

MONARCH MOUNTAIN

Master Development Plan

2025

PREPARED BY:

SE GROUP

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2025

ACCEPTED BY: RYAN NEHL Digitally signed by RYAN NEHL Date: 2026.07.02 14:58:37 -06'00'

Ryan Nehl

Forest and Grassland Supervisor

Pike-San Isabel National Forests & Cimarron and Comanche National Grasslands

DATE: 7/2/26

Prepared By:

SE GROUP

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CHAPTER 1. INTRODUCTION

Monarch Mountain may be tucked away in a quieter part of Colorado, but it still provides access to the world-class skiing the state is known for. With scenic views and a welcoming vibe, it is an ideal place for guests of the Pike-San Isabel National Forests & Cimarron and Comanche National Grasslands (PSICC), and the Grand Mesa, Uncompahgre and Gunnison National Forests (GMUG) to enjoy outdoor recreation opportunities like skiing, hiking, and sightseeing. Monarch offers a more relaxed and authentic mountain experience, where visitors can carve through fresh powder without long lift lines. The resort boasts a variety of terrain, from gentle green groomers perfect for beginners to steep, challenging hike-to runs that thrill expert skiers and riders. With an average annual snowfall of 350 inches and a commitment to maintaining its natural, off-the-beaten-path charm, Monarch Mountain is a true hidden gem for those seeking adventure in Colorado's high country.

The ski area is located entirely on National Forest System (NFS) lands. Each mountain ski area in the United States on NFS lands must obtain a United States Forest Service (USFS) Special Use Permit (SUP) to operate on public lands. Forest Service SUPs require the preparation of a Master Development Plan (MDP) that identifies the existing and desired conditions for the ski area, and proposed improvements on NFS lands within the SUP boundary. This Master Development Plan is intended to be the guiding document for future development at Monarch Mountain.

A. LOCATION

Monarch is located entirely on NFS lands within the Pike-San Isabel National Forests & Cimarron and Comanche National Grasslands (PSICC), and Grand Mesa Uncompahgre and Gunnison National Forests (GMUG) in Chaffee and Gunnison Counties in Colorado. The ski area is approximately 20 miles west of Salida, Colorado, in the Sawatch Mountain Range. To access Monarch, it is approximately a 30-minute drive from Salida and a 2.5-3 hours' drive from Denver, Colorado Springs and portions of the Colorado Front Range. Monarch is accessed via U.S. Highway 50, a major east-west thoroughfare in south-central Colorado. The ski area sits on the Continental Divide, with the main portion of the resort on the east side and the No Name Basin portion on the west side. The Continental Divide National Scenic Trail (CDNST), a popular and iconic hiking route that the resort predates by nearly 40 years, traverses the resort in an alignment that currently follows Monarch's summer roads. Perched along the Continental Divide, Monarch's elevations range from 10,727 feet at the base of the ski slopes to 11,952 feet at the summit.

B. HISTORY

Monarch first opened to the public in 1939 as a Works Progress Administration (WPA) project, featuring a single rope tow running from the current parking lot to the top of *Gunbarrel*. Once completed, the ski area was transferred to the City of Salida to provide winter recreation for residents of Salida and south-central Colorado. After getting a Special Use Permit (SUP) from the Forest Service, the city added a second rope tow and a rustic log cabin lodge without electricity or running water.

By the mid-1950s, as recreational skiing grew in popularity, the ski area's lift capacity struggled to meet demand, prompting the need for upgrades. In 1955, the City of Salida sold Monarch to Ray Berry, the general manager at the time. In efforts to expand and improve the ski area's infrastructure, he installed a T-Bar in 1957, Monarch's first aerial chairlift in 1960, additional developed runs, and renovated base facilities in 1965. Majority ownership changed again in 1967, leading to further improvements, including the installation of the Breezeway and Garfield lifts in subsequent years in response to the increasing popularity of winter sports.

Westlake Mortgage and Investment Corporation took ownership of Monarch Mountain during the 1979/1980 season. Under Westlake, the Panorama lift was added, giving Monarch its third double chairlift. In the summer of 1981, the Tumbelina lift replaced an older Poma lift to enhance Monarch's teaching terrain, featuring a mid-unload station to service beginner skiing on the *Snowflake* run.

Beyond lift upgrades, Monarch expanded its terrain offerings with snowcat tours and lift-accessible "off-piste" skiing. For the 1990/91 season, Monarch launched a snowcat skiing operation under a Forest Service Outfitter and Guide Permit, granting access to approximately 1,635 acres of expert terrain on public lands north and west of the existing SUP boundary, including No Name Basin. This permit covers terrain within the PSICC and GMUG National Forests but is administered by the Pike-San Isabel National Forests.

Further expanding expert terrain, Monarch incorporated Mirkwood Basin, located north of the developed ski area, into its SUP boundary. Accessible via the Breezeway lift and a 15-minute hike along a cat track, Mirkwood Basin offers around 130 acres of advanced and expert terrain with a vertical rise of approximately 1,100 feet from the base area. This expansion was officially approved in a 2005 Decision Memo.

PowderMonarch LLC purchased the ski area in 2002, bringing in a new era of development. PowderMonarch LLC is currently the second largest private employer and major economic driver in Chaffee County, providing full- and part-time employment to 450 people. Many of Monarch's guests stop in or stay in Salida providing substantial spending in the local economy, which is driven by the seasonal tourism industry. After the last MDP was accepted in 2011, a 16,000 square foot expansion of the day lodge and an additional parking lot were constructed to address deficiencies in capacities and improve the guest experience.

Garfield was updated in 2010 with a new Skytrac Bottom Drive Terminal. Breezeway was updated in 2014 with a new Skytrac Bottom Drive Terminal. In addition, Tumbelina and Panorama received upgrades to the drive systems, gearboxes, counterweights, and braking systems. In 2018, Monarch started removing Engelmann spruce trees that had succumbed to Spruce Beetle infestations. This not only improved the ski area's resilience to fire, but also improved tree skiing terrain around the resort. The tubing park was also installed in 2018, providing accessible winter recreation opportunities for all guests.

In 2022, Monarch acquired the Crest Welcome Center and Tram at the top of Monarch Pass. Monarch Mountain at The Crest is primarily used in the summer as a basecamp for single-day or multi-day hiking or mountain biking trips as well as sightseeing. There is a visitor center and restaurant for passers-by to refuel and learn about the surrounding flora and fauna of the area. The Monarch Crest Tramway is a fixed grip gondola used for scenic lift rides. In the winter, this is used as skier overflow parking. This area is on a separate permit from the ski area SUP.

In 2024, the Monarch Mountain No Name Basin Projects Decision Notice was released by the Forest Service, adding 377 acres to Monarch's SUP area, bringing the total SUP area to 1,146 acres. In addition, a new chairlift and 62 acres of developed terrain were approved, enriching the ski area's offerings and creating additional capacity for skiers as winter recreation has grown in popularity.

C. PLAN VISION AND GOALS

An overall ski area vision and goals help guide the planning and design of a resort's future improvements. Questions such as "What's important to our guests?", "What makes our ski area special?", and "Where should we invest our time, money and resources?" are questions that assist in identifying priority projects and the overall vision and goals for this MDP.

Monarch primarily serves the day-use and regional destination market, with the majority of visitors arriving on weekends and holidays, while lodging is available in the nearby town of Salida. Like many ski areas across the country, Monarch's skier visits have increased in recent years due to heightened demand for outdoor recreation, particularly winter sports and desire for less crowded roads to access resorts and slopes. Monarch has experienced growth, in new skiers and from their loyal destination and day-use skiers, reinforcing its reputation as a hidden "gem" in the Colorado ski market.

Additionally, families from the Colorado Front Range (Denver to Pueblo) have recognized the value of Monarch as an accessible, family-friendly ski area. Denver visitors can reach Monarch in roughly three hours via Highway 285, with only a minor mountain pass (Kenosha Pass) at 10,000 feet. Guests from Colorado Springs and Pueblo can reach Monarch in about 2.5 hours, with Monarch Pass being the only major mountain pass on the route. These factors continue to contribute to Monarch's success and expected future growth.

This growth in popularity is reflected in an increase in skier visits since 2013/2014. Average visits between 2013/2014 and 2018/2019 were approximately 175,000, and average visits between 2020/2021 and 2024/25 (these calculations do not include 2019/2020 due to the Covid-19 pandemic) were approximately 213,0000, an increase of 22%. Skier visits over the past ten years are illustrated below.

A core element of Monarch's vision and goals for this Master Development Plan is its continued commitment to responsible stewardship of the Forest Service lands where Monarch operates. Looking ahead, Monarch will emphasize protection of natural resources and sustainable land management practices. The resort will continue to work collaboratively with the Forest Service, Chaffee County, and other relevant agencies to refine project designs and implementation strategies. This approach includes the application of Project Design Criteria (PDC), Best Management Practices (BMPs), and appropriate mitigation measures to avoid, minimize, or offset potential impacts to sensitive environmental resources.

To meet increasing demand and continue to provide a quality ski experience, Monarch has identified the need to continue expanding and enhancing both on-mountain and base area facilities. The planned improvements outlined in this MDP directly respond to guest expectations and address aging infrastructure, bringing the resort's functions into balance. These upgrades follow a phased approach, though the exact projects within phases may shift due to changes in priorities and conditions. Together, these upgrades aim to enhance the recreation experience for current visitors while accommodating the anticipated rise in downhill skiing demand on NFS lands.

The following are guiding goals for this MDP:

- Continue to service beginner skiers and riders with exceptional lifts, terrain, and services to support their needs and a beginner progression
- Improve on-mountain guest service facilities to provide diverse F&B offers and experiences, and efficient base area guest service facilities to improve overall circulation and operations
- Enhance winter terrain offerings to support the visitation levels
- Continue to be a gateway to the surrounding National Forest and facilitate connection to the natural environment through recreational and educational activities
- Develop multi-season recreational and non-ski winter recreation offerings to diversify the resort business year-round

Chart 1. Annual Winter Skier Visitation



D. FOREST SERVICE POLICY

Many mountain resorts across the country are partially or completely located on public lands. Each mountain resort on NFS lands must obtain a USFS SUP to operate on public lands. Forest Service SUPs require the preparation of an MDP that identifies the existing and desired conditions for the resort, as well as proposed improvements on NFS lands.

This MDP fulfills this requirement and provides future direction for the development and improvement of Monarch—ensuring both a balance of facilities and a wide variety of amenities affording an exceptional recreational experience in a manner which is sustainable to the business, operations, and the surrounding environment. This MDP provides a thorough assessment of existing operations and facilities at Monarch and identifies a comprehensive plan for future improvements to the resort.

Throughout the master planning process, careful consideration was given to known environmental and cultural resource constraints within the project area. This included the identification and avoidance of wetlands, known cultural sites, and areas of potential environmental sensitivity to minimize overall ground disturbance. Figure 4 highlights the existing wetlands located within the current SUP boundary and illustrates how these areas were considered in the proposed layout. The planning process aimed to reduce environmental impacts while balancing operational needs and future development goals.

Forest Service acceptance of this document as a planning tool for Monarch does not imply authorization to proceed with implementation of any of the projects that are identified herein. All projects identified within this MDP will require site-specific environmental analysis and approval per the National Environmental Policy Act of 1970 (NEPA) before they can be implemented. This MDP is intended to be a dynamic document, which may be amended periodically to reflect innovations in facilities and recreation.

Planning + Design Nomenclature

Throughout this document, text highlights like this one, have been included to explain the various planning and design concepts that are utilized throughout the MDP process. Further descriptions and explanation of these concepts may be found in the Appendices.

Table 1. Upgrade Project List

Upgrade Project	Previous NEPA Approval/ MDP Acceptance Status
Lifts	
Breezeway Lift Replacement	Previously approved - 1999 DN FONSI Previously Accepted – 2011 MDP
Garfield Lift Replacement	
Panorama Lift Replacement	
Tumbelina Lift Replacement	
Pioneer Lift Replacement	
Conveyor Replacements	
New Divide Express Lift	
New No Name Basin 2 Lift	
New Breezeway Transfer Tow	
Terrain	
Terrain Improvements on Powderline/Roundabout, Sleepy Hollow, Snowburn Traverse, Romp, & Snowsports Beginner Area	Previously accepted – 2011 MDP
Vegetation Management near Gunbarrel	Previously Approved -Monarch Pass Vegetation Management Plan
SUP Boundary Adjustment Phase 2 for Paradise parking expansion SUP Boundary Adjustment Phase 3 for Cat roads and Nordic skiing	
Snowmaking	
70.6 Acres of New Snowmaking	33.3 acres previously approved - 1999 DN FONSI; Previously accepted – 2011 MDP
Snowmaking Pond	Previously approved - 1999 DN FONSI; Previously accepted – 2011 MDP
Guest Services	
Pano Flats Building	Previously approved - 1999 DN FONSI; Previously accepted – 2011 MDP
Summit Hut	Previously approved - 1999 DN FONSI; Previously accepted – 2011 MDP
Day Lodge Expansion	Previously accepted – 2011 MDP
Rental/Children's Center Replacement	Previously accepted – 2011 MDP
North Star Yurt	
Nordic and Cat Ski Yurt	
Nordic Building	
Base Area Ski Patrol Building Replacement	Previously accepted – 2011 MDP

Parking and Access	
Paradise + Entrance and Exit Road Parking Expansion (excluding area between Entrance and Exit Road)	Exit Lane Parking Expansion Under NEPA Review
Mountain Operations	
Tubing Area Relocation	
Maintenance Shop Replacement	Previously accepted – 2011 MDP
Nordic Operations	
Wastewater Treatment Plan Expansion	Previously accepted – 2011 MDP
Multi-Season Operations	
Mountain Coaster/similar attractions	
Summer programming and events	

CHAPTER 2.
EXISTING CONDITIONS

With its scenic views and laid-back vibe, Monarch Mountain is an ideal place to experience world-class skiing in Colorado. There is something for any type of guest at Monarch, from gentle groomers to thrilling hike-to terrain in Mirkwood Basin. Its high elevation brings an average of 350 inches of snowfall each season. The expansion into No Name Basin brought 377 acres of new terrain to explore on the other side of the Continental Divide, increasing the capacity of the resort and enhancing recreation opportunities.

This chapter contains discussion and analysis of existing facilities at Monarch. Completion of a thorough resort inventory is the first step in the master planning process and involves the collection of data pertaining to the resort's existing facilities. This inventory includes chairlifts, runs, base area structures, guest services, other resort functions and activities, parking, operations, and mountain roads. This inventory of facilities creates a baseline of the resort, which is then compared to similar resorts (as discussed in Appendix B). Comparing the resort's existing conditions helps clarify the ways in which the resort can reach its strategic vision and goals.

The overall balance of the existing resort is evaluated by calculating the capacities of various facility components and then comparing these capacities to the resort's current Comfortable Carrying Capacity (CCC). This analysis of capacities helps to identify the ski area's strengths, weaknesses, opportunities, and constraints as a resort. The next step is the identification of improvements that would bring the existing facilities into better balance with other resort capacities.

A. EXISTING LIFT NETWORK

Monarch's lift network includes six aerial chairlifts and two surface conveyor lifts, all located on USFS lands. These lifts effectively serve the ski area's terrain, though some areas—such as North Forty through Gunbarrel northeast of the Pioneer lift's top terminal and the hike-to terrain in Mirkwood Basin—are more difficult to access. However, many guests appreciate the challenge of hike-to terrain, and these zones tend to have lower skier densities. All lifts use RFID technology to track scans.

The Breezeway lift services intermediate to expert terrain in the northern section of the ski area and also provides access to the staging area for participants of Monarch Cat Skiing and the Steel City Terrain Park. This lift serves Monarch's longest intermediate runs and has increased in popularity in recent years. In addition, it receives prolonged sun exposure in the spring which can provide for pleasant skiing. However, its southern-facing slopes can lead to the snow surface rapidly changing in the spring. Although Breezeway was originally constructed in 1968, the bottom terminal was replaced in 2014 and has extended the lifespan of the lift.

The Garfield and Pioneer lifts serve a diverse range of terrain in the southern portion of Monarch, from the expert *Gunbarrel* run to the frequently used novice-friendly *Sleepy'Hollow*. Their bottom terminals are adjacent to each other and the ropeways cross a third of the way up the lifts. These lifts provide access to approximately 80% of Monarch's beginner terrain. Installed in 1999, the Pioneer lift was added to increase out-of-base capacity and alleviate pressure on the Garfield lift, which dates back to 1969. Garfield's bottom terminal was replaced in 2010 to extend the lifespan of the lift. Garfield is the most ridden lift at the ski area according to scan data from multiple seasons, likely popular for its high quality advanced and expert terrain. While they appear to serve similar terrain, the skiers on each lift tend to ski different terrain. Garfield is most frequently skied by more advanced guests skiing steeper terrain under the lift or heading to Panorama. In contrast, Pioneer is generally skied by lower ability level skiers and families. It is an ideal next step after progressing beyond Tumbelina due to its long novice runs such as *Roundabout*, *Sidewinder* and *Lower'Tango*.

Panorama, a fixed-grip double chair, can only be accessed after riding another chairlift. It primarily serves advanced intermediate to expert terrain in the central portion of Monarch, in addition to allowing guests to descend into No Name Basin. While advanced skiers and snowboarders are the primary users, many novice and intermediate guests ride Panorama for its breathtaking views of the Continental Divide. The *Skywalker* run allows novice skiers to descend from the lift's upper terminal to the popular *Sleepy'Hollow* run. This is particularly advantageous at a ski area that caters to families and new skiers because they can see more of the mountain beyond the shorter runs off of Tumbelina. In 2017 and 2018, Panorama underwent significant upgrades, including a new drive, gearbox, braking system, controls, and hydraulic tensioning system.

Tumbelina, installed in 1981, is intended to be the first chairlift a beginner rides after progressing beyond the learning conveyors. It typically operates at a slow rope speed of 400 feet per minute (fpm), providing access to gentle terrain and an easy route to the Panorama lift. Originally featuring a mid-station, the lift was later modified to create a smoother experience for beginners. In 2021, Tumbelina received a new drive, gearbox, braking system, auxiliary drive, restraint bars, motor room enclosure, and operator house.

The Tomichi lift, a fixed-grip triple chair constructed in 2025, serves the backside of the resort in No Name Basin. This area offers a mix of low intermediate to advanced terrain on developed runs, along with extensive gladed skiing options.

Monarch's two conveyor lifts, Safari and Caterpillar, are dedicated to beginner skiers. Safari is located in a separate learning area designed for Snowsports students, while Caterpillar was installed to replace the former Tumbelina mid-station, providing access to longer runs for those preparing for their first chairlift ride.

The Kaleidoscope surface lift serves the tubing area, but is not included within analyses because it does not apply to alpine skiing operations.

Table 2. Lift Specifications—Existing Conditions

Lift Name / Lift 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
Breezeway/C2	11,675	10,845	830	3,319	26%	1,200	500	50	Hall 1968 / Skytrac Upgrade 2014[1]
Garfield/C2	11,638	10,793	846	2,986	30%	1,200	500	50	Hall 1969 / Skytrac Upgrade 2010[2]
Panorama/C2	11,804	11,020	785	3,131	26%	1,200	488	49	Hall 1980 / Skytrac Upgrade 2017[3]
Tumbelina/C2	11,160	10,835	325	1,368	25%	1,200	488	49	Hall 1981 / Skytrac Upgrade 2021[4]
Pioneer/C4	11,602	10,819	783	3,598	23%	1,800	450	60	CTEC 1999
Safari/C	10,883	10,875	8	60	13%	600	120	12	Magic Carpet 2005
Caterpillar/C	10,909	10,849	60	470	13%	600	120	12	2011
Tomichi/C3	11,669	10,727	941	2,908	32%	1,500	500	60	Skytrac/2025

Source: SE Group
Notes:
C2 = fixed-grip double chairlift / C3 = fixed-grip triple chairlift / C4 = fixed-grip four-passenger chairlift / C = Conveyor

[1] Breezeway received a new Skytrac bottom drive terminal in 2014
[2] Garfield received a new Skytrac bottom drive terminal in 2010
[3] Panorama was updated with a new Skytrac drive train, gearbox, braking system, and low voltage controls in 2017. A new hydraulic tensioning system was installed in 2018.
[4] Tumbelina was updated with a new Skytrac drive, auxiliary drive, gearbox, braking system, low voltage controls, communication line, operator house, restraint bars, and counterweight enclosure in 2021.

B. EXISTING TERRAIN NETWORK

1. TERRAIN VARIETY

a) Developed Terrain

The existing developed run network is comprised of approximately 337 acres of developed terrain, including 62 acres of developed terrain in No Name Basin. An additional 129 acres of managed, hike-to terrain is offered in Mirkwood Basin, which is accessed via the Breezeway lift and a short 10 to 20 minute hike for adventurous guests. The maximum vertical drop on the frontside is 1,110 feet—from the top of Mirkwood Basin to the base facilities. In No Name Basin, there is 941 feet of vertical drop from the top of the lift to the bottom. Monarch Mountain also constructs terrain parks on their developed terrain, and they may be moved or altered at any time. The terrain specifications in Table A-1 in Appendix A provide specific information by individual ski run. A detailed analysis of this terrain is completed later in this chapter.

b) Undeveloped and Hike-To Terrain

Undeveloped and gladed skiing is present between developed runs around the ski area. An additional 1,635 acres of off-piste terrain are offered through Monarch Cat Skiing, which operates under a separate Forest Service Outfitter and Guide Permit. This terrain is located immediately adjacent to Monarch's existing SUP boundary on the northern and western boundaries.

In addition to the hike-to terrain in Mirkwood Basin, there is also some hiking required to access *Curecanti* located at the intersection with *Quick'Draw* and *Skywalker*[5] and *'Tele'Alley*, *Gunbarrel*, and *North'Forty'* as accessed beyond the *Liberty* run.

2. TERRAIN DISTRIBUTION BY ABILITY LEVEL

The following table and charts illustrate the distribution of terrain by skier ability level for the developed ski run network, as well as the distribution of the active skier population at Monarch. The terrain distribution is compared to industry norms.

The full spectrum of ability levels is present, from beginner to expert. The natural topography of the ski area is characterized by an abundance of novice to low intermediate grades, with advanced slopes concentrated on the upper mountain and the highest concentration of expert slopes within Mirkwood Basin, but terrain within this area is not included within the developed terrain network.

Compared to the skier market, there is a significant shortage of beginner terrain. This can lead to crowded beginner areas or long lines, which can impede the beginner experience. Creating a comfortable and seamless beginner experience is key to attracting and retaining beginner skiers, who will ideally continue skiing at Monarch and progress through multiple ability levels. However, opportunities for beginner area development can be limited due to the topography because beginner slopes should have grades between 8% to 12%.. The tubing area is located on suitable beginner terrain and may need to be relocated to create additional beginner terrain.

In contrast, there is a disproportionate amount of novice to low intermediate terrain. Once skiers progress to these lower ability levels, there is plenty of terrain variety. There is a need for improved connectivity between lower ability level runs to ensure seamless skill progression. Intermediate skiers tend to favor terrain served by Breezeway. The expansion into No Name Basin further enriches intermediate offerings as well. Popular intermediate runs include *Little Mo*, *Ramble On*, *Turbo*, and *Snowburn*.

However, intermediate terrain is still undersized compared to the market which may cause a gap in skill progression from novice to advanced. There is an abundance of advanced terrain and balanced expert terrain compared to the skier market. Panorama is very popular with the advanced to expert crowd.

Note that ability level designations in this document are based on slope gradients and other factors such as run width and surrounding terrain. Ability level designations are described in Appendix B Section C. These designations are used to analyze existing and upgraded terrain. Designations may differ from the ability level designations on the trail map and ultimately, the ski area officially decides what difficulty level a run should be for its guests.

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 moguls, bowls, gladed trees, open parks, in-bounds backcountry-style "hike-to" terrain, and terrain parks. 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.

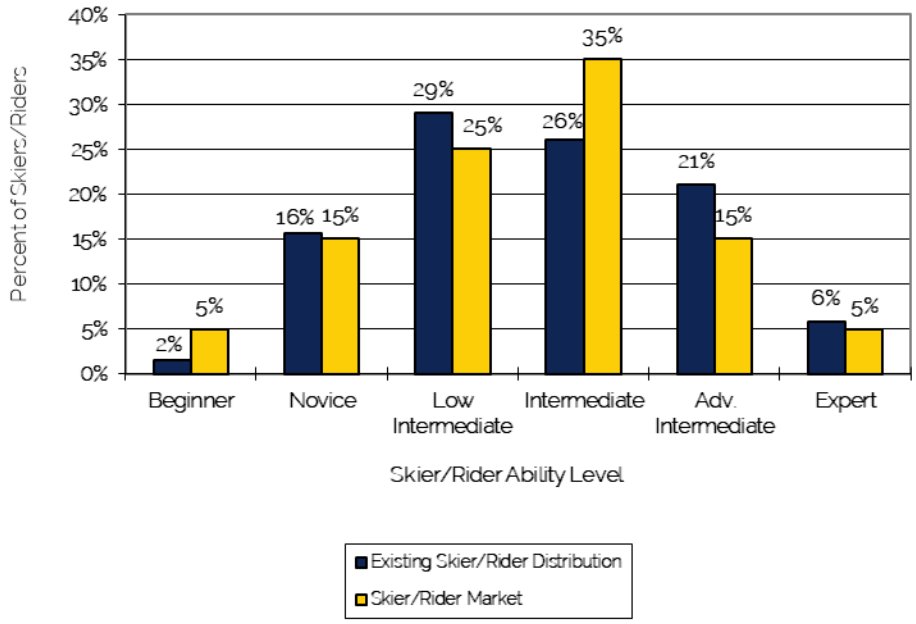
To provide the highest quality guest experience, resorts should offer groomed runs of all ability levels and some level of each of the undeveloped terrain types. Undeveloped terrain is primarily used by advanced and expert level skiers/riders during desirable conditions, e.g., periods of fresh snow, 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.

