



# TIMBERLINE 2022 MASTER DEVELOPMENT PLAN

*Prepared for:*



USDA Forest Service  
Mt. Hood National Forest  
Zigzag Ranger District

*Prepared by:*



# PREFACE



This Master Development Plan continues the ongoing process of long-term planning and strategic visioning for Timberline by R.L.K. and Company, the operators of Timberline. It takes a comprehensive and thoughtful approach to planning the connection of Summit Ski Area (hereafter referred to as Summit Pass) with Timberline Ski Area. The integration of Summit Pass, which was recently acquired by R.L.K. and Company, will help resolve long-standing use conflicts, traffic problems and parking limitations at Timberline. This will help Timberline live up to its *Guiding Principles* and *Ethos*. This preface introduces these guiding principles and provides an overview of recent planning efforts and Timberline.

In 2005 R.L.K. and Company wrote a pamphlet entitled *The Next 50 Years: Our Vision for the Future* as a public guide for the continued direction of Timberline. This vision, which was received well by the general public, seeks to maintain “quality recreation within the capabilities of the ecosystem,” at Timberline and promotes a pledge to future development that complements the SUP in a way which does not overshadow the historic lodge. It acknowledges a powerful and important “*sense of place*” at Timberline and recognizes a historical context consistent with President’s Franklin Delano Roosevelt’s original vision for Timberline when he stated “*There will be many [visitors] to Timberline from the outermost parts of our Nation, travelers from the Middle West, the South, and the East*” and then dedicated the Lodge as “*a place to play for generations of Americans in the days to come.*” His dedication speech also makes clear that the Lodge was envisioned as a year-round resort, providing future visitors “enjoyment of new opportunities for play in every season of the year.” In order to fulfill this vision and maintain Timberline’s original purpose R.L.K. and Company practices a principle they refer to as “*preservation through use.*” This principle acknowledges Timberline’s original purpose as well as its cultural history and significance and makes it relevant in today’s world. It recognizes the attraction and economic engine of recreation that Timberline offers to the region and embraces that it has a mission to operate a robust mountain resort while preserving the original feel and fabric of the original Lodge.

Furthermore, Timberline has adopted *Guiding Principles* and an *ethos* to set the stage for the experience they seek to provide to staff and guests. These *Guiding Principles* establish the following mission statement for the Timberline.

***“To create life-long memories by offering the best in historic lodging, fine dining, and exciting, family-friendly skiing and snowboarding, backed by a high standard in service and hospitality to every guest.”***

A Timberline Ethos was established in collaboration with the entire staff, and this too is a guiding statement which informs not only the staff’s focus, but the focus of this Master Development Plan (MDP).

### ***We Are Timberline!***

- ***We provide exciting family friendly skiing, snowboarding, and year ‘round recreation.***
- ***We offer the best in historic lodging, fine dining, meaningful souvenirs, and memorable experiences.***
- ***We practice historic preservation and environmental stewardship.***
- ***We provide a safe and warm friendly atmosphere.***
- ***We provide jobs and economic stimulus for our local community.***
- ***We display a high level of social responsibility and maintain a safe and healthy working environment.***
- ***We are committed to diversity and inclusion of all people in all aspects of what we do.***
- ***We support each other. We are positive. We are authentic.***
- ***We are Proud to Be Your Host!***



To build on this Ethos, R.L.K. and Company presented draft MDP concepts to a focus group of Timberline employees in 2018, and subsequently conducted a robust round of public engagement through a series of stakeholder outreach meetings. These meetings were facilitated by Sustainable Northwest, a regional non-profit specializing in Federal lands use. Consistent themes emerged from these sessions. These included: continued support for environmental stewardship; the perceived value of the rich history and deep cultural connections to Timberline; the importance of continued regular community engagement; and emerging concerns around decreasing barriers to entry and increasing diversity of recreation participants. However, most concerns centered around transportation issues such as a lack of parking on the mountain, access challenges, and traffic congestion. There was strong support voiced to increase available parking on the mountain but not specifically at the upper elevations of the mountain. A common theme heard at these outreach sessions was that R.L.K. and Company needed to think more broadly to address these age-old issues. With this feedback, R.L.K. and Company began thinking about using the larger landscape of the Village of Government Camp (Government Camp) to address transportation and access needs. Specifically, there was interest in connecting Government Camp to Timberline with alternative modes of transportation such as a gondola.

In part because of this interest, R.L.K. and Company purchased Summit Pass in 2018. Summit Pass is located on the south slopes of Mt. Hood, at the east end of Government Camp. The small ski area has a rich heritage in the ski industry dating back to 1927. For nearly a century, the ski area has been a family-friendly, affordable place for beginner skiers and riders to learn the sport of skiing and experience the outdoors. In late 2020, the permit boundaries of the two ski areas were officially connected by the Forest Service, and in mid-2021 the SUPs for operating the two areas were consolidated into one Timberline SUP. This MDP is a requirement of that consolidation.

This MDP focuses on opportunities within the larger area around Government Camp and identifies future projects that can serve as a catalyst for alternative transportation solutions, smart planning, proper parking and circulation, and a more pleasant sense of arrival and visitor experience. As President Franklin Roosevelt said in dedicating Timberline in 1937, Timberline is intended to be “a place to play for generations of Americans in the days to come.”

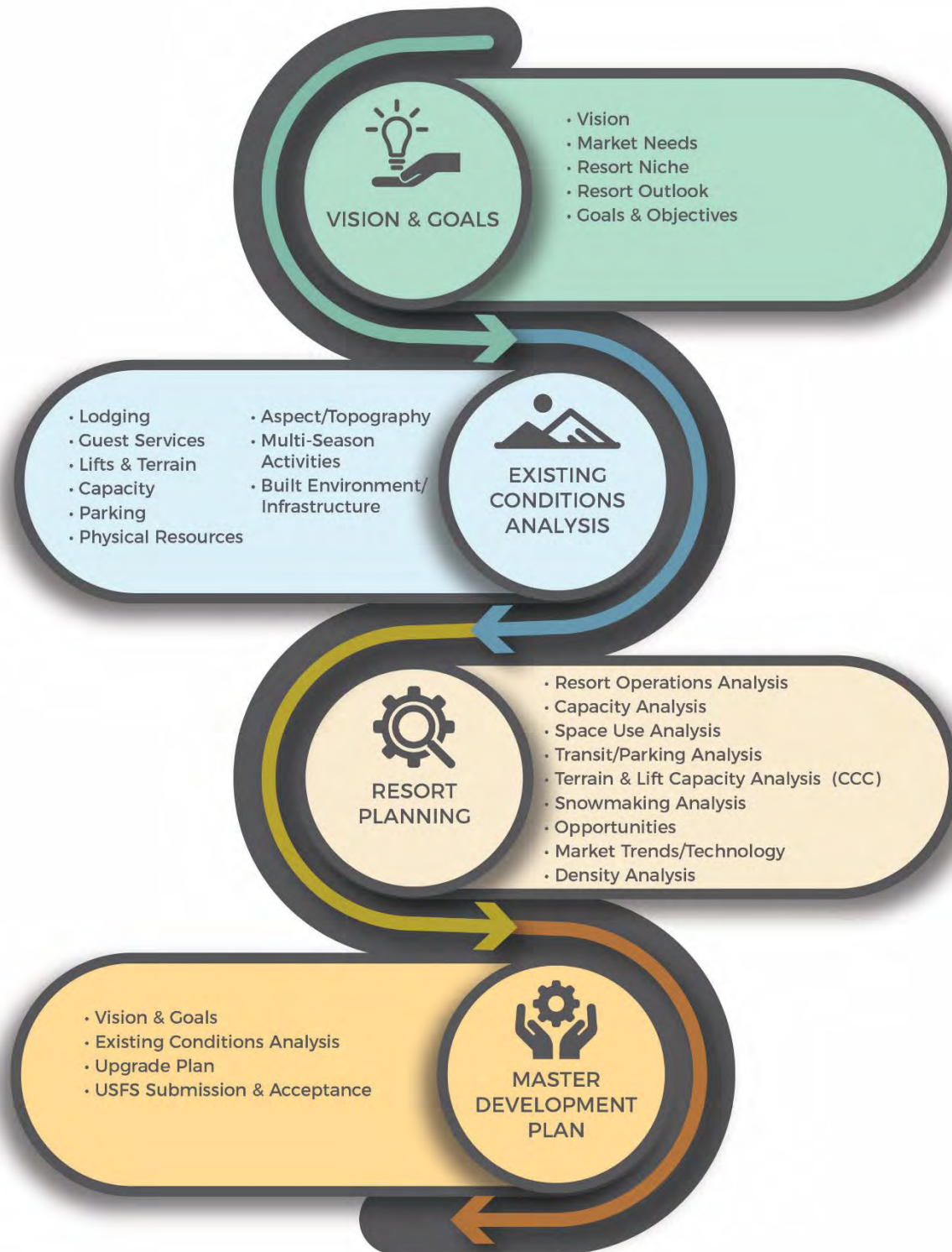
R.L.K. and Company notes that the vision for Summit Pass is to continue to operate the facility as a community ski hill, which is family-orientated, affordable, and friendly, while upgrading facilities to support the vision of connecting Government Camp with Timberline. Strategies for success will be built around improved infrastructure, transportation, access and delivering a quality customer experience that reduces the hassle factor and the current reliance on cars for circulation within the area.

This MDP is intended to be the guiding document for future development at Timberline. This MDP exclusively evaluates facilities at the resort that are directly related to the ski area operation and does not address Timberline Lodge historic preservation and facilities maintenance work, or other non-ski area-related projects. Illustration 1 is a visual representation of the process on which this document is based.

This MDP is divided into five chapters, plus appendices:

- ❖ Chapter 1—Introduction: provides an overview of the plan, summary of Timberline’s location and market, statement of the plan vision and goals, and an overall summary of the MDP.
- ❖ Chapter 2—Design Criteria: defines and describes key mountain planning concepts, assesses physical resources such as topography and slope gradients and discusses applicable United States Forest Service policy, direction and agreements.
- ❖ Chapter 3—Existing Conditions: describes existing resort facilities for both winter and summer, and evaluates the current balance of resort operations, facilities, and infrastructure. This includes lifts, terrain, guest services, snowmaking and parking. This chapter also provides the baseline conditions which drive the upgrade plan.
- ❖ Chapter 4—Previously-Approved Projects, Not Yet Implemented: describes projects that have been previously approved by the United States Forest Service but have not yet been implemented. It is anticipated that the majority of these projects will ultimately be implemented as capital becomes available.
- ❖ Chapter 5—Upgrade Plan: describes the proposed upgrades and improvements to the experience at Timberline.
- ❖ Appendix A: provides terrain and space use specifications for existing conditions and the upgrade plan.

Illustration 1. The MDP Process



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# CHAPTER 1—INTRODUCTION



## A. PURPOSE OF A MOUNTAIN RESORT MASTER DEVELOPMENT PLAN

Many mountain resorts across the country are partially or completely located on public lands. Each mountain resort on National Forest System (NFS) lands must obtain a U.S. Department of Agriculture Forest Service (Forest Service) 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 resort and the proposed improvements on the NFS lands within the permit boundary. The previous Timberline and Summit Pass SUPs have been consolidated into one Timberline SUP and this document fulfills the SUP requirements for a MDP.

This MDP provides direction for the future development and improvement of Timberline, including both the Timberline and Summit Pass areas. It ensures 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 Timberline and identifies a comprehensive plan for future improvements to the resort. This MDP replaces the 2019 Timberline MDP and 2019 Summit Ski Area MDP and is intended to be the guiding document for Timberline over the next ten years.

This MDP was created using an iterative and collaborative process between Timberline planners, Forest Service personnel who administer the SUP, stakeholders, and SE Group – the mountain planners and their team, including Skylab Architects and Nelson Nygaard transportation consultants. Forest Service “acceptance” of this MDP is consistent with the requirements of Timberline’ SUP and replaces the 2019 Timberline MDP and 2019 Summit MDP.

Forest Service acceptance of this document as a planning tool for Timberline does not imply authorization to proceed with implementation of any of the projects that are identified herein. Therefore, all projects identified within this MDP that have not been previously approved by a prior National Environmental Policy Act of 1969 (NEPA) process will require site-specific environmental analysis and approval per 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 and 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 Supplemental Information.*



## B. STAKEHOLDER ENGAGEMENT AND FEEDBACK

R.L.K. and Company places a strong emphasis on public involvement, partnerships, and building trust with stakeholders. As discussed in the Preface, R.L.K. and Company held a number of stakeholder engagements throughout the 2019 Timberline MDP process to solicit feedback about the projects planned in the MDP. Additionally, two stakeholder outreach meetings were held to assist with the development of the 2019 Summit MDP. These meetings focused on the ski area's history and guiding tenets, while also vetting conceptual proposals for the projects included in the MDP.

The full reports for both the 2019 Summit MDP and 2019 Timberline MDP by Sustainable Northwest were published and are available upon request. Engagement highlights and the resulting actions taken by R.L.K. and Company are provided here. Because this 2022 Timberline MDP is mostly a compilation of the projects included in those two previous MDPs, and the projects added since the development of those MDP are consistent with prior stakeholder input, no additional stakeholder outreach was done.

### *Consistent Themes*

- ❖ Growing Oregon population and vital need for initiatives that improve on-mountain connectivity, U.S. Route 26 (referred to hereafter as Highway 26) safety concerns, parking access, and traffic congestion.
- ❖ Enhancing the beginner experience and maintaining the Summit Pass niche as a beginner focused ski experience.
- ❖ Need to accommodate a broader diversity of visitors and reducing barriers to entry in such a way that promotes outdoor education with youth, and educates a diverse public about the natural environment, heritage, and recreation ethics.
- ❖ Attracting and supporting a high-quality workforce by working to help develop opportunities for quality, affordable housing solutions and mass transportation.
- ❖ Rich history, deep cultural connections, and role of Timberline Lodge as a National Historic Landmark and public space.
- ❖ Importance of historic preservation, environmental stewardship, and sustainability initiatives.
- ❖ The important role that managed recreation plays in a mixed and multiple use public forest.
- ❖ Need for four-season operations and attractions including lodging, dining, a mix of outdoor recreation offerings, plus operating as a renowned and highly visited regional tourism destination and "gateway experience" on the Mt. Hood National Forest.
- ❖ Strengthening local economic development and community engagement by promoting Government Camp businesses opportunities and developing community-orientated spaces and programs.
- ❖ R.L.K. and Company's long-term commitment and excellent reputation (since 1955).
- ❖ The benefit of leveraging partnerships and community involvement as pillars of successful operations on public lands, and the need for an on-going dialogue about master planning.

## *Conclusion & Results of Stakeholder Outreach*

Participant feedback expressed general support of the R.L.K. and Company and the previous MDPs. It also provided constructive criticism and some new ideas to the various proposals presented in a draft development stage. Generally speaking, one common feedback theme was to “think broader” and consider connectivity to Government Camp by contemplating a larger footprint. The perennial idea of a gondola link was again brought up and promoted. Concurrently, an opinion was voiced that parking solutions should be contemplated in lower elevations, rather than the more fragile environments of the high country. The purchase of Summit Pass presents an opportunity to address these suggestions and this MDP more clearly outlines how Timberline can “think broader”.

On the other end of the spectrum, a perspective was shared related to the 2019 Timberline MDP that no additional lodging or parking development should occur on the mountain, and promotion of tourism and recreation on the mountain should cease. This position is essentially a no-action development philosophy which R.L.K. and Company recognizes but finds unrealistic. Instead, R.L.K. and Company remains dedicated to a solutions-oriented approach to problems through progressive “smart planning.” Having said that, R.L.K. and Company has for now decided to withdraw its draft concept for five additional cabins at the Timberline Phlox Point site. In addition, the Molly’s parking lot portal proposal included in the 2019 Timberline MDP is now considered with the current planning for the Summit Pass area and is considered more as a secondary, potential future phase, to plans drawn for Summit Pass aimed at achieving the same goal of providing more parking, snow play area, and guest service space.

