
	38	American Flyer	18.9
	38	American Flyer	4.2
	41	Windsong	14.1
	41	Windsong	1.8
	12L	Oh No Lower	8.4
	14B	Skid Road	9.6
	14B	Skid Road	1.9
	14C	West Encore	8.6
	14L	Andy's Encore Lower	10.9
	14U	Andy's Encore Upper	20.3
	15L	Collage Lower	2.4
	15M	Collage Middle	7.6
	15U	Collage Upper	12.0
	16L	Bouncer Lower	5.4
	16U	Bouncer Upper	13.1
	24L	Main Vein Lower	7.5
	24M/23	Main Vein Upper/Rhapsody	23.2
	26L	Bittersweet Lower	4.2
	26U	Bittersweet Upper	8.0
	28L	Carefree Lower	7.4
	28M	Carefree Middle	7.4
	28U	Carefree Upper	7.4
	29L	Loverly Lower	8.9
	29U	Loverly Upper	14.5
	30L	Scooter Lower	4.3
	31BL	Hidden Vein Lower	2.6
	31L	Vein Glory Lower	6.0
	31U	Vein Glory Upper	13.0
	33M	Coppertone Middle	6.3
	34L	I Dropper Lower	1.7
	44	Soliloquy (Moon Island)	1.3
		Soliloquy Upper	4.9
	45L	Roundabout Lower	10.8
	Sub-Total Existing		**378.8**
Approved	A	Highline	18.0
	B	Lower Sawtooth	2.1
	2	Too Much	15.7
	4	Formidable	10.9
	7	Treble Cliff	4.8
	20	CDL's Trail	9.2
	20.5	Mine Dump	4.7
	26.33	Race Arena	1.4
	44	Soliloquy (Moon Island)	1.3
	46	Prospector	6.2
		Pitchfork	1.8
	12M	Oh No Middle	2.1
	12U	Oh No Upper	4.4
	21B	Storm King Connect	1.5
	26L	Bittersweet Lower	2.7
	28B	Liberty	6.3
	30U	Scooter Upper	6.1
	31C	Snodeal	2.6
	32L	Easy Feelin Lower	4.8
	32U	Easy Feelin Upper	4.1
	33U	Coppertone Upper	18.2
	36U	Woodwinds Upper	7.4
	39B	The Moz Upper	1.4
	41A	Flyer Timberline Traverse	0.5
	45U	Roundabout Upper	20.1
	45U/49/50	Roundabout Upper/Clear Cut/I-Way	5.0
	47U	Fairway Upper	4.6
	49/50	Clear Cut/I-Way	4.8
	Sub-Total Approved		**172.6**
Sub-Total Existing			**378.8**
Sub-Total Approved			**172.6**
TOTAL SNOWMAKING ACREAGE*			**551.4**

Last Updated: 01/30/2024

* Minor difference in summation could exist (~0.1 acre) due to rounding.

0 2,000 Feet

SE GROUP