Table 3. Terrain Distribution by Ability Level—Existing Conditions

Skier/Rider Ability Level	Run Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	1.7	50	2%	5%
Novice	27.6	497	16%	15%
Low Intermediate	67.9	950	29%	25%
Intermediate	83.0	830	26%	35%
Advanced	95.7	670	21%	15%
Expert	61.4	184	6%	5%
TOTAL	337.2	3,181	99%	100%

Source: SE Group

Chart 2. Terrain Distribution by Ability Level—Existing Conditions



Ability Level

It should be noted that there is a significant difference between the ski run ability level ranking approach used in this document and that used by all U.S. ski areas on their trail map and on mountain trail signs. The established approach used at all resorts in the country is to make the ranking be relative to that resort [i.e. the easiest runs at that resort are signed as green circles and the most difficult are signed as black diamonds, the intermediate runs being blue squares. SE Group uses a different approach in Master Development Plan analyses. This approach is aimed at comparing the terrain available at a given resort to the overall skier market, to determine if there are opportunities to appeal to a broader range of skiers. SE Group also uses six categories of ability level, as opposed to the standard three used by mountain resorts. Using various criteria, including maximum sustained gradient, run width, sightlines, and others, SE Group makes an internal determination of which ability level each run falls into. From that data, calculations are then done to determine terrain capacity and ability level distribution by capacity. These calculations are accomplished by multiplying terrain acreage by an assigned density. These numbers are then compared to the skier market, to determine surpluses and deficiencies of terrain by ability level, as compared to the overall skier market.

C. EXISTING CAPACITY ANALYSIS

1. COMFORTABLE CARRYING CAPACITY

As stated earlier, the accurate calculation of a ski area's CCC is an important and complex analysis that is the single most important planning criterion for the ski area. All other related skier service facilities can be evaluated and planned based on the proper identification of the mountain's capacity. The detailed calculation of Monarch's current CCC is described in the table below.

As illustrated in Table 4, the calculated CCC of the lift and run network at Monarch is 3,530. It is typical for ski areas to experience peak days during which skier visitation exceeds the CCC by as much as 25%. However, it is not recommended to consistently exceed the CCC due to the resulting decrease in the quality of the recreational experience, and thus the resort's market appeal.

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. The design capacity is a planning parameter that is used to establish the acceptable 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 normally 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. Design capacity is typically equated to a resort's fifth or tenth busiest day, and peak] day visitation at most resorts is at least [H] 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 service facilities, including day lodge seating, mountain restaurant requirements, restrooms, parking, and other guest services are planned around the proper identification of the mountain's true capacity.

CCC is derived from the resort's supply of vertical transport (the vertical feet served combined with the uphill hourly capacities of the lifts) and demand for vertical transport (the aggregate number of runs desired multiplied by the vertical rise associated with those runs). The CCC is calculated by dividing vertical supply (VTF#day) by vertical demand, and factors in the total amount of time spent in the lift waiting line, on the lift itself, and in the descent.

Table 4. Comfortable Carrying Capacity—Existing Conditions

Lift Name/ Lift Type	Slope Length (ft.)	Vertical Rise (ft.)	Actual Capacity (pph)	Operating Hours (hrs.)	Up-Mountain Access Role (%)	Misloading /Lift Stoppages (%)	Adjusted Hourly (pph)	VTF/ Day (000)	Vertical Demand (ft./day)	CCC (guests)
Breezeway/C2	3,319	830	1,200	7.00	0	10	1,080	6,275	15,431	410
Garfield/C2	2,986	846	1,200	7.00	0	10	1,080	6,394	15,001	430
Panorama/C2	3,131	785	1,200	6.75	0	10	1,080	5,720	9,016	630
Tumbelina/C2	1,368	325	1,200	7.00	0	15	1,020	2,319	5,261	440
Pioneer/C4	3,598	783	1,800	7.00	0	15	1,530	8,385	8,687	970
Safari/C	60	8	600	7.00	0	5	570	32	695	50
Caterpillar/C	470	60	600	7.00	0	5	570	239	1,603	150
Tomichi/C3	2,908	941	1,500	6.00	0	10	1,350	7,622	16,791	450
TOTAL	17,840		9,300				8,280	36,986	72,484	3,530

Source: SE Group
Notes:
C2 = fixed-grip double chairlift / C3 = fixed-grip triple chairlift / C4 = fixed-grip four-passenger chairlift / C = conveyor

2. DENSITY ANALYSIS

The density analysis in this section compares the uphill and downhill capacities at Monarch Mountain. 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. Conveyors and transport lifts are not included in this analysis.

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. The density index at Monarch is 56%. While this is under the optimal density, it is not uncommon for a resort to have densities under the target because lower trail densities generally reflect a higher quality recreation experience. It also indicates that the terrain could accommodate increases in CCC without additional terrain expansions. Tumbelina lift pod has the highest density of skiers at Monarch. This is partially because lower ability-level terrain experiences higher densities in general. In addition, the lift capacity is high compared to the amount of terrain the lift serves. However, since the lift runs slower than designed, trail densities may be lower.

Table 5. Density Analysis – Existing Conditions

Lift Name/ Lift Type	Daily Lift Capacity (guests)	Guest Dispersement				Density Analysis				
		Support Fac./ Milling (guests)	Lift Lines (guests)	On Lift (guests)	On Terrain (guests)	Terrain Area (acres)	Terrain Density (guests /ac.)	Desired Run Density (guests /ac.)	Diff. (+/-)	Density Index (%)
Breezeway/C2	410	103	54	119	134	78.1	2	9	-7	22%
Garfield/C2	430	108	90	108	124	49.1	3	8	-5	38%
Panorama/C2	630	158	90	115	267	89.8	3	8	-5	38%
Tumbelina/C2	440	110	119	48	163	15.1	11	16	-5	69%
Pioneer/C4	970	243	102	204	421	43.9	10	12	-2	83%
Safari/C	50	13	19	5	13	0.2	--	--	--	--
Caterpillar/C	150	38	29	37	46	2.4	--	--	--	--
Tomichi/C3	450	113	68	131	138	58.5	2	9	-7	23%
Total:	3,530	886	571	767	1,306	337.2	6	10	-4	56%

Source: SE Group
Notes:
C2 = fixed-grip double chairlift / C3 = fixed-grip triple chairlift / C4 = fixed-grip four-passenger chairlift / C = Conveyor

D. 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 areas provide visitors with shelter from the elements, bathrooms, food and beverages. The capacity of these facilities is important in understanding whether the needs of visitors are being met. Table 6 compares total resort space use versus current industry norms for similar resorts based on the CCC.

All guest services are concentrated at the base area. The Day Lodge is where most guest services are located, including ticketing, lockers, retail, restaurant seating, food and beverage services and bar. The Lodge has five levels:

Level 1: The bottom floor includes restrooms, seasonal lockers, administrative space, and overflow seating. This floor is on the same level as the parking area and provides accessible access to the elevators and the rest of the building.

Level 2: The second floor is largely occupied by a cafeteria space called the Gunbarrel Grill, the Java Stop, and diner seating. This area can be crowded at times and cafeteria wait times can be long on busier days due to limited kitchen and service space. the Pioneer Room which includes guest seating space and Elmo's bar. There are separate rooms in this area that can be closed off during less busy days to allow for private meeting or event spaces, or to limit serviceable areas.

Level 3: This level provides additional seating a half level up from the Gunbarrel Cafeteria as well as restroom facilities. This level provides direct access to the slopes and access to the parking lot via an outdoor stairway.

Level 4-The popular Sidewinder Saloon that provides full-service, sit-down lunch dining. The Saloon is busiest during the lunch rush, from about 11:30 am to 1 pm, and wait times can be long during this time.

Level 5: The top floor includes a retail space called Elation Sports, limited seating areas, guest services, and administrative offices. This floor is accessed from the Sun Deck which is a popular outside dining area along the snow beach. Fly-By Burritos is also on the Sun Deck providing food truck items for dining guests.

Next to the Day Lodge is a large sprung structure housing rental operations, reservations, and retail (also referred to as North Elation Sports). Separating rental space from the Day Lodge can enhance the guest experience as rentals require a lot of space for registration, gear try-on, and back of house functions. The space within the structure is sufficient for operations, but the building was initially deemed temporary. A permanent space would serve this function more efficiently. A small retail space was also added in 2019.

The Children's Center north of the Day Lodge was constructed in 1987. The approximately 2,600-square-foot facility features play areas for daycare and young children's ski programs on the main

floor, with employee lockers located in the basement. However, the distance of the Children's center from the snow can make the transition to on-snow learning difficult, especially for first-time skiers. Additionally, the Children's Center's separation from the Day Lodge—which houses essential guest services such as restrooms—leads to duplicated spaces and operational inefficiencies, significantly impacting its overall functionality.

The Snowsports School building was constructed in 2019, intended to accommodate Snowsports School staff and provide a rental equipment valet. The space is sufficient for current needs. Junior Mountain Yurt was constructed in 2018 as part of the Monarch Snowsports School. It serves as a lunch spot and meeting area

The Ski Patrol Building, was built in 1986. Positioned southeast of the Day Lodge, it offers convenient on-grade access to both the trails and parking lot. The 1,492-square-foot, single-level facility is exclusively used for ski patrol operations. The building includes a clinic space, administrative area, restrooms for both the patrol and clinic, and a designated space for patrol radio dispatch.

There are two other yurts intended for non-downhill skiing guests. The snowcat Yurt was constructed in 2015. It serves as an office and meeting space for Monarch Cat Skiing. The Tubing Yurt, originally constructed around 2010 as the Junior Mountain Yurt, provides the same functions for tubing guests. Because these guests may have different needs than traditional skiing guests, it is advantageous to have these functions outside of the Day Lodge.

The Mountain Ops Annex is a two-story building constructed in 2024 located on the south end of the base area buildings. It contains employee lockers, additional administrative space, and employee restrooms. None of these spaces are accessible by the public, however, it can be beneficial to separate out employee space from the main guest service-centered spaces to ensure guest use of those spaces is maximized.

In 2023, a small vault toilet facility was constructed at the Paradise lot to reduce the need to walk to the base area for restroom facilities.

There are minimal public facilities on the mountain. The Pano Flats Vault Toilets were installed in 2021. Constructed in 2025, a warming hut and restroom facility with simple food and beverage operations was constructed in No Name Basin. The facilities ensure that guests can stay in No Name Basin throughout the day without returning to the base area.

Space Use Planning

Service functions 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.

Kids 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 1 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.

2. SPACE USE ANALYSIS

Overall, Monarch is within the recommended space for its CCC. However, there are individual functions that could use additional space, and an increase in CCC would warrant more guest service space. For example, restroom space appears to be above the recommended range, however, most of that space is within the day lodge. The rental sprung structure only has approximately 400 square feet of restroom space which can feel too small on busy days. The sprung structure space is smaller than the recommended range but works well. However, it would be ideal to have rentals in a more permanent structure. In addition, there is a deficiency of indoor restaurant space. While it is partially offset by outdoor decks, that space is not always available or desirable to use as seating if there is inclement weather.

There is limited on-mountain space as previously mentioned, with vault toilets at Pano Flats and the small warming hut and vault toilets in No Name Basin. While the existing space is within the recommended range, on-mountain facilities such as food and beverage outlets or restrooms can prevent guests from returning to the base for such needs even if they'd like to stay on the mountain. In addition, on-mountain facilities take advantage of the scenic views and enhance the guest experience.

Table 6. Space Use Recommendations—Total Resort—Existing Conditions

Service Function	Existing Total	Recommended Range	
		Low	High
Ticket Sales/Guest Services	1,035	670	820
Public Lockers	2,187	1,680	2,060
Rentals/Repair	6,514	8,470	9,530
Retail Sales	3,124	1,930	2,360
Bar/lounge	3,465	2,640	3,220
Adult Ski School	685	1,330	1,630
Kid's Ski School	2,362	2,670	3,260
Restaurant Seating	13,320	13,340	16,310
Kitchen/Scramble	4,335	3,840	4,690
Restrooms	2,769	2,070	2,530
Ski Patrol	1,220	1,200	1,460
Administration	1,409	1,770	2,160
Employee Lockers/Lounge	2,934	700	860
Mechanical	260	1,140	1,680
Storage	2,571	1,910	2,800
Circulation/Waste	5,598	4,570	6,720
TOTAL SQUARE FEET	53,788	49,930	62,090

Source: SE Group

3. FOOD SERVICE SEATING

The majority of food and beverage options are located at the Day Lodge. Options include Java Stop, a coffee shop with quick food options, Sidewinder Saloon for sit-down dining, Elmo's Bar for drinks and light fare, Gunbarrel Grill for cafeteria-style service, and Fly-by Burritos, a food truck on the lodge deck. There is also a small warming hut with seating and grab-and-go food and beverage options at the bottom of No Name Basin.

An analysis of restaurant seating at Monarch was conducted. A turnover rate of 3.5 was used for the Day Lodge and a turnover rate of four was used at the No Name Basin facilities. Outdoor seats were not included in the seating total because they are not always available during inclement weather. Currently, there is a deficit of 60 seats. If the CCC increases, there will be a need for additional seating.

Table 7. Restaurant Seats—Existing Conditions

	Day Lodge	No Name Basin Facilities	Total
Lunchtime Demand (CCC + Add'l guests)	3,504	203	3,707
Average Seat Turnover (indoor)	3.5	4.0	
Existing Indoor Seats	942	50	992
Existing Outdoor Seats	245	0	245
Recommended Seats	1,001	51	1,052
Difference (Indoor Seats - Recommended)	-59	-1	-60

Source: SE Group

E. ARCHITECTURAL THEMES

The architectural theme for the existing facilities at Monarch Mountain may be characterized as being reminiscent of the influences of the rustic modern style, which combines the material of rustic architecture with the minimalism of modern architecture. The Rustic Architecture style emerged in the late 1800's and spread throughout Appalachia and later became popular in the intermountain west. The current Monarch Design Guidelines have been used to create a consistent architectural theme across the mountain.

Buildings are typically one to three stories, have simple gable and/or shed roof forms at pitches between 3:12 and 6:12. Individual buildings use rustic modern style board and batten which incorporates the traditional charm of board and batten siding with contemporary design elements. Roofs have been designed to retain the extraordinary snow and wind loads that the structure must withstand. In remote areas where traditional building methods may not be possible, yurts or similar style structures may be used.

Building materials are natural and may also utilize stone or brown metal wainscoting as accents to the board and batten style. Synthetic materials which simulate natural materials or the vertical lines of board and batten style have been used. Large windows will be utilized where possible to maximize the beautiful views of the surrounding National Forest. Building colors are typically green walls with brown soffit, facia, and roofing.

New lifts and towers are to be constructed out of metal, Munsell grey color, to better disappear into the horizon at a distance. New operator houses will use architectural themes and colors that complement the drive terminal of the lift they service.

F. EXISTING PARKING CAPACITY AND RESORT ACCESS

Most guests arrive at Monarch in a personal vehicle. While there are guest shuttles from Salida, ridership is not high. On a peak day, there is space for approximately 1,700 cars at Monarch, including Crest, 130 of which are employee spots. The main/lower lot consists of 980 spaces, the upper lot/Paradise has 450 spaces, and 300 spaces are available at the Crest. Note that sometimes there are spaces used by backcountry skiers at the Crest. Monarch runs guest shuttles to the Paradise and Crest lots. Parking at the Crest is not included in this analysis because of its distance and reliance on shuttles. Based on data collected by Monarch, average vehicle occupancy (AVO) is 2.4 persons per vehicle. However, this can fluctuate depending on how many guests drive alone. In addition, sometimes oversized vehicles such as RVs take up multiple car spaces, depleting the available parking. Another issue is the narrow width of the entrance road. Sometimes cars get stuck and block traffic flow. To maximize available parking, Monarch has implemented dynamic pricing and introduced blackout days for certain products to help steer visitation and is currently exploring methods to incentivize carpooling.

With these assumptions, there is a deficit of parking at Monarch. While parking at the Crest can alleviate the lack of parking at the resort, it is not ideal to rely on a satellite lot for parking. There is a need for additional parking to accommodate current demand.

Table 8. Recommended Parking—Existing Conditions

	Multiplier	Total
Parking Demand (CCC + 5% nonskiing guests)		3,707
Required car parking spaces	2.40	1,544
Required employee car parking spaces		130
Total required spaces		1,674
Existing parking spaces at the ski area		1,430
Surplus/deficit		-244
Crest Parking Spaces (not included in total)		300

Source: SE Group

G. EXISTING RESORT OPERATIONS

1. SNOWMAKING AND GROOMING

Monarch currently does not have a snowmaking system. However, the resort does have snowmaking water rights consisting of 0.35 cubic feet per second (cfs) priority #51 from White Ditch #1. Monarch may withdraw water for snowmaking purposes for the period of October 15 through December 1 annually.[5] Given Monarch's high base elevation of nearly 10,800 feet, retaining snow coverage is less of an issue than at resorts of lower elevations. However, given the increasing variability of winter precipitation, it would be prudent to develop a snowmaking system to ensure Monarch can remain open during times of low snow and preserve coverage on key areas. This is especially important earlier in the season during the holidays when ski areas receive high levels of visitation.

On the frontside Monarch grooms approximately 134 acres of terrain around the mountain on a nightly basis and 40 additional acres when demand and conditions warrant. In No Name Basin, Monarch grooms approximately 20 acres nightly and an additional 20.2 acres when warranted. In total, 154 acres are groomed nightly and 61 acres are groomed occasionally.

Snowmaking

Snowmaking is not considered to be HFF consumptive Ie the majority of the water used for snowmaking is returned to the watershed through runoff There are two sources of water loss first through some loss due to evaporation during the snowmaking process and second through further evaporation and sublimation loss while the snow resides in the natural snowpack Other factors that can influence consumptive loss percentage are soil type temperature aspect and wind Numerous studies have been conducted over the years at mountain resorts to determine the percent loss through these processes Across the Rocky Mountain region it is generally accepted that around 1H of the water returns to streams lakes or rivers while around TH is lost to evaporation and sublimation

If snowmaking is constructed implemented and maintained properly snowmaking can be a beneficial influence to downstream water rights holders and water users This is primarily through two factors Snowmaking can be a legitimate and significant source of water storage Since snowmaking is denser than natural snow Ie it contains a higher percent water content it takes longer to melt and stays on the mountain longer into the spring and summer than natural snow Snowmaking can also recharge surface and groundwater sources at higher elevations in the watershed by pumping water onto the mountain

[5] USDA Forest Service, 1999. Monarch Ski Area Master Development Plan Decision Notice and Finding of No Significant Impact.

2. MAINTENANCE FACILITIES

Monarch's maintenance buildings are located adjacent to the parking lot and are visible from the base area. The four buildings include all vehicle and lift maintenance operations with storage for vehicles, parts, lift maintenance, restrooms, administrative space for employees and fuel storage. The buildings are largely in good condition, except for the Lift Maintenance Building which needs to be replaced, and provide all necessary functions. Due to additional storage needs, in 2024. a 1,750 square foot building was constructed for additional cat parking and storage.

3. INFRASTRUCTURE AND UTILITIES

Electrical power is supplied to Monarch over an Xcel 25,000 kVa transmission which provides the ski area with three-phase, incoming power (110-208-430v). Xcel also provides Monarch's major transformers and distribution lines. Monarch's power supply is more than adequate for existing ski area operations. In addition, a major transmission line runs through the southern portion of Monarch's SUP. The transmission line and utility easement spans from the top of Drifter, along the ridge, largely following the SUP boundary limits, before continuing beyond the boundary to the skier's right of Curecanti.

Monarch's fuel storage is located above ground next to the maintenance facility. It includes one diesel tank , with a capacity of 6,000 gallons, one unleaded gasoline tank with a capacity of 4,000 gallons, and five propane tanks, two with 500 gallons, and three with 1,000 gallons. The existing storage capacity sufficient for Monarch's needs.

4. CULINARY WATER AND WASTEWATER TREATMENT

Domestic water is supplied by two wells, one of which produces a maximum flow of approximately 15 gallons per minute (gpm), while the other produces approximately 14 gpm. Water storage is available in two underground concrete storage tanks with a combined capacity of 50,000 gallons of water. The water supply is adequate for Monarch's needs.

Wastewater is treated with a tertiary sewage treatment system owned and operated by Monarch. It has a 24,000 gallon per day capacity. The system was built in such a way that it can be expanded to double capacity, as mandated by the state when the limits are reached. On a peak day, the system will run at approximately 50% capacity. While wastewater capacity is sufficient for now, there may be a need to expand capacity if visitation rises.

5. TUBING

Tubing is an excellent activity to bring a more diverse set of guests to experience winter sports and the National Forest. Tubing is affordable and requires no experience. Monarch Mountain offers tubing at the base area served by the Kaleidoscope surface lift. Tubing sessions are 90 minutes with options to add additional time. The retail shop offers winter coats and pants for rent to guests who need them. There is a need for dedicated indoor space for tubing guest functions. The area where tubing resides is ideal beginner terrain, so there is an opportunity to relocate tubing area to expand beginner offerings.

6. WEATHER STATION

Weather data collection is necessary for the purpose of avalanche forecasting for both the ski area and for the Colorado Avalanche Information Center. Critical data such as wind speed/direction, barometric pressure, and temperatures are collected from a weather station located at the highest point on the ridge above Mirkwood Basin. The weather instruments are located on a 15-foot tower and use radio signals to transmit the data. This weather station has been in place since 1990.

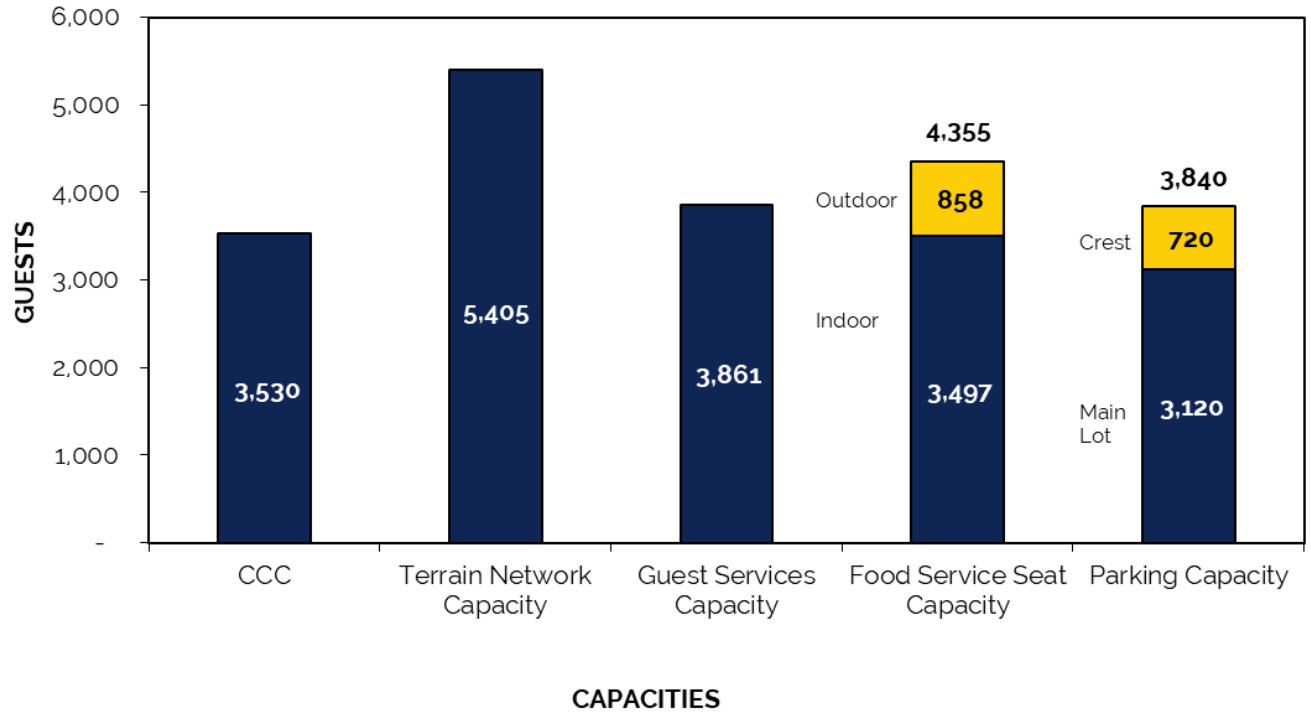
7. MOUNTAIN ROADS

There are 7.3 miles of mountain roads at Monarch that are used to access facilities during the summer months for maintenance and construction. Forest Service roads within the SUP boundary have gated access. In addition, there is a network of cat access roads that are only used by snowcats in the winter over-the-snow by the Monarch Cat Skiing Program.