Future development at Timberline (and specifically Summit Pass) provides opportunities to expand summer activities as well as winter snow-play activities. It provides opportunities for entry-level ski school offerings, and other more easily affordable and easy access programs to pro-actively reduce barriers to entry into the sport. In addition, winter snow-play at Timberline could also reduce public safety risks associated with the informal and unsanctioned snow-play that currently occurs at Timberline and along the roadsides. These were issues stakeholders also voiced an interest in during the stakeholder outreach meetings for the 2019 Summit MDP.



## C. LOCATION

Timberline is located entirely on lands under the jurisdiction of the Zigzag Ranger District of the Mt. Hood National Forest in Clackamas County, Oregon. Timberline encompasses approximately 1,685 acres regulated by a SUP administered by the Forest Service; the current terms of the SUP expire September 30, 2038. Timberline's SUP is the longest held USDA Forest Service permit, dating back to 1955.

The SUP area is contained within the following Public Lands Survey System areas: Sections 29, 31, and 32, and Protracted Blocks 47, and 49, Township 2S, Range 9E., Willamette Meridian; Sections 6, 7, 8, and 18, Township 3S, Range 9E., Willamette Meridian; Sections 12, 13 and 24, Township 3S, Range 8.2E. and 8.5E, Willamette Meridian. Ski area infrastructure operates at elevations ranging from approximately 3,9750 feet at the base of the Summit Pass area to 8,540 feet at the top of Palmer Express.

Timberline is approximately 55 miles east of Portland, Oregon, the largest metropolitan area in Oregon, with a population of over 2.3 million (refer to Figure 1). It is accessed by the Timberline Road (OR Hwy 173) via Highway 26 as well as Highway 26 itself. Timberline is a popular ski area and is home to a public building of national significance. It is one of Oregon's most highly visited tourist attractions seeing an approximated two million annual visits. Mt. Hood offers a stark contrast to surrounding environments, making the snow and mountain adventure available at Timberline a serious draw for this market in the winter and summer seasons. The allure of the unique mountain environment at Timberline provides a steady stream of visitors seeking to explore the forest and recreate on their public lands.

## D. RESORT SUMMARY

Both Timberline and Summit Pass have long rooted histories. Together, the two areas form the overall Timberline operation and are located in what is considered by many to be the 'cradle' of Pacific Northwest skiing. The following describes each resort's history.

### 1. TIMBERLINE

Timberline has a long, storied history. Timberline Lodge was constructed during the Great Depression as part of the Works Progress Administration. The Lodge was dedicated by President Franklin D. Roosevelt on September 28, 1937. In his speech, Roosevelt spoke of his vision for the Lodge—to create a destination for year-round recreation for current and future generations.

After years of war and failed operations, Timberline Lodge had fallen into disrepair. Richard L. Kohnstamm, a social worker from New York City who had recently moved to Portland to work for a non-profit, visited the Lodge in 1954 and was enamored with the building and its potential as a year-round resort and a public place. He felt the Lodge meant a great deal to the people of Oregon and should be preserved for future generations. He applied for and was awarded the operator permit. He quickly set out developing the Lodge and Ski Area by installing a heated pool and constructing new chairlifts.

The Kohnstamm family continues to operate the Lodge and Ski Area today through their company, R.L.K. and Company, and focuses on providing a high-quality guest experience that supports the on-going stewardship of the historic facilities. Timberline Lodge was declared a National Historic Landmark in 1977.

The National Historic Landmark is a year-round destination for skiers and riders, hikers and mountaineers, mountain bike riders, hotel guests, and tourists. The ski area alone hosts over 300,000 guests annually, as shown in Table 1. Timberline is estimated to host over two million annual visits.<sup>1</sup>

Because of its unique history and attributes, Timberline’s SUP is a “Resort” permit, unlike other ski resorts on NFS lands that operate under a “Ski Area” Special Use Permit. Among other things, the Resort SUP specifically authorizes four-season public use of the facilities. Year around recreation has been permitted at Timberline since 1937, and therefore, the 2011 Ski Area Recreational Opportunities Enhancement Act (SAROE) amendment to the 1986 Ski Area Permit Act is not applicable to Timberline.

Timberline’s ski season extends throughout the summer—the longest in North America—providing diverse opportunities to a spectrum of visitors. With its four-season Resort SUP, Timberline’s non-skiing and multi-season activities are, and will continue to be, important guest offerings at the resort because summer recreational activities tend to attract a more diverse range of new guests than do skiing and snowboarding (e.g., more balanced gender demographics, older median age, and more families), which is essential to the continued success of the resort. The alpine, nature-based activities provided at Timberline, coupled with the existing ski area infrastructure and amenities, offer an experience for guests not commonly available on NFS lands.

With ski area visitation representing only about 15 percent of annual visitation at Timberline, a situation that is uncommon for mountain resorts, it is clear that visitation from non-skiing guests is an extremely important consideration when evaluating resort services such as parking, restaurants, rest rooms, and other guest services.

Table 1. Timberline Ski Area Annual Visitation

Season	Winter	Summer	Total
2020/21*	184,914	63,145	248,059
2019/20*	207,597	48,987	256,584
2018/19	273,350	65,110	338,460
2017/18	245,316	111,203	356,519
2016/17	189,517	82,870	272,387
2015/16	213,934	115,282	329,216
2014/15	182,419	46,360	228,779
2013/14	241,874	127,617	369,491
2012/13	224,657	124,459	349,116
2011/12	226,788	126,079	352,867
<b>AVERAGE</b>	<b>219,037</b>	<b>91,111</b>	<b>310,148</b>

Note: Due to the Covid 19 pandemic, the 2019/20 season was shortened and visitation during the 2020/21 season varied and were corrected with best estimates.

<sup>1</sup> Timberline Lodge History. <https://www.timberlinelodge.com/about-us/history>



## 2. SUMMIT PASS

Summit Pass is the oldest ski area in the Pacific Northwest (its first permit was issued in 1927) and is the second oldest, continuously operating, ski area in the United States. Portland Advertising Club was the original permit holder and operated the warming hut and open glades with volunteers. In 1928 the nearby Multotorpor Jumping Hill was established attracting more people to the area. This recreational land designation was particularly successful along the Mt. Hood Highway corridor between Rhododendron and Government Camp, with the initial culmination being the building of Timberline Lodge in 1937.

Major historical milestones for Summit Pass include:

- the 1959 installation of a T-bar
- construction of the present-day base area lodge in 1966
- construction of the existing chairlift in 1980
- Charlie Wessinger's 1991 purchase of the ski and snow play area and introduction of the legal entity Northwest Nordic, Inc.
- J.S.K. and Company's June 2018 purchase of 100% of NNI stock from Charlie Wessinger
- NNI elects in July 2018 to sublease the operation of Summit Pass to R.L.K. and Company
- J.S.K and NNI dissolved when Summit's permit area was consolidated with Timberline's permit area

## E. TIMBERLINE'S VISION AND GOALS

The primary vision for Timberline is a resort which preserves Timberline's heritage while balancing the growing demand to visit the site. The population in metro Portland has swelled in recent years and this trend is forecasted to continue. This relatively rapid population growth has corresponded to increasing visitation, putting a strain on Timberline's facilities and resulting in overcrowding. Improvements are required to bring the resorts' facilities into balance with new levels of visitation and market demand and elevate the customer experience to an acceptable level.

R.L.K. and Company's vision for base-area development at the east end of Government Camp also supports a larger platform for economic development and contemplates the emergence of additional private business opportunities on private land as well as additional public/private efforts to develop additional support services in Government Camp, and in the Hoodland area.

One of R.L.K. and Company's primary intentions is to provide a solutions-oriented catalyst for existing problems facing the mountain community. R.L.K. and Company recognizes that some critical elements to future success on the mountain lay outside of its permit area and are above the practical ability of the base area program.

Offsite elements include a sustainable Mt. Hood Express public transit system expanded to include the Gorge Express connection to Hood River and the Cascades East Transit connection to Warm Springs, a workforce housing development within walking distance of the transit system, and the future siting and development of a Mt. Hood Transit Center in the vicinity of Government Camp. R.L.K. and Company also supports and is highly vested in the future re-location and upgrade of the Government Camp Rest Area, an Oregon Priority Project designated by Governor Kate Brown in 2020.

R.L.K. and Company will continue to support and work closely with local, County, State, and Federal representatives to address additional inadequacies surrounding the visitor experience and quality of life on Mt. Hood. Areas of collaboration include transportation initiatives, tourism promotion, access management, law enforcement, various safety initiatives, wildfire prevention, health and human service issues, historic preservation, environmental protection and natural resource management, issues around diversity, equity, and inclusion, sustainability, and promoting mountain heritage and culture.

The overall goal of the winter- and summer-oriented improvements described in this MDP is not to drive new winter visitation to Timberline, but rather to bring the existing facilities into better balance with existing visitation levels; thus, meeting the ever-changing expectations of its marketplace. Smart planning is necessary to continue to accommodate the public in a way that does not diminish from the experience nor harm or overshadow the historic Timberline Lodge. To that end, this MDP utilizes innovative mountain planning techniques that will enhance the year-round guest experience while maintaining appropriate skier and other user densities and respecting the unique character of Timberline. In addition, because R.L.K. and Company has a long-term commitment to the people, environment, and preservation of Mt. Hood and Timberline Lodge, environmental topics like climate change are discussed throughout the document.

Timberline has a desire to become the premier learn-to-ski destination in the region. This goal builds upon Timberline's current market position, the incredible beginner and teaching opportunities available, and the overall learning progression Timberline is able to provide across seasons. It will also fulfill a critical niche in the skiing industry; that is, being a family-friendly, affordable place for first timers and beginner skiers and riders to explore the sport. Ski areas like Timberline are key to engaging and attracting the next generation of skiers and riders. The acquisition of Summit Pass will aid Timberline in this desire.

Continuing to provide diverse opportunities to a spectrum of visitors is also central to Timberline's summer activity goals. Integral to this goal is the resort's recent introduction of mountain bike trails and skills park. The Park, constructed in summer of 2021, will bring a new type of guest to Timberline in the summer, and further diversify the resort's spectrum of offerings.

Timberline has a tremendous opportunity to introduce guests, who often live in more urban/ suburban environments, to the National Forest and a natural alpine environment in a fun and comfortable setting. Opportunities for environmental education, stewardship, and overall public lands awareness are present across Timberline's SUP area. Developed activities in an appropriate setting will promote these opportunities, thereby achieving the goal of encouraging guests to further explore their public lands while feeling comfortable doing so. Enhancing the connection between the Timberline and Summit Pass areas will assist with this by adding an efficient parking and entry point at Summit Pass alongside a scenic gondola ride up to the higher and more remote sections of the mountain.

The Forest Service has acknowledged a demonstrated need to encourage the public, particularly youth, to explore the lands within the National Forests. As an identifiable and accessible portal to NFS lands, Timberline provides a gateway experience for visitors to the Mt. Hood National Forest and has a unique opportunity to meet this need through the provision of a range of recreational opportunities and experiences suitable to the diverse public groups that live in and visit the area.

This MDP details a new Summit Pass Base Area design providing much needed additional guest services and more parking, as well as improved access to the timberline on Mt. Hood via a scenic gondola ride to Timberline. Connectivity of the two areas via the recent permit boundary connection that will embrace the opportunities for continuous skiing and riding from Timberline to Summit Pass, take cars off OR Highway 173 (commonly referred to as



the Timberline Road), and help support the Timberline arrival experience with the creation of additional base area amenities in Government Camp.

## F. SUMMARY OF THE UPGRADE PLAN AND PREVIOUSLY ACCEPTED PROJECTS

### 1. LIFTS

- Installation of the 10-passenger Timberline Gondola to provide lift interconnect between Summit Pass and the upper portion of Timberline
- Upgrade or replace existing Summit Pass Chairlift
- Installation of a beginner surface lift

### 2. TERRAIN

- New trails to connect the upper portion of Timberline to Summit Pass base area
- Expanded snowmaking system

### 3. OPERATIONS

- Reconfigure the Summit Pass base to improve the arrival sequence to the gondola and provide shuttle/passenger drop off and parking
- Improvements to existing snowmaking infrastructure and creation of a water storage facility
- Enhancements to the tubing and/or sledding opportunities, and introduction of other sliding and snow play experiences
- Installation of a small maintenance and utility building

### 4. SUMMER

- Construction of bike trails to connect the Timberline Bike Park trail network with Summit Pass and potential construction of a slopestyle bike park at Summit Pass base area
- Installation of other summer activities that would be themed around outdoor experiences and education; the area's rich heritage and history; and affordable, family-oriented recreation

### 5. PREVIOUSLY ACCEPTED PROJECTS

- Molly's Portal (including parking, day lodge/warming hut and snowplay area)
- Vehicle maintenance shop and patrol headquarters

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## CHAPTER 2—DESIGN CRITERIA



This chapter covers a range of design criteria that is the foundation of the mountain resort planning process, from the basic concepts and ideas behind trail and lift layout, to Forest Service policy and direction, to previous planning efforts and documents that help inform the master planning process.

## A. REGIONAL DESTINATION RESORTS

Regional destination resorts largely cater to a “drive” market. In the case of Timberline, the resort is a regional destination for nearby cities (like Portland) via automobile. While day-use guests play a large role, the regional destination resort also appeals to vacationers. At some regional destination resorts, lodging is a component (e.g., the Historic Timberline Lodge). However, due to the average length of stay, and perhaps more importantly a regional guest’s vacation budget, lodging and related services and amenities are usually less extensive than what is common for national/international destination guests.

## B. BASE AREA DESIGN

The relationship between planning at a resort’s base area developments and on-mountain lift and terrain network is critically important. This relationship affects the overall function and perception of a resort. 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.

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. However, fundamental objectives of base area planning are to integrate the mountain with the base area for the creation of an 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): guest service locations, skier/rider circulation, pedestrians, parking/access requirements, and mass-transit drop-offs.

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 or a bus);
- Distributing arriving guests onto the mountain’s lift and trail systems and other recreational facilities; and
- Providing the necessary guest services (e.g., tickets and rentals).

The base area configurations at Timberline, including the integration of Summit Pass and Timberline, will be discussed in greater detail throughout this document.

## 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 terrain unique to each mountain. Ability level designations are based on the maximum sustained gradient calculated for each trail, in combination with other factors present that may make a trail more difficult. While short sections of a trail can be more or less steep without affecting the overall run designation, a sustained steeper pitch may cause the trail to be classified with a higher difficulty rating. It is important to understand that slope gradient is not the only

factor in assigning a trail ability designation to a specific trail. A variety of factors, such as trail width, terrain features, and the context of other trails on the mountain can cause a trail to be classified under a higher designation.

The following general gradients, reflective of industry norms, are used as the basis to classify the skier difficulty level of the mountain terrain. As previously mentioned, additional considerations can compound with slope gradient and cause a trail to be classified under a higher designation.

Table 2. 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 Pacific Northwest skier market is shown in Table 3.

Table 3. Skier Ability Breakdown

Skier Ability	Percent of Skier Market
Beginner	5%
Novice	15%
Low Intermediate	25%
Intermediate	35%
Advanced Intermediate	15%
Expert	5%

Source: SE Group, Mountain Planning Guidelines

## b) Trail System

A resort’s trail system should be designed to provide a wide variety of terrain to meet the needs of the entire spectrum of ability levels, as well as the resort’s particular market. Each trail should provide an interesting and challenging experience within the ability level for which the trail is designed. Optimum trail widths vary depending upon topographic conditions and the caliber of the skier/rider being served. The trail network should provide terrain for the full range of ability levels consistent with each level’s respective market demand.

In terms of a resort’s ability to retain guests, both for longer durations of visitation and for repeat business, one of the more important factors has proven to be terrain variety. This means providing developed runs for all ability levels—some groomed on a regular basis and some not (bowls, trees, and terrain parks and pipes).