H. 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. Resort balance is illustrated in Chart 3. CCC is about two thirds of the terrain network capacity, indicating that the terrain can comfortably accommodate the CCC and visitation that exceeds the CCC. The terrain network capacity does not include the hike-to Mirkwood Basin terrain capacity because it is not considered part of the developed terrain network. That area will accommodate additional skiers beyond the terrain network capacity. Parking capacity, when Crest parking is included, exceeds the CCC. However, parking at the main portion of the resort is a limiting factor. In addition, RVs and larger vehicles park at Crest, reducing the overall capacity for Monarch. Seating capacity is the most limiting factor at Monarch Mountain, even when outdoor seating is available. Expanding seating on the mountain and at the base will improve the guest experience.

Chart 3. Resort Capacity—Existing Conditions



I. SUMMER AND MULTI-SEASON OPERATIONS

Across the United States, summer recreation at ski resorts has been a fast-growing market. The increase has been driven by both new technologies in summer recreation equipment, as well as the growing numbers of people seeking recreation activities in more managed settings. The summer guest is generally more diverse than the winter guest, from season hikers tackling the CDNST to those on their first visit to a National Forest. Given Monarch's location, there are already robust summer activities in the area surrounding the resort, including hiking, camping, rafting and mountain biking.

Many guests, including first-time users, of the National Forest are looking for ways to experience the outdoors in an accessible or controlled setting. At present, Monarch Mountain at the Crest is the epicenter of summer operations for the resort. However, there are opportunities for additional activities and programming to be developed at the main portion of Monarch Mountain.

CHAPTER 3. PREVIOUSLY APPROVED, NOT YET IMPLEMENTED

The following projects have been previously approved but have not yet been implemented. Approvals are contained in the 1999 Monarch Ski Area Master Development Plan, Decision Notice and Finding of No Significant Impact (DN/FONSI) and Monarch Pass Vegetation Management Plan Decision Memo. The 1999 DN/FONSI approval may have resulted in changed conditions since the analysis and may warrant additional analysis to evaluate the changed conditions prior to construction of projected analyzed in the 1999 DN/FONSI.

1. BREEZEWAY LIFT

The Forest Service approved the upgrade of the Breezeway lift as a bottom-drive, fixed-grip, four-person chairlift. The previous approval authorized the relocation and realignment of the chairlift, but the Breezeway project within this MDP is planned in the same alignment as the existing alignment.

2. MOUNTAIN-TOP FACILITY

The Forest Service approved the construction of a mountain-top facility to be located adjacent to the top terminal of the Panorama lift. The 700-square foot yurt type facility will accommodate seating for 50 guests and provide limited food service. In addition, the facility will have composting toilets and will function as a warming hut. The previously-approved ski patrol function for the Mountain-top facility is not part of this MDP. Due to changes in demand, the building, in the upgrade plan as “Summit Hut” is planned to be larger than approved.

3. MID-MOUNTAIN FACILITY

The Forest Service also approved construction of a small mid-mountain facility, sun deck, and associated restrooms facility as part of the 1999 DN. This facility was approved to be approximately 300 square feet in size and offer limited food preparation (barbeque) as well as restroom facilities in the form of composting toilets. The attached sun deck will accommodate approximately 150 people.

Due to changes in demand and guest needs, the building is planned to be larger than approved in 1999.

4. SNOWMAKING

The Forest Service approved the development of snowmaking capabilities on approximately 33 acres of skiable terrain to improve early snow conditions and ensure adequate coverage on popular novice and intermediate terrain. The snowmaking system will utilize high efficiency, fan-type (airless) snowmaking equipment to augment natural snowfall by approximately 9 inches on each of the proposed ski runs to be covered. Monarch is previously approved to provide snowmaking coverage on the following ski runs: *Safari*, *Sleepy Hollow*, *Freeway*, *Glade*, *Little Joe*, and *Snowflake*, *Butterfly*.

The outstanding previously-approved snowmaking coverage requires the construction of a snowmaking pond located immediately south of the guest parking lots. Supplied by an unnamed tributary that flows through the base area, the pond will have at most 1.67 acre-feet capacity and divert maximum 12.92 acre-feet as a means to replenish the pond from evaporative losses (as previously approved in the 1999 DN/FONSI). The 1999 decision also notes snowmaking activities to occur from October 15th – December 1st. Necessary water lines and power lines will require approximately 11,000 feet of trenching.

5. VEGETATION MANAGEMENT

Forest health projects were approved in the Monarch Pass Vegetation Management Plan (MPVMP) DM. The full span of this project consists of 2,809 acres, extending beyond the ski area due to spruce beetle and western balsam bark infestations in the area that increase fuel loads and cause forest health deterioration. This project approved the removal of insect infested and susceptible trees and watershed improvements to reduce sediment loads in the project area.

CHAPTER 4. UPGRADE PLAN

The upgrade plan for Monarch is intended to fine-tune the existing guest experience by building upon previous planning efforts and address opportunities for growth. As a family-oriented ski area, providing a high-quality guest experience is pivotal to attracting and retaining new skiers to the sport. Strategic upgrades to the lift network are planned to facilitate access to preferred terrain for guests across the full spectrum of ability levels. In addition, Monarch plans to add more on-mountain capacity and make the ski area more competitive in the region. The beginner area will also be improved to further establish Monarch as the place where locals learn to ski. Upgrades to guest services will make the Snowsports School and rental experience more seamless from arrival to departure, as well as add necessary seating in the base area and on the mountain.

Monarch will implement improvements following a phased approach. While phases are identified for unique projects, the exact projects within phases may shift due to changes in priorities and conditions.

The planned conditions detailed in this section reflect a full buildout scenario with all projects being completed. Figures 7-10 depict the upgrade plan.

A. UPGRADED LIFT NETWORK

Under the upgrade plan, all existing chairlifts will be replaced. In addition, two new chairlifts and one new tow rope are planned to be constructed. The Caterpillar conveyor is planned to be replaced with a new duplex conveyor, and the existing Safari conveyor will be realigned alongside the relocated Caterpillar conveyor as part of the proposed Snowsports beginner area project, The existing Kaleidoscope rope tow will be relocated with the tubing area.

1. LIFT REPLACEMENTS

With the exception of Tomichi, all existing chairlifts range from approximately 30 to nearly 60 years old and are at or near the end of their mechanical lifespan. In particular, Breezeway, Garfield, Panorama, and Tumbelina were all constructed by the Hall Ski Lift Company, which is no longer operating. This makes chairlift maintenance more difficult because replacement parts are increasingly difficult to find. If a chairlift cannot operate for any reason, it can result in costly maintenance and restricted uphill capacity. In addition, most of them are double chairlifts. As demand for winter sports increases, this places pressure on the lower capacity lifts which can result in long lift lines. With nearby communities growing in population and increasing demand for winter sports, Monarch plans to meet these needs with new and upgraded chairlifts that enhance mountain connectivity and increase on-mountain capacity.

Detachable chairlifts can shorten lift lines due to their faster speeds, and the technology is desirable in the skier market, making Monarch more competitive in the region. They are also generally more resilient to wind and other factors. Newer skiers enjoy detachable lifts because they are easier to load with slower loading speeds. Many chairlift upgrades in this plan are outlined within the

analyses as detachable lifts, but they may be constructed as fixed-grip lifts or with lower hourly capacities depending on demand and market conditions. These changes will likely lower the CCC of the lift analyzed in this document, ultimately decreasing the amount of seats, square footage, and parking spaces needed. Monarch will continue to monitor demand and assess priorities to determine final planning for construction after the MDP is accepted.

Breezeway is planned to be replaced with a detachable or fixed grip quad in a similar alignment. Although it was updated in 2014, maintenance can be an issue. It is in good working condition, but due to its age and difficulty in obtaining spare parts, it will need to be replaced sometime in the future. Its higher capacity will facilitate the transport of skiers to the ridge to access Mirkwood Basin and ski down into No Name Basin. This concept was previously approved in the 1999 DN/FONSI but may require additional analysis due to the length of time that has passed since 1999.

Garfield is planned to be replaced with another detachable quad or fixed-grip double in the same alignment. While the bottom terminal was upgraded in 2010, the original lift was constructed in the 1960s and can experience maintenance issues. As the most popular lift at the resort, a newer and more reliable lift will better serve this terrain.

Panorama is planned to be replaced with a detachable or fixed grip quad in a similar alignment. It had some upgrades to infrastructure in 2018 and 2019, but like the other Hall lifts, it is becoming increasingly difficult to maintain. According to lift scan data over multiple seasons, the lift gets the second most scans out of all lifts at the resort. Increasing the lift's capacity will bolster the lift's ability to transport guests to the ridge and prevent crowds at the bottom.

Tumbelina is planned to be replaced with a detachable or fixed grip lift in a similar alignment. A newer, more reliable lift will be more user friendly for the beginner to novice clientele and prevent stoppages that would limit lower ability level access to terrain. In addition, the slower loading speeds will be more user-friendly to new skiers who are riding a chairlift for the first time.

Pioneer is planned to be replaced with a detachable or fixed grip quad in a similar alignment with the bottom terminal moved uphill. While it was constructed in the 1990's, it could still benefit from improvements to the loading and unloading areas as well as lift infrastructure.

2. NEW LIFTS

A new detachable quad, the Divide Express, is planned to be constructed to transport guests directly from the base area to the ridge. The bottom terminal will be located between the bottom terminals of Tumbelina and Pioneer, and the top terminal will be south of the Panorama top terminal. This will relieve pressure on other base area lifts and remove the need to ride two chairlifts to access the top of the ridge. Because it is a detachable lift, it will expand opportunities for summer uses like scenic lift rides or events at the top. In addition, the new technology will help Monarch be competitive in the Colorado skier market.

Another new lift, No Name Basin 2, is planned in No Name Basin. It will be a fixed grip or detachable quad intended to provide redundancy to and reduce pressure on the existing Tomichi lift. The additional lift will bolster the lift capacity of that area and the overall resort. At present, the density of the Tomichi pod is 13%, indicating that the terrain could be more utilized with additional lift capacity.

The Breezeway to No Name Basin rope tow is planned at the top of the Breezeway lift intended to facilitate transport of guests to No Name Basin. Some excavation and grading will be required for this project.

3. BEGINNER CONVEYOR IMPROVEMENTS

To improve the beginner learning experience, multiple improvements are planned for the beginner area. Caterpillar will be replaced with a double barrel conveyor in its same alignment, doubling the hourly capacity. In addition, the existing learning area can become congested with newer skiers and can be difficult to access. The planned improvements include shifting the Safari conveyor and repurposing the Caterpillar conveyor to where the existing Kaleidoscope rope tow is. The Kaleidoscope rope tow or a new surface lift would then be relocated to the new tubing area. This will increase the capacity of the learning area and create a progression area from the shorter, less steep Safari conveyor to the longer, steeper. There is also potential for a smaller conveyor on the skier's left side of *Little'Mo* that would primarily serve the Children's Center guests. The project would also include terrain improvements for guest lessons and a new, small structure to serve as a warming hut within the and Safari conveyor area. These improvements are proposed to be constructed as two projects: Caterpillar & Children's Center Conveyor Improvements (Caterpillar upgrade and a new Children's Center conveyor) and Snowsports Novice Terrain Improvements (and Safari conveyors with a new warming hut).

These changes will both enhance the learning experience and bolster the resort's capacity to teach new guests how to ski or snowboard. As the closest ski area to growing communities like Salida, it is crucial to provide accessible beginner terrain offerings to introduce more guests to winter sports.

Table 9. Lift Specifications—Upgrade Plan

Lift Name / Lift 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
Breezeway/DC4	11,674	10,850	824	3,204	27%	2,400	1,000	100	Planned Replacement
Garfield/DC4	11,633	10,794	839	2,916	30%	2,400	1,000	100	Planned Replacement
Panorama/DC4	11,803	11,019	785	3,149	26%	2,400	1,000	100	Planned Replacement
Tumbelina/DC4	11,155	10,832	323	1,367	24%	2,400	800	80	Planned Replacement
Pioneer/DC4	11,614	10,823	792	3,491	23%	2,400	1,000	100	Planned Replacement
Safari/C	10,875	10,864	10	150	7%	600	120	12	Relocated
Caterpillar/C	10,909	10,837	59	454	13%	1,200	120	12	Planned
Tomichi/C3	11,669	10,727	941	2,908	32%	1,500	500	60	Skytrac/2025
No Name 2/C4	11,563	10,711	853	2,758	33%	1,800	500	67	Planned
Divide Express/DC4	11,781	10,834	947	4,204	23%	2,400	1,100	110	Planned
Breezeway-NN Basin/T	11,667	11,667	0	250	0%	600	450	45	Planned
Proposed Beginner Conveyor	10,853	10,863	10	80	13%	600	120	12	Planned
Kaleidoscope/C	10,927	10,895	32	272	12%	600	120	12	Relocated

Source: SE Group
Notes:
C3 = fixed-grip triple chairlift / C4 = fixed-grip four-passenger chairlift / DC4 = detachable four-passenger chairlift / C = conveyor/ T = Tow

B. UPGRADED TERRAIN NETWORK

Small terrain improvements are planned around the ski area to improve circulation between lift pods and connectivity of lower ability level runs. A new short novice run, *Roundabout II*, is planned to provide an alternative to *Roundabout* and connect back at the top of *Sidewinder*. The existing *Roundabout* run has flat areas that are too difficult for snowboarders and new skiers to navigate. Terrain improvements to the existing *Roundabout* run may be considered as part of this effort as well. The *Roundabout* improvements are proposed to extend from the intersection with *Powderline* to the top of *Sidewinder*. The improvements in this area will create a true novice run from top to bottom on *Drifter* and *Sidewinder*. This will also increase their utilization because they will be easier to access for newer skiers. Minor improvements to Powderline are planned to accommodate the new novice run as well.

Terrain improvements are planned on *Sleepy Hollow*, a popular novice run that provides access to Pano Flats and the base area. The run can experience crowding at the intersection with *Serendipity* and sometimes it can get icy because it is north-facing and often shaded. The run is planned to be widened by approximately 15-20 feet and will require grading in some areas including the intersection with *Serendipity*.

In addition, there are no intermediate routes directly from the Tomichi lift to Pano Flats or the base area. The planned *Snowburn Traverse* will allow skiers at the Breezeway to No Name Basin Rope Tow unload area and the top of Tomichi to traverse the ridge to the *Snowburn* run and provide continuous intermediate access from the Breezeway and Tomichi ski pod to the Panorama lift and mid-mountain area.

Grading and widening is planned along *Skywalker* at the top of *Short and Sweet* to facilitate access off of Divide Express for novice skiers. This portion of *Skywalker* has a hump that can be difficult for novice skiers to get up and over. Some improvements were approved and implemented in 2016 and 2017, but further work is needed in this area.

Grading is planned along the bottom of the Pioneer lift line to facilitate skier egress to the lift maze.

Some vegetation removal is planned in the treed area east of *Gunbarrel*. Some timber work here is currently outlined in the Monarch Pass Vegetation Management Plan. Some glading is planned here with an additional section cleared at the base for a ski out. No more than 10 feet wide of additional tree clearing is planned beyond the timber thinning effort.

Lastly, some terrain improvements are planned within the learning area to improve the learning experience. Some grading and other improvements are planned to implement terrain-based learning and redesign the tubing park into a snowsports area. Other terrain improvements also include providing a ski-in/ski-out run to and from the Paradise parking lot and maintaining the cat road through the learning area for access outside of operating hours

1. TERRAIN DISTRIBUTION BY ABILITY LEVEL

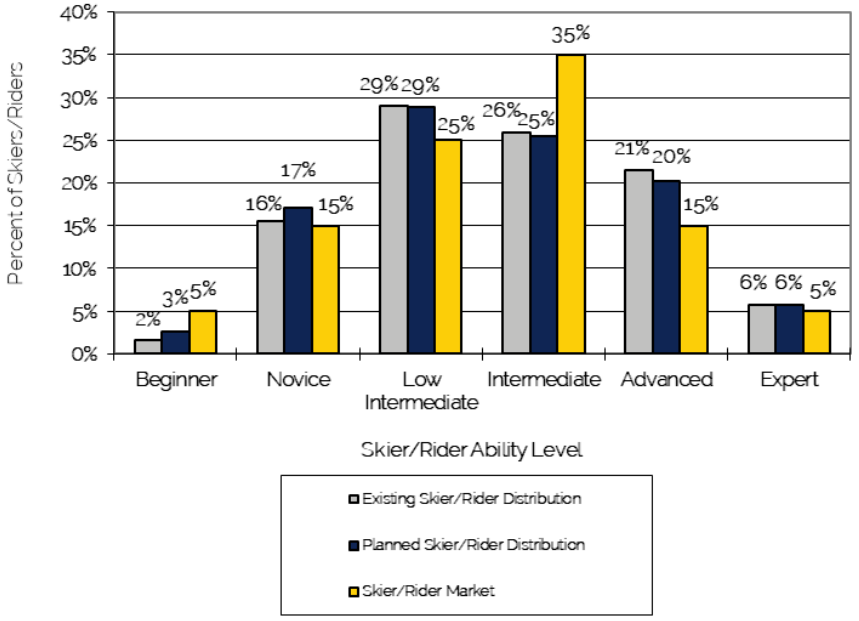
Projects within the upgrade plan will not dramatically change the distribution of ability levels. There will be an overall increase of novice and intermediate terrain with the construction of new smaller runs. While the quantity of beginner terrain will not change significantly, the new layout of conveyors will maximize the use of available space and improve the overall experience of learning to ski.

Table 10. Terrain Distribution by Ability Level—Upgrade Plan

Skier/Rider Ability Level	Run Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	2.8	84	3%	5%
Novice	31.0	558	17%	15%
Low Intermediate	67.1	939	29%	25%
Intermediate	83.0	830	25%	35%
Advanced	94.1	659	20%	15%
Expert	61.8	186	6%	5%
TOTAL	339.9	3,255	100%	100%

Source: SE Group

Chart 4. Terrain Distribution by Ability Level—Upgrade Plan



C. UPGRADED CAPACITY ANALYSIS

1. COMFORTABLE CARRYING CAPACITY

A detailed calculation of Monarch's upgraded CCC was completed for this MDP, as shown in the table below. In the upgrade plan, the CCC is calculated at 5,780 guests. The new Divide Express and No Name Basin 2 lifts are the primary contributors to this higher CCC, while replacements of existing lifts contributing mostly minor increases.

As discussed in Section A of this chapter, the CCC in the upgrade plan is based upon many of the lifts being upgraded to detachable lifts at 2,400 pph. Although this is the plan, lifts may be analyzed through NEPA with lower capacities and/or as fixed-grip lifts. This willl reduce the CCC upon full buildout of the upgrade plan and therefore reduce the amount of seats, parking spaces, and guest service space needed to accommodate guests. Planning for a higher CCC allows Monarch to prepare for future growth in visitation and demand for winter sports and stay responsive to visitation demand. Monarch will assess market conditions, demand, capital, and the needs of its guests to determine final specifications of a project prior to environmental review.

2. DENSITY ANALYSIS

As shown in the following table, Monarch's average density index in the upgrade plan is 84%—a significant improvement in utilization relative to Monarch's current density of 56%. Since this upgrade density index is still below 100%, guests at Monarch will continue to enjoy a high-quality recreation experience. However, strategic lift additions and upgrades will increase the use of currently underutilized terrain.

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 circulation routes and service to all ability levels and types of skiers.

Table 11. Comfortable Carrying Capacity—Upgrade Plan

Lift Name/ Lift 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)
Breezeway/DC4	3,204	824	2,400	7.00	0	5	2,280	13,151	19,373	680
Garfield/DC4	2,916	839	2,400	7.00	0	5	2,280	13,390	20,713	650
Panorama/DC4	3,149	785	2,400	6.75	20	5	1,800	9,533	12,013	790
Tumbelina/DC4	1,367	323	2,400	7.00	0	10	2,160	4,879	10,028	490
Pioneer/DC4	3,491	792	2,400	7.00	0	5	2,280	12,633	11,578	1,090
Safari/C	150	10	600	7.00	0	5	570	41	637	60
Caterpillar/C	454	59	1,200	7.00	0	10	1,080	448	2,095	210
Tomichi/C3	2,908	941	1,500	6.00	0	10	1,350	7,622	17,852	430
No Name 2/C4	2,758	853	1,800	6.00	0	10	1,620	8,290	16,946	490
Divide Express/DC4	4,204	947	2,400	7.00	20	5	1,800	11,931	15,454	770
Breezeway-NN Basin/T	250	0	600	7.00	100	0	-	0	14	-
Proposed Beginner Conveyor	80	10	600	7.00	0	5	570	40	794	50
Kaleidoscope/C	272	32	600	7.00	0	5	570	128	1,730	70
TOTAL	25,203		21,300				18,360	82,086	129,229	5,780

Source: SE Group
Notes:
C3 = fixed-grip triple chairlift / C4 = fixed-grip four-passenger chairlift / DC4 =detachable four-passenger chairlift / C = conveyor / T = tow

Table. 12. Density Analysis—Upgrade Plan

Lift Name/ Lift Type	Daily Lift Capacity (guests)	Guest Dispersement				Density Analysis				
		Support Fac./ Milling (guests)	Lift Lines (guests)	On Lift (guests)	On Terrain (guests)	Terrain Area (acres)	Terrain Density (guests /ac.)	Desired Run Density (guests /ac.)	Diff. (+/-)	Density Index (%)
Breezeway/DC4	680	170	114	122	274	76.7	4	9	-5	44%
Garfield/DC4	650	163	114	111	262	42.6	6	7	-1	86%
Panorama/DC4	790	198	90	94	408	55.9	7	8	-1	88%
Tumbelina/DC4	490	147	36	62	245	15.1	16	16	0	100%
Pioneer/DC4	1,090	273	114	133	570	42.5	13	13	0	100%
Safari/C	60	15	19	12	14	0.4	--	--	--	--
Caterpillar/C	210	84	18	68	40	1.4	--	--	--	--
Tomichi/C3	430	108	45	131	146	35.5	4	9	-5	46%
No Name 2/C4	490	123	54	149	164	24.2	7	10	-3	70%
Divide Express/DC4	770	193	90	115	372	44.7	8	9	-1	91%
Breezeway-NN Basin/T	0	0	0	0	0	0.0	0	0	0	0%
Proposed Beginner Conveyor	50	13	19	6	12	0.7	--	--	--	--
Kaleidoscope/C	70	18	10	22	20	0.1	--	--	--	--
Total:	5,780	1,505	723	1,025	2,527	339.9	8	9	-2	84%

Source: SE Group
Notes:
C3 = fixed-grip triple chairlift / C4 = fixed-grip four-passenger chairlift / DC4 = detachable four-passenger chairlift / C = conveyor / t = Tow

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

1. GUEST SERVICES

Upgrades to guest service space at Monarch Mountain are intended to address existing deficiencies, maximize available space, and create additional space to accommodate future demand at Monarch. There is a need to enhance the existing guest experience through consolidating buildings and improving the efficiency of the arrival experience. Additional space is planned to accommodate existing demand as well as anticipate growth in keeping with rising visitation trends over the past decade.

In the base area, the rental sprung structure, the Snowsports School, and the Children's Center are planned to be replaced with one permanent building. Alternatively, the new building may connect to the existing Snowsports School building because that building is newer and in good condition and the existing Children's Center building may remain and continue to operate as a base for the resort's children ski programming needs. Exact plans to reassign space, keep buildings, or replace buildings, will be determined by demand. To accommodate demand for the upgraded CCC, it would need to be approximately 26,000 square feet. This will address any needs for additional space between the three buildings and the rental space's need for a permanent structure. In addition, since their functions go hand in hand with one another, it will ideally streamline operations for both guests and employees who use these spaces. Many of the guests who use these spaces are newer skiers or families and providing a pleasant and efficient experience will ensure that these skiers continue returning to the ski area to foster a connection with winter sports. This is especially important if visitation increases, as inefficient spaces and space deficiencies can be compounded by additional guests.

Other base area improvements include general expansion of the Day Lodge. To the west, towards the snow beach, the expansion will provide additional guest seating for Elmo's Bar and the lower level cafeteria, and improved access from the snow front into the building. To the east, towards the parking area, the additional space will expand upon the public locker area and employee offices, and improve access from parking to the mountain, including improved ADA access. The ski patrol building to the South of the day lodge will also be replaced. The existing snowcat, junior mountain, and tubing yurts are planned to be replaced with permanent structures to better serve the base area.

Along with planned Nordic skiing operations, a small Nordic building is planned to be the epicenter of guest services for Nordic guests and has the potential to include tubing check-in and other tubing operational needs such as employee space as well, This will include ticketing, restrooms, limited food and beverage operations, seating, and potentially a rental fleet. It may also include private space such as lockers and offices for employees. This will ensure that the Day Lodge remains geared towards downhill skiers while reserving a space for Nordic guests.

Two yurts are planned in the upgrade plan. Within the cat skiing and Nordic trail network, a combined Nordic and Cat Skiing yurt is planned to serve as a warming hut for guests participating in those activities. There will be some seating indoors and potentially an outdoor deck and composting toilets. The yurt is planned to be accessed by the proposed Backdoor Snowcat Road that will provide on-dirt, summer and on-snow winter access to the yurt for construction, maintenance, deliveries, emergency access, etc. Lastly, the North Star Yurt is planned at the top of the North Star Glades as a warming hut. It will have simple food and beverage offerings, a separate composting toilet building, some seating space, and potentially an outdoor deck. These are intentionally planned as yurts rather than permanent structures because yurts are cost-effective, blend within the natural environment, and require fewer materials and equipment for construction. In addition, they generally have a less significant environmental impact than permanent structures. Due to their remote locations, there is less of a need for a permanent building; multiple facilities are planned on-mountain. The largest facility is planned at Pano Flats. It was approved as a concept in the 1999 DN/FONSI, but due to changed demand, it is larger than originally planned. With changed conditions since the approval, the analysis may need to be revisited. This area is accessible from every lift on the frontside, making it ideal for an on-mountain dining location. The building will have abundant restaurant seating, cafeteria-style service, and restrooms, significantly relieving pressure at the base area and reducing crowds. In addition, on-mountain dining is desirable and generally elevates the guest experience. The existing vault toilet at Pano Flats will be moved to the south end of the Paradise Lot. The existing log cabin is to remain in the greater Pano Flats area but moved to another accessible, flat location such as above the intersection of B's Bash and Glade.

Another facility is planned at the top of Panorama, taking advantage of stunning views and alpine essence. It will be smaller than the Pano Flats facility and have a more simplified food and beverage service, restrooms, and an outdoor deck. Because it is accessible from the planned detachable Divide Express lift, it presents an opportunity for summer use as well. This concept was approved in the 1999 DN/FONSI but may require additional analysis since conditions have changed.

2. SPACE USE ANALYSIS

Space use recommendations based upon an increased CCC of 5,780 are detailed in Table 13. Including the replacement of the Children's Center, Snowsports School, and rental sprung structure, approximately 30,000 to 45,000 square feet of additional space will be needed. It is estimated that the new consolidated building will be approximately 26,000 square feet of this space, and the remainder will be from the construction of on-mountain facilities and smaller base area upgrades.

Table 13. Space Use Recommendations—Upgrade Plan-

Service Function	Existing Total	Recommended Range	
		Low	High
Ticket Sales/Guest Services	1,035	1,090	1,340
Public Lockers	2,187	2,760	3,370
Rentals/Repair	6,514	13,870	15,610
Retail Sales	3,124	3,170	3,870
Bar/lounge	3,465	4,320	5,270
Adult Ski School	685	2,180	2,670
Kid's Ski School	3,232	4,370	5,340
Restaurant Seating	12,850	21,850	26,700
Kitchen/Scramble	4,335	6,280	7,670
Restrooms	2,769	3,380	4,140
Ski Patrol	1,220	2,000	2,440
Administration	1,409	2,890	3,540
Employee Lockers/Lounge	2,934	1,150	1,400
Mechanical	260	1,870	2,760
Storage	2,571	3,120	4,590
Circulation/Waste	5,598	7,480	10,990
TOTAL SQUARE FEET	54,188	81,780	101,700

Source: SE Group

3. FOOD SERVICE SEATING

Under the upgrade plan, Monarch plans to improve their on-mountain food and beverage offerings by adding seating at the Pano Flats and Summit Hut facilities. These two planned facilities will relieve pressure at the base area with abundant indoor and outdoor seating. The Pano Flats and Summit Hut are recommended to have 381 and 71 seats, respectively. All planned facilities will have outdoor seating that will help reduce the deficit of seating when weather permits. Each location will take advantage of Colorado weather and the ability for outdoor seating. Overall, it is recommended to add additional seating in the base area, even with the Pano Flats and Summit Hut facilities, to accommodate the increase in demand upon full buildout of the upgrade plan.

Table 14. Restaurant Seats—Upgrade Plan

	Day Lodge	Planned Pano Flats Facility	Planned Summit Hut	No Name Basin Facilities	Total
Lunchtime Demand (CCC + Add'l guests)	4,241	1,335	273	221	6,069
Average Seat Turnover (indoor)	3.5	3.5	3.5	4.0	
Existing Indoor Seats	942	0	0	50	992
Existing Outdoor Seats	245	0	0	0	245
Recommended Seats	1,212	381	78	55	1,726
Difference (Indoor Seats - Recommended)	-270	-381	-78	-5	-734

Source: SE Group

E. UPGRADED PARKING CAPACITY AND RESORT ACCESS

Total parking capacity must be balanced to the CCC to facilitate access to the resort. Due to the resort's location, the vast majority of guests arrive at the resort in a personal vehicle and there are fewer opportunities for public transit compared to resorts in more metropolitan areas. As previously discussed, parking limits how many guests can visit the resort on a peak day. While parking at the Crest may be available for parking overflow, it can cause operational challenges driving shuttles to and from the parking lot. In addition, guests have to drive past the ski area to access the Crest lot which can cause confusion. While it is a good option for overflow parking, it may not always be feasible. To continue to provide a hassle-free arrival experience for guests, Monarch plans to explore parking options in the Monarch base area to support current and future visitation needs.

To accommodate both the current and increased CCC, approximately 9 acres of additional parking are planned: 0.5 acres of this planned parking area along the existing entrance and exit roads. While there is a neighboring stream and wetlands, the added parking avoids wetlands impact (detailed design and an understanding of resource constraints will be analyzed during environmental review). Assuming an industry standard 120 spaces per acre, this will equate to approximately 60 additional spaces. The Paradise lot is planned to be expanded by 7 acres, adding approximately 840 spaces. To accommodate the full extent of the Paradise parking expansion, the SUP boundary will require adjustment. 1.5 aces of additional parking are planned by the Mountain Ops Annex and other areas, equating to 186 parking spaces. In total, 1,122 spaces are planned. Alternatively, some parking may be constructed in the form of a parking garage. Parking under the upgrade plan is outlined in Table 15. With an increased CCC of 5,780 and an additional 5% of non-skiing guests, parking is necessary for approximately 6,069 guests. Parking expansion areas are depicted on Figure 8.

This analysis assumed an increase in AVO from 2.4 to 2.5. Even with parking expansions, it will be necessary to incentivize higher vehicle occupancy amongst its guests, especially on weekends and holidays. Incentives may include parking reservations, preferred parking for carpool guests, or rewarding carpooling guests. With this increased AVO and planned parking, parking is more balanced to the new CCC.

In addition to parking expansions, Monarch plans to improve the entry road. A portion of the existing road can get icy, causing cars to get stuck and impeding circulation into the resort. The Paradise access road will be widened to increase capacity and safety, and edge protection measures such as jersey barriers may be installed.

Table 15. Recommended Parking—Upgrade Plan

	Multiplier	Total
CCC + other guests		6,069
Required car parking spaces	2.50	2,428
Required employee car parking spaces		130
Total required spaces		2,558
Existing parking spaces		1,430
Planned parking spaces		1,122
Total existing and proposed		2,552
Surplus/deficit		-6
Crest parking spaces (not included in total)		300

Source: SE Group

F. UPGRADED RESORT OPERATIONS

1. SUP BOUNDARY ADJUSTMENT

The existing SUP boundary would increase by 192 acres to accommodate the Paradise parking expansion as well as Nordic skiing, a cat skiing yurt, and cat access roads. The SUP expansion area would be within the PSICC designated Management Area 1B: Winter Sports Site. Cat skiing operations would occur within Management Area 2B: Rural and Roaded-Natural Recreation Area outside of the SUP area. Refer to Figure 6 for a map detailing the boundary adjustment area designations and proposed phasing of the adjustment areas.

2. SNOWMAKING AND GROOMING

Monarch Mountain plans to expand snowmaking onto 70.6 acres of terrain, 33 acres of which are previously approved. Upon full buildout, Pioneer, Panorama, Breezeway, and Tumbelina will all have at least one route down the mountain with coverage, ensuring that more lifts can operate during times of low snow. In addition, it will be expanded onto the beginner area. It is important to preserve a high-quality snow surface in beginner areas because they are high traffic and generally lower elevation than the remainder of the resort.

To support the snowmaking expansion, a snowmaking storage pond and a pumphouse are planned to the south of the main, asphalt parking area, just behind the Mountain Annex building. The snowmaking pond is previously approved in the 1999 DN/FONSI. Because conditions may have changed since the approval, the project may require additional analysis. It will be located immediately south of the guest parking lots. The snowmaking pond may also be designed as a fully contained storage structure. The existing sediment capture pond would remain functional following the installation of the snowmaking pond and pumphouse.

3. MAINTENANCE FACILITIES

The existing Lift Maintenance building located within the Maintenance Facilities area no longer meets the needs of the Monarch operations team and needs to be replaced. The existing building would be demolished and the new building constructed in its place. The new building will be designed to accommodate the growing needs of the lift maintenance team including office space, employee lockers, and storage.

4. INFRASTRUCTURE AND UTILITIES

An existing private well (nonportable) planned to be relocated to Pano Flats. In addition, culinary water, septic, and electricity will be routed to Pano Flats to serve the new facility.

Monarch Mountain also experiences occasional inconsistent power supply and outages and will continue to explore alternate energy sources to improve reliability and operations. These efforts may include, but are not limited to, solar energy systems and auxiliary power generation to reduce outage impacts and strengthen overall resilience.

5. CULINARY WATER AND WASTE WATER TREATMENT

The wastewater treatment plant is planned to be expanded to accommodate current and future wastewater treatment demands. Monarch Mountain is anticipating continued daily visitation growth that will impact their current wastewater permit and require eventual improvements including expansion. The proposed project would be coordinated with the Forest Service and align with their permitting and operating requirements. The expansion area will be confined to the existing treatment plant area.

6. MOUNTAIN ROADS

Approximately one mile of new dirt roadway is planned to be constructed to support the cat skiing expansion, primarily within the SUP boundary adjustment area. Monarch plans to make this road over the snow with no grading required wherever possible. There is an existing network of approximately 7 miles of cat roads that are winter, over-snow access only and are included within the cat operations SUP.

In addition, continued maintenance and drainage improvements are planned around the existing road network. Maintenance projects may include reconstructing roads to appropriate widths and cross slopes, installation of new waterbars and/or reconstructing existing waterbars, digging and/or rerouting new or existing roadside ditches, culverts, soil stabilization projects, and reseeding.

7. OTHER WINTER ACTIVITIES

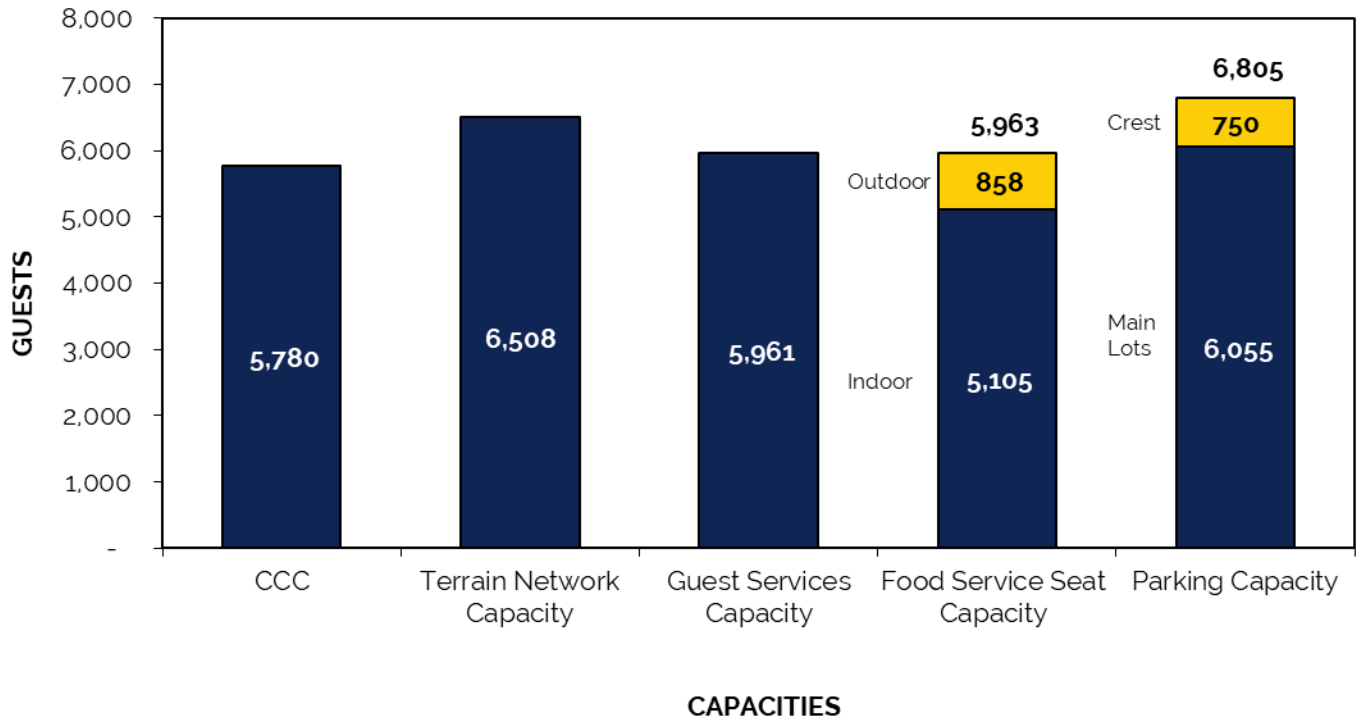
Tubing is planned to be relocated so the existing space can be used for additional teaching terrain and reducing crowding in the base area. The new tubing area will be relocated to an area with conveyor access to the top and space for tubing runout. By moving it from the existing space, the new location will enhance the experience of both beginner skiers and tubing guests. Tubing activities will be designed in accordance with industry standards.

Given the success of Nordic skiing at other ski areas, a Nordic skiing network is planned within the SUP area. Nordic skiing attracts different guests than downhill skiing for its relative affordability and lower barrier to entry. It presents business opportunities for Monarch to offer rentals and lessons and enriches available recreation offerings in the surrounding area. While there are Nordic skiing opportunities around the area, there are no formal Nordic facilities within the vicinity.

G. RESORT CAPACITY BALANCE AND LIMITING FACTORS

Upon full buildout of the upgrade plan, Monarch Mountain will be well-balanced. The increased CCC remains under the terrain network capacity, indicating terrain densities will not be overwhelmed while increasing utilization of the lift and terrain network. With improvements in the base area, like day lodge expansions and the consolidation of the Snowsports School, rental structure, and Children's Center, the guest experience will be streamlined and improved upon arrival. It will particularly elevate the experience for newer skiers who utilize those buildings. The construction of the new Summit Hut and Pano Flats buildings will address deficiencies in guest service space, particularly restaurant seating capacity. Parking expansions will improve guest access to the resort without leaning too heavily on parking at the Crest.

Chart 5. Resort Capacity—Upgrade Plan



H. UPGRADED SUMMER AND MULTI-SEASON OPERATIONS

With the uptick in interest for outdoor recreation, there is an opportunity for Monarch Mountain to further cater to the demand for outdoor activities and for guests' connection with the surrounding forest at Monarch. With the existing lifts, lodges, and abundant parking, there is immense potential for the ski area to be a place where guests experience the outdoors in a more managed setting compared to remote locations. Monarch can act as a gateway to the National Forest. While Monarch Mountain at the Crest will remain the epicenter of summer operations, the ski area will enhance their summer operations as well.

Monarch also plans to bolster its capacity to host events and further establish itself as a summer destination. Many ski areas draw crowds for events such as trail races and Monarch will continue to look for opportunities to attract visitors to the ski area for concerts, trail races, hosting weddings or other similar events. Food and beverage facilities will be open for guests based on demand. A mountain coaster is planned at the ski area. Mountain coasters are an ideal multi-season activity because there is no skill barrier to entry and they are family friendly. Summer activities and zoning under the upgrade plan are depicted in Figure 10.

Monarch recognizes the existing CDNST alignment is an important regional asset. Any projects intersecting or adjacent to the CDNST will be done in coordination with the Continental Divide Trail Coalition with the understanding currently Monarch's mountain access road doubles as the CDNST alignment for a portion of the Monarch ridgeline. Monarch is committed to maintaining a positive experience for hikers on the CDNST.

Activities at Monarch will be planned based on demand. Following guidance provided in FSM 2343.14 – Additional Seasonal and Year-Round Recreation at Ski Areas, this MDP has established "zones to guide placement and design of additional seasonal or year-round recreation facilities, basing the zones on the existing natural setting and level of development to support snow sports." Future activities at the ski area should conform to these zoning designations.

Zone designations were carried out through a two-step planning process. The first step was to identify distinct areas at Monarch through careful consideration of the area's setting and proximity to existing snow sports infrastructure. Features such as watersheds, topography, vegetation structure, level of existing disturbance, and existing infrastructure were considered in establishing seven distinct areas across the planned SUP area that are unique in their location and/or features.

The second step of the zone designation process was to evaluate each distinct area based on characteristics of setting and level of development. Similar to the Forest Service ROS (refer to Appendix B), this analysis utilized the following characteristics to evaluate distinct areas:

- Access – the number and function of roads within the area
- Remoteness – how far removed an individual feels from human activity
- Naturalness – the extent and intensity of development and disturbance within the area
- Infrastructure – the amount of and proximity to the built environment

Table 16. Zone Characteristics

Zone Characteristics	Scores
Access	
Road Access within Area	1
Limited Road Access/Trails	2
No Road Access	3
Remoteness	
Proximate to Human Activity	1
Distant Sight of Human Activity within SUP	2
Out of Sight of Human Activity within SUP	3
Naturalness	
Heavily Disturbed by Ski Area Activity	1
Moderately Disturbed by Ski Area Activity	2
Undisturbed by Ski Area Activity	3
Infrastructure	
Adjacent to 2 or More Ski Area Infrastructure	1
Ski Area Infrastructure in Area	2
Out of Site of Ski Area Infrastructure	3
Minimum Score Possible	4
Maximum Score Possible	12
Zones	Score Range
1	4
2	5 to 6
3	7 to 9
4	10 to 11
5	12

a) Zone 1

Setting

The existing setting of Zone 1 is highly developed and disturbed. Within Zone 1, the built environment dominates the landscape. Within the context of Monarch's overall operational area, the following summarizes the setting in Zone 1:

- Road access and roads are prevalent;
- Considerable human activity (people recreating and/or ski area operations) occurs within and proximate to this setting—there is little to no feeling of remoteness;
- Terrain modifications (ground disturbance and vegetation removal) dominate the area; and
- Infrastructure, including lifts and buildings, are present.

The base area, parking area, and the surrounding area are designated as Zone 1.

Desired Experiences

Within Zone 1, guests are expected to encounter a high concentration of other guests. The level of development will reflect the current setting and function of these areas as hubs of activity and portals to other activities across the ski area. Guests will encounter a higher degree of maintenance and operations facilities and activities within Zone 1. Within Zone 1, the concepts in the Built Environment Image Guide (BEIG) will be followed to ensure appropriate design guidelines for both landscape architecture and built architecture are followed. Zone 1 is completely surrounded by Zone 2 on the fringes of the developed base area. This allows guests to experience a gradual transition between the built environment (Zone 1) and more-natural areas that still contain activities and facilities blending with the area's natural setting (Zone 2). Zone 1 will offer interpretive opportunities in a developed setting, with goals of enhancing guests' understanding of the natural environment as they prepare to venture into less-developed areas.

Compatible Activities and Facilities[6]

Services and activities within Zone 1 may include food and beverage operations, lodges, special event venues, shelter and emergency services, restroom facilities, landscaped areas, and other activities.

[6] Because summer and multi-season uses are continually being developed and activities that do not currently exist may be popular within the next several years, a list of compatible activities is provided for each zone. The intent of the list of compatible activities is to allow for a certain amount of flexibility, since it is impossible to foresee exactly what new activities will be developed over this time, Monarch will continue to work with the Forest Service to ensure that proposed summer and multi-season activities are suitable for the setting and desired experience within each zone. Existing summer recreation and maintenance occurs throughout developed portions of the ski area; therefore, no area within the developed ski area is off limits to administrative access and maintenance.

b) Zone 2

Setting

The setting of Zone 2 is less disturbed when compared with Zone 1 and provides more naturalness due to a lesser degree of disturbance from the surrounding ski area. Within the context of Monarchs overall operational area, the following summarizes the setting in Zone 2:

- Road access and roads are present;
- Human activity (people recreating) occurs within and proximate to this setting—there is little feeling of remoteness;
- Terrain modifications (ground disturbance and vegetation removal) are evident in the area, but past disturbance blends with the landscape; and
- Infrastructure, including lifts and buildings, are present.

One area is designated as Zone 2. The area encompasses all lift infrastructure on the frontside.

Desired Experiences

Most summer guests entering Zone 2 areas at Monarch will do so from a Zone 1 area. In moving between these zones, guests will transition from the built environment to a setting characterized by both developed and passive activities proximate to existing infrastructure and facilities, but still offering a more-natural feel. For many guests of Monarch, this may be their first real experience in the mountains, and providing a safe, comfortable environment for exploration is critical to the success of Zone 2 and the overall plan. Zone 2 provides the initial opportunity for guests to learn about and engage in their natural surroundings through hands-on recreational, interpretive, and educational offerings. In addition to hosting these types of activities, Zone 2 should serve as a buffer between higher levels of development within Zone 1 and the more natural settings of Zones 3 and 4.

Compatible Activities and Facilities

Passive activities within Zone 2 include educational/interpretive opportunities, sightseeing and light hiking. Zone 2 will provide enhanced sightseeing opportunities when compared to Zone 1 as these areas are typically elevated and further within the mountain landscape. Activity offerings could include access to zip lines and canopy tours, via ferrata, mountain coasters, guided hikes and interpretative opportunities, extended hiking trails, mountain biking trails, challenge/aerial adventure courses, and other natural resource and gravity-based activities.

As mentioned above, Zone 2 serves two primary purposes—to provide activities in a natural setting in proximity to existing infrastructure and services, and to provide a buffer between Zones 3 and 4 and more developed areas within Zone 1. Thus, areas within Zone 2 serve as transitional zones, encouraging guest exploration into more natural portions of the ski area in a setting that still feels comfortable for less-experienced outdoor recreationists. The setting of Zone 2 and the activities that occur within will offer sufficient challenge for first-time guests and will prepare others to venture into the less developed areas of Zones 3 and 4.

c) Zone 3

Setting

The setting of Zone 3 contains areas of disturbance from ski trail and lift development, but guests can still find a greater degree of remoteness and naturalness depending on their location within the zone. Generally speaking, Zone 3 includes areas where existing lifts are present; however, this was not the determining factor for the designation. Within the context of Monarch's overall operational area, the following summarizes the setting in Zone 3:

- Road access and roads are present, but limited to certain areas;
- Human activity (people recreating) can be seen at a distance or is out of sight from within this setting—a stronger feeling of remoteness is present;
- The area is moderately disturbed by ski area activity, including vegetation removal from ski trail development and some ground disturbance; and
- Infrastructure, including lifts and buildings, are present.

There are two areas designated as Zone 3: the southeast edge of the SUP area that doesn't contain any lift infrastructure and the portion of No name Basin that contains lift infrastructure and developed terrain.

Desired Experiences

Once in Zone 3, guests will have a variety of opportunities to engage in their surroundings in a more natural and remote environment.

The desired experience in Zone 3 is to offer a diverse set of experiences for guests, which, if Monarch's SUP is granted for operations on adjacent NFS lands, will promote the SNF as a recreationally, biologically, and geographically diverse landscape. Guests may enjoy interpretive signage that will provide education on their biological, cultural, and historical surroundings. Enhanced opportunities to experience the incredible views of the Sawatch should be provided. Trail activities—including both hiking and mountain biking—and other recreational activities should be provided in forested settings. This will provide opportunities to learn about the importance of forest health and stewardship.