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

Timberline operates terrain parks within its developed trail network (currently Paintbrush, Spraypaint, Conway's, Boneyard, Blossom, Schoolyard, and the upper segment of Thunder), which affects the trail system from an operational standpoint and may change the skier/rider ability classification of the trail. It is common at ski areas for the locations and/or configurations of terrain parks to vary from year to year. Terrain parks are not part of the trail system themselves but rather an operational combination of certain trails and uses within the trail system (e.g., moving snow, creating terrain features, additional fencing and signage).

## 2. LIFT DESIGN

The goal for lift design is to serve the available terrain in an efficient manner (i.e., having the minimum number of lifts possible while fully accessing the terrain and providing sufficient uphill capacity to balance with the available downhill terrain capacity). In addition, the lift design has to take into consideration such factors as wind, round-trip utilization of the terrain pod, access needs, the ability to connect with other lift pods, the need for circulation space at the lower and upper terminal sites, access to residential development, and the presence of natural resources (e.g., visual impacts, wetlands, and riparian areas). The vertical rise, length, and ride time of lifts across a mountain are important measures of overall attractiveness and marketability of any resort.

## 3. ON-MOUNTAIN GUEST SERVICES

On-mountain guest service facilities are generally used to provide shelter, food service (cafeteria-style or table service), restrooms, and limited retail, as well as ski patrol/first aid and other guest 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.

## 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," "skier carrying capacity," "skiers-at-one-time," "persons-at-one-time," 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 5th or 10th busiest day, and peak-day visitation at most resorts is at least 10 percent higher than the design capacity.

Timberline operates as a ski area but experiences high levels of visitation from non-skiers visiting Timberline Lodge or exploring the area. Therefore, this MDP will use the terms "comfortable carrying capacity" (CCC) when referring to Timberline's daily ski area design capacity and the term persons-at-one-time (PAOT) to capture capacities of all visitors to Timberline, including skiers and riders, mountain bikers, hikers and mountaineers, tourists and sightseers and hotel guests. Refer to Chapter 3 for additional detail on the calculation of these capacities.

## 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 to match 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 or higher than the capacities of other resort components.

## F. MULTI-SEASON RECREATION ACTIVITIES

In light of the increasing challenges of operating a sustainable ski resort given the seasonal nature of the typical six-month operating season, there has recently been a great deal of interest within the industry in developing multi-season recreation facilities and activities for guests. Timberline is one of a select few mountain resorts able to offer alpine skiing during the summer, but summer alternative recreational activities are also an important part of its overall appeal. Because summer recreational activities tend to attract a more diverse range of new guests than do skiing and snowboarding and because ski area visitation is only 15 percent of annual visitation at Timberline, multi-season recreational activities are key to Timberline's summer activity goals. This comprehensive resort planning process assesses the best approach and program for adding multi-season activities and facilities in order to have the greatest potential for success given the unique characteristics that define Timberline and its markets, and then will create a "road map" for their implementation.

A strategic approach must be taken to identify reasonable and realistic opportunities for multi-season recreational activities. This approach involves a case-by-case examination of several important criteria to determine the multi-season recreation elements that have the greatest potential for success. Criteria such as suitability of available land for recreation facilities and/or activities, operational compatibility with existing or proposed facilities, initial fiscal considerations, and visitation potential are all explored within this MDP. Undertaking such a comprehensive exercise leads to a multi-season recreation program comprised of recreation facilities and/or activities that are suitable for implementation and will align with operational goals and performance expectations.

As a regional recreation destination, Timberline has the opportunity to both provide and promote interactive, educational, natural resource-based recreation activities for all ages and demographics. Increasingly, there is potential to reach a wide range of ages and demographics, including those not currently being reached, through multi-season recreation activities.

## G. INVENTORY OF ENVIRONMENTAL CONDITIONS

### 1. TOPOGRAPHY

Topography is the arrangement of natural and artificial physical features of an area and includes the general surface shapes and features within the project area of Timberline. Topography, along with slope gradient, is important to a ski area because it partly defines terrain variety, which is consistently ranked as the second most important criterion in skier choice of a ski destination in Ski Magazine's Reader Resort Ratings, behind snow quality. Timberline lies within the Cascade Range of the Pacific Northwest and is defined by the above-treeline open slopes, steep gladed valleys, and gently sloping forests of the south facing flank of Mt. Hood. It lies entirely on the slopes of Mt. Hood and ranges in elevation from 3,975 to 8,540 feet above sea level for a total vertical rise of approximately 4,565 feet. The

lift served ski terrain in the winter season typically ranges in elevation from approximately 7,000 feet to 4,000 feet above sea level, as the upper mountain is only open to snow cat skiing during high snowfall years. During low snowfall years, the upper lifts operate as conditions permit. The Timberline base area is located at approximately 5,900 feet above sea level while the Summit Pass Base Area is located approximately 4,000 feet above sea level.

The lift and trail pods incorporate a variety of terrain topography, ranging from steep, high alpine slopes on the upper mountain to the moderate and easy groomed cruiser runs within the forests of Mt. Hood National Forest. Slopes range from steep, technical sections to almost flat in the base area. This type of topography allows for a range of ski opportunities. Timberline's infrastructure, parking lots, and lodges are currently found on the eastern side of the ski area, midway between the summit and the lowest elevations of the operational boundary. This is a good topographic scenario for a ski area, as it provides a variety of topographical terrain as well as efficient access and circulation from the base area to that terrain.

## 2. SLOPE GRADIENTS

Slope gradient defines the angle of the trail, relative to a completely flat surface. As mentioned above, slope gradient helps define terrain variety. In addition, slope gradient defines the difficulty of terrain and therefore what types of skiers (novice, intermediate, etc.) are able to ski that terrain. Slope gradient also dictates trail and infrastructure development, as both completely flat trails and cliff faces are un-skiable and steep slopes are more difficult to build structures on.

The steepest slopes of Timberline are generally located on the uppermost section of the ski area, at the top of the operational boundary. This section features only steep, high-alpine terrain. The lower portion of the existing Timberline Ski area contains a mixture of beginner and intermediate slopes with a series of short, steep pitches scattered throughout. Below that, the Summit Pass area has almost exclusively beginner and low intermediate gradients. Timberline also offers a variety of undeveloped ski opportunities, like glades and ungroomed terrain, as well as a significant amount of acreage dedicated to terrain parks. Terrain parks have their own set of topographic guidelines with north facing, 18 to 35 percent grade terrain generally considered to provide the best opportunities for terrain park building.

Terrain ability level designations are based on slope gradients and terrain features associated with the varying terrain unique to each mountain. Regardless of the slope gradient for a particular trail, if it feeds into a trail that is rated higher in difficulty, its ability level must be rated accordingly. Conversely, if a trail is fed only by trails of a higher ability level than the maximum slope of the trail would dictate, it also must be rated accordingly.

General slope gradients are defined as:

- **0 to 8% (0 to 5 degrees):** too flat for skiing and riding, but ideal for base area accommodations, and other support facility development.
- **8 to 25% (5 to 15 degrees):** ideal for Beginners and Novices, and typically can support some types of development.
- **25 to 45% (15 to 25 degrees):** ideal for Intermediates, and typically are too steep for development.
- **45 to 70% (25 to 35 degrees):** ideal for Advanced and Expert skiers/riders and pose intermittent avalanche hazards.
- **>70% (>35 degrees):** too steep for all but the highest level of skiing/riding. These areas are typically allocated as Expert only and are closely managed by the resort operator for avalanche control.

The slope gradients at Timberline are depicted on Figure 3.

### 3. SOILS AND GEOLOGY

The soils and geology within and around a ski area are an important factor to take into consideration because they influence the erosion potential of the area, the drainage capabilities, the vegetation that grows in the area, and other factors that influence ski area management. A watershed-specific report for the Salmon River Watershed provides information on the soils and geology in the area.

Timberline is located on Mt. Hood, an andesitic volcano of Quaternary age that was built by a succession of lava-flow and lava-dome eruptions. While the volcano has been quiet for over 200 years, the volcano is still classified as active and monitored by the United States Geological Survey (USGS). Mt. Hood is located within the High Cascades geological province within the broader Cascade Mountain Range. This province consists of younger, glaciated hillslopes that are generally moderately sloping deposits of basalts, andesites, and pyroclastic flows. The area is characterized by surface, glacial, and fluvial erosion, streambank failures, and peak flow deposits. The alpine section of the ski area, below the Palmer Snowfield, is primarily comprised of steepened, unconsolidated materials. These steep upper slopes of Mt. Hood—because they are unvegetated, contain loose debris and glacial deposits, and receive a high amount of precipitation—are prone to land sliding and therefore deliver significant sediment amounts downslope. The lower portion of the area is not prone to landslides and mass wasting due to its more gradual slopes. These lower slopes have also allowed for soil development and various vegetative growth. Overall, the soils within Timberline’s operational area are strongly influenced by alpine glaciation and are moderately deep, gravelly soils forming in glaciated till and ash. The area also includes wet meadows and bottomlands, fresh sands and gravels, and perpetual snow and ice in the upper sections.

### 4. HYDROLOGY

Hydrology influences the availability of water in the project area as well as the movement of snowmelt and groundwater. This can influence a ski area’s ability to make snow as well as how snowmelt travels through and impacts the project area. The Upgrade Plan projects encompasses upper portions of the Zigzag and Salmon River watersheds. Within this higher elevation zone, headwater wetland complexes and streams create unique challenges to development. This MDP takes into account known locations of streams and wetlands.

Timberline is located within the Sandy River Basin and specifically within the Salmon River Watershed. The watershed incorporates portions of two major physiographic zones (the Cascade Mountain Range and the Columbia Basin) and encompasses approximately 116 square miles. The hydrology is strongly influenced by Mt. Hood, as the snow and rain that falls on this section of Mt. Hood flows down from the headwaters of the Palmer Snowfield to the valley below. The headwaters of the river receive plentiful rainfall and snow, with approximately 130 inches of precipitation falling per year on its slopes. Timberline is located adjacent to the headwaters of the Palmer Snowfield but the Salmon River is fed by seven major tributaries and the watershed contains ten sub-watersheds. Greatest precipitation for the watershed occurs between November and January and the least amount occurs between July and August. Mt. Hood sustains a snowpack year-round at its upper elevations, which moderates stream flows in the Salmon River by providing water storage over the winter and contributing water in the summer. Despite this, stream flow is significantly impacted by rates of snow accumulation and snowmelt within the watershed. Varying geology and topography in the Salmon River watershed produce hydraulic features such as waterfalls, wetland meadows, and oxbow river channels.

The Salmon River flows free of water impoundments for 33 miles from its headwaters to its confluence with the Sandy River at Brightwood. From there, the Sandy River flows to the Columbia River and on to the Pacific Ocean.

## 5. FISH AND WILDLIFE

Fish and wildlife, as being federally monitored (in the case of the Endangered Species Act) as well as generally being in the public eye, are also an important consideration for ski area development. There are 236 wildlife species that have potential habitat located within the watershed. Of these, 31 are listed as Threatened, Endangered and Protected (TEP), 12 are local species of concern, 46 are snag dependent species, and 8 are introduced species. Given the high variety of species potentially present, site-specific NEPA analyses will be conducted, as warranted, and will be based on current information provided by the Mt. Hood National Forest, U.S. Fish and Wildlife Service, and the State of Oregon.

## 6. VEGETATION

The vegetative composition of a ski area, beyond influencing the wildlife discussed above, also influences the erosion potential of the land and its ability to retain water. It is therefore important to analyze vegetation within a ski area boundary. Because Timberline is located on the middle to upper slopes of Mt. Hood, the area is primarily within the Mountain Hemlock Zone. In this area, mountain hemlock is common in mid and late successional stands. Other trees like western hemlock, true firs, western white pine, white bark pine, and Douglas-fir are also present. The cold, moist environment present, with deep winter snowpack and short summers, heavily influences the vegetation. The upper elevations of the ski area are within the Alpine zone, which is predominantly mountain hemlock and subalpine fir with small amounts of white bark pine. As the ski area extends also above treeline, hardy shrubs and alpine grasses are also present in the highest sections of the operational boundary.

Vegetation at Timberline is typical of the Mt. Hood National Forest and specifically the Salmon River Watershed at these elevations. The Timberline permit area contains extensive blocks of continuous forest cover dominated by Pacific Silver Fir and Mountain Hemlock. The ski area contains Late Seral forests, which are those forests that include mature and old-growth tree age classes. Portions of Late Seral forests provide important habitat for the northern spotted owl, an endangered species listed under the Endangered Species Act. Late Seral forests also provide habitat for many other species of wildlife. This MDP seeks to maintain as much of the natural vegetation onsite as possible. While some tree removal would be necessary, this MDP seeks to maintain forest cover and subsequent wildlife habitat to the maximum extent possible.

The proposed Molly's Portal in particular is situated on the lower slopes of the SUP area where the forest is characteristic of Late Seral conditions. Additionally, this part of the SUP area contains a large number of dead or dying and diseased trees that were observed during preliminary investigations of the site. Implementation of this MDP would take into account the health of the forest as trees are identified for removal. For example, groups of healthy trees would be retained where possible to protect the forested character of the site. Site-specific NEPA analyses will be conducted, as warranted.

## 7. CLIMATE CHANGE

Climate change has impacted and will continue to impact Oregon and the alpine regions of Mt. Hood.<sup>2</sup> Over the past century, most of the state has warmed by approximately 2 degrees Fahrenheit. Warmer winters have reduced average snowpack in the Cascades by 20 percent since 1950.<sup>3</sup> In addition, the snowpack is now melting a few weeks

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<sup>2</sup> U.S. Environmental Protection Agency. 2016. What Climate Change Means for Oregon. August. Available at: <https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-or.pdf>.

<sup>3</sup> Ibid.





earlier than during the 20th century, and, by 2050, it is likely to melt three to four weeks earlier. The reduced snowpack and earlier melting results in reduced streamflow during the summer.

In the future, climate change is also likely to increase the frequency and severity of fires that burn forests, grasslands, and desert vegetation. Since 1984, about 4 percent of the land in Oregon has burned per decade and climate change is likely to more than double the area burned by forest fires during an average year by the end of the 21st century. Higher temperatures and a lack of water can also make trees more susceptible to pests and disease, and trees that are damaged or killed burn more readily than living trees. The combination of more fires, increased pressure from pests and disease, and drier conditions could change the forest patterns around Timberline. For example, climate change is likely to increase the area of pine forests in Oregon that are infested with mountain pine beetles.

This MDP has been drafted with consideration to the challenges and uncertainties that climate change presents.

## H. APPLICABLE FOREST SERVICE POLICY, DIRECTION, AND AGREEMENTS

The Forest Service nationally supports the recreational opportunities that private ski areas provide. The Forest Service and National Ski Areas Association work in partnership to achieve common goals of managing and promoting active participation in alpine recreation and sports by all people.

Timberline operates under a Term Special Use Permit.<sup>4</sup> The permit authorizes the use of NFS lands, on the Mt. Hood National Forest, for the purposes of constructing, operating, and maintain a winter sports lodge including overnight accommodations, alpine ski operations, food service, retail sales, and other ancillary facilities.

The basis for determining the types of activities and facilities appropriate for permitted winter sports resorts operating on NFS lands are expressed in federal laws and Forest Service policy directives, such as the 1990 Mt. Hood National Forest Land and Resource Management Plan (1990 Forest Plan), as amended by the 1994 Northwest Forest Plan. This guiding document provides the Forest Service with authority and direction pertaining to ski area management on NFS lands.

Timberline and the Forest Service are connected through a committed long-term partnership to provide quality recreational opportunities on NFS lands. By satisfying its current and future visitors, Timberline will grow as a healthy and competitive ski resort within its market niche. This, in turn, would help fulfill Forest Service policy, objectives, and direction for ski area management on the Mt. Hood National Forest and the vitality of the local economy.

The following consists of the formative legal and policy mandates guiding the Forest Service administration of NFS lands and winter sports resorts:

- The Multiple-Use Sustained-Yield Act of 1960 mandates that the Forest Service manage National Forest System lands for “*outdoor recreation, range, timber, watershed, and wildlife and fish purposes.*” 16 U.S.C. § 528 (emphasis added).
- The National Forest Management Act (NFMA) requires the Forest Service to develop Forest Plans that provide for multiple uses of forests, including “*coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness.*” 16 U.S.C. § 1604(e)(1) (emphasis added).