Compatible Activities and Facilities

Activities could include mountain biking trails including flow trails, scenic lift rides, hiking trails, multiple-use trails, canopy tours, challenge/aerial adventure course, via ferrata and other similar natural resource-based activities. Select activities such as interpretive tours and canopy tours may occur on a year-round basis. Activities within Zone 3 will not require substantial modifications to natural topography to facilitate construction. Existing ski area development (ski trails and lifts) exist to varying degrees within Zone 3, and potential seasonal and year-round facilities and activities will be consistent with the level of existing development for the ski area operation.

d) Zone 4

Setting

The setting of Zone 4 is more remote and provides a great degree of naturalness. Ski area development is limited and, where ski trails are present, larger tree islands and natural terrain prevail. Within the context of Monarch's overall operational area, the following summarizes the setting in Zone 4:

- Little to no road access occurs;
- Human activity (people recreating and/or ski area operations) is distant or out of sight facilitating a high degree of remoteness;
- The area is completely natural or has limited disturbance; and
- Infrastructure, including a lift and small buildings, are present.

There are two areas designated as Zone 4, the first comprising of the north end of No Name Basin and the Mirkwood area and the second comprising of the south end of No Name Basin.

Desired Experiences

In Zone 4, guests will connect with the more natural setting in a relatively undisturbed environment. Dispersed hiking opportunities will allow guests to experience and interpret areas of the SNF where natural processes are more evident, allowing for educational opportunities that are not available in more developed zones. The setting in Zone 4 will directly affect the guest experience, and maintaining a more remote setting with opportunities for solitude will meet the guests' expectations.

Compatible Activities and Facilities

Activities will promote the surroundings and inform guests of similar environments throughout the SNF. Activities include slower-moving actions to match the setting and character, which provide even greater opportunities for environmental education and exposure to unique environments. These activities include hiking trails with signage and interpretation and mountain biking trails.

Activities within Zone 4 will require minimal site modification to maintain the current level of naturalness. In this zone, the low density of guests is expected to maintain the feeling of remoteness.

e) Zone 5

Setting

The setting of Zone 5 is currently physically unaltered by ski area activities. Very few people recreate in these areas of the SUP boundary during the summer. No ski area roads or infrastructure are present in Zone 5. Within the context of the overall SUP area, the following summarizes the setting in Zone 5:

- No ski area roads are present;
- Human activity (people recreating and/or ski area operations) is predominantly out of sight, so one would feel completely remote;

- Area is undisturbed or physically unaltered by ski area activity; and
- Ski area infrastructure is only visible at a distance.

The entirety of the SUP adjustment area will be designated as Zone 5.

Desired Experiences

Zone 5 represents the most remote sectors within the SUP. The desired experience is remote and more natural. Guests within this zone would not expect to encounter many other guests.

Compatible Activities and Facilities

The areas with the Zone 5 designation should be left as is with no developed seasonal or year-round activities or facilities.

CHAPTER 5.
UPGRADE PROJECT PHASING

Monarch recognizes that the planned upgrades are extensive. As a result, Monarch has identified project phasing to identify priority projects that the resort will focus on initially. These projects are deemed high priority in terms of operations and guest experience. Once these top-priority projects are completed, Monarch will then turn its attention to secondary projects that will offer additional benefits to operations and the guest experience. This phased approach is intended to roughly outline the implementation of the projects described in the upgrade plan. The exact projects within phases may shift due to changes in priorities and conditions. Each phase and the overall structure of the phasing plan may change based on social and economic factors such as capital, industry trends, manufacturer and vendor workloads, and guest experience needs. For example, a Phase 1 project could be delayed to Phase 2 and a Phase 2 project moved into Phase 1. Monarch will actively monitor changing conditions and priorities to determine if the timing of projects needs to change. Project phasing is depicted in Figures 7.1, 7.2 and 7.3.

Phase 1 projects address immediate needs and are more feasible to implement in a shorter time frame, approximately the next 1 to 3 years. Phase 1 on-mountain projects would include the learning conveyor improvements, Caterpillar & Children's Center Conveyor improvements, the Pano Flats facility, and the Breezeway-NN Basin rope tow. This will address immediate needs for lower ability level terrain enhancements, on-mountain guest service space, and facilitated circulation from Breezeway to No Name Basin. A small 10.6 acre SUP boundary adjustment is planned in the second phase as well. The primary purpose of the SUP boundary adjustment at this stage is to accommodate a parking expansion for current and future visitation levels at Monarch. There is currently a deficit of parking at the Monarch base area. Lift additions and upgrades taking place in Phase 2 and 3 will increase the CCC and warrant more parking capacity. The Paradise Lot expansion taking place in Phase 2 will both address the need for parking and prepare for more demand. At the base area, the day lodge will be expanded to accommodate current and future demand.

Phase 2 projects are projected to be implemented in approximately 4 to 8 years. Phase 2 includes the construction of the Divide Express and the replacements of Pioneer and Breezeway lifts. At the base area, the Nordic center and Nordic/Cat Skiing yurt, wastewater treatment plant expansion, maintenance shop replacement, and the new rentals/learning center building would be implemented.

Phase 3 would include the replacements of Garfield, Panorama, and Tumbelina lifts, the new No Name Basin 2 lift, the snowmaking expansion, the summit hut, the North Star yurt, projects related to Nordic operations, and the relocation of the tubing area. Because these projects are not urgent, they are projected to be implemented in nine or more years. The larger SUP boundary adjustment for Nordic skiing, cat roads, and cat skiing yurt will take place within this phase. The SUP boundary will increase by 181.4 acres.

Summer operations and potential phasing of summer operation-specific projects are contingent on the phasing of the greater on-mountain projects. For example, as part of the detailed planning process for the Pano Flats Building, summer operations for event space or multi-season building use may be included. Other priority summer operations projects that may accompany detailed projects outlined below include lift-served mountain biking or hiking access to the CDNST. Projects in close proximity to the CDNST will be done in coordination with the Continental Divide Trail Coalition with the understanding currently Monarch's mountain access road doubles as the CDNST alignment for a portion of the Monarch ridgeline. Monarch will work with the Coalition to maintain and improve the experience through the resort to provide a quality experience through Monarch for CDNST users.

Table 17. Project Phasing

Project Phasing
Phase One (1-3 years)
Caterpillar & Children's Center Conveyor Improvements
Breezeway-NN Basin Rope Tow
Day Lodge Expansion
Pano Flats Building
Trail grading including Romp, Skywalker, Lower Pioneer lift line, Sleepy Hallow and Snowburn Traverse
Base Area Ski Patrol Building Replacement
Phase Two (4-8 years)
New Divide Express Lift
Pioneer Lift Replacement
Breezeway Lift Replacement
Rentals/Children's Center Replacement
Wastewater Treatment Plant Expansion
Maintenance Shop Replacement
SUP Boundary Adjustment For Paradise Parking
Phase Three (9+ years)
Garfield Replacement
Panorama Replacement
Tumbelina Replacement
No Name Basin 2 Lift
Snowmaking Expansion
Snowsports Novice Terrain Improvements
Entrance/Exit Road Parking
Relocate Tubing Operations
Summit Hut
North Star Yurt
New Nordic Center
Nordic and Cat Ski Yurt
SUP Boundary Adjustment for Nordic skiing and Cat Access Roads

APPENDIX A. ADDITIONAL TABLES

Table A-1. Terrain Specifications—Existing Conditions

Run/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
01 Gunbarrel	11,124	10,803	321	1,328	62	1.9	26%	58%	Expert
02 Tele Alley	11,111	10,817	294	1,304	223	6.7	23%	44%	Intermediate
03 North Forty	11,116	10,874	242	1,318	113	3.4	19%	31%	Low Intermediate
04 Ricochet	11,167	10,935	232	1,015	137	3.2	24%	31%	Low Intermediate
05 Drifter	11,194	11,034	159	800	63	1.2	20%	29%	Low Intermediate
06 Sidewinder	11,316	10,995	320	1,753	99	4.0	19%	34%	Low Intermediate
07 Toddler	11,284	11,021	262	878	82	1.7	31%	41%	Intermediate
08 Short Circuit	11,434	11,241	194	679	34	0.5	30%	49%	Advanced
10 Curecanti	11,630	11,454	176	1,053	114	2.8	17%	58%	Expert
11 Romp	11,503	11,373	130	387	145	1.3	38%	44%	Intermediate
12 Tango	11,600	11,000	600	1,930	136	6.0	32%	47%	Advanced
13 Lower Tango	10,991	10,789	202	1,868	154	6.6	12%	22%	Novice
14 Examiner	11,632	10,926	706	2,800	163	10.5	38%	54%	Advanced
15 Ajax	11,372	10,987	385	1,145	320	8.4	39%	53%	Advanced
16 Cleanzer	11,496	11,236	260	642	272	4.0	48%	63%	Expert
17 Kanonen	11,602	11,308	294	686	284	4.5	51%	64%	Expert
18 Roundabout	11,610	11,196	414	525	22	0.3	10%	24%	Novice
19 Sky Walker I	11,799	11,593	207	2,875	32	2.1	8%	19%	Novice

Run/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
20 Quick Draw	11,625	11,526	98	761	210	3.7	26%	37%	Intermediate
21 KC Cutoff	11,589	11,457	131	170	111	0.4	14%	19%	Novice
22 Sleepy Hollow	11,593	11,192	401	2,813	75	4.9	15%	25%	Low Intermediate
23 Lobo	11,492	11,404	88	184	107	0.5	59%	61%	Expert
24 Upper No Name	11,592	11,270	322	734	84	1.4	40%	61%	Expert
25 Upper Xmas Tree	11,630	11,211	419	1,103	75	1.9	29%	49%	Advanced
26 Lower No Name	11,315	10,808	507	1,437	76	2.5	26%	41%	Intermediate
27 Freeway	11,179	10,808	371	1,874	311	13.4	20%	29%	Low Intermediate
28 Snowflake	10,901	10,835	66	555	108	1.4	14%	18%	Novice
29 Little Joe	11,144	10,918	225	1,137	108	2.8	22%	25%	Novice
30 Bee Line	11,141	11,025	116	482	157	1.7	34%	38%	Intermediate
31 Rookie	11,149	11,082	66	403	90	0.8	15%	23%	Novice
32 Glade	11,189	10,840	349	2,785	155	9.9	13%	23%	Novice
33 Tenderfoot	11,221	11,032	189	1,336	105	3.2	15%	24%	Novice
34 Short N Sweet	11,718	11,412	306	953	182	4.0	29%	48%	Advanced
35 Turbo	11,743	11,371	372	1,035	171	4.1	36%	52%	Advanced
36 Mirage	11,790	11,072	718	2,494	176	10.1	30%	57%	Expert
37 Sheer Rocko	11,793	11,103	690	2,165	49	2.4	34%	59%	Expert
38 High Anxiety	11,718	11,048	669	2,298	189	10.0	32%	64%	Expert
39 Safari	10,874	10,867	7	100	95	0.2	3%	4%	Beginner
40 Little Mo	11,646	10,857	789	3,359	101	7.8	25%	35%	Low Intermediate
41 Ramble On	11,664	10,943	721	3,975	169	15.4	21%	35%	Low Intermediate
42 Lower Hall's Alley	11,263	10,957	306	1,248	97	2.8	27%	33%	Low Intermediate

Run/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
43 Doc's Run	11,397	11,099	298	1,130	103	2.7	31%	38%	Intermediate
44 B's Bash	11,544	11,027	518	1,885	141	6.1	30%	55%	Advanced
45 JR's	11,693	11,222	471	1,315	174	5.2	45%	59%	Expert
46 Zipper	11,541	11,159	382	1,017	143	3.3	42%	64%	Expert
47 Dire Straits	11,443	11,249	194	522	94	1.1	52%	63%	Expert
48 Ticaboo	11,675	11,061	614	2,238	152	7.8	29%	50%	Advanced
49 Great Divide	11,801	11,527	274	2,075	209	10.0	13%	25%	Low Intermediate
50 Picante	11,562	11,206	356	1,132	235	6.1	33%	50%	Advanced
51 Snow Burn	11,519	11,049	470	2,317	215	11.5	21%	41%	Intermediate
52 Outback	11,629	11,247	382	941	436	9.4	34%	53%	Advanced
53 Shagnasty	11,627	11,158	469	1,652	211	8.0	33%	48%	Advanced
54 Upper Hall's Alley	11,652	11,290	362	1,193	94	2.6	33%	52%	Advanced
55 Geno's Meadow	11,268	11,012	256	835	375	7.2	35%	44%	Intermediate
56 Orcs	11,927	11,700	226	603	311	4.3	41%	51%	Advanced
57 Mirkwood Bowl	11,927	11,384	543	1,402	200	6.4	43%	78%	Expert
58 Mirkwood Egress	11,380	10,965	415	4,210	24	2.3	10%	24%	Advanced
59 Powderline	11,447	11,280	167	676	123	1.9	26%	33%	Low Intermediate
60 Serendipity	11,334	11,147	187	1,020	113	2.7	19%	24%	Advanced
61 Pinball	11,350	11,102	248	1,488	118	4.0	17%	36%	Advanced
62 Butterfly	10,883	10,841	43	385	162	1.4	11%	13%	Beginner
64 Wapiti	11,663	11,332	331	2,956	33	2.2	11%	21%	Intermediate
65 Bonanza	11,430	10,726	704	2,279	149	7.8	33%	58%	Expert
66 Ambush	11,626	10,751	875	2,904	175	11.6	32%	43%	Intermediate

Run/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
67 Buckhorn	11,623	10,737	886	2,681	106	6.5	35%	53%	Advanced
68 Eureka	11,559	10,758	801	2,419	156	8.7	36%	47%	Intermediate
69 Snowblind	11,494	10,908	585	1,808	154	6.4	34%	40%	Intermediate
70 Riches	11,444	10,946	497	1,353	163	5.1	40%	46%	Intermediate
71 Mule Train	11,537	10,724	812	4,274	79	7.7	20%	44%	Intermediate
72 Prospector	11,669	11,403	266	2,955	35	2.4	9%	17%	Intermediate
73 Mirkwood Hike-To	11,934	11,678	256	1,230	16	0.4	21%	31%	Advanced
TOTAL				109,284		337.2			

Source: SE Group

Table A-2. Space Use Recommendations—Base Area—Existing Conditions

Service Function	Existing Total	Recommended Range	
		Low	High
Ticket Sales/Guest Services	1,435	670	820
Public Lockers	2,187	1,680	2,060
Rentals/Repair	6,514	8,470	9,530
Retail Sales	3,124	1,930	2,360
Bar/lounge	3,465	2,640	3,220
Adult Ski School	685	1,330	1,630
Kid's Ski School	2,362	2,670	3,260
Restaurant Seating	11,630	12,610	15,420
Kitchen/Scramble	4,085	3,630	4,430
Restrooms	2,669	1,960	2,390
Ski Patrol	1,220	1,200	1,460
Administration	2,229	1,770	2,160
Employee Lockers/Lounge	2,934	700	860
Mechanical	260	1,110	1,640
Storage	2,571	1,860	2,730
Circulation/Waste	5,598	4,460	6,550
TOTAL SQUARE FEET	52,968	48,690	60,520

Source: SE Group

Table A-3. Space Use Recommendations—No Name Basin Facilities—Existing Conditions

Service Function	Existing Total	Recommended Range	
		Low	High
Ticket Sales/Guest Services	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/lounge	-	-	-
Adult Ski School	-	-	-
Kid's Ski School	-	-	-
Restaurant Seating	470	730	890
Kitchen/Scramble	250	250	260
Restrooms	100	100	140
Ski Patrol	-	-	-
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	30	40
Storage	-	50	70
Circulation/Waste	-	110	170
TOTAL SQUARE FEET	820	1,240	1,570

Source: SE Group

Table A-4. Terrain Specifications—Upgrade Plan

Run/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
01 Gunbarrel	11,124	10,803	321	1,328	62	1.9	26%	58%	Expert
02 Tele Alley	11,111	10,817	294	1,304	223	6.7	23%	44%	Intermediate
03 North Forty	11,116	10,874	242	1,318	113	3.4	19%	31%	Low Intermediate
04 Ricochet	11,167	10,935	232	1,015	137	3.2	24%	31%	Low Intermediate
05 Drifter	11,194	11,034	159	800	63	1.2	20%	29%	Low Intermediate
06 Sidewinder	11,282	10,995	287	1,422	116	3.8	21%	34%	Low Intermediate
07 Toddler	11,284	11,021	262	878	82	1.7	31%	41%	Intermediate
08 Short Circuit	11,434	11,241	194	613	35	0.5	33%	61%	Expert
10 Curecanti	11,630	11,454	176	1,053	114	2.8	17%	58%	Expert
11 Romp	11,503	11,373	130	387	145	1.3	38%	44%	Intermediate
12 Tango	11,600	11,000	600	2,001	134	6.2	32%	47%	Advanced
13 Lower Tango	10,991	10,789	202	1,868	154	6.6	12%	22%	Novice
14 Examiner	11,632	10,926	706	2,800	163	10.5	38%	54%	Advanced
15 Ajax	11,372	10,987	385	1,145	320	8.4	39%	53%	Advanced
16 Cleanzer	11,496	11,236	260	642	272	4.0	48%	63%	Expert
17 Kanonen	11,602	11,308	294	686	284	4.5	51%	64%	Expert
18 Roundabout	11,610	11,196	414	525	22	0.3	10%	24%	Novice
19 Sky Walker I	11,799	11,593	207	2,875	32	2.1	8%	19%	Novice
20 Quick Draw	11,625	11,526	98	761	210	3.7	26%	37%	Intermediate
21 KC Cutoff	11,589	11,457	131	170	111	0.4	14%	19%	Novice
22 Sleepy Hollow	11,593	11,192	401	2,720	81	5.0	15%	25%	Low Intermediate
23 Lobo	11,492	11,404	88	184	107	0.5	59%	61%	Expert

Run/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
24 Upper No Name	11,592	11,270	322	734	84	1.4	40%	61%	Expert
25 Upper Xmas Tree	11,630	11,211	419	1,103	75	1.9	29%	49%	Advanced
26 Lower No Name	11,315	10,808	507	1,437	76	2.5	26%	41%	Intermediate
27 Freeway	11,179	10,808	371	1,874	311	13.4	20%	29%	Low Intermediate
28 Snowflake	10,901	10,835	66	555	108	1.4	14%	18%	Novice
29 Little Joe	11,144	10,918	225	1,137	108	2.8	22%	25%	Novice
30 Bee Line	11,141	11,025	116	482	157	1.7	34%	38%	Intermediate
31 Rookie	11,149	11,082	66	403	90	0.8	15%	23%	Novice
32 Glade	11,189	10,840	349	2,785	155	9.9	13%	23%	Novice
33 Tenderfoot	11,221	11,032	189	1,336	105	3.2	15%	24%	Novice
34 Short N Sweet	11,718	11,412	306	953	182	4.0	29%	48%	Advanced
35 Turbo	11,743	11,371	372	1,035	171	4.1	36%	52%	Advanced
36 Mirage	11,790	11,072	718	2,494	176	10.1	30%	57%	Expert
37 Sheer Rocko	11,793	11,103	690	2,165	49	2.4	34%	59%	Expert
38 High Anxiety	11,718	11,048	669	2,298	189	10.0	32%	64%	Expert
39 Safari	10,935	10,878	57	463	103	1.1	13%	18%	Novice
40 Little Mo	11,646	10,858	788	3,319	99	7.5	25%	35%	Low Intermediate
41 Ramble On	11,664	10,943	721	3,975	169	15.4	21%	35%	Low Intermediate
42 Lower Hall's Alley	11,263	10,957	306	1,248	97	2.8	27%	33%	Low Intermediate
43 Doc's Run	11,397	11,099	298	1,130	103	2.7	31%	38%	Intermediate
44 B's Bash	11,544	11,027	518	1,885	141	6.1	30%	55%	Advanced
45 JR's	11,693	11,222	471	1,315	174	5.2	45%	59%	Expert
46 Zipper	11,541	11,159	382	1,017	143	3.3	42%	64%	Expert

Run/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
47 Dire Straits	11,443	11,249	194	522	94	1.1	52%	63%	Expert
48 Ticaboo	11,675	11,061	614	2,238	152	7.8	29%	50%	Advanced
49 Great Divide	11,801	11,527	274	2,075	209	10.0	13%	25%	Low Intermediate
50 Picante	11,562	11,206	356	1,132	235	6.1	33%	50%	Advanced
51 Snow Burn	11,519	11,049	470	2,317	215	11.5	21%	41%	Intermediate
52 Outback	11,629	11,247	382	941	436	9.4	34%	53%	Advanced
53 Shagnasty	11,627	11,158	469	1,652	211	8.0	33%	48%	Advanced
54 Upper Hall's Alley	11,652	11,290	362	1,193	94	2.6	33%	52%	Advanced
55 Geno's Meadow	11,268	11,012	256	835	375	7.2	35%	44%	Intermediate
56 Orcs	11,927	11,700	226	603	311	4.3	41%	51%	Advanced
57 Mirkwood Bowl	11,927	11,384	543	1,402	200	6.4	43%	78%	Expert
58 Mirkwood Egress	11,380	10,965	415	4,210	24	2.3	10%	24%	Advanced
59 Powderline	11,403	11,280	123	461	139	1.5	28%	33%	Low Intermediate
60 Serendipity	11,334	11,147	187	1,020	113	2.7	19%	24%	Advanced
61 Pinball	11,350	11,102	248	1,488	118	4.0	17%	36%	Advanced
62 Butterfly	10,883	10,841	43	385	162	1.4	11%	13%	Beginner
63 Sunset Glades Return	11,078	10,732	346	1,828	58	2.5	20%	41%	Intermediate
64 Wapiti	11,663	11,332	331	2,956	33	2.2	11%	21%	Intermediate
65 Bonanza	11,430	10,726	704	2,279	149	7.8	33%	58%	Expert
66 Ambush	11,626	10,751	875	2,904	175	11.6	32%	43%	Intermediate
67 Buckhorn	11,623	10,737	886	2,681	106	6.5	35%	53%	Advanced
68 Eureka	11,559	10,758	801	2,419	156	8.7	36%	47%	Intermediate
69 Snowblind	11,494	10,908	585	1,808	154	6.4	34%	40%	Intermediate

Run/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
70 Riches	11,444	10,946	497	1,353	163	5.1	40%	46%	Intermediate
71 Mule Train	11,537	10,724	812	4,274	79	7.7	20%	44%	Intermediate
72 Prospector	11,669	11,403	266	2,955	35	2.4	9%	17%	Intermediate
73 Mirkwood Hike-To	11,934	11,678	256	1,230	16	0.4	21%	31%	Advanced
74 Snowburn Traverse	11,632	11,489	143	1,725	31	1.2	8%	12%	Beginner
75 Roundabout II	11,440	11,237	203	2,048	49	2.3	10%	15%	Novice
76 Beginner Area 3	10,864	10,853	11	94	56	0.1	12%	12%	Beginner
TOTAL				112,958		339.9			

Source: SE Group

Table A-5. Space Use Recommendations—Base Area—Upgrade Plan

Service Function	Existing Total	Recommended Range	
		Low	High
Ticket Sales/Guest Services	1,435	1,090	1,340
Public Lockers	2,187	2,760	3,370
Rentals/Repair	6,514	13,870	15,610
Retail Sales	3,124	3,170	3,870
Bar/lounge	3,465	4,320	5,270
Adult Ski School	685	2,180	2,670
Kid's Ski School	2,762	4,370	5,340
Restaurant Seating	11,630	15,270	18,660
Kitchen/Scramble	4,085	4,390	5,360
Restrooms	2,669	2,370	2,890
Ski Patrol	1,220	1,450	1,770
Administration	2,229	2,890	3,540
Employee Lockers/Lounge	2,934	1,150	1,400
Mechanical	260	1,600	2,350
Storage	2,571	2,670	3,910
Circulation/Waste	5,598	6,400	9,380
TOTAL SQUARE FEET	53,368	69,950	86,730

Source: SE Group

Table A-7. Space Use Recommendations—Summit Hut—Upgrade Plan

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	-	-
Public Lockers	-	-
Rentals/Repair	-	-
Retail Sales	-	-
Bar/lounge	-	-
Adult Ski School	-	-
Kid's Ski School	-	-
Restaurant Seating	980	1,200
Kitchen/Scramble	280	340
Restrooms	150	190
Ski Patrol	90	110
Administration	-	-
Employee Lockers/Lounge	-	-
Mechanical	40	60
Storage	70	100
Circulation/Waste	160	240
TOTAL SQUARE FEET	1,770	2,240

Source: SE Group

Table A-8. Space Use Recommendations—No Name Basin Facilities—Upgrade Plan

Service Function	Existing Total	Recommended Range	
		Low	High
Ticket Sales/Guest Services	-	-	-
Public Lockers	-	-	-
Rentals/Repair	-	-	-
Retail Sales	-	-	-
Bar/lounge	-	-	-
Adult Ski School	-	-	-
Kid's Ski School	-	-	-
Restaurant Seating	470	790	970
Kitchen/Scramble	250	230	280
Restrooms	100	120	150
Ski Patrol	-	-	-
Administration	-	-	-
Employee Lockers/Lounge	-	-	-
Mechanical	-	30	50
Storage	-	60	80
Circulation/Waste	-	120	180
TOTAL SQUARE FEET	820	1,340	1,710

Source: SE Group

APPENDIX B. DESIGN CRITERIA AND FOREST SERVICE DIRECTION

Design criteria are important concepts in resort master planning. Appendix B provides an overview of the basic design criteria on which Chapter 2 (Existing Conditions) and Chapter 4 (Upgrade Plan) are based. By design, this appendix provides a general introduction to concepts in resort master planning.