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<sup>4</sup> The Term Special Use Permit is authorized under the Act of March 4, 1915 as amended July 28, 1956 (Ref. FSM 2710); Section 7 of Granger-Thye Act of April 24, 1950, 16 U.S.C 580d.

- The service-wide Memorandum of Understanding between the National Ski Areas Association and the Forest Service (FS Agreement No. 07-SU-11132424-246), recognizes “that ski areas can help meet increased demand for recreational opportunities in a managed setting.” The Forest Service stated its commitment to “evaluate four-season recreation at ski areas to improve economic stability and enhance outdoor recreation opportunities during policy formation, master development planning, and project plans.”

Note that Summit Pass previously operated under Ski Area Term SUP, which is authorized under the National Forest Ski Area Permit Act of 1986. Under this SUP, both the National Forest Ski Area Permit Act of 1986 and the 2011 Ski Area Recreational Opportunity Enhancement Act were applicable; however, because the Summit Pass SUP has been merged into Timberline’s Term SUP, these acts are no longer applicable and are not discussed further.

## 1. MT. HOOD 1990 NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN REVISION

The 1990 Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the National Forest.<sup>5</sup> The 1994 Northwest Forest Plan amended the 1990 Forest Plan and established new standards and guidelines for management of late successional and old growth forest.<sup>6</sup> A full list of amendments to the 1990 Forest Plan can be found on the Mt. Hood National Forest Planning website.

In the 1990 Forest Plan, ski areas are included under Management Area A 11 (Winter Recreation Areas), which emphasizes winter recreation. The stated goal of Management Area A 11 is to “provide high quality winter recreation (and associated summer) opportunities including: downhill skiing, Nordic skiing, snowmobiling, and snowplay within a natural appearing forest environment” (USDA, 1990a). Under the 1994 Northwest Forest Plan, MA A 11 lands have been allocated to Administratively Withdrawn Area (AWA).

The 1990 Forest Plan also includes Management Area A 4 (Special Interest Area), which includes the Timberline Lodge within the boundary of the A 11 (refer to Figure 2 and 2.1). The goal of these areas is to protect and, where appropriate, foster public recreational use and enjoyment of important historic, cultural, and natural aspects of our national heritage.

Additional 1990 Forest Plan allocations that this MDP considers are:

- Management Area B 7 (General Riparian Areas)
- Management Area B 2 (Scenic Viewshed)

Applicable 1994 Northwest Forest Plan land allocations include:

- Tier 1 Key Watersheds
- Riparian Reserves

## 2. VISUAL MANAGEMENT SYSTEM

The 1990 Forest Plan describes the scenery resources within the context of the older Visual Management System (VMS).<sup>7</sup> This system was replaced by the Scenery Management System (SMS) in 1995 in the document Landscape

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<sup>5</sup> USDA Forest Service. 1990. Mt. Hood National Forest Land and Resource Management Plan. Available at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fseprd578367.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd578367.pdf).

<sup>6</sup> USDA Forest Service. 1994. Northwest Forest Plan. Available at: <https://www.fs.fed.us/r6/reo/>.

<sup>7</sup> USDA Forest Service. 1979. The Visual Management System of the Forest Service, USDA. Available at: [https://www.fs.fed.us/psw/publications/documents/psw\\_gtr035/psw\\_gtr035\\_15\\_bacon.pdf](https://www.fs.fed.us/psw/publications/documents/psw_gtr035/psw_gtr035_15_bacon.pdf).



Aesthetics: A Handbook for Scenery Management; however, the handbook notes the VMS remained in place until a Forest Plan is revised to fully implement the SMS.

The Forest Service VMS helps establish Visual Quality Objectives (VQOs) for various landscapes and helps define how the landscapes would be managed, the level of acceptable modification in the area, and under what circumstances modifications are allowed. The VMS and VQOs are outlined in the USDA Handbook 462 – National Forest Landscape Management, Vol 2.

The 1990 Forest Plan prescribes VQOs for management areas throughout the forest as viewed from designated viewpoints including US Hwy 26 (Mt. Hood Highway), Timberline Road (OR Hwy 173), and NFS Road 2645 (West Leg Road). Timberline is an A 11 Management Area – Winter Recreation Area and has a prescribed VQO of Partial Retention (for ski facilities) for Foreground (0 to 0.5 mile from viewpoint), Middleground (0.5 to 5 miles from viewpoint), and Background (over 5 miles from viewpoint) views.

Partial retention means that any activity must be visually subordinate to the natural characteristics of the landscape. Landscapes with this designation can be modified, but the resulting changes in patterns of vegetation, line, form, color and texture should not contrast strongly with the adjacent undisturbed landscape.

### 3. BUILT ENVIRONMENT IMAGE GUIDE

The Built Environment Image Guide (BEIG) has been 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.<sup>8</sup> 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.

It should be noted that the Built Environment Image Guide North Pacific Province is modeled after Timberline Lodge. As such, scenery and aesthetics have always been at the forefront of architectural design at Timberline.

### 4. ACCESSIBILITY GUIDEBOOK FOR SKI AREAS OPERATING ON PUBLIC LANDS

In October 2012 the Forest Service released the *Accessibility Guidebook for Ski Areas Operating on Public Lands, 2012 Update*.<sup>9</sup> 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. Timberline will maintain 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 Timberline would operate as a “public accommodation;” moreover, Timberline is a business open to the public. Section 504 applies because Timberline would operate under a SUP authorized by the Forest

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<sup>8</sup> USDA Forest Service. 2001. The Built Environment Image Guide for the National Forests and Grasslands. Available at: [https://www.fs.usda.gov/sites/default/files/fs\\_media/fs\\_document/TheBuiltEnvironmentImageGuide-2001-09.pdf](https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/TheBuiltEnvironmentImageGuide-2001-09.pdf).

<sup>9</sup> USDA Forest Service. 2012. Accessibility Guidebook for Ski Areas Operating on Public Lands. Available at: [https://www.fs.usda.gov/sites/default/files/legacy\\_files/Ski%20Access%20Guide.10.5.pdf](https://www.fs.usda.gov/sites/default/files/legacy_files/Ski%20Access%20Guide.10.5.pdf).

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 includes 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 or for 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.”

Through future site-specific NEPA and design development reviews, Timberline will work closely with the Forest Service to ensure accessibility measures are taken to provide equal opportunity to all users of public lands.

## 5. PROGRAMMATIC AGREEMENT WITH SHPO

In 2004 a Programmatic Agreement between the Forest Service, the Advisory Council on Historic Preservation, and the Oregon State Historic Preservation Officer was established. The agreement details the management of cultural resources on Forest Service lands and the management of the Timberline Lodge Historic Building Preservation Plan. This MDP does not contain any proposed projects that would affect the historic nature or historical fabric of the Timberline Lodge. Additionally, the Forest Service, together with R.L.K. and Company and Friends of Timberline, drafted and signed a statement of shared values titled “The Timberline Lodge Collaborative Stewardship Agreement”.

## 6. WINTER SPORTS GUIDEBOOK

In 1992 the Forest Service published the Winter Sports Guidebook to establish master planning guidelines for ski resort on Forest Service lands operating under a SUP.<sup>10</sup> The Winter Sports Guidebook outlined details to include in the master planning process to inform the Forest Service and the public of potential changes that may result from development of public and private lands.

## 7. REGION 6 SUSTAINABLE RECREATION STRATEGY SUMMARY

The Region 6 Sustainable Recreation Strategy Summary, last updated February 2016, documents the need to manage outdoor recreation in a sustainable way, that is, take a long-term view on decisions about Forest resources.<sup>11</sup> The vision is to “nurture relationships to build strong connections to place; inspire passion, enhance sustainability and provide outdoor experiences that foster stewards who help nurture relationships...” With this vision in mind, the Forest Service is dedicated to approaching problems and finding solutions in a holistic approach that encourages outdoor recreation and preservation of resources.

## 8. FOREST SERVICE GUIDANCE ON CLIMATE CHANGE

Under Executive Order 14008, Part 2, Section 204, the Forest Service must manage public lands to support robust climate action.<sup>12</sup> The Forest Service Climate Change Resource Center (FSCCRC) serves as a reference for land managers who need information and tools to address climate change in planning and project implementation on

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<sup>10</sup> USDA Forest Service. 1992. Winter Sports Guidebook.

<sup>11</sup> USDA Forest Service. 2016. R6 Sustainable Recreation Strategy Summary. Available at: <https://www.fs.usda.gov/sites/default/files/R6-Sustainable-Recreation-Strategy-Summary.pdf>.

<sup>12</sup> Executive Office of the President, “Executive Order on Tackling the Climate Crisis at Home and Abroad,” 7619 86 FR § 204 (2021)

national forests. According to the FSCCRC, natural resource management strategies for addressing climate change can be classified under two avenues: adaptation and mitigation.<sup>13</sup> Adaptation strategies include actions taken to assist natural resources (species, habitats, forest plantations, watersheds) in accommodating new conditions imposed by climate change. Mitigation strategies work to reduce the human influence on the climate system, primarily through removal of greenhouse gases (GHG) from the atmosphere and the reduction of GHG emissions. On public lands, this may include managing forests in a way that sequesters carbon dioxide.

In addition to these considerations, the Forest Service also has guidance for incorporating climate change into NEPA analysis. NEPA requires federal agencies to analyze the environmental effects of proposed projects before making decisions and climate change is one environmental effect that may be considered.<sup>14</sup> There are three ways that climate change can be considered in the NEPA process: 1) consideration of the effects of a proposed project on climate change through GHG emissions and sequestration; 2) analysis of the effects of climate change on a proposed project; and 3) implications of climate change for the environmental effects of a proposed action (i.e., will the project and climate change combine to create increased impacts on a resource?)

This MDP considers this guidance throughout the document. The conditions presented by climate change (discussed in Chapter 2, Section G, Subsection 7. Climate Change) are considered as part of the existing conditions for Timberline. As a result, plans at Timberline will continue to consider adaptation and mitigation strategies as feasible to reduce risks a changing climate poses to the operations of the resort.

## I. OTHER EXISTING POLICY AND GUIDANCE DOCUMENTS

### 1. MT. HOOD MULTIMODAL TRANSPORTATION PLAN

The Mt. Hood Multimodal Transportation Plan is a multimodal, multi-jurisdictional transportation plan created to improve safety for all highway users and expand travel options along the Mt. Hood Scenic Byway.<sup>15</sup> The plan is a 15-year rolling plan published in 2014. The study area includes Highway 26 and OR Highway 35 from Sandy to Hood River. The plan includes a number of projects to improve intersections and congestion on Highway 26, as well as developing additional parking and transportation options in and around Government Camp. The plan also identifies an aerial transportation link between Government Camp and Timberline. ODOT has initiated a 6-month process to review and reassess priorities beginning in November 2021 and ending in April 2022.

### 2. CLACKAMAS COUNTY COMPREHENSIVE PLAN

In 2001, Clackamas County completed a comprehensive plan to guide future conservation and development in the County.<sup>16</sup> Highway 26 is a major west-east corridor in Clackamas County from the Portland-Vancouver-Hillsboro Metropolitan Statistical Area to popular outdoor recreation sites around Mt. Hood. The Village of Government Camp is an unincorporated community within Clackamas County. Although Timberline is on federal land, the Summit Pass Base Area is included in the Government Camp Comprehensive Plan and is zoned appropriately as Rural Tourist

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<sup>13</sup> Forest Service Climate Change Resource Center (FSCCRC). 2021. Managing for Change. Accessed September 1. Available at: <https://www.fs.usda.gov/ccrc/education/managing-change>

<sup>14</sup> FSCCRC. 2021. NEPA - Introduction to Incorporating Climate Change. Accessed September 1. Available at: <https://www.fs.usda.gov/ccrc/topics/nepa-introduction-incorporating-climate-change>.

<sup>15</sup> Oregon Department of Transportation. 2014. Mt. Hood Multimodal Transportation Plan. Available at: <https://www.oregon.gov/ODOT/Projects/Project%20Documents/Final-Plan-MHMTTP.pdf>.

<sup>16</sup> Clackamas County. 2001. Clackamas County Comprehensive Plan. Available at: <https://www.clackamas.us/planning/comprehensive.html>.

Commercial (RTC). The Comprehensive Plan also identifies a land use plan for the Highway 26 Corridor and has developed a transportation plan identifying needs for future development.

The Clackamas County Comprehensive Plan also includes the Mt. Hood Community Plan, which provides guidelines for the communities in the Mt. Hood area to assure reasonable development potential consistent with the need for environmental protection.<sup>17</sup> The broader Clackamas County Comprehensive Plan is applicable to the Mt. Hood area, but the Mt. Hood Community Plan takes precedence where conflicts exist. The Mt. Hood Community Plan specifically provides direction different from the rest of the Comprehensive Plan in the following areas: Land Use, Public Facilities, Transportation, and Planning Process.

### 3. FEASIBILITY ANALYSIS FOR AERIAL TRANSPORTATION BETWEEN GOVERNMENT CAMP AND TIMBERLINE

A report was completed to identify the feasibility of an aerial transportation system from Government Camp to Timberline. The report, the Preliminary Feasibility Study and Fatal Flaw Analysis for an Overhead Transportation System Serving the Government Camp/Mt. Hood Area was completed in September 2001. The report details a number of pros and cons for four segments analyzed. The report found the gondola transportation system would serve as an economic catalyst to Government Camp Village and also help to address transportation issues related to Highway 26; however, significant capital investment would be required to construct the gondola.

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<sup>17</sup> Clackamas County. 2001. Mount Hood Community Plan. Available at: <https://dochub.clackamas.us/documents/drupal/2a6d4e5f-4035-4a19-87b6-d153d3da4f2b>.

# CHAPTER 3—EXISTING CONDITIONS



## A. SUMMARY OF THE EXISTING GUEST EXPERIENCE

Timberline, which now incorporates the Timberline and Summit Pass areas, currently has two distinct guest experiences. Timberline is known for its historical significance as an outdoor recreation site, as well as the abundant snow in the winter and year-round skiing on the Palmer Snowfield. Summit Pass has always been grassroots and orientated toward a family-friendly, accessible experience for the beginner skier or rider, or guest who wants to play in the snow. This MDP strives to preserve the existing guest experiences that make these areas unique while increasing the connectivity between the two areas and the overall offerings of Timberline. Because of their separate nature, this section summarizes the existing conditions of each area under separate headings. More detailed discussion of the existing conditions can be found in the 2019 Timberline MDP and 2019 Summit MDP. Figures 5 – 7 illustrate the existing conditions at each area.

### 1. TIMBERLINE

Timberline attracts skiers, snowboarders and mountain bikers to the ski area, hikers and mountaineers to Mt. Hood, hotel guests to Timberline Lodge, and tourists and sightseers to the base area and Timberline Lodge. With Timberline being in close proximity to Portland (about an hour and half drive), it is no wonder Timberline is a gateway experience for visitors to Mt. Hood National Forest, as well as one of Oregon's top tourist attractions hosting approximately two million visitors a year.

Timberline is perched on the side of Mt. Hood, Oregon's highest mountain. The active andesitic volcano rises to over 11,000 feet and has numerous glaciers and snowfields. During the winter, Mt. Hood can receive abundant snow with moisture from the Pacific Ocean. In the summer, Timberline takes advantage of Palmer Snowfield by offering summer skiing and riding and is busy with youth and adult camps. In addition, these users and other guests take advantage of the recently constructed mountain bike park.

Mt. Hood also attracts regional, national, and international mountaineers. The south side routes are the most popular, with climbers being directed to skirt the ski area to head for the summit. All climbers must obtain a wilderness permit to enter the Mt. Hood Wilderness Area at the top of the Palmer Snowfield. With climbing primarily taking place during early morning hours, the southern route typically takes ten to twelve hours to summit and return to the Timberline Lodge parking area.

Timberline Lodge is a National Historic Landmark and is a top attraction in the area. With 70 guest rooms, the Lodge can accommodate over 200 guests at full capacity. The building also acts like a gallery of Depression Era arts and crafts for all its intricate detail and historic artwork. These include mosaics, carved panels, and unique architectural features that make the Lodge historically significant.

### 2. SUMMIT PASS

Summit Pass also has a rich history in the ski industry. Due to its location on Highway 26 and close proximity to Government Camp, the area has been a constant source of outdoor recreation for the area. Summit Pass was established in 1927 by the Portland Advertising Club. The area was essentially a warming hut and open glades. In 1928, a ski jump was constructed at Multitorpor. In 1980 the ski area's chairlift was installed. Currently, it's ideal location off of Highway 26 makes the ski area convenient for people passing through or who live in the greater Government Camp area. With its rich heritage in the ski industry and beginner and alternative tubing experience, Summit Pass continues to serve this essential part of the market with simple but quality experiences.

The Summit Pass Base Area is comprised of the Summit Pass Lodge, Ski Patrol A-Frame, maintenance/pumphouse building, and the Summit Pass Sno-Park. The Summit Pass Sno-Park is part of a statewide agreement between ODOT





and the Forest Service, which covers snow removal in many high elevation parking lots throughout the state. A 0.6-acre area of the Summit Pass Sno-Park is reserved for a special use permit authorization held by Oregon Travel Experience/Oregon Travel Information Council for the public rest area they manage.

## B. EXISTING LIFT NETWORK

### 1. TIMBERLINE

Timberline has seven chairlifts (six detachable quads and one fixed grip double) and one surface conveyor lift. During the summer ski season Timberline also operates four surface lifts on the Palmer Snowfield. In general, the lift system is well maintained and operates efficiently.

In the winter, all lifts operate except for the four Palmer Snowfield surface lifts. Additionally, the Palmer Express rarely operates during the winter months due to weather. For the summer operating mode, the Magic Mile Express operates primarily for access to the Palmer Express and snowfield (and rarely for repeat skiing), and the Palmer Express and four surface lifts are operated for repeat skiing on the snowfield.

The Magic Mile and Palmer Express lifts (both detachable quads) service the upper half of Timberline and operate in both the summer and winter. The trails located off of these lifts offer intermediate, advanced, and expert terrain. These trail areas are above treeline, giving skiers and riders an open bowl experience. When weather is poor, these lifts can often be shut down due to wind and visibility concerns.

The Stormin' Norman Chairlift is the next highest lift at Timberline after the Magic Mile and Palmer Express lifts. The top terminal of the lift is slightly above treeline. This detachable quad was installed in 2000 and has an hourly capacity of 1,500 people per hour (pph). It primarily services intermediate terrain and terrain with terrain park and freestyle features.

The longest lift at Timberline, the Jeff Flood Express is a detachable quad with an hourly capacity of 1,800 pph. It was installed in 2007 and services intermediate terrain from an elevation of 4,850 ft to above Timberline Lodge and Magic Mile Express bottom terminal.

The Molly's Express is a detachable quad that services the eastern trails at Timberline. These trails are typically intermediate and advanced terrain. The Molly's Express has an hourly capacity of 1,200 pph and was constructed in 2000. The top terminal is located 600 feet south of the Wy'East Day Lodge.

The Pucci Chairlift is a detachable quad with an hourly capacity of 1,800 pph. The lift was replaced in 2020 and is the newest lift at Timberline. The Pucci Chairlift services beginner and novice terrain with some lower intermediate terrain. The top terminal of the Pucci Chairlift is located south of the Timberline Lodge and west of Wy'East Day Lodge.

The beginner's learning area south of the Wy'East Day Lodge contains two lifts on which first-time and beginner skiers can progress their skills. This is a good location for beginners to develop their skills close to the day lodge, ski school and other amenities. Guests who have never skied before typically start on Heidi's Carpet, which serves a small hill between Main Run Pucci and Upper West Leg Road. Once new skiers and riders feel ready, they then proceed to Bruno's Chairlift, a fixed-grip double in the beginner learning area. From the Bruno's Chairlift, beginners usually progress to the Pucci Chairlift, with more beginner and novice terrain.

## 2. SUMMIT PASS

Summit Pass has one chairlift, which services approximately 19 acres of ski terrain. The chairlift is a fixed-grip double with an hourly capacity of 1,200 pph. The lift was installed in 1980 by Riblet Tramway Company. In general, the lift is in good working condition and received substantial upgrades in June 2019. The lift does not operate during the summer months.

The following table provides detailed specifications for Timberline and Summit Pass lift networks.



Table 4. Existing Chairlift Specifications

Lift Name, Lift Type	Top Elevation	Bottom Elevation	Vertical Rise	Slope Length	Avg. Grade	Actual Capacity	Rope Speed	Carrier Spacing	Lift Maker/ Year Installed
	(ft.)	(ft.)	(ft.)	(ft.)	(%)	(pph)	(fpm)	(ft.)	
<b>Timberline</b>									
Stormin' Norman Chairlift, DC4	6,248	5,464	784	4,411	18	1,500	1,000	160	Doppelmayr/2000
Jeff Flood, DC4	6,027	4,847	1,180	6,539	18	1,800	1,000	133	Doppelmayr/2007
Magic Mile Express, DC4	6,988	5,915	1,073	5,333	21	1,600	950	143	Poma/1992
Palmer Express, DC4	8,484	6,952	1,532	5,492	29	1,800	1,000	133	Doppelmayr/1996
Pucci Chairlift, DC4	5,915	5,350	565	3,431	17	1,800	1,000	133	Doppelmayr/2020
Molly's Express, DC4	5,815	4,986	829	5,237	16	1,200	1,000	200	Doppelmayr/2000
Bruno's Chairlift, C2	5,885	5,840	45	339	13	630	300	57	Poma/1987
Heidi's, Carpet	5,879	5,840	12	76	16%	600	120	12	Existing
<b>Summit Pass</b>									
Summit Pass Chairlift, C2	4,290	3,985	305	2,325	13	1,200	400	40	Riblet/1980

Source: SE Group

Notes:

C2 = fixed-grip double chairlift / DC4 = detachable four-passenger chairlift

## C. EXISTING TERRAIN NETWORK

### 1. TIMBERLINE

Evaluation of the existing terrain network requires equal consideration of many factors, chief among them being terrain variety and the distribution of terrain by ability level. Assessment of either of these factors on their own will not provide a complete picture of the current state of terrain at the resort. For example, looking solely at the terrain distribution by ability level for Timberline, there appears to be a surplus of low intermediate terrain and a deficit of beginner and intermediate terrain at Timberline compared to the skier/rider market. Furthermore, Timberline offers a vast amount of undeveloped terrain not counted in this circulation that provide a good variety of advanced and expert terrain when conditions are suitable.

The developed trail network accommodates beginner through expert-level guests on 69 lift-served, named trails spanning approximately 558 acres. Most developed terrain is groomed on a regular basis. For details of the existing conditions terrain specifications at Timberline, refer to Appendix A.

#### a) Terrain Variety

Timberline has a wide variety of terrain options, from developed terrain to undeveloped, off-piste terrain to terrain parks and features. This analysis accounts for three separate types of terrain at Timberline, totaling approximately 1,200 skiable acres:

- Lift-accessed, developed trails and bowls for beginner, intermediate, and expert skiers and riders (totaling about 558 acres)
- Developed and undeveloped (non-thinned or maintained) glades and natural terrain within the ski area boundary that are routinely skied (totaling approximately 642 acres of terrain)
- Developed terrain parks and freestyle features – during the winter, Timberline maintains six terrain parks and one pipe on Paintbrush, Spray Paint, Conway’s, the Bonezone, Blossom and Thunder; in the summer, Timberline operates multiple camp features and one public terrain park off of the Magic Mile and Palmer Express lifts

The developed terrain at Timberline contains both the advanced and expert terrain found at the higher elevations, as well as novice and intermediate terrain on the lower elevations of the mountain, which provides for adequate terrain for the full range of ability levels, from beginner skiers and riders up to experts.

All of the above-treeline terrain accessible off of Magic Mile and Palmer Express lifts is included in the developed terrain network statistics. This terrain offers an open meadow, backcountry feel and is often more challenging than the developed terrain on the lower elevations, due to unmaintained snow surface conditions and natural obstacles. This terrain is included in the terrain distribution analysis, as it is critical for Timberline to satisfy advanced and expert level skiers and riders. Lower Alpine and Lower West Leg Road were included in the Timberline existing terrain analysis as a connection between Timberline Lodge and Summit Pass.

Terrain park and freestyle features are an important part of Timberline’s operations. Timberline was a freestyle leader from the early days of freestyle skiing with Palmer Snowfield as a testing ground for many types of features now seen in freestyle terrain parks today.



## b) Terrain Distribution by Ability Level

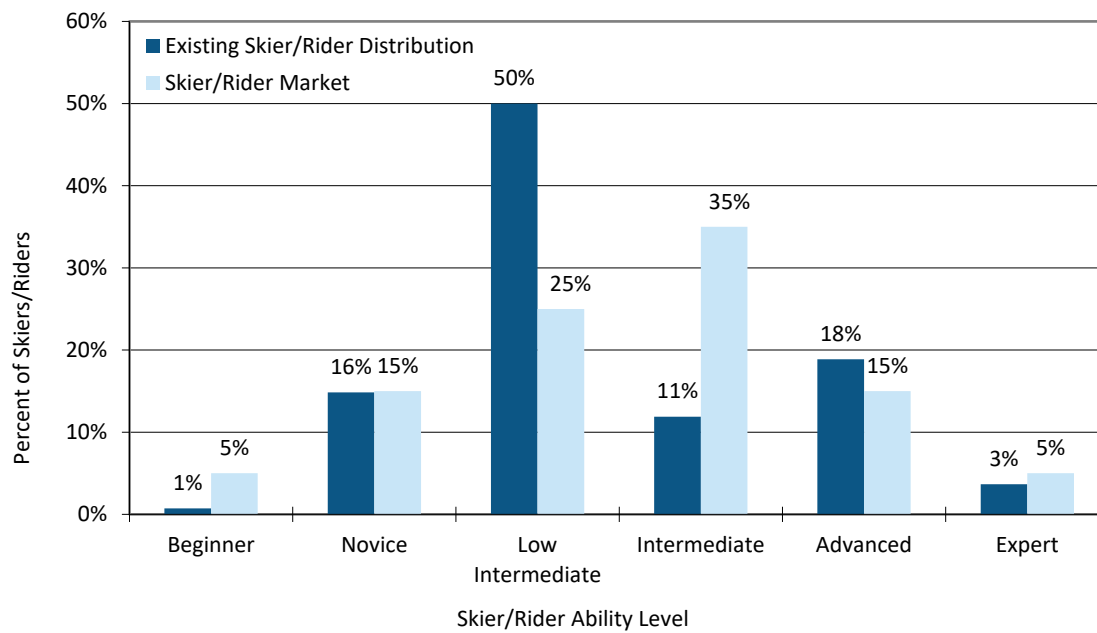
This terrain distribution analysis considers the 558 acres within the developed terrain network at Timberline. The overall terrain distribution through the full range of ability levels is relatively close to the ideal breakdown for the Pacific Northwest market, with the exception of low intermediate and intermediate distributions (there is a surplus of low intermediate terrain and a shortage of intermediate terrain). However, this is simply a factor of the natural topography at Timberline, which tends to be more in the low intermediate range. There is also a shortage of first-time beginner terrain.

Table 5. Existing Terrain Distribution by Ability Level—Timberline

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	1.4	41	1	5
Novice	55.1	992	16	15
Low Intermediate	212.7	2,978	50	25
Intermediate	67.3	673	11	35
Advanced	152.6	1,068	18	15
Expert	69.1	207	3	5
<b>TOTAL</b>	<b>558.2</b>	<b>5,959</b>	<b>100</b>	<b>100</b>

Source: SE Group

Chart 1. Existing Terrain Distribution by Ability Level—Timberline





## 2. SUMMIT PASS

Given Summit Pass' accessibility and family-friendly, beginner terrain, the Summit Pass terrain network does not follow the same terrain network standards of larger, regional or destination resorts.

The developed trail network accommodates beginner to lower intermediate guests on 7 lift-served trails accounting for 19 acres of skiable terrain. The developed terrain is groomed on a regular basis. Table A-2 provides details of the existing terrain specifications.

### a) Terrain Variety

Because Summit Pass is primarily beginner and family friendly, it contains mostly lower-level terrain; therefore, terrain variety is not discussed here.

### b) Terrain Distribution by Ability Level

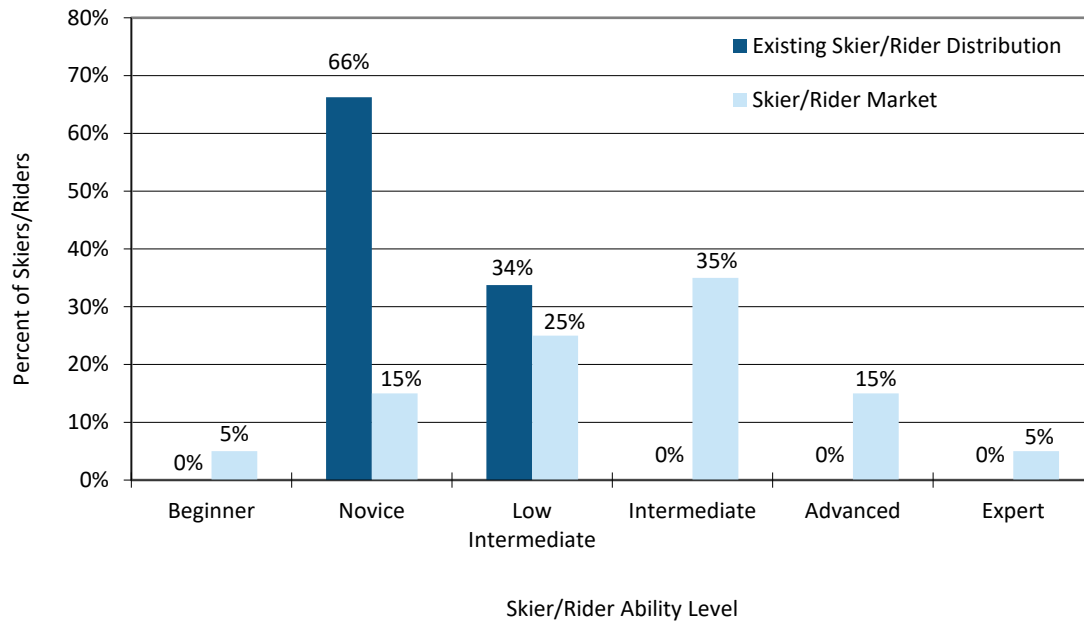
This terrain distribution analysis considers the 19 acres of ski terrain at Summit Pass. The terrain distribution through the range of ability levels is not necessarily in line with regional market breakdown. However, this is simply a factor of the position of Summit Pass in the marketplace as a family-friendly, beginner ski area, situated on 52 acres of gently sloped terrain.

Table 6. Existing Terrain Distribution by Ability Level—Summit Pass

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	0	0	0	5
Novice	11.5	207	66	15
Low Intermediate	7.5	105	34	25
Intermediate	0	0	0	35
Advanced	0	0	0	15
Expert	0	0	0	5
<b>TOTAL</b>	<b>19.0</b>	<b>312</b>	<b>100</b>	<b>100</b>

Source: SE Group

Chart 2. Existing Terrain Distribution by Ability Level—Summit Pass





*Importance  
of  
Terrain  
Variety*

*Terrain variety is the key factor in evaluating the quality of the actual skiing and riding guest experience (as opposed to lift quality, restaurant quality, or any other factor).*

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

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

## D. EXISTING CAPACITY ANALYSIS

As noted previously, this existing conditions analysis evaluates two different capacities: CCC and PAOT. CCC is a ski area modeling tool that considers the utilization of the ski lift and terrain network and skier use of other facilities across the resort during a given day; it is a **daily skier** population. PAOT is a snapshot of the resort at a given point in time and includes all resort guests including skiing and non-skiing visitors.