A variety of design criteria, each of which helps to create a quality ski experience, influence the upgrade plan projects of ski areas. At mountain resorts, guests have a variety of expectations—to participate in recreation associated with mountains, to enjoy dining and shopping opportunities, and to enjoy a mix of other vacation experiences in a mountain setting. Thus, a destination resort must offer a variety of services, amenities, and experiences that are designed to allow a guest to rejuvenate their spirit. Design parameters that guide the development of everything from the pedestrian-oriented, social environment, to the alpine experience, all contribute to the success of a destination resort.

Along with design guidelines, awareness of consumer preferences is crucial to the overall performance of a resort—for both recreational amenities and real estate product. Accordingly, detailed market research and user group surveys are effective tools to help guide the development of a successful resort. Resort innovation must be pursued to: (1) attract and retain target customers; (2) satisfy unmet needs; and (3) improve a resort's overall market effectiveness and efficiency.

The following discussion describes several types of mountain resort, and the principal base lands and mountain design criteria that lead to the development of a successful resort.

A. DESTINATION RESORTS

1. REGIONAL DESTINATION RESORTS

Regional destination resorts largely cater to a "drive" market. While day-use guests play a large role, the regional destination resort also appeals to vacationers. At regional destinations resorts, lodging typically is a component of operations, but due to the average length of stay and guests' vacation budgets, lodging and related services and amenities are usually less extensive than what might be expected at a larger national and/or international destination resort. As most regional destination resorts have evolved within or adjacent to an existing local community, resort services are often supplied by proprietors within that local community.

B. BASE AREA DESIGN

The relationship between planning at a resort's base area and its on-mountain lift and terrain network is critical. This relationship affects the overall function and perception of a resort.

Design of the base lands at a mountain resort involves establishing appropriate sizes and locations for the various elements that make up the development program. The complexion and interrelationship of these elements varies considerably depending on the type of resort and its intended character. In every case, however, fundamental objectives of base area planning remain the same. A resort should seek to integrate the mountain with the base area (or base areas) to establish attractive, cohesive, and functional recreational and social experience. This is essential to creating the feeling of a mountain community and can only be achieved by addressing base area components such as (but not limited to): multiple mountain portals, guest service locations, skier/rider circulation, pedestrians, parking/access requirements, and mass-transit drop-offs.

Planners rely on resort layout as one tool to establish resort character. The manner in which resort elements are inter-organized, both inside the resort core and within the landscape setting, along with architectural style, help to create the desired character.

Skier service facilities are located at base area and on-mountain buildings. Base area staging locations, or portals, are "gateway" facilities that have three main functions:

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

C. MOUNTAIN DESIGN

1. TRAIL DESIGN

a) Slope Gradients and Terrain Breakdown

Terrain ability level designations are based on slope gradients and terrain features associated with the varying ability terrain unique to each mountain. 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 interested by short, steeper pitches of slope, but a sustained steeper pitch may cause the trail to be classified with a higher difficulty rating. The following general gradients are used by SE Group to classify the skier difficulty level of the mountain terrain.

Table B-1. Terrain Gradients

Skier Ability	Slope Gradient
Beginner	8 to 12%
Novice	to 25%
Low Intermediate	to 35%
Intermediate	to 45%
Advanced Intermediate	to 55%
Expert	over 55%

Source: SE Group Mountain Planning Guidelines

The distribution of terrain by skier ability level and slope gradient is compared with the market demand for each ability level. It is desirable for the available ski terrain to be capable of accommodating the full range of ability levels reasonably consistent with market demand. The market breakdown for the (region) skier market is shown in Table B-2, illustrating that intermediate skiers comprise the bulk of market demand.

Table B-2. Skier Ability Breakdown

Skier Ability	Slope Gradient
Beginner	8 to 12%
Novice	to 25%
Low Intermediate	to 35%
Intermediate	to 45%
Advanced Intermediate	to 55%
Expert	over 55%

Source: SE Group Mountain Planning Guidelines

b) Trail Density

The calculation of capacity for a ski area is based in part on the target number of skiers that can be accommodated, on average, on a typical acre of ski terrain at any one given time. The criteria for the range of trail densities for North American ski areas that SE Group utilizes are listed below.

These density figures account for the skiers that are actually populating the ski trails and do not account for other guests who are either waiting in lift lines, riding the lifts, using the milling areas or other support facilities. Through observations and calculations, SE Group has determined that on an average day, approximately 33% of the total number of skiers in the area will be on the trails at any one time. Additionally, areas on the mountain, such as merge zones, convergence areas, lift milling areas, major circulation routes, and egress routes, will experience higher densities periodically during the ski day.

SE Group has seen a recent trend in trail density design criteria that provides for less crowded skiing experiences. As witnessed at many Colorado resorts, there is a segment of the market that has a preference for more natural, unstructured, semi-backcountry types of terrain commonly referred to as off-piste.[7] Open bowls, glades, and other similar types of terrain are increasing in demand. Skier density per acre numbers are not necessarily applicable to these types of terrain, particularly as there often is not a defined edge to these areas like on a traditional ski run. However, skiers are attracted to these areas for the un-crowded feel, and the experience and challenge that it affords. These areas should be provided if possible. Examples range from glading between existing runs to providing guided out-of-bounds tours.

c) Trail System

A primary goal for Monarch's trail system design is to provide a wide variety of ski terrain which caters to the ski area's guest demographic. Each trail should provide an interesting and challenging experience for skiers with the ability level the trail is designed for. Optimum trail widths should vary depending upon topographic conditions and the caliber of the skier being served. The trail network should provide the full range of ability levels consistent with their market demand.

In terms of a ski area's ability to retain guests at that ski area, both for longer durations of visitation and for repeat business, one of the more important factors has proven to be variation in terrain. This means having developed runs for all ability levels: some groomed on a regular basis and some not, bowl skiing, tree skiing, off-piste style skiing, and terrain parks and pipes.

In summary, a broad range of skiing terrain satisfies skiers from beginner through expert ability levels within the natural topographic characteristics of the ski area.

2. LIFT DESIGN

The goal for lift design is to serve the available ski terrain in an efficient manner, while being sensitive to environmental considerations. A myriad of factors should be considered including wind conditions, visual impacts, wetlands, round-trip skiing, access needs, inter-connectability between other lifts and trails, and the need for circulation space at the lower and upper terminal sites. The vertical rise and length of ski lifts for a particular mountain are important measures of overall attractiveness and marketability of a ski area.

3. ON-MOUNTAIN GUEST SERVICES

On-mountain guest service facilities are generally used to provide food service (cafeteria-style or table service), restrooms, and limited retail, as well as ski patrol and first aid services, in closer proximity to upper-mountain terrain. This eliminates the need for skiers and riders to descend to the base area for similar amenities. It has also become common for resorts to offer ski/board demo locations on-mountain, so skiers and riders can conveniently test different equipment throughout the day.

[7] As stated in Chapter 2, "Piste" is a term commonly borrowed from French vernacular which refers to a groomed, maintained, defined ski trail. "Off-Piste" therefore refers to the ungroomed, less defined natural style of skiing commonly found in high Alpine areas and bowls.

D. CAPACITY ANALYSIS AND DESIGN

In ski area planning, a "design capacity" is established, which represents a daily, at-one-time guest population to which all ski resort functions are balanced. The design capacity is a planning parameter that is used to establish the acceptable size of the primary facilities of a ski resort: ski lifts, ski terrain, guest services, restaurant seats, building space, utilities, parking, etc.

Design capacity is commonly expressed as "Comfortable Carrying Capacity (CCC)," "Skier Carrying Capacity," "Skiers at One Time (SAOT)," and other ski industry specific terms. These terms refer to a level of utilization that provides a pleasant recreational experience, without overburdening the resort infrastructure. Accordingly, the design capacity does not normally indicate a maximum level of visitation, but rather the number of visitors that can be "comfortably" accommodated on a daily basis. Design capacity is typically equated to a resort's fifth or tenth busiest day, and peak-day visitation can be as much as 25 to 30% 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 service facilities, including day lodge seating, mountain restaurant requirements, restrooms, parking, and other guest services are planned around the proper identification of the mountain's true capacity.

CCC is derived from the resort's supply of vertical transport (the vertical feet served combined with the uphill hourly capacities of the lifts) and demand for vertical transport (the aggregate number of runs desired multiplied by the vertical rise associated with those runs). The CCC is calculated by dividing vertical supply (VTF/day) by vertical demand, and factors in the total amount of time spent in the lift waiting line, on the lift itself, and in the descent.

Note: It is not uncommon for resorts to experience peak days during which visitation exceeds the CCC by as much as 25% to 30%. However, from a planning perspective, it is not recommended to consistently exceed the CCC due to the resulting decrease in the quality of the recreational experience, and thus the resort's market appeal.

E. BALANCE OF FACILITIES

The mountain master planning process emphasizes the importance of balancing recreational facility development. The sizes of the various guest service functions are designed around the CCC of the mountain. The future development of a resort should be designed and coordinated to maintain a balance between accommodating guest needs, resort capacity (lifts, trails, and other amenities such as tubing), and the supporting equipment and facilities (e.g., grooming machines, day lodge services and facilities, utility infrastructure, access, and parking). Note that it is also important to ensure that the resort's CCC balances with these other components, facilities, and services at the resort. Since CCC is primarily derived from the resort's lift network, it is possible to have a CCC that is effectively lower than the other components.

F. INVENTORY OF PHYSICAL RESOURCES

1. TOPOGRAPHY

Monarch's day lodge and parking lot are located at an approximate elevation of 10,825 feet above sea level. The highest lift-accessible point (via the Panorama lift) is approximately 11,800 feet above sea level, while the "hike to" terrain in Mirkwood Basin tops out at 11,952 feet above sea level. The lowest point is the bottom of No Name (10,728) which can be skied from Mirkwood. Therefore, the vertical rise at Monarch is approximately 1,224 feet. The steepest slopes on the mountain are located in Mirkwood Basin. The steepest lift-served terrain is generally above the 11,250-foot contour and is accessed by the Panorama and Garfield lifts. Slopes are generally uniform, with the steepest areas near the top and lowest grades at the bottom.

2. SLOPE GRADIENTS

The Slope Gradient Analysis for the study area is shown in Figure 2. The full range of skiable gradients has been color-coded in order to depict the primary skill classifications for skiers. The color designations are described below:

- White: slope gradients between 0 and 8% (0 to 5 degrees) are too flat for skiing, but ideal for base area accommodations, and other support facility development
- Green: slope gradients between 8 and 25% (5 to 15 degrees) are ideal for beginner to novice skiers, and typically can support some types of development
- Blue: slope gradients between 25 and 45% (15 to 25 degrees) are ideal for intermediate skiers, and typically are too steep for development
- Grey: slope gradients between 45 and 70% (25 to 35 degrees) are ideal for expert skiers, and pose intermittent avalanche hazards
- Red: slope gradients greater than 70% (40 degrees and over) are gradients too steep for all but the highest level of skiing. Areas of this high slope are typically allocated as expert only and are closely managed by the ski area operator

Overall, the slope analysis shows a good mix of ability level designations. As demonstrated in Figure 2, the middle and lower portions of the SUP provide a variety of easy to low-intermediate terrain with a sufficient amount of slope gradients between 8 to 25% to access the base area. Intermediate terrain, with slope gradients between 26 to 45%, can be found throughout the SUP area and can be accessed by all of Monarch's chairlifts. A limited amount of advanced terrain with slope gradients between 45 to 70% is available within the SUP area. Expert terrain with gradients 70% and above are limited and primarily found within Mirkwood Basin.

Terrain in the No Name Basin primarily caters to the intermediate, advanced-intermediate ability levels. In addition, the high alpine terrain on the northern extent of No Name Basin includes terrain with slope gradients between 46 to 70%, which attracts guests of advanced and expert ability levels. Additional advanced to expert terrain can be found in other "pockets" of No Name Basin. The majority of terrain primarily has a slope gradient between 26 to 45%, which caters to the intermediate ability level.

3. ASPECT

The existing Monarch SUP area is located in a large bowl below a long ridge line with a few protruding sub ridges. Individual portions of developed runs have exposures to every aspect, but the majority of terrain has northeast, east and southeast facing aspects (refer to Figure 3). Slope aspect plays an important role in snow quality and retention at this latitude. The variety of exposures present opportunities to provide a range of slope aspects that can respond to the changes in sun angle. The various angles of exposure are discussed below.

Similar to the Slope Gradient Analysis, a Slope Aspect Analysis was completed for the terrain within No Name Basin. This area is located on the western ridge of the Continental Divide. As such, terrain within No Name Basin have general exposures to the northwest, west, and southwest. In addition to slope aspect, the high-altitude nature of the area would also ensure consistent quality snow conditions. The various angles of sun exposure are discussed below:

- North-facing: ideal for snow retention, minimal wind scour, minimal sun exposure
- Northeast-facing: ideal for snow retention, minimal wind scour, minimal sun exposure
- East-facing: good for snow retention, some wind scour, morning sun exposure
- Southeast-facing: fair for snow retention, moderate wind scour, morning and early afternoon sun exposure
- South-facing: poor for snow retention, moderate wind scour, full sun exposure
- Southwest-facing: poor for snow retention, high wind scour, full sun exposure
- West-facing: fair for snow retention, high wind scour, late morning and afternoon sun exposure
- Northwest-facing: good for snow retention, high wind scour, afternoon sun exposure

4. SOILS AND GEOLOGY

Soils and geology of an area may influence the erosion potential of the area, drainage capabilities, vegetation, and other factors that can affect a recreation area's management. Monarch Mountain is located within the Sawatch Mountains, formed 70 - 65 million years ago by the Sawatch uplift, and have been formed through both water and wind erosion ever since. The SUP area is primarily characterized by Pikes Peak Granite formed during the Paleozoic era. Pikes Peak Granite includes the presence of true granite, quartz monzonite, quartz diorite and many intermediate gradations. High alpine environments such as these pose construction constraints, especially given how soil challenges will be considered as part of detailed project planning. Several types of soil are found within the Monarch Mountain SUP area, with varying water capacities and drainage classes ranging from well-drained to somewhat excessively drained. Surface and subsurface soil erodibility within the SUP area ranges from moderate to severe. To protect soil resources, there should be proper management of soil drainage, soil stability, and vegetation.

5. HYDROLOGY

The hydrology of a recreation area influences the availability of water in the area as well as the movement of snowmelt and groundwater. Monarch Mountain is located high within the Sawatch Mountains on the continental divide, making it a significant hydrologic divide. On the east side is the

headwaters of the South Arkansas River which is a major tributary to the Mississippi River. On the west side, water from Monarch Pass flows into the Tomichi Creek which ultimately the Gunnison River. The Gunnison River is a major tributary of the Colorado River, contributing about one-third of the Colorado's flow at the Colorado-Utah state line. Additionally on the west side of the resort, snowmelt flows into the No Name Creek, which eventually joins into the Tomichi Creek. Monarch Pass averages 350" of snowfall per year.

6. FISH AND WILDLIFE

Within the PSICC and GMUG, the Canada Lynx, Mexican Spotted Owl, Bonytail, Colorado Pikeminnow, Humpback Chub, and Razorback Sucker are considered threatened and endangered species. These threatened and endangered fish reside in the creeks that Monarch Mountain's snowmelt runs into and, therefore could be affected by activities within the SUP area. The proposed endangered tricolored Bat also has the potential to be found within the SUP area, as well as the non-essential experimental population of Grey Wolves, which are to be treated as proposed threatened species.[8] The Monarch Butterfly is listed as a candidate for listing as a threatened and endangered species.

7. VEGETATION

Vegetation influences the wildlife present in an area as well as the quality of the soil. Monarch Mountain is characterized by Engelmann spruce and subalpine fir forests. There are no USFWS threatened or endangered species of vegetation in the area. Monarch Mountain has successfully revegetated disturbed areas in the past and continues to maintain its ongoing vegetation management actions revegetation and restoration objectives, including wetland/stream channel protection.

8. CLIMATE CHANGE

Climate change has impacted global weather patterns and will continue to do so. Colorado, in particular, has experienced an increase in annual average temperatures by 2 degrees Fahrenheit since the 1990s. Snowpack measurements in all eight major Colorado river basins have been below average since 2000. Spring runoff timing has shifted earlier in the season by one to four weeks due to overall warming temperatures and decreased albedo of the snow surface due to dust on snow. While Colorado has experienced periods of drought, there is no significant evidence of significant increases or decreases of precipitation.

Analyses of Global Climate Models (GCMs) are used to project future impacts of climate change in the state throughout the next 50 to 100 years. The following projections are based on data from 30 or more GCMs. All models projected average annual temperatures to rise by 2.5 to 5 degrees Fahrenheit by 2050 under a medium-low emissions scenario and 3.5 to 6.5 degrees under a high emissions scenario. Winters are projected to warm less than summers. The models' projections of precipitation quantity varied, but nearly all agreed that winter precipitation would increase. Spring runoff peaks are projected to shift one to three weeks earlier by mid-century. Snowpack (measured as snow water equivalent (SWE) by April 1) is generally projected to decline due to increased temperatures. By 2050, heat waves, droughts, and wildfires will likely become more frequent and

[8] Under ESA Section 7(a)(4) federal agencies must not jeopardize their existence.

severe over time. Globally, extreme precipitation events are expected to rise due to a warmer atmosphere's increased capacity to hold water vapor. In Colorado, studies show that these extreme precipitation events will more often impact winters rather than summers.[9]

Higher temperatures, shifting seasons, and variable precipitation will have a significant impact on skiing and outdoor recreation in Colorado. As previously mentioned, snowpack is projected to decline over time due to higher temperatures. Yet, many resorts in Colorado benefit from very high elevations that will be more resilient to these temperature changes than lower elevations, at least in the short term. Higher temperatures and lack of snowfall elsewhere may draw more guests from other regions to Colorado. However, late autumn temperatures may not be cold enough for snowmaking, possibly shortening the season.[10]

Warming temperatures will increase forests' vulnerability to fire and insect outbreaks such as bark beetles. With warmer temperatures year-round, beetle larvae are more likely to survive the winter and reproduce longer in the summer. Increased disturbance from both beetles and wildfire are likely to significantly change forest composition and structure.[11]

[9] Lukas, J. and E. Gordon (2015). Chapter 2—Colorado's Climate : Past and Future. In Colorado Climate Change Vulnerability Study, edited by Eric Gordon and Dennis Ojima. University of Colorado, Boulder, CO and Colorado State University, Fort Collins, CO.
[10] Jedd, T., A. Seidl, and O. Wilhelmi (2015). Chapter 9—Outdoor Recreation and Tourism Sector. In Colorado Climate Change Vulnerability Study, edited by Eric Gordon and Dennis Ojima. University of Colorado, Boulder, CO and Colorado State University, Fort Collins, CO.
[11] Chapter citation: Jedd, T., W. D. Bowman, A. S. Cheng, D. Ojima, M. Smith, and C. Wessman (2015). Chapter 4—Ecosystems Sector. In Colorado Climate Change Vulnerability Study, edited by Eric Gordon and Dennis Ojima. University of Colorado, Boulder, CO and Colorado State University, Fort Collins, CO.

G. APPLICABLE FOREST SERVICE POLICY DIRECTION

1. 2011 SKI AREA RECREATIONAL OPPORTUNITY ENHANCEMENT ACT

The 2011 SAROEA amended the National Forest Ski Area Permit Act of 1986. The 2011 SAROEA enables snow sports (other than Nordic and alpine skiing) to be permitted on NFS lands subject to ski area permits issued by the Secretary of Agriculture. In addition, it clarifies the authority of the Secretary of Agriculture to permit appropriate additional seasonal or year-round recreational activities and facilities on NFS lands subject to ski area permits issued by the Secretary of Agriculture. Activities and facilities that may, in appropriate circumstances, be authorized under the Act include but are not limited to, zip lines and ropes courses, mountain biking trails, and Frisbee golf.

Ski Area Recreational Opportunity Enhancement Act

National Forests are and have always been the greatest opportunity for Americans to use and enjoy their public lands. Because ski areas serve as portals to the National Forests for millions of people every year they have a unique opportunity to involve the recreating public in natural resource based recreation in new and exciting ways that promote an appreciation of the environment and the natural world through both adventure and discovery.

The Ski Area Recreational Opportunity Enhancement Act embraces this notion and provides authority for mountain ski areas operating on NFS lands to offer an expanded range of outdoor recreation activities in order to further recreational opportunities for the public allow year round utilization of existing ski area facilities and stimulate job creation and economic growth within local communities.

In April 2014, the Forest Service provided a Final Directive for Additional Seasonal or Year-Round Recreation Activities at Ski Areas that includes guidance for implementing the 2011 SAROEA. Forest Service Manual (FSM) 2343.14 states that the Forest Service will apply the following screening criteria during review of site-specific proposals prior to the initiation of a NEPA review process. During this master planning stage, projects are conceptual and do not, nor should they, include the level of design that would be required to complete all of the screening criteria; that amount of site-specific detail would be provided during the project proposal stage to initiate the NEPA process. The screening criteria included in FSM 2343.14(1) guide the development of projects on NFS lands, and the activities and facilities associated with those projects must:

- (1)(a) Not change the primary purpose of the ski area to other than snow sports;
- (1)(b) Encourage outdoor recreation and enjoyment of nature and provide natural resource-based recreation opportunities;
- (1)(c) To the extent practicable, be located within the portions of the ski area that are developed or that will be developed pursuant to the MDP;
- (1)(d) Not exceed the level of development for snow sports and be consistent with the zoning established in the applicable MDP;

- (1)(e) To the extent practicable, harmonize with the natural environment of the site where they would be located by:
    - (1)(e)(1) Being visually consistent with or subordinate to the ski area's existing facilities, vegetation and landscape; and
    - (1)(e)(2) Not requiring significant modifications to topography to facilitate construction or operations.
- (1)(f) Not compromise snow sports operations or functions; and
- (1)(g) Increase utilization of snow sports facilities and not require extensive new support facilities, such as parking lots, restaurants, and lifts.

Again, the above screening criteria should be applied for the planned activities in this MDP during the NEPA process that would occur with project proposal. At that point, design plans more detailed than those generated within this master planning process would be made available.

FSM 2343.14(8) provides guidance for elements to be included in the master planning process. Specifically, the master planning process should:

- (8)(a) Establish zones to guide placement and design of additional seasonal or year-round recreation facilities, basing the zones on the existing natural setting and level of development to support snow sports;
- (8)(b) Depict the general location of the facilities; and
- (8)(c) Establish an estimated timeframe for their construction.

2. 1984 LAND AND RESOURCE MANAGEMENT PLAN—PIKE AND SAN ISABEL NATIONAL FORESTS

Monarch's operations carried out on NFS lands within the existing SUP area must comply with the management directions provided in the 1984 Land and Resource Management Plan – Pike and San Isabel National Forest (1984 LRMP). The 1984 LRMP includes 21 Management Areas for different portions of the Forest based on ecological conditions, historic development, and anticipated future conditions.[12] Monarch's existing ski area falls within the Management Area 1B. Management Area 1B proximate to Monarch is 870 acres in size (682 acres of the Monarch SUP is within Management Area 1B), and directs:

> *"Management emphasis provides for downhill skiing on existing downhill ski sites. Management integrates ski area development and use with other resource management to provide healthy tree stands, vegetative diversity, forage production for wildlife and livestock, and opportunities for non-motorized recreation."*

Portions of the Monarch SUP area is located within Management Area 2B, including the southern extent of the ski area, the base area entrance and exit roads, and the northern extent of the Mirkwood area. Management Area 2B proximate to Monarch is 4,923 acres in size (58 acres of the

[12] USDA Forest Service. 1983 as amended in 1991. Land and Resource Management Plan – Pike and San Isabel National Forests; Comanche and Cimarron Grasslands.

Monarch SUP is within Management Area 2B), (Note: due to mapping inaccuracies, the SUP area acreages within Management Area 1B and 2B do not total 769 acres, which is the total SUP acreage presented in the Permit) and directs:

> *"Management emphasis is for rural and roaded-natural recreation opportunities. Motorized and nonmotorized recreation activities such as driving far pleasure, viewing scenery, picnicking, fishing, snowmobiling, and cross-country skiing are possible. Conventional use of highway-type vehicles is provided for in design and construction of facilities. Motorized travel may be prohibited or restricted to designated routes, to protect physical and biological resources."*

a) Management Policies and Direction

Downhill skiing is an important component of the recreation opportunities offered by National Forests. The National Recreation Strategy, a result of the 1987 President's Commission for America's Outdoors, gives the Forest Service a major role in providing recreation opportunities on National Forests through partnerships such as those with the ski industry.[13]

In 1984 the LRMP for the Pike-San Isabel National Forests identified six operating ski areas (Ski Cooper, Monarch, Pikes Peak, Geneva Basin, Cuchara Valley Resort, and Conquistador) and that the demand for downhill skiing has been rapidly increasing.[14] Notably, only Monarch and Ski Cooper remain in operation. The 1984 LRMP additionally provided supply and demand projections for average annual downhill skiing use on the National Forest and anticipated demand to outpace supply by year 2011.[15]

Existing SUP Area

Monarch currently operates under a 40-year term SUP administered by the Pike-San Isabel National Forest, which covers approximately 1,146 acres of NFS lands after the Monarch Mountain No Name Basin Decision Notice approved an adjustment of the ski area's SUP.

The enabling authorities for the Forest Service are contained in many laws enacted by Congress and in the regulations and administrative directives that implement these laws.[16] These authorities allow the Forest Service to provide recreation opportunities to facilitate the use, enjoyment, and appreciation of National Forests.

The Forest Service is authorized to approve certain uses of NFS lands under the terms of SUPs.[17] Generally, SUPs for recreational developments are issued and administered for uses that serve the

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[13] USDA Forest Service. 1988. National Recreation Strategy. April.
[14] As of 2007, the Pikes Peak, Geneva Basin, Cuchara Valley Resort, and Conquistador ski areas have permanently ceased downhill skiing operations. Only Ski Cooper and Monarch operate downhill skiing operations on public lands on the Pike and San Isabel National Forests.
[15] USDA Forest Service. 1983 as amended in 1991. Land and Resource Management Plan – Pike and San Isabel National Forests; Comanche and Cimarron Grasslands. p. II-40
[16] These laws include: the Organic Administrative Act (1897), the Weeks Act (1911), the Multiple-Use Sustained Yield Act (1960), the Forest and Rangeland Renewable Resources Planning Act (1974), the National Forest Management Act (1976) and the National Forest Ski Area Permit Act (1986).
[17] 16 USC 497: Use and Occupation of Lands for Hotels, Resorts, Summer Homes, Stores and Facilities for Industrial, Commercial, Educational or Public Uses.

public, promote public health and safety, and provide land stewardship. In accomplishing these objectives, the SUP held by Monarch authorizes the implementation of the following:

> *"Skiing, Snowboarding, Ski & Snowboard Lessons, Guided Cat Skiing, Special Events, Food & beverage Operations, Retail Sales, Equipment Rental, Childcare, and Snow Tubing."*[18]

b) Recreation Opportunity Spectrum

The 1984 LRMP for the Pike-San Isabel National Forests states,

> *"Approximately 84 percent of the recreation use on the Pike and San Isabel National Forests occur within the Roaded Natural, Rural, and Urban [Recreation Opportunity Spectrum] ROS classes. Almost 100 percent of all developed recreation sites, including ski areas, occur within these classes and account for the resultant intensive use."*[19]

The Monarch SUP area is designated within the 1984 LRMP to have a ROS setting of "Rural." This setting is described in the Forest Service's 1986 ROS Book as:

> *"Predominantly a culturally modified setting where the natural environment has been substantially modified, i.e., structures are readily apparent, pastoral or agricultural or intensively managed, wildland landscapes predominate as viewed from visually sensitive roads and trails. Access is primarily via conventional motorized use on roads. Contact frequency with other users may be moderate to high in developed sites and moderate away from developed sites."*

Additionally, the 1991 GMUG LRMP identifies Management Area 1B to have a ROS setting of "Semi-primitive" (non-motorized) and states,

> *"Management integrates ski area development and use with other resource management to provide…opportunities for non-motorized recreation."*[20]

This setting is described in the Forest Service's 1986 ROS Book as:

> *"A setting that has an area of primitive roads* or trails that are not open to motorized use; is generally at least 2,500 acres in size; and is between 1/2 and 3 miles from all roads, railroads, or trails with motorized use. Access is via non-motorized trails or non-motorized primitive roads or cross-country. Low contact frequency with other visitors. High probability of solitude; natural-appearing environment. Note: "Primitive roads" are not constructed or maintained and are not generally suitable for highway type vehicles."*

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[18] USDA Forest Service. 1983 as amended in 1991. Land and Resource Management Plan – Pike and San Isabel National Forests; Comanche and Cimarron Grasslands. p. III-94; The Sprung Structure was approved in the previous Monarch MDP Environmental Assessment. This documentation did not change the language contained with Monarch's 40-year term SUP. Numerous other authorized facilities are not included in the SUP language; the slope side bathroom building, weather station, Ski Patrol building at the top of Garfield, fuel storage locations, and three overflow tents.
[19] Ibid. p.II-23
[20] Ibid. p. III-92

The assigned desired ROS condition class is the maximum level of use, impact, development, and management that an area should experience over the life of the Forest Plan. The ROS is not prescriptive; it serves as a tool for land managers to identify and mitigate change. Recreational carrying capacity is a consequence of adopting specific ROS classes for which a landscape will be managed.

3. 2024 GRAND MESA, UNCOMPAHGRE, AND GUNNISON NATIONAL FORESTS REVISED LAND MANAGEMENT PLAN

No Name Basin falls within the boundaries of the GMUG National Forests and therefore must comply with management direction provided in the recently revised Land Management Plan published in 2024 (2024 RLMP)[21]. Like the PSINF Forest Plan, the 2024 RLMP includes several Management Areas to guide activities and future conditions within the forest. The portion of Monarch's SUP boundary in the GMUGNF falls under Management Area 4.1 Mountain Resorts. The desired conditions for this Management Area are as follows:

> *MA-DC-MTR-01: Mountain Resorts in the GMUG primarily provide for skiing and other snow sports and may also provide for other seasonal or year-round natural-resource-based recreational activities (e.g. hiking, mountain biking, and sightseeing). Recreation opportunities are managed for large numbers of visitors in developed settings. Where feasible and desired, other snowsports such as backcountry skiing, snowshoeing, and/or cross-country skiing opportunities may be facilitated or enhanced by visitor services.*
>
> *MA-DC-MTR-02: The primary focus of the Mountain Resorts Management Area is the protection of sustainable recreation resources and public safety. Ecological values are provided to the extent possible while protecting the public and meeting primary recreation use objectives. Resource management activities are designed and implemented to maintain or enhance existing resources. Forested areas are managed as sustainable cover with a variety of species and age classes in patterns typical of the natural landscape character of the area. Disturbed areas are revegetated to protect scenery and minimize erosion.*
>
> *MA-DC-MTR-03: Base areas in mountain resorts serve as entrance portals and are designed as gateways to public lands, including signage and/or interpretive elements to inform visitors about the public lands that the mountain resort encompasses. Facilities may be extensively used throughout the year to satisfy a variety of seasonal recreation use demands. Facilities and infrastructure are designed to blend with the national forest setting as seen from key viewpoints. Facilities that no longer serve a useful purpose are removed. Directional, regulatory, and informational signs are common and*

[21] USDA Forest Service. 2024 Grand Mesa, Uncompahgre, and Gunnison National Forests Revised Land Management Plan.

consistent with the mountain resort sign plan. Signs foster safe use, identify routes, and provide visitor information.

Standards for Management Area 4.1 are as follows:

MA-STND-MTR-04 Mountain resort management plans shall include vegetation management measures that are updated on a ten to twenty year basis and/or when conditions have significantly changed due to shifts in forest health (e.g., forests and disease).

MA-STND-MTR-05: Snow management for mountain resorts, including snowmaking and snow-farming, shall be conducted in a manner that prevents slope failures and gully erosion, as well as bank erosion and sediment damage in receiving channels.

MA-STND-MTR-05a: Any new seasonal or year-round facilities, trails, and improvements shall be guided by an accepted Master Development Plan

Guidelines for Management Area 4.1 are as follows:

MA:GDL-MTR-05.b: Snow management for mountain resorts, including snowmaking and snow-farming, should comply with terms and conditions outlined in the ski area permit and be conducted in a manner that does not conflict with State of Colorado Water laws.

MA-GDL-MTR-06" To sustainably design infrastructure and recreational features and limit impacts to water resources and soils in mountain resorts, a geohazard and soils analysis should be conducted in the initial phases of project planning to assess and provide information about the permit area such as slope stability, soil composition, and water supply, system, and/or influence.

MA-GDL-MTR-07: To maintain a relatively natural-appearing setting, mountain resort infrastructure associated with other seasonal or year-round recreational activities should require limited permanent structures.

MA-GLD-MDL-08: To improve visitor safety, avoid physical hazards, manage known avalanche zones, or maintain policy compliance, mountain resort permit boundaries may be amended over time.

MA-GLD-MTR-09: To maintain high-quality scenery and recreational values in mountain resorts, and to sustainably achieve snow management objectives, stands and islands of trees should be managed to provide for a variety of species and size classes that perpetuate forest cover, Vegetative management should complement

snow management objectives, scenery objectives, and recreation values, including the desired recreation opportunity spectrum settings.

a) Recreation Opportunity Spectrum

The portion of Monarch Mountain within the GMUG National Forest boundary falls within the Roaded Natural-summer and winter. The theme of this area for both summer and winter is "predominantly natural and/or natural appearing; rustic improvements to protect resources." Its remoteness is described as one-half mile or more from designated motorized routes and areas. The Scenic Integrity Objective of this area is typically high.

4. SCENERY RESOURCES

In addition to providing recreation experiences and the production of numerous resources, public landscapes provide beauty, which is a valuable resource to many Forest Service constituencies. This resource is explicitly recognized by law. The National Environmental Policy Act (NEPA) requires equal consideration of aesthetics and science. Since the mid-1970s, the Forest Service has utilized the Visual Management System (VMS) to measure the inherent scenic quality of any forest area as a measurement of the degree of alteration for use in inventory and management.[22] Although the Forest Service has since replaced the VMS with a new management direction for visual resources to be included in subsequent Forest Plan revisions, the VMS continues to provide direction for the Pike-San Isabel National Forests under the 1984 LRMP and the GMUG National Forests under the amended 1991 LRMP, for managing the aesthetic environment.

As such, the LRMPs for these respective Forests establish acceptable limits of change for Scenic Resources.[23] The acceptable limits of change are the documented Visual Quality Objectives (VQO), which serve as a management goal for scenic resources.

a) Visual Quality Objectives

A project can cause visual resource change that can be objectively measured. Viewer response to this change, although subjective, usually displays broad patterns of consensus. Thus, visual impacts comprise both the landscape change and viewer response to that change. By assessing the existing visual character of an area in terms of pattern elements (form, line, color and texture) and pattern character (dominance, scale, diversity, and continuity), it is possible to identify the extent to which the visual character of a facility will exhibit visual contrast with the landscape, or it's converse, visual compatibility.

VQOs as defined within the VMS, are based on the physical characteristics of the land and the sensitivity of the landscape setting as viewed by humans. VQOs define how the landscape will be managed; the level of acceptable modification permitted in the area, and under what circumstances modification may be allowed. VQOs range from *Preservation* (untouched environment) to *Maximum Modification* (major disturbance). Per the 1984 LRMP and the Amended 1991 GMUG

[22] USDA Forest Service. 1974. National Forest Landscape management, Volume 2, Chapter 1, The Visual Management System.
[23] USDA Forest Service. 1983 as amended in 1991. Land and Resource Management Plan – Pike and San Isabel National Forests; Comanche and Cimarron Grasslands.

LRMP, the Monarch SUP area and No Name Basin area are classified as a VQO of *Modification*. The VMS provides the following definition of the *Modification* VQO:

> *"Results of management activities may visually dominate the original characteristic landscape. However activities of vegetative and land form alteration must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type."*

b) Built Environment Image Guide

In concept, the Built Environment Image Guide (BEIG) is designed to ensure thoughtful design and management of the built environment, which includes: administrative and recreation structures, landscape structures, site furnishing, structures on roads and trails, and signs installed or operated by the Forest Service, its cooperators, and its permittees. It focuses on the image, appearance, and structural character of facilities. Three core contexts are stressed throughout the BEIG: (1) environmental; (2) cultural; and (3) economic.

The BEIG provides general guidance regarding the image, aesthetics, and overall quality of recreational and administrative structures on NFS lands, but it does not contain enforceable "standards" pertaining to aesthetic quality as would be found in a typical Forest Plan. As indicated on pages 250–252 of the BEIG, specific direction for the design of administrative and recreational facilities is found in the Forest Service Manual (FSM) and Forest Service Handbooks (FSH).

The environmental, cultural, and economic contexts with which the BEIG is based are important considerations in development of structural facilities (not including lift terminals) within the Monarch SUP area. Furthermore, there are some elements of the BEIG within the "Rocky Mountain Province" section (pages 159–178) that should be taken into account when designing and constructing facilities on NFS lands.

All future buildings and structures within the development area shall be designed to reflect and reinforce the architectural character established by existing facilities. This includes adhering to similar massing strategies and form language that align with the existing buildings. Building color palettes shall remain cohesive, using natural, muted tones and materials that integrate with the surrounding landscape and built environment.

> *Rooflines, fenestration patterns, and architectural detailing should support visual continuity across the site. Building access points shall be planned to accommodate snow management needs and efficient back-of-house operations, while maintaining consistency in scale and material treatment with existing entries and circulation routes. The intent is to ensure a unified and functional built environment throughout the resort base area.*

5. ACCESSIBILITY TO PUBLIC LANDS

In June 2005, the Forest Service released the Accessibility Guidebook for Ski Areas Operating on Public Lands, 2005 Update. This guidebook provides information for ski areas authorized under a SUP to work with the Forest Service in providing equal opportunities for all people, including those with disabilities. Monarch will ensure consistency with this guidebook for future development projects occurring on public lands.

Ski areas operating under special-use authorization from the Forest Service are required to comply with both the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504). The ADA applies because Monarch operates as a "public accommodation;" moreover, Monarch is a business open to the public. Section 504 applies because Monarch operates under a SUP authorized by the Forest Service. Through the SUP, the ski area agrees to abide by these and all other laws, regulations, and policies of the federal government.

Significant legislation that preceded the ADA included the Architectural Barriers Act (ABA) of 1968 and the Rehabilitation Act of 1973, as amended. ABA was the first measure passed by Congress to ensure access to facilities. The ABA requires that all facilities built, bought, or leased by a Federal agency be accessible. Section 504 of the Rehabilitation Act states: "No otherwise qualified individual with a disability in the United States shall, solely by reason of his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive Agency."

Monarch currently complies with this legislation through their active involvement in assisting guests with a disability with skiing and other recreation activities. Through future site-specific NEPA and design development reviews, Monarch will work closely with the Forest Service to ensure accessibility measures are taken to provide equal opportunity to all users of public lands.

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

PROPERTY BOUNDARIES PLAN

FIG. 1

Grand Mesa, Uncompaghre and Gunnison National Forests

Grand Mesa, Uncompaghre and Gunnison National Forests

Pike and San Isabel National Forests

Pike and San Isabel National Forests

OLD MONARCH PASS ROAD

TOMICHI LIFT

PANORAMA LIFT

GARFIELD LIFT

PIONEER LIFT

TUMBELINA LIFT

BREEZEWAY LIFT

CATERPILLAR

KALEIDOSCOPE

SAFARI

DAY LODGE

CHILDREN'S CENTER

MAINTENANCE

RENTALS AND LESSON CENTER (RLC)

US HIGHWAY 50

Legend

- Forest Service Land
- Management Area 4.1: Mountain Resort Management Area
- GMUG Designated Trail Corridor
- Management Area 5: General Forest
- Pike and San Isabel NF Management Area 1B: Winter Sports Site
- Pike and San Isabel NF Management Area 2B: Rural and Roaded-Natural Recreation Areas
- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- Mountain Road
- SUP Boundary
- Transmission Line

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

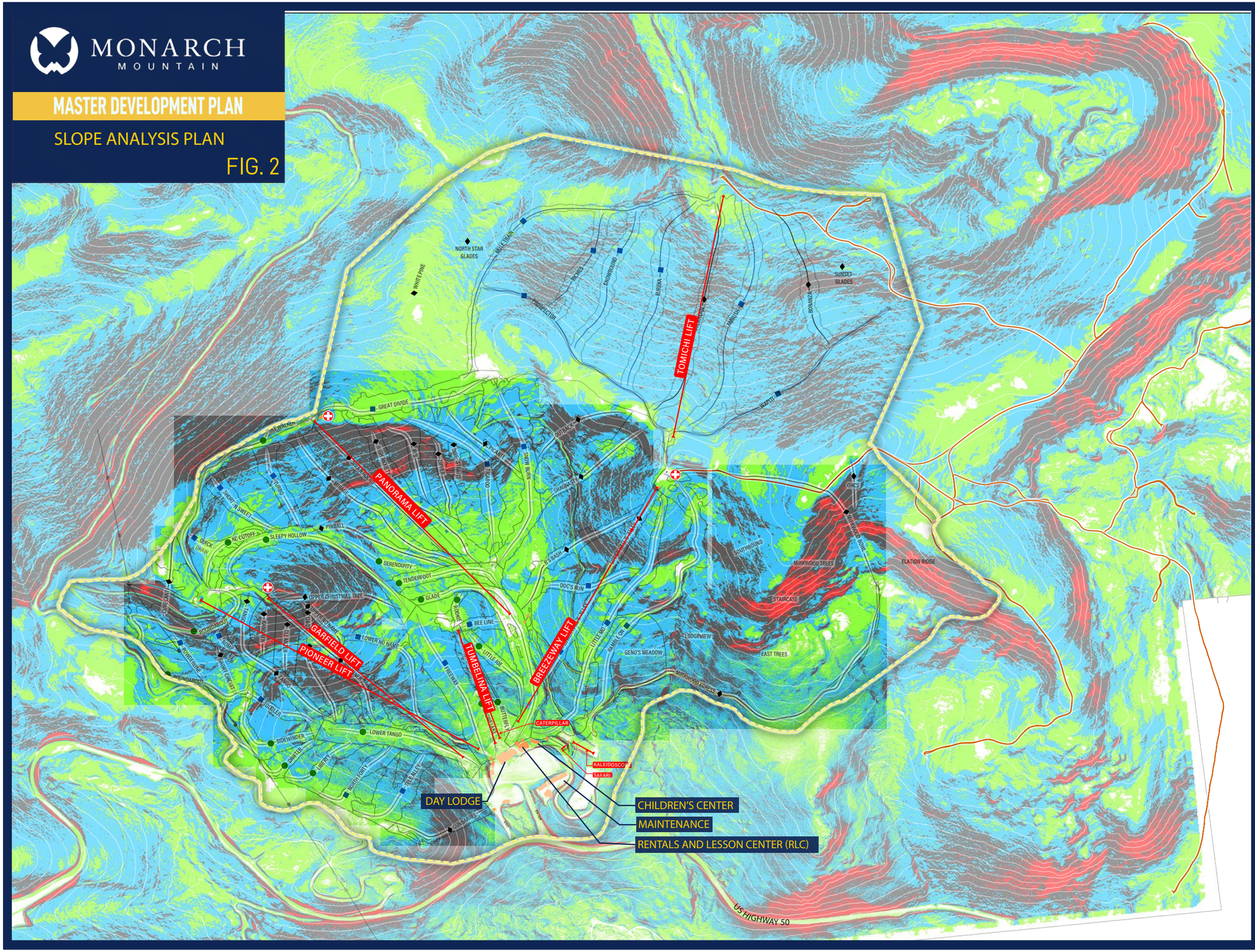
SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

SLOPE ANALYSIS PLAN

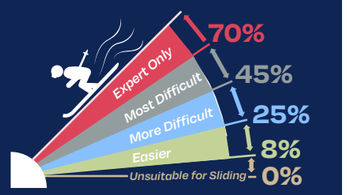
FIG. 2



Legend

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Transmission Line

Slope Legend



N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

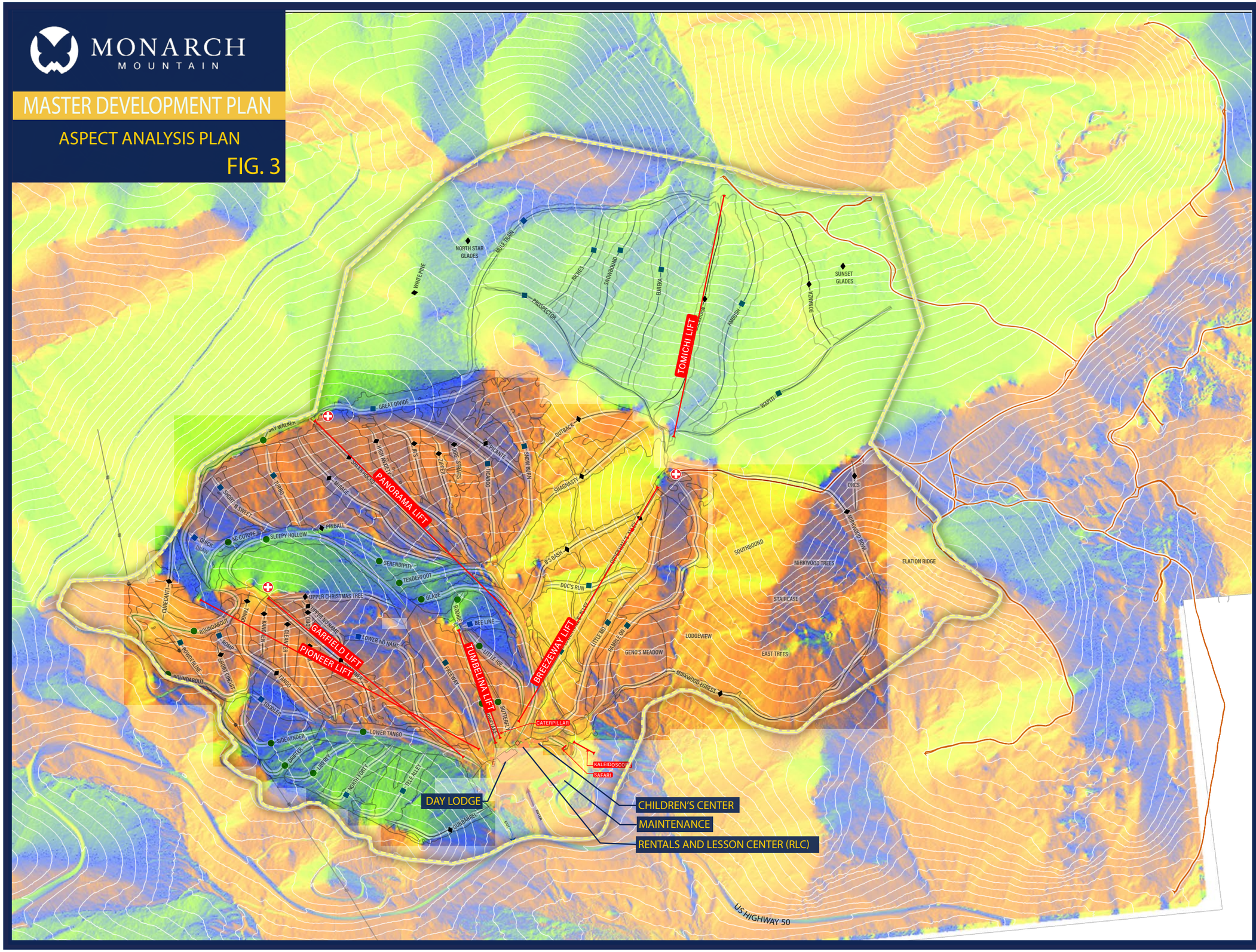
SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

ASPECT ANALYSIS PLAN

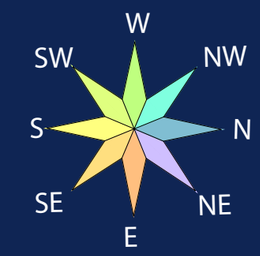
FIG. 3



Legend

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Transmission Line

Aspect Legend



N

Contour Interval:

SCALE (ft)

0 500 1000 1500 2000

SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

EXISTING WINTER CONDITIONS

FIG. 4

NO NAME BASIN WARMING HUT & BATHROOM FACILITIES

NORTH STAR GLADES
WHITE PINE
MULE TRAIN
PROSPECTOR
RICHES
SNOWBOUND
EUREKA
TOMICHI LIFT
DECKHORN
AMBUSH
BONANZA
SUNSET GLADES

GREAT DIVIDE
SKY WALKER
SHEEPSHOCKO
PANORAMA LIFT
HIGH ANXIETY
JR'S
ZIPPER
DIRE STRAITS
PICANTE
TICABOO
SNOW BURN
OUTBACK
SHAGNASTY
WAPITI
ORCS
MIRKWOOD BOWL
ELATION RIDGE

SHORT 'N SWEET
TURBO
MIRAGE
PINBALL
QUICK DRAW
KC CUTOFF
SLEEPY HOLLOW
SERENDIPITY
TENDERFOOT
GLADE
P'S BASH
DOC'S RUN
UPPER HALL'S ALLEY
SOUTHBOUND
MIRKWOOD TREES
STAIRCASE