### 1. TIMBERLINE

#### a) CCC

A detailed calculation of the existing CCC was completed for Timberline, as shown in Table 7. The CCC of Timberline is presently calculated at 4,080 guests with all lifts operating. The majority of CCC can be attributed to five detachable quads, with the second newest detachable quad, Jeff Flood Express, having the highest CCC. It should be noted that Palmer Express often does not run during the winter months due to weather and snow levels. This effectively drops CCC to 3,300 guests. This number is supported by the fact that historical peak visitation days have maxed out at around 3,100, indicating that there are factors that are limiting Timberline from reaching the 4,080 level, as discussed below.

Timberline currently operates under an approved CCC limit of 4,665, which was based on a theoretical calculation of the original lift capacities.<sup>18</sup> At full operation, Timberline operates with a CCC of 4,080 guests per day.<sup>19</sup> Although the ski lift and terrain network is capable of reaching this capacity, the greatest factor limiting Timberline from reaching its actual CCC is the limited parking capacity and, more importantly, the use of available parking by a significant proportion of non-skiing guests. Other factors limiting the resort from reaching CCC levels of visitation are guest service space and food service seating, which are also used by non-skiing guests. Due to this situation and inadequate available parking for visitors, Timberline's typically has far fewer guests than the calculated CCC. While most resorts reach their CCC between the 5<sup>th</sup> and 10<sup>th</sup> busiest day of the season, Timberline historically only has approximately 2,300 guests on its 5<sup>th</sup> busiest day.<sup>20</sup> This demonstrates the competing uses of the parking lots effectively limit the total number of guests that can ski at Timberline. If this present condition persists, Timberline will fail to meet the forecasted trend in visitation and compromise its ability to serve as a gateway experience to Mt. Hood.

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<sup>18</sup> USDA Forest Service. 1975. Timberline Lodge Environmental Statement.

<sup>19</sup> USDA Forest Service. 2005a. Timberline Express DEIS.

<sup>20</sup> Ibid.

What is  
Comfortable  
Carrying  
Capacity?

*In ski area planning, a “comfortable carrying capacity” (CCC) is established, which represents an 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.*

*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 10% 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 base 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 7. 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)	Daily Lift Capacity (guests)
<b>Timberline</b>										
Stormin' Norman Chairlift, DC4	4,411	784	1,500	7.00	0	10	1,335	7,331	12,730	580
Jeff Flood Express, DC4	6,539	1,180	1,800	7.00	0	10	1,584	13,083	13,934	960
Magic Mile Express, DC4	5,333	1,073	1,600	7.00	10	5	1,360	10,216	15,968	640
Palmer Express, DC4	5,492	1,532	1,800	6.50	0	5	1,710	17,032	22,693	750
Pucci Chairlift, DC4	3,431	565	1,800	7.00	5	10	1,530	6,053	11,003	550
Molly's Express, DC4	5,237	829	1,200	7.00	0	10	1,080	6,264	12,968	480
Bruno's Chairlift, C2	339	45	630	7.00	0	15	536	169	1,919	90
Heidi's, Carpet	76	12	600	7.00	0	5	570	48	1,464	30
<b>TOTAL</b>	<b>30,858</b>		<b>10,930</b>				<b>9,756</b>	<b>60,575</b>		<b>4,080</b>
<b>Summit Pass</b>										
Summit Pass Chairlift, C2	2,325	305	1,200	7.0	0	15	1,020	2,178	5,303	410

Source: SE Group

Notes:

C2 = fixed-grip double chairlift / DC4 = detachable four-passenger chairlift

Daily Lift Capacity values in this table differ from those found in the 2005 Timberline Express DEIS because of adjustments made in operating assumptions related to lift line waits, skier circulation patterns, etc. that better represent how skiers are distributed throughout the ski area complex.

## b) Lift Network Efficiency

An important aspect of resort design is the balancing of uphill lift capacity with downhill trail capacity.

Within the context of ski area design efficiency, the term “Lift Network Efficiency” refers to the amount of effort and cost required to operate and maintain the lift network, as compared to the number of guests served by the lift network. The energy and costs related to the lifts include, but are not limited to: power use, operational labor, maintenance costs and labor, increased indirect administrative costs, and various direct and indirect costs associated with higher staff levels to perform these tasks. From this standpoint, the most efficient scenario is to have the fewest number of lifts possible that can comfortably and effectively serve the capacity and circulation requirements of the resort.

One way to analyze Lift Network Efficiency is to calculate the average CCC per lift at a given resort. While this calculation does not relate to the overall capacity of the resort, it can indicate if 1) the resort is not getting maximum utilization out of its lifts; or 2) if there are more lifts than necessary for the capacity levels of the resort. When calculating this average, conveyors used for teaching, as well as lifts that are used for access only, are not included. Optimally, and in general, the average CCC per lift would likely be close to 1,000 guests. Industry-wide, the average CCC per lift is approximately 650. The average CCC per lift at Timberline is 665. This rating is slightly above the industry-wide average, indicating that overall, the lift network efficiency is relatively good when compared to other ski areas.

## c) Persons-At-One-Time

PAOT, by definition, is the number of guests accommodated by a resort, at any one time, which affords a high-quality experience and helps ensure sound stewardship of the land. In essence, PAOT is a guest population which is serviceable by the resort (i.e., attendance level where operations remain functional and optimal).

In the case of Timberline, the calculation of PAOT was identified to better understand the overall dynamics of Timberline as a resort and tourist attraction, not just the ski area operations alone. Specifically, the need to understand the constraining capacity of parking at Timberline has highlighted the need for this analysis. Timberline routinely attracts tourists and sightseers to the base area and Timberline Lodge due to their historic significance. This, in combination with other attractions (skiing, hiking, biking, climbing) and hotel guests, routinely creates an at-capacity parking situation that causes Timberline to turn would-be guests away at the foot of Timberline Road and direct them back onto the crowded Highway 26.

For this analysis, PAOT was categorized into five subcategories: skiers/riders, mountain bikers, Timberline Lodge and Silcox Hut overnight guests, tourists/general milling, hikers/mountaineers. These calculations were completed for both summer-mode and winter-mode operating seasons. (In general, summer-mode operations are when skiing is only offered on the upper mountain/Palmer Snowfield and mountain bike trails are open, and winter-mode operations are when the lower mountain and the Magic Mile Express is fully operational. Typically, summer operations are defined by seven day a week operation between Memorial Day and Labor Day.)

For existing conditions during the winter months, the largest group of daily Timberline users are skiers and riders, with tourists being the second largest group, followed by climbers, and then hotel guests. The skiers PAOT is based on visitation on the 5th busiest day averaged over the past 5 seasons (2,231 skiers). The capacity of the Timberline Lodge is 220 guests at full occupancy. Only 44 guests are accounted for during winter-mode operations, because it was assumed the other Lodge guests were on the mountain skiing and riding and are captured in the skiers PAOT number. This analysis shows that during the winter season, an additional 29% of guests need to be accounted for in

guest services functions, such as restaurant seating and base area parking, to comfortably accommodate the resort PAOT (i.e., the PAOT [2,869 guests] is approximately 29% higher than the skiers-at-one-time [2,231 skiers]).

Table 8. Existing Persons-At-One-Time—Timberline

Type of Guest	Winter	Summer
Skiers	2,231	750
Mountain Bikers	0	338
Hotel Guests	58	189
Tourists	350	350
Climbers + Hikers	230	530
<b>TOTAL</b>	<b>2,869</b>	<b>2,157</b>

Source: SE Group

Notes:

Skiers for winter account for all lifts except Palmer Express, and summer skiers account for Palmer Chairlift only (summer PAOT for Magic Mile Express is 0 because it is used only for access to Palmer Express).

Mountain bikers are from the PAOT calculation in the Mountain Bike Trails and Skills Park EA.

Timberline Lodge guests are from 70 rooms/220 pillows, with 80% occupancy rate, and assumed 20% non-skiers in winter).

Silcox Hut guests are from 24 beds; 90% winter occupancy, 60% summer occupancy; and 65% winter non-skiers, 90% summer non-skiers/hikers/climbers.

Tourists PAOT is estimated at 350 in the summer and winter.

Winter and summer climbers are calculated by assuming 80% of peak climber counts (based on permits issued) of 285 people per day. Summer hikers are estimated at 300 per day.

PAOT represents the resort population at a single point in time during the day. Many of the non-ski activities do not extend over an entire day, and therefore daily visitation for these non-ski activities can be many times greater than the at-one-time population. In order to estimate total daily visitation at Timberline, each PAOT subcategory can be multiplied by an average turnover, which is based on the average duration of the stay. For example, if the average tourist visitor spends approximately 1.5 hours at Timberline, there is an average of six tourist turnovers per day (9-hour day divided by 1.5 hours per visit equals 6 individual visits.) The following table presents an estimated daily visitation level based on PAOT.



Table 9. Estimated Existing Daily Visitation—Timberline

Type of Guest	Winter			Summer		
	PAOT	Average Turnover	Estimated Daily Visits	PAOT	Average Turnover	Estimated Daily Visits
Skiers	2,231	1	2,231	750	1	750
Mountain Bikers	0	3	0	338	3	1,014
Hotel Guests	58	1	58	189	1	189
Tourists	350	6	2,100	350	6	2,100
Climbers	230	1	230	530	1	530
<b>TOTAL</b>	<b>2,869</b>		<b>4,619</b>	<b>2,157</b>		<b>4,583</b>

Source: SE Group

## 2. SUMMIT PASS

### a) CCC

The CCC of Summit Pass is 410 guests. This number is supported by recent peak visitation days at roughly 450 guests.

### b) Persons-At-One-Time

Similar to Timberline, the need to understand the constraining capacity of parking at Summit Pass has highlighted the need for this analysis. For this analysis, PAOT was categorized into four subcategories: skiers/riders, snow tubers, tourists/general milling, and hikers/Nordic skiers. These calculations were completed for both summer-mode and winter-mode operating seasons.

For existing conditions during the winter months, the largest group of at-one-time guests are skiers and riders, with tourists being the second largest group, followed by tubers, and then Nordic skiers. Skier PAOT is based on the calculated CCC (410 skiers) and estimated average visitation on the 10th busiest days. This analysis shows that during the winter season, an additional 40% of guests need to be accounted for in guest services functions, such as restaurant seating and base area parking, to comfortably accommodate the resort PAOT (i.e., the PAOT [575 guests] is approximately 40% higher than the skiers-at-one-time [410 skiers]).

Table 10. Existing Persons-At-One-Time – Summit Pass

Type of Guest	Winter	Summer
Skiers/Riders	410	0
Snow Tubers	65	0
Tourists	70	30
Hikers/Nordic	30	30
<b>TOTAL</b>	<b>575</b>	<b>60</b>

Source: SE Group

Notes:

Skier PAOT is based on the calculated CCC; only one year of historical visitation records are available at Summit Pass.

Snow tuber PAOT is based on tuber visits, or 65% of skier/riders visits (about 265 daily capacity), at 4 turnovers /day.

Tourist PAOT is estimated at 20% of tourist PAOT at Timberline in winter (70) and 30 in the summer.

Hiker/Nordic PAOT is estimated at 10% of hikers/mountaineers PAOT at Timberline (30 in the summer and winter).

As discussed previously, PAOT represents the resort population at a single point in time during the day, and therefore daily visitation for these non-ski activities can be many times greater than the at-one-time population. The following table presents an estimated daily visitation level based on PAOT and demonstrates that tourist and tuber traffic far outweigh skier/rider visitation.

Table 11. Estimated Existing Daily Visitation—Summit Pass

Type of Guest	Winter			Summer		
	PAOT	Average Turnover	Estimated Daily Visits	PAOT	Average Turnover	Estimated Daily Visits
Skiers/Riders	410	1	410	0	1	0
Snow Tubers	65	4	260	0	4	0
Tourists	70	6	420	30	6	180
Hikers/Nordic	30	2	60	30	2	60
<b>TOTAL</b>	<b>575</b>		<b>1,150</b>	<b>60</b>		<b>240</b>

Source: SE Group

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

### a) Guest Services

#### 1. TIMBERLINE

Guest services are currently provided in Timberline’s base area and on-mountain. The base area services are primarily at the Wy’East Day Lodge. The Day Lodge provides full ski area facilities including beginning of day services (ticketing, rentals, retail, ski school), food and beverage service/seating, ski patrol/first aid, and administrative functions. In addition to the Wy’East Day Lodge, the Phlox Point Cabin offers on-mountain warming hut and food service and the Silcox Hut provides additional bed-and-breakfast lodging on-mountain. Overnight guests at the Silcox Hut are transported to the hut via snow cats and provided dinner and breakfast.

The existing guest service space allocations at Timberline are generally considered adequate for current PAOT visitation levels (2,869 skiing and non-skiing guests). The Wy’East Day Lodge is a spacious building that has several restaurants and services. On-mountain guest services are limited at Timberline, requiring most guests to return to the base area for services. This can result in a less desirable guest experience.

If Timberline were to achieve skier visitation levels that are in line with the CCC of 4,080, then additional guest service space would need to be provided.

#### 2. SUMMIT PASS

Guest services are provided at the Summit Pass Lodge, a ticket building, and the Ski Patrol A Frame (winter months only). The Base Lodge was constructed in 1966 and is in fair to good condition but has space limitations and cannot service all the guests. It provides full ski area facilities including beginning of day services (i.e., ticketing, rentals, retail, ski school), food and beverage service/seating, and administrative functions in approximately 2,200 square feet. The restaurant, Summit Pass Café, is open for summer and winter operations.





Prior to Summer 2018, the Summit Pass Base Area didn't have a public restroom facility. Guests would use the Government Camp Rest Area facilities across the parking lot. Presently, the Summit Pass Lodge has a single, ADA-certified restroom.

In Summer 2019, Summit Pass received permission from the Forest Service to construct a 12 feet-by-36 feet prefabricated building located immediately west of the Summit Pass Lodge to accommodate ticketing and rental equipment space. When these services are moved from the Summit Pass Lodge to the temporary guest services building, it will be possible to construct more restroom facilities within the Summit Pass Lodge. At this time, Timberline is planning to use a temporary trailer, placed directly to the west of the Summit Pass Lodge, in lieu of the prefabricated building to provide additional rental space.

The existing guest service space allocations at Summit Pass are generally considered limited for current PAOT capacity and highlight the need for additional guest service, food service seating, and restroom space.

## Space Use Planning

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

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

*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.*
- ◆ *Kid's Ski School: Includes all daycare/nursery facilities, including booking areas and lunch rooms associated with ski school functions. Storage and employee lockers directly associated with ski school are included.*
- ◆ *Rentals/Repair: All rental shop, repair services, and associated storage areas.*
- ◆ *Retail Sales: All retail shops and associated storage areas.*
- ◆ *Ticket Sales: All ticketing and season pass sales areas and associated office space.*
- ◆ *Public Lockers: All public locker rooms. Any public lockers located along the walls of circulation space are included, as well as the 2 feet directly in front of the locker doors.*
- ◆ *Ski Patrol/First Aid: All first aid facilities, including clinic space. Storage and employee lockers directly associated with ski patrol are included in this total.*
- ◆ *Administration/Employee Lockers & Lounge/Storage: All administration/employee/storage space not included in any of the above functions.*



a) Space Use Analysis

Based upon an existing winter PAOT of 2,869 guests for Timberline and 575 guests for Summit Pass, Table 12 presents the recommended space use allocations for each in accordance with industry standards for a resort of similar market orientation and regional context. Square foot figures contained in this table are based on industry averages; they should not be considered absolute requirements.