CURECANTI
UPPER CHRISTMAS TREE
UPPER NO NAME
LOWER NO NAME
ROUNDABOUT
ROMP
TANGO
KANONEN
CLEANER
ALPINE
GARFIELD LIFT
PIONEER LIFT
ROOGIE
BEE LINE
LITTLE JOE
TUMBELINA LIFT
FREEWAY
BREEZEWAY LIFT
TELE ALLEY
LITTLE MO
RAMBLE ON
LODGEVIEW
GENO'S MEADOW
EAST TREES
MIRKWOOD EGRESS

POWDERLINE
SHORT CIRCUIT
TODDLER
SIDEWINDER
DRIFTER
LIBERTY
NORTH FORTY
LOWER TANGO
SNOWFLAKE
BUTTERFLY
CATERPILLAR
KALEIDOSCOPE
SAFARI

DAY LODGE
CHILDREN'S CENTER
MAINTENANCE
RENTALS AND LESSON CENTER (RLC)
GUNBARREL
EAST RIVER
US HIGHWAY 50

Legend

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Transmission Line
- Wetlands

N

Contour Interval:

SCALE (ft)

0 400 800 1200 1600

SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

EXISTING BASE AREA PLAN

FIG. 5

TUMBELINA LIFT
CATERPILLAR CARPET
BREEZEWAY LIFT
PIONEER LIFT
GARFIELD LIFT
LITTLE JOE
GLADE
SNOWFLAKE
BUTTERFLY
FREEWAY
LITTLE MO
RAMBLE ON
MIRKWOOD EGRESS
LOWER TANGO
NORTH FORTY
TELE ALLEY
GUNBARREL

SNOW SPORTS SCHOOL
JUNIOR MOUNTAIN YURT
RENTALS AND LESSON CENTER (RLC)
CHILDREN'S CENTER
TUBING YURT
KALEIDOSCOPE
SAFARI
RESTROOM FACILITY
SNOWCAT YURT
SKI PATROL
DAY LODGE
MOUNTAIN OPERATIONS ANNEX
SEDIMENT POND
WASTE WATER TREATMENT PLANT
2025 PARKING IMPROVEMENTS
MAINTENANCE

EXIT
ENTER
US HIGHWAY 50

Legend

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- Mountain Road
- SUP Boundary
- Wetlands

N

Contour Interval: 50'

SCALE (ft)

0 100 200 300 400

SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

SUP BOUNDARY ADJUSTMENT PLAN

FIG. 6

Grand Mesa, Uncompaghre and Gunnison National Forests

Grand Mesa, Uncompaghre and Gunnison National Forests

Pike and San Isabel National Forests

Pike and San Isabel National Forests

OLD MONARCH PASS ROAD

PLANNED NNB LIFT II L: 2,528' V: 810'

TOMICHI LIFT

PLANNED BREEZEWAY-NN BASIN ROPE TOW

PANORAMA LIFT

PLANNED DIVIDE EXPRESS L: 4,300' V: 980'

BREEZEWAY LIFT

GARFIELD LIFT

PIONEER LIFT

TUMBLELINA LIFT

CATERPILLAR

KALEIDOSCOPE

SAFARI

US HIGHWAY 50

Legend

- Forest Service Land
- Management Area 4.1: Mountain Resort Management Area
- GMUG Designated Trail Corridor
- Management Area 5: General Forest
- Pike and San Isabel NF Management Area 1B: Winter Sports Site
- Pike and San Isabel NF Management Area 2B: Rural and Roaded-Natural Recreation Areas
- Lift
- Ski Run by Ability Level
- Ski Patrol
- Building
- Mountain Road
- SUP Boundary
- Transmission Line

Planned

- Planned SUP Boundary Adjustment Phase 1
- Planned SUP Boundary Adjustment Phase 2
- New Lift
- Building
- Cat Access Road

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

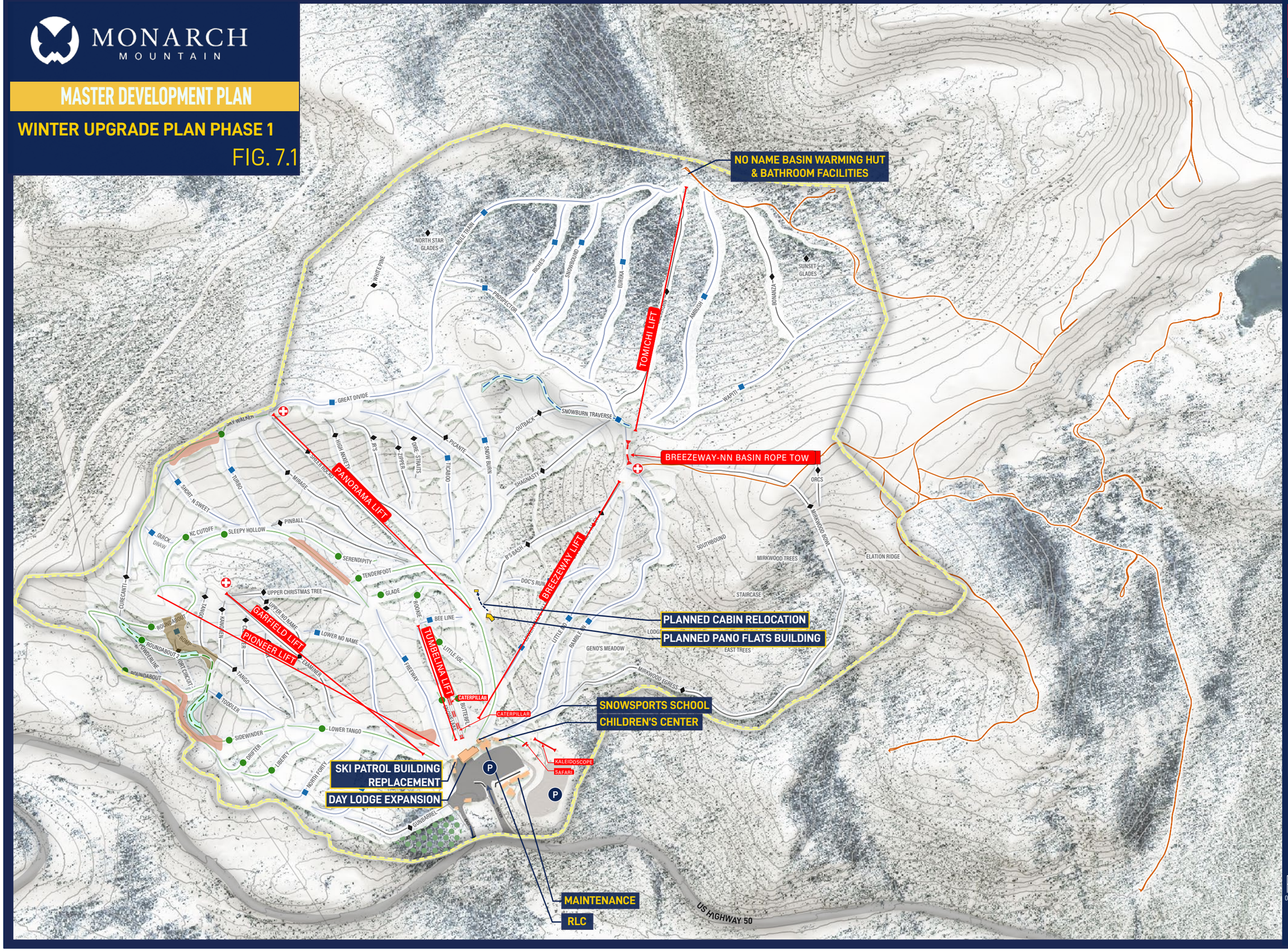
SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

WINTER UPGRADE PLAN PHASE 1

FIG. 7.1



Legend

Existing

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Transmission Line

Planned

- New Lift
- Lift to be Removed
- Building
- Planned SUP Boundary Adjustment
- Parking
- Ski Run by Abililty Level
- Vegetation Management Tree Clearing
- Terrain Improvements

Previously Approved

- Terrain Improvements

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

WINTER UPGRADE PLAN PHASE 2

FIG. 7.2

NO NAME BASIN WARMING HUT & BATHROOM FACILITIES

BREEZEWAY-NN BASIN ROPE TOW

RELOCATED CABIN

PANO FLATS

CHILDREN'S CENTER REPLACEMENT

PLANNED YURT REPLACEMENTS (3)

DAY LODGE EXPANSION

RLC BASE LODGE

PLANNED NORDIC BUILDING & BATHROOM FACILITIES

WASTE WATER TREATMENT PLANT EXPANSION

PLANNED PANO FLATS VAULT TOILET RELOCATON

PLANNED PARKING EXPANSION

LIFT MAINTENANCE BUILDING REPLACEMENT

TOMICHI LIFT

PANORAMA LIFT

PLANNED DIVIDE EXPRESS

BREEZEWAY LIFT

GARFIELD LIFT

PIONEER LIFT

TUMBELINA LIFT

NORTH STAR GLADES

MULE TRAIN

WHITE PINE

PROSPECTOR

RIDGES

SNOWBOUND

EUREKA

AMBUSH

WAPITI

BONANZA

SUNSET GLADES

GREAT DIVIDE

SKY WALKER

HIGH RIVER

SHEEP HORN

JR'S

TIPPER

WIRE STRAITS

PICANTE

TIC800

SNOW BURN

OUTBACK

SNOWBURN TRAVERSE

SHAGNASTY

ORCS

MIRKWOOD BOWL

ELATION RIDGE

SOUTHBOUND

MIRKWOOD TREES

STAIRCASE

B'S BASIN

DOC'S RUN

LITTLE MO

BAMBI LON

LODGE

GENO'S MEADOW

EAST TREES

MIRKWOOD EXPRESS

TURBO

MIRAGE

PINBALL

SHORTY 'N SWEET

QUICK DRAW

KC CUTOFF

SLEEPY HOLLOW

SERENDIPITY

TENDERFOOT

GLADE

ROOKIE

BEE LINE

LITTLE JOE

CURECANTI

ROUNDABOUT

ROMP

JOINT

UPPER CHRISTMAS TREE

UPPER NO NAME

LOWER NO NAME

CHUTE

ROUNDABOUT

LOWDOWN

ROUNDABOUT

HORN CIRCUIT

EXAMINER

TANGO

TODDLER

SIDEWINDER

LOWER TANGO

DRIFTER

LIBERTY

NORTH FORTY

TELE ALLEY

CATERPILLAR

BUTTERFLY

CATERPILLAR

KALEIDOSCOPE

SAFARI

US HIGHWAY 50

Legend

Existing

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Transmission Line

Planned

- New Lift
- Building
- Parking
- Cat Access Road
- SUP Boundary Adjustment

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

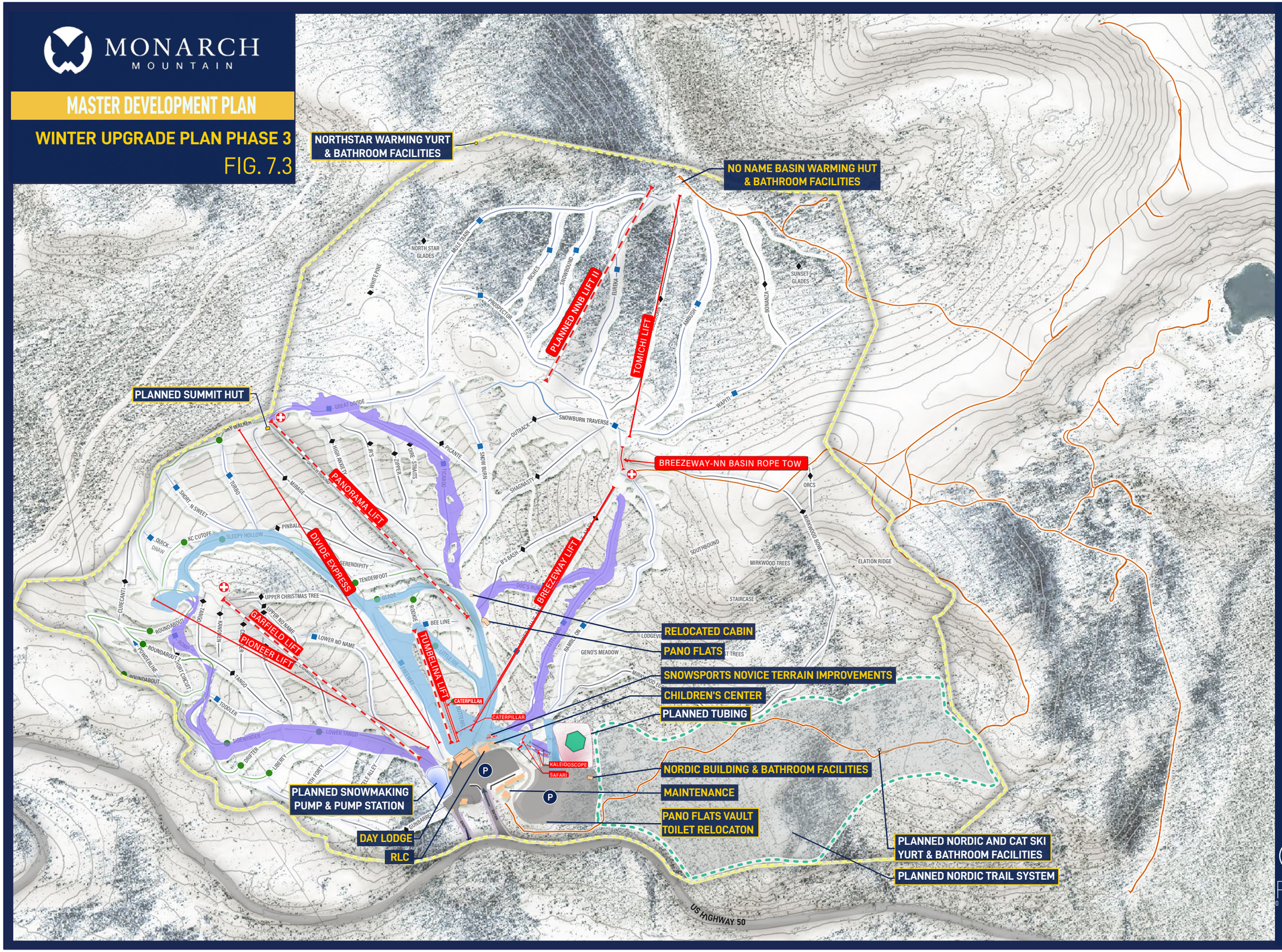
SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

WINTER UPGRADE PLAN PHASE 3

FIG. 7.3



Legend

Existing

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Transmission Line

Planned

- New Lift
- Building
- Snowmaking Coverage
- Nordic Ski Terrain
- Terrain Improvements

Previously Approved

- Snowmaking Coverage

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

WINTER UPGRADE PLAN

FIG. 8

NORTHSTAR WARMING YURT & BATHROOM FACILITIES

NO NAME BASIN WARMING HUT & BATHROOM FACILITIES

PLANNED SUMMIT HUT

PLANNED NNB LIFT II L: 2,528' V: 810'

TOMICHI LIFT

PLANNED BREEZEWAY-NN BASIN ROPE TOW

PANORAMA LIFT

PLANNED DIVIDE EXPRESS L:4,300' V:980'

BREEZEWAY LIFT

GARFIELD LIFT

PIONEER LIFT

TUMBLELINA LIFT

PLANNED CABIN RELOCATION

PLANNED PANO FLATS BUILDING

CHILDREN'S CENTER

PLANNED RLC REPLACEMENT

PLANNED TUBING

PLANNED NORDIC AND CAT SKI YURT & BATHROOM FACILITIES

PLANNED NORDIC BUILDING & BATHROOM FACILITIES

PLANNED PARKING EXPANSION

LIFT MAINTENANCE BUILDING REPLACEMENT

YURT REPLACEMENT (3)

SKI PATROL BUILDING REPLACEMENT

SNOWMAKING POND AND PUMP STATION

DAY LODGE IMPROVEMENTS

WASTE WATER TREATMENT PLANT EXPANSION

US HIGHWAY 50

Legend

Existing

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- SUP Boundary
- Cat Ski Road
- Wetlands

Planned

- Snowmaking Coverage
- Disturbance
- New Lift
- Lift to be Removed
- Building
- Cat Access Road
- Planned SUP Boundary Adjustment
- Parking
- Ski Run by Abililty Level
- Terrain Improvements
- Vegetation Management Tree Clearing
- Nordic Ski Area

Previously Approved

- Terrain Improvements
- Snowmaking Coverage

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

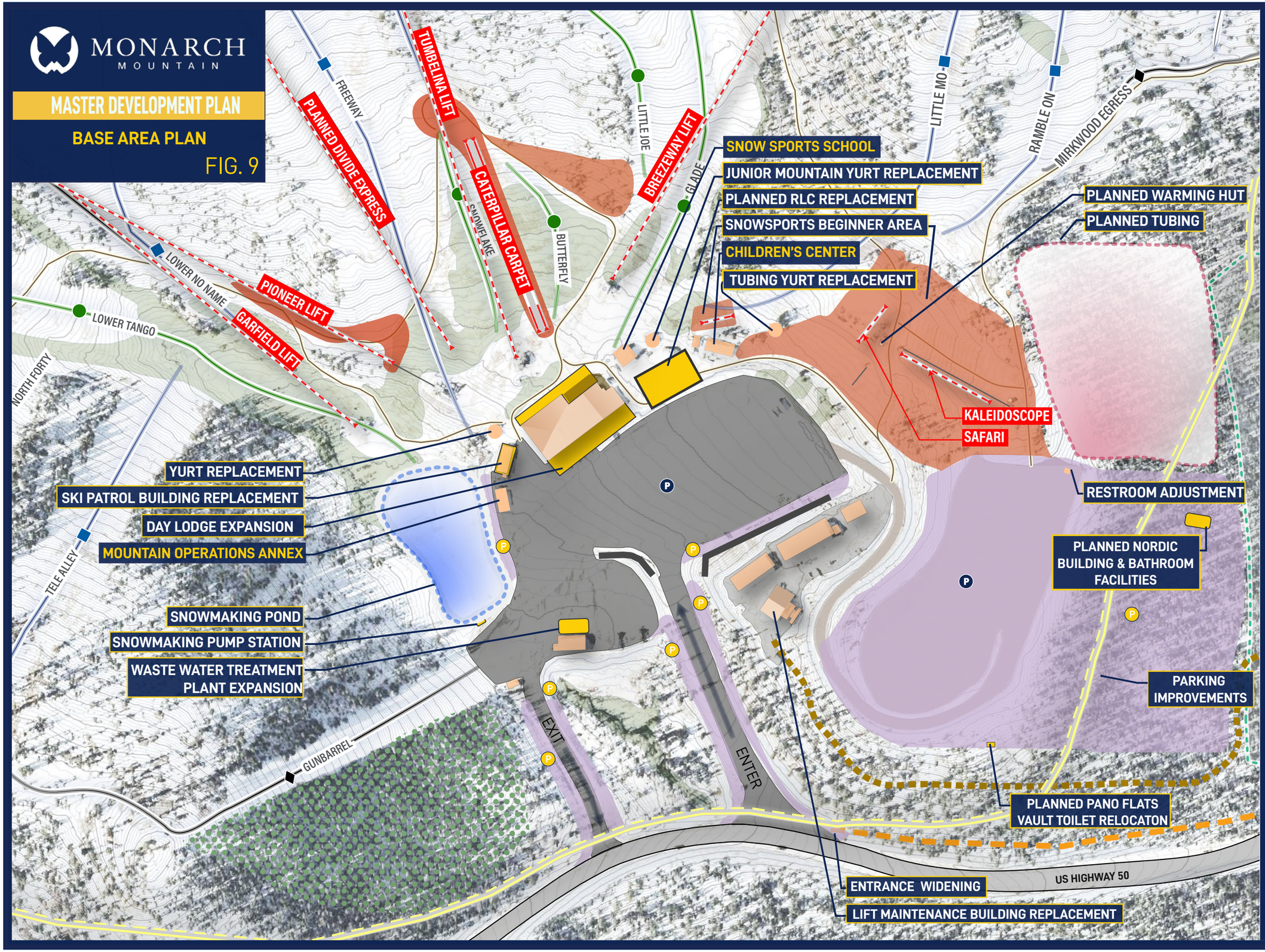
SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

BASE AREA PLAN

FIG. 9



Legend

Existing

- Lift
- Ski Run by Ability Level
- Ski Patrol
- Parking
- Building
- Mountain Road
- SUP Boundary
- Wetlands

Planned

- New Lift
- Lift to be Removed
- Building
- Cat Access Road
- Planned SUP Boundary Adjustment
- Parking
- Terrain Improvements
- Retaining Wall
- Vegetation Management Tree Clearing
- Tubing
- Nordic Ski Area

N

Contour Interval: 50'

SCALE (ft)

0 100 200 300 400

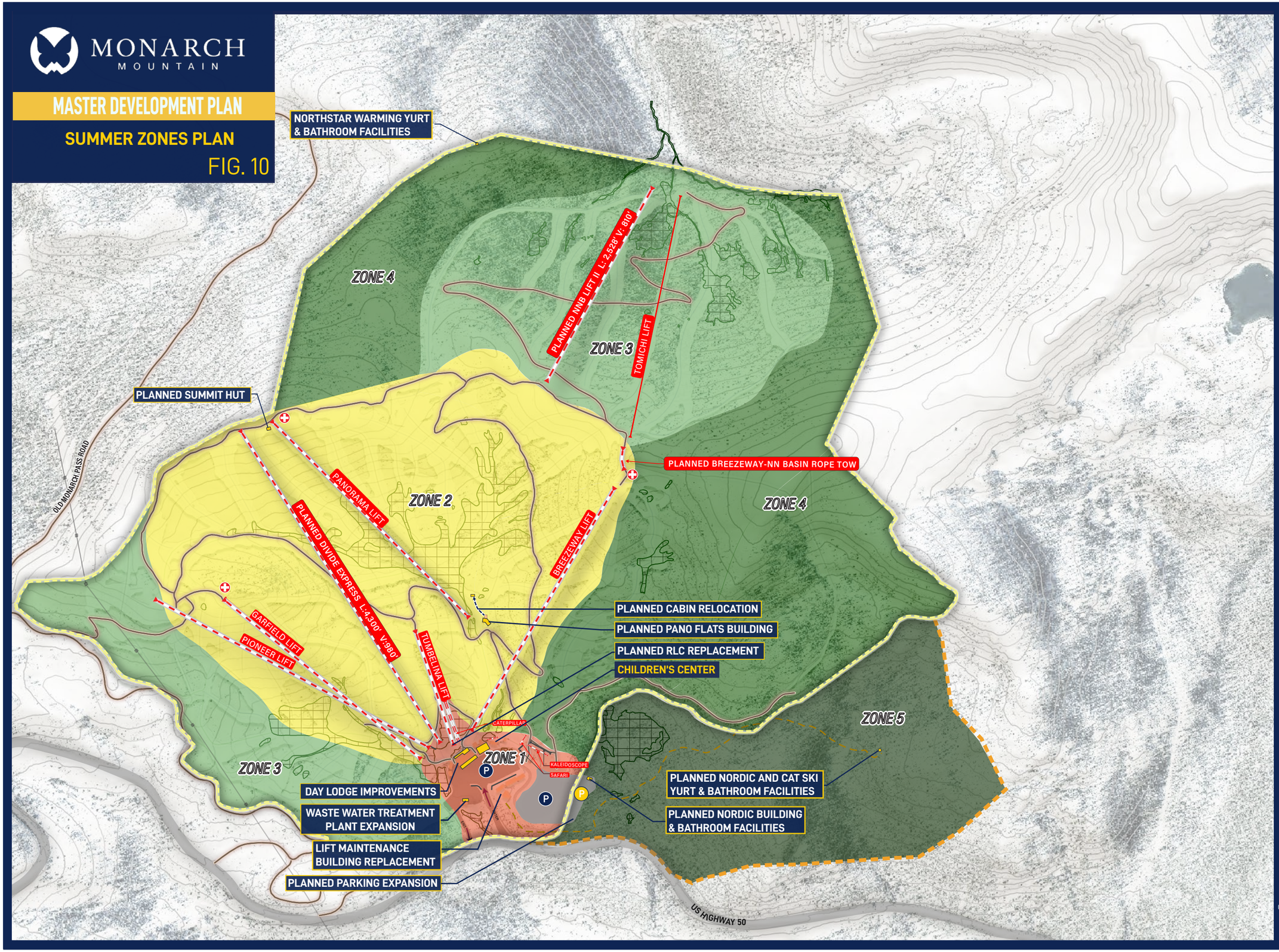
SE GROUP

MONARCH MOUNTAIN

MASTER DEVELOPMENT PLAN

SUMMER ZONES PLAN

FIG. 10



Legend

Existing

- Lift
- Ski Patrol
- Parking
- Building
- Mountain Road
- SUP Boundary
- Transmission Line
- Wetlands

Planned

- New Lift
- Lift to be Removed
- Building
- Cat Access Road
- Planned SUP Boundary Adjustment
- Parking

Zones

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

N

Contour Interval: 50'

SCALE (ft)

0 500 1000 1500 2000

SE GROUP