Table 12. Existing Space Use Recommendations—Resort Total—Timberline and Summit Pass

Service Function	Recommended Range		Recommended Range	
	Low	High	Low	High
	Timberline		Summit Pass	
Ticket Sales/Guest Services	500	610	130	140
Public Lockers	1,510	1,840	390	430
Rentals/Repair	3,570	4,020	920	920
Retail Sales	1,280	1,570	260	290
Bar/lounge	1,930	2,360	390	430
Adult Ski School	800	980	210	230
Kid’s Ski School	1,610	1,960	410	460
Restaurant Seating	10,120	12,370	2,590	2,880
Kitchen/Scramble	7,590	9,280	2,070	2,300
Rest rooms	2,530	3,090	520	580
Ski Patrol	1,010	1,230	210	230
Administration	1,280	1,570	260	290
Employee Lockers/Lounge	510	630	100	120
Storage	1,550	2,290	380	510
Circulation/Waste	6,160	9,140	1,140	1,530
<b>TOTAL SQUARE FEET</b>	<b>41,950</b>	<b>52,940</b>	<b>9,980</b>	<b>11,340</b>

Source: SE Group

b) Food Service Seating

Timberline food services are primarily located in the base area with limited on-mountain food service at Phlox Cabin. The base area food services are offered at Ram’s Head, Cascade Dining Room, Blue Ox Bar, Day Lodge Y’Bar and deck, and Wy’East Café. To accommodate the current winter PAOT capacity (including skiers and non-skiing guests), Timberline should provide 813 seats to accommodate the lunchtime capacity. Based on Timberline’s 718 currently available seats, the resort would need an additional 95 seats.

The Summit Pass Lodge houses the ski area’s only food service outlet, the Summit Pass Café. The Café has 64 indoor seats and 12 outdoor patio seats. An outdoor seating area added in summer of 2019 (outside the back doors of the Base Lodge towards the bottom terminal of the chairlift) provides additional outdoor seating for 38 guests.

Table 13. Existing Restaurant Seats—Timberline and Summit Pass

		Base Area	Phlox Cabin	Total Resort		Summit Pass Lodge
PAOT	Timberline	2,681	188	2,869	Summit Pass	575
Average Seat Turnover		3.5	4			4
Existing Seats		688	30	718		114
Required Seats		766	47	813		144
Difference		-78	-17	-95		-30

Source: SE Group

Notes:

Outdoor/sundeck seating was included in the existing seat count.

Silcox Hut seating was not counted because lunch service is not provided.

Summit Pass has 64 indoor seats and 50 outdoor seats at the Summit Pass Lodge.

## F. EXISTING PARKING CAPACITY

### 1. TIMBERLINE

Parking at Timberline is provided in six parking lots in or near the base area and between the Main Lot and the Maintenance Lot on Timberline Road. Approximately 1,100 parking spaces are available with most of the parking spaces being located in the Main Lot to the east of Wy'East Day Lodge (510 spaces). The existing parking lots are used by all resort guests and approximately 160 spaces are used by Timberline employees.

During the winter months, the parking lots typically fill up every weekend from Thanksgiving to Memorial Day, plus on holidays, by approximately 8:00 a.m. During these busy periods, Timberline has had to turn cars away due to limited parking, while on-mountain facilities (lifts, trails, on-mountain guest services, etc.) have been observed to have available capacity. There are typically low skier densities and short lift lines on busy days, which demonstrates that visitation and PAOT is being limited by the parking capacity.

During the summer months, the parking lots fill up on peak days; however, user groups arrivals and departures are better spaced out during the summer. Typically, skiers and riders depart the mountain about the same time hikers, tourists and sightseers are arriving. Bike park users arrive and depart continuously throughout the day. Despite this complementary use of parking spaces, the constant turning over of spaces, during both winter and summer, creates traffic congestion and inefficient use of available parking (i.e., not all available parking spaces are being continually occupied throughout the day), thereby reducing the overall parking capacity by some 10 percent. According to parking counts conducted during the 2008/09 and 2009/10 winter seasons, the peak observed parking capacity at Timberline was 1,016 vehicles.<sup>21</sup>

In addition to accommodating skiers and riders, the Timberline base area facilities must also accommodate a number of other user groups throughout the year, including Timberline Lodge overnight guests, mountain bikers, hikers and mountaineers and tourists. Timberline also does not have an exclusive use permit and shares the parking lot with the Mazamas Climbing Club and other permittees, which run big outing programs out of the parking facilities for the Boy Scouts, the Portland Parks and Recreation programs, and organized climbs. These other organized groups can consume 30 to 50 parking spaces on busy days.

<sup>21</sup> David Evans and Associates, Inc. 2010. Timberline Lodge – Molly's Base Area Traffic Impact Study



Transportation is a known issue to Timberline due to its multiple functions and popular tourist destination. A guiding document for transportation in the region is the Mt. Hood Multimodal Transportation Plan.<sup>22</sup> The Plan identifies in Group C (third highest priority projects) a Government Camp Intermodal Hub for automobiles and alternative transportation connections and an aerial transportation link project between Mt. Hood Skibowl, Government Camp, and Timberline. These projects would alleviate pressure of traffic on the Timberline Road and parking at the Timberline base area.

To help alleviate the demand for parking at the base area, Timberline started a free shuttle service during the 2017/18 season. The shuttle operates on weekend and holidays from Government Camp to Timberline Lodge. Mt. Hood Express bus service also operates daily from the City of Sandy east to Timberline Lodge.

Table 14. Existing Recommended Parking—Timberline

	Timberline		Summit Pass	
	Assumptions	Total	Assumptions	Total
PAOT		2,869		575
Number of guests arriving by car	90% of PAOT	2,582	80% of PAOT	460
Number of guests arriving by shuttle service	10% of PAOT	287	20% of PAOT	115
Required car parking spaces	2.7 guests per car	956	2.7 guests per car	170
Parking spaces used by other highway travelers <sup>a</sup>				15
Required employee car parking spaces <sup>b</sup>		160		15
Total required spaces		1,116		200
Existing parking spaces <sup>c</sup>		1,100		125
<b>Difference</b>		<b>-16</b>		<b>-75</b>

Source: SE Group

Notes:

a Tractor-trailer combinations, 55-passenger motor coaches, oversized RVs, etc.

b Based on number of employees equals 5% of PAOT, and assuming 2 employees per car.

c 100 parking spaces at the Snow Bunny Sno-Park parking lot may be used as overflow parking for the Summit Pass operation.

As shown in Table 14, the existing parking capacity at Timberline is closely balanced with the PAOT capacity. This analysis clearly demonstrates that Timberline’s existing parking capacity is the definitive limiting factor that establishes the resort PAOT of 2,869 skiing and non-skiing guests.

For Timberline to achieve skier visitation levels that are in line with the CCC of 4,080, while continuing to serve its other non-skiing guests, a total of about 1,500 parking spaces would be required or about 400 more than currently exist. This analysis demonstrates that the current number of parking spaces at Timberline is a limiting factor to the resort achieving its potential skier capacity.

This deficiency creates a challenging parking situation at Timberline. Additional parking or an additional ski area portal would help Timberline operate at full capacity and prevent the need to turn would-be guests away at the foot of Timberline Road and direct them back onto the crowded Highway 26. Without additional parking or a change in

<sup>22</sup> David Evans and Associates, Inc. 2014. Mt. Hood Multimodal Transportation Plan: 2014–2029 15-Year Rolling Plan. <https://www.oregon.gov/ODOT/Projects/Project%20Documents/Final-Plan-MHMTTP.pdf>

the status quo, Timberline will continue to operate under capacity due to the lack of available parking for skiers and other guests.

## 2. SUMMIT PASS

The Summit Pass Sno-Park is adjacent to the Government Camp Rest Area. The Rest Area has roughly 20 parking spots on about 0.6 acre. There are current plans to relocate the rest area. Approximately 125 parking spaces are available in the Summit Pass Sno-Park parking lot. An additional 100 parking spaces at the Snow Bunny Sno-Park parking lot may be used as overflow parking for the Summit Pass operation. During the winter months, the parking lot can fill up on busy days with skiers and tubers accessing Summit Pass. During the summer and winter months, the parking lot is used by multiple user groups including hikers accessing the trailheads for the Crosstown Trail and the Alpine Trail, bikers, multiple disciplines of skiers, snowshoers, etc. Recreationists also park on non-NFS land—the most significant example of this parking being the opportunities afforded by the Government Camp Loop Road.

The Summit Pass Sno-Park and rest area currently fulfills several roles beyond parking for Summit Pass guests, including highway travelers accessing the Government Camp Rest Area facilities; circulation, transfer of cargo, and turn around for tractor-trailer combinations; a de facto park-n-ride for Mt. Hood Express ridership; a shuttle stop for the Timberline Shuttle; chain up areas for vehicles traveling on Highway 26; and trailhead parking. The rest area is situated on NFS lands and has been operated for more than 10 years under the guidance of Oregon Travel Experience/Oregon Travel Information Council. In 2020 Oregon Governor Kate Brown designated the relocation of the Mt. Hood Rest Area as an Oregon Priority Project. An Oregon Solutions Team is in the feasibility process of site selection, design, and engineering for a new state-of-the-art rest area. The current rest area at the east end of Government Camp will be decommissioned. Highway 26 provides direct access to three ski areas and is very congested during the busy summer and winter months. In addition, the tandem of highways 26 and 35 provide access to four additional ski centers. The majority of Highway 26 travelers pass by Summit Pass to gain access to Timberline, Mt. Hood Meadows, Cooper Spur, Nordic centers at Teacup Lake and Mt. Hood Meadows, and ski areas situated in central Oregon. The east intersection of Highway 26 and Government Camp Loop Road is an area of concern that has been identified by local and state agencies as failing engineering design criteria and needing improvements. The majority of travelers seeking access to Summit Pass and the rest area must navigate through this signaled intersection. While the intersection is outside the Timberline SUP boundary, Timberline understands the importance of continuing its work with local and state agencies to develop alternatives to this intersection's present configuration.

The Mt. Hood Multimodal Transportation Plan is also relevant to Summit Pass. The projects identified in the Plan (including a Government Camp Intermodal Hub, alternative transportation connections, and aerial transportation link between Government Camp and Timberline) would help alleviate highway congestion and help mitigate parking shortages in the Summit Pass Sno-Park, on Government Camp Loop Road, and in parking facilities at the Timberline complex. The Government Camp Intermodal Hub would not be a connected action to the 2019 Summit MDP and could occur on either NFS or private lands.

Public transportation is available and helps alleviate the regional transportation pressures. The Mt. Hood Express is a public bus service along Highway 26, running from Sandy east to Government Camp and Timberline. The easternmost Government Camp bus stop is located on Government Camp Loop Road immediately adjacent the Summit Pass Sno-Park. The Timberline Shuttle also provides shuttle service between Summit Pass and Timberline ski areas.

Currently a separate planning process is underway to expand public transit on Highway 35 and connect the Mt. Hood Express services with those of the Gorge Express. This is being referred to as the "Around the Mountain Plan." This



planning is also considering the development of a Transit Center as prescribed in ODOT's Mt. Hood Multimodal Transportation Plan. The Summit Pass plan contemplates and supports both of these initiatives.

## G. EXISTING RESORT OPERATIONS

### 1. SKI PATROL/FIRST AID

The Timberline Ski Patrol is based out of the Wy'East Day Lodge with outposts across the mountain. The team is supported by Mt. Hood Ski Patrol, a 300-patroller volunteer group that supports Mt. Hood Meadows, Mt. Hood Skibowl, Summit Pass, Timberline, and Teacup Nordic (a dedicated Nordic ski center).

Summit Pass ski patrol and first aid operations are located in the A-frame building next to the Summit Pass Lodge on the western boundary of the Timberline SUP area.

### 2. MAINTENANCE FACILITIES

Timberline's maintenance functions operate out of the maintenance facility located along Timberline Road to the southeast of the Wy'East Day Lodge. The existing maintenance facility is severely undersized for the operational needs of the resort and should be replaced or expanded.

Summit Pass currently has minimal maintenance and storage facilities. A collection of very small out buildings and storage units provides this nominal square footage, with the maintenance/pumphouse building being the largest of these facilities.

### 3. SNOWMAKING

Timberline has minimal existing snowmaking coverage in the Bruno's area. The existing snowmaking operation at Bruno's consists of two fan snow guns, that draw water from nearby fire hydrants at the Wy'East Day Lodge, and deposit snow at the top of Bruno's slope. After large snow piles are made at the top of the slope, snow groomers spread the snow down the slope to the base of Bruno's covering an area of about 1.4 acres.

On May 25, 2011, in response to an application by the Forest Service, the State of Oregon Water Resources Department, Water Right Service Administrator authorized a change of the character of water use at Timberline from domestic to commercial, which authorizes the water to be used for snowmaking purposes.

Summit Pass has minimal existing snowmaking coverage. The existing snowmaking operation consists of two snow guns and a small pumphouse located west of the Summit Pass Lodge. The snowmaking pump draws water from the Government Camp Water Company (GCWC) 8-inch water main, which runs parallel and to the west of the western Timberline SUP boundary, via a 6-inch snowmaking supply line. GCWC can supply up to 150,000 gallons per day at a rate of 150 gallons per minute (GPM). NNI can draw up to 150 GPM for snowmaking operations and is limited by the available water from GCWC. The existing snowmaking operations typically cover approximately 1 acre with approximately 1 foot of snow. Hoses and other snowmaking equipment are stored in the snowmaking storage building; fan guns are stored outside.

### 4. NIGHT LIGHTING

Night skiing is available at Timberline on Fridays and Saturdays, as well as during the holiday season, from 4:00 p.m. to 9:00 p.m. on Bruno's, as well as the Molly's Express and Pucci Chairlift pods. The runs that are currently covered with lighting are: Vicky's Run, Wy'East, Main Run Pucci, Thunder, Bob Elmer, and Wingle's Wiggle. These runs account for 28.5 acres of night skiing and support a night skiing CCC of about 1,000 skiers. The operation of two separate pods for night skiing often poses operational inefficiencies for Timberline, particularly on days below CCC.

There are currently no “after dark” operations at Summit Pass.

## 5. MOUNTAIN ROADS

The mountain road system provides access to the top of Timberline and various locations across the mountain on about 8 miles of roads (refer to Figure 5). In general, the mountain roads provide reasonable access to the existing facilities for maintenance and support activities. Two types of roads exist within the ski area boundary; R.L.K and Company maintained roads and NFS roads which are maintained by the Forest Service.

Table 15. Existing Mountain Roads—Timberline

Road Segment	NFS Maintained Roads (miles)	R.L.K. Roads (miles)
Silcox Hut	1.0	--
Water Tank	--	0.4
Magic Mile	--	1.6
Palmer Base	--	0.1
Magic Mile Base Loop	--	0.1
Stormin’ Norman	--	1.0
West Leg	2.9	--
Phlox Point	--	0.3
Molly’s Base	--	0.3
Pucci’s Base	--	0.1
Water Supply	--	0.2
<b>TOTAL</b>	<b>3.9</b>	<b>4.1</b>

Source: SE Group

A Summit Pass-maintained mountain access road runs along the western edge of the existing permit area for approximately 0.5 mile. This road is used primarily to access the top terminal of the lift. The West Leg Road (FSR 2645) also serves as a mountain road and intercepts the existing SUP on the eastern edge of the Summit Pass area. The West Leg Road starts just east of Summit’s base lands and terminates at the OR Highway 173 corridor (below Timberline’s maintenance shop and equipment storage area). During the winter months, the West Leg Road is a snow route, which allows for snowcats and snowmobiles to commute between Summit Pass and Timberline ski areas.

## 6. INFRASTRUCTURE

See Figure 6 for a map showing the location of existing utilities at Timberline and Summit Pass.

### a) Power and Communications

Existing power and communications lines at Timberline provide interconnected service to all major facilities: Timberline Lodge, Wy’East Day Lodge, Silcox Hut, all lift terminals, water supply pump house, maintenance facility and sewage treatment facility. Power and communication lines are a combination of above-ground and buried. Timberline has redundant power sources, one along Timberline Road and one along West Leg Road.





Electrical lines run to the Summit Pass Lodge, ticket building, Ski Patrol A-Frame, maintenance building, and bottom terminal of the chairlift. Portland General Electric (PGE) has two underground lines that run through the Summit Pass base area—one that travels west to supply Government Camp, and one that travels east to Mt. Hood Meadows ski resort. PGE also has an overhead line that crosses the lower segments of the Summit Pass ski runs and chairlift that supplies power to the Mazamas Lodge, Cascadia Arts, the Boy Scouts camp, and other users (see Figure 6).

## b) Water

Timberline's water source is a horizontal well tapping a natural spring located roughly 1.3 miles below Timberline Lodge, at the 5,000-foot level of the mountain (accessed by the West Leg Road). There is an 8,000-gallon collection tank there and a wooden A-frame pump house where water is pumped to a 257,000-gallon domestic water tank and an 80,000-gallon fire suppression tank located upslope from the Timberline Lodge.

The lodge is sprinkled inside, and there is proper backflow prevention and valving that allows use of all 337,000 gallons to fight fire. Water is accessed through six fire hydrants, four around the lodge and two by the day lodge. The Timberline Lodge swimming pool can also be used to draw fire fighting water.

Water from the domestic water tank is directed to Timberline Lodge, and from there distributed to the other base area buildings and Alpine Campground. Water is also pumped from the domestic water tank to a 4,000-gallon tank that provides water to Silcox Hut.

Phlox Point Cabin at Timberline does not have its own water supply. For operational purposes, five gallons of potable water are transported to the hut on a daily basis.

For Summit Pass, a domestic water well on the northwest corner of the Summit Pass Lodge services domestic water needs for the base lodge. The well is 146 feet deep and can provide up to 15 GPM for domestic use. The Summit Pass Lodge is the only facility at Summit Pass that currently uses domestic/potable water, and a 1-inch supply line feeds the base lodge from the well pump. Domestic uses include food service, one restroom and a dishwasher. During the summer, Summit Pass also uses the water for irrigation, as needed. The well is sufficient to meet the current demand for potable water and irrigation at Summit Pass. As noted earlier, the GCWC serves as the source for snowmaking water.

## c) Wastewater

Wastewater from Timberline Lodge, Wy'East Day Lodge, and the maintenance facility is treated at the sewage treatment facility adjacent to the maintenance facility, and effluent is piped to a series of drain fields located approximately 0.25 mile to the east-southeast of the treatment facility. Wastewater from Silcox Hut is directed to a small drain field adjacent to the hut.

Residual wastewater from Phlox Point Cabin at Timberline is collected and transported back to the sewage treatment plant on a daily basis.

The Summit Pass Lodge is the only facility at Summit Pass that currently discharges sanitary sewer. Sewer service for Summit Pass is provided by the Government Camp municipal system.

## 7. SUSTAINABILITY

Timberline currently has a variety of sustainability initiatives in place regarding energy use, waste and recycling, and transportation. They currently use LED lighting in Timberline Lodge, the Wy'East Day Lodge, and the Vehicle Maintenance Shop. Their refrigeration units have also been upgraded to require less electricity and water. Timberline

uses reusable flatware, biodegradable plastics, and biodegradable paper straws at all their food service locations. Spent fryer oil is provided to SeQuential, a cooking oil recycling company, and refined into biodiesel. R.L.K. and Company funds the Mt. Hood Express, which offers public transportation to the area, and encourages the use of other ride sharing and public transportation methods to Timberline. Timberline also uses an innovative grooming management system that optimizes grooming workflows and vehicle routes to increase grooming efficiency and reduce fuel consumption.

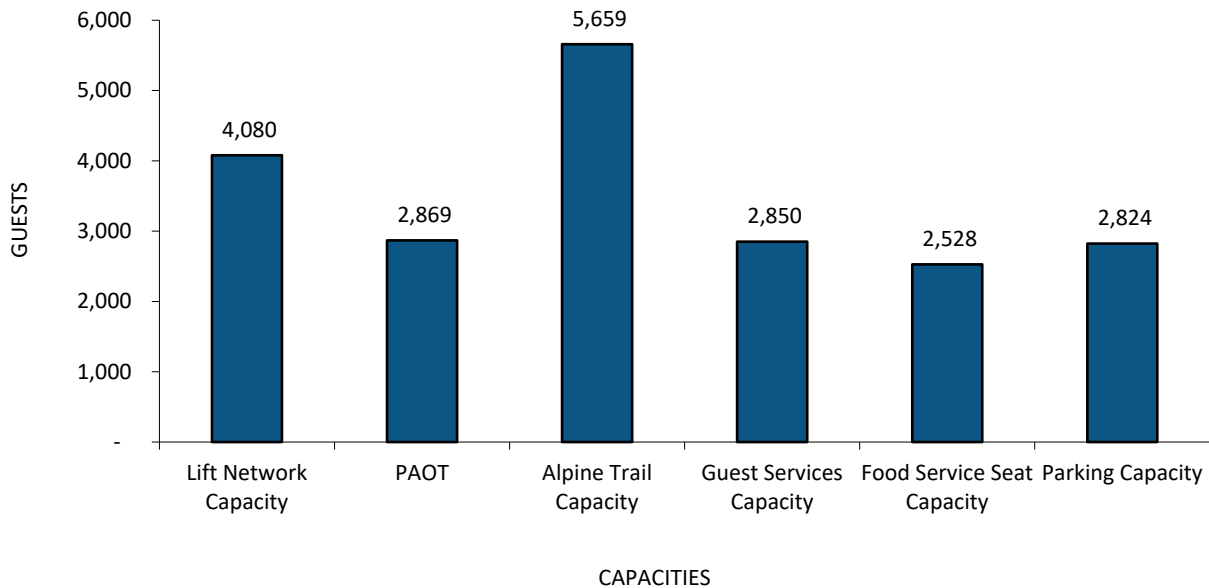
Timberline also partners with a variety of environmental organizations. This includes involvement in National Ski Area Association's Sustainable Slopes voluntary program, which is a way for ski areas to commit to sustainable practices across their operations, as well as the with the National Forest Foundation. With the National Forest Foundation, Timberline helps provide volunteer opportunities, such as Timberline's Friends of the Forest Day, and contributes to the Ski Conservation Fund, which provides funding for action-oriented on-the-ground or citizen-based monitoring projects that improve forest health and outdoor experiences on National Forests and Grasslands.

## H. RESORT CAPACITY BALANCE AND LIMITING FACTORS

### 1. TIMBERLINE

Timberline on-mountain facilities currently operate well under existing conditions. The lift and terrain network can easily handle the current visitation levels (2,200 to 2,400 guests on capacity days and around 3,100 guests on peak days). Other aspects of Timberline’s operations, specifically parking, restaurant seating, and guest service space are restricting Timberline from reaching its full potential and depressing visitation through limited capacity. Timberline wants to realize better utilization of the resort facilities by addressing the existing deficiencies. There is sufficient mountain (lift and ski terrain) capacity to handle an increase of around 1,700 people per day on capacity days and 900 people per day on peak days. This MDP outlines what would be required to bring the capacities of the other resort components up to meet the need for visitation levels that are in line with the resort’s CCC and PAOT. The following chart shows these relationships.

Chart 3. Existing Resort Capacity—Timberline



**Notes:**

Lift Network Capacity is based on Daily Lift Capacity/CCC calculation from Table 4.

PAOT is based on PAOT calculation in Table 8.

Alpine Trail Capacity is based on on-slope capacity plus skiers on the lift, in lift line, and using support facilities.

Guest Services Capacity is based on total square feet of guest services building space divided by a commonly accepted, average required square feet per skier capacity (In the case of Timberline and Summit Pass, 17 square feet per skier capacity)

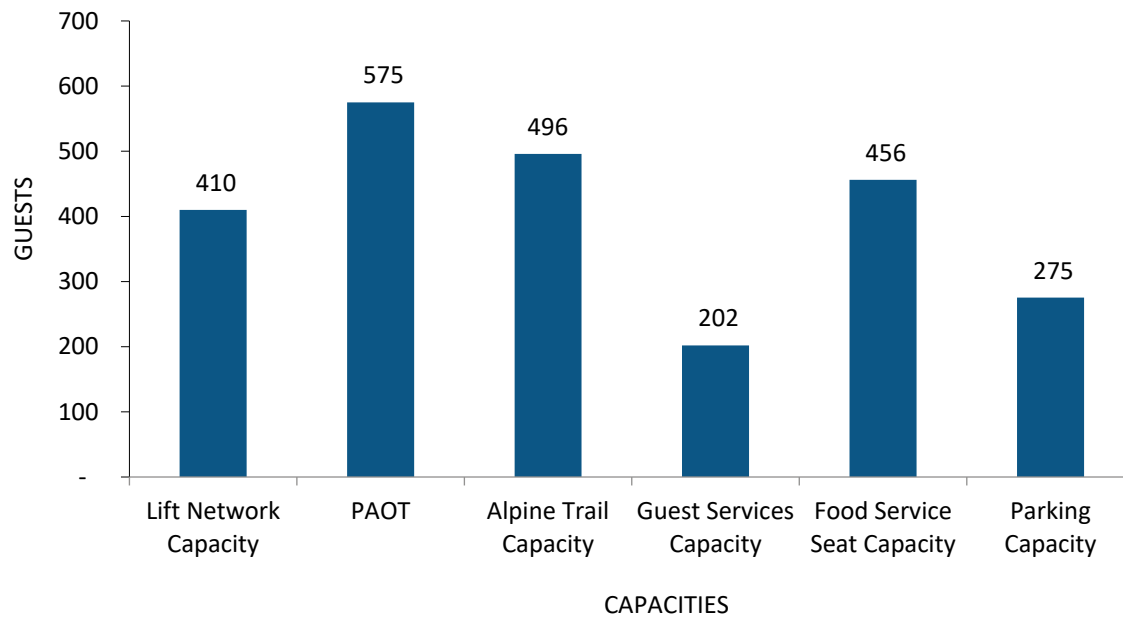
Indoor/Outdoor Food Service Seat Capacity is based on total seats available times 3.5 or 4 uses per seat, depending on the facility.

Parking Capacity is based on total parking spaces available to guests, times 2.7 guests per car, plus guests arriving by shuttle or bus.

## 2. SUMMIT PASS

Summit Pass currently operates near or over capacity under existing conditions. The lift and terrain network on a busy weekend day can typically accommodate guests. However, the guest service space in the base lodge, the indoor food service seating and parking capacity restrict Summit Pass' operations. This MDP outlines what would be required to bring the capacities of the other resort components up to meet the need for visitation levels that are in line with the resort's CCC and PAOT. The following chart shows these relationships.

Chart 4. Existing Resort Capacity—Summit Pass



**Notes:**

Lift Network Capacity is based on Daily Lift Capacity/CCC calculation from Table 4.

PAOT is based on PAOT calculation in Table 10.

Alpine Trail Capacity is based on on-slope capacity plus skiers on the lift, in lift line, and using support facilities.

Guest Services Capacity is based on total square feet of guest services building space divided by a commonly accepted, average required square feet per skier capacity (In the case of Timberline and Summit Pass, 17 square feet per skier capacity)

Indoor/Outdoor Food Service Seat Capacity is based on total seats available times 3.5 or 4 uses per seat, depending on the facility.

Parking Capacity is based on total parking spaces available to guests, times 2.7 guests per car, plus guests arriving by shuttle or bus.

## I. MULTI-SEASON ACTIVITIES

### a) Summary of the Existing Multi-Season Activities and The Guest Experience

In addition to skiing and riding in the winter season, Timberline offers a variety of summer recreation activities. These expand the recreation experience at Timberline by offering enjoyable opportunities to those who want to experience Mt. Hood National Forest in a non-winter setting. Many guests come to take in the views and explore all that northern Oregon has to offer in a mountain setting. Activities include summer skiing and snowboarding (Timberline has the longest ski season available in North America), mountain biking, scenic lift rides, mountain climbing, and hiking. Refer to Figure 7 for existing non-winter conditions at Timberline.

These offerings provide a variety of activities for guests to choose from. However, with the nearby large population center of Portland, there is significant demand for recreation opportunities in the Mt. Hood National Forest during the summer and shoulder seasons. Mt. Hood is the closest high-altitude peak within northern Oregon and as a result, is a highly-valued destination for residents and tourists alike. While there are opportunities that exist at Timberline for summer recreation, continued expansion of these opportunities will only draw more guests.

### b) Summer Skiing and Snowboarding

Timberline is known for its summer skiing, which is typically available from June through August on the Palmer Snowfield. In ideal snow years, the lifts are open 10 months (November through August). Maintenance typically occurs in September. Summer skiing is open to intermediate and more advanced public skiers and snowboarders, as well as ski and snowboard camps. These camps are a significant portion of the summer recreation opportunities at Timberline. Timberline itself offers performance youth race camps, family race camps, masters adult race camps, and freestyle camps. Other camps and groups also use the snowfield, including organized ski camps and Olympic training organizations.

### c) Mountain Biking

Timberline currently offers a network of lift-assisted mountain biking trails and a skills bike park. Approved as part of the 2012 Timberline Mountain Bike Trails and Skills Park Environmental Assessment, there are approximately 17 miles of mountain bike trails. Timberline uses the Jeff Flood Express to transport riders and bikes to the top of the trail system. The trail system utilizes terrain off this chairlift and uses switchbacks, wooden bridges, natural landscape contours, grade-reversals, dips, and other techniques to keep riders on the trail and to control their speed. Trail widths range from 16 to 66 inches. The bike park consists of trails and features for all ability levels as well as a skills park. The first phase of mountain bike trails was opened to the public during fall of 2018 and the last trail was completed in September of 2021. Restoration projects were also approved at this time to correct existing sedimentation issues in the West Fork Salmon River and Still Creek watersheds resulting from the roads and ski area facilities.

### d) Scenic Lift Rides

The Magic Mile Express is open for summer lift rides to an elevation of 7,000 feet where guests can view Mt. Hood, the Palmer Snowfield, and south to Mt. Jefferson. Guests must purchase a ticket to use the lift and can choose to ride up and down, or ride up and walk down.

### e) Mountain Climbing

As a developed recreation site, Timberline provides the most easily accessible jump-off spot for alpine climbing of any major volcano in the Cascade Range. The popular south side route is accessed from the Timberline area. Alpine style climbing takes place all year long, with the majority of climbs occurring between May and late September.

While climbers rarely patronize the services offered at Timberline Lodge, they are drawn to the easy access, free bathroom facilities, and climbers registration room in the Wy'East Day Lodge.

#### f) Year-Round NFS Hiking and Multi-Use Trails

Timberline is a jumping off point for a variety of hiking and multi-use trails within the Mt. Hood National Forest. Starting from Timberline Lodge a variety of shorter waking trails can be accessed. The trails also offer a hike that travels approximately 1-mile up Mt. Hood, where guests can enjoy the views from Silcox Hut and the Palmer Express. Timberline is also connected to a variety of other, longer trails that extend beyond the operational boundary, including the 39-mile Timberline Trail and the Pacific Crest Trail.

Summit Pass is the starting point for a number of hiking, multi-use and winter-use trails within the Mt. Hood National Forest. These trails include Alpine, Alpine Loop (SNO-660B), Crosstown (NFS Trail #755), Camp Creek Loop (NFS Trail #754), Timberline to Town (NFS Trail #756), and West Leg Bypass (SNO-2645A) trails (see Figure 7). In addition to serving as an over-the-snow route for NNI/RLK operations, the West Leg Road is also a popular winter trail that serves the Nordic and alpine touring communities. Nordic and alpine touring skiers use the West Leg Road for uphill and downhill travel, and for access to dispersed areas on Mt. Hood. Summit Pass Café offers lunch and dinner options for trailhead users, as well as passing motorists and Government Camp locals. The Café has become a popular dining destination and visitation is robust. Use of the Summit Pass Café has grown with the opening of Timberline Bike Park.

The Alpine Trail is a multi-directional, 2.1-mile trail that originates at Timberline Lodge and descends approximately 1,500 vertical feet before terminating at Government Camp's Crosstown Trail. This trail is a popular ski and snowshoe trail in the wintertime and is open year-round to hikers. While it passes through the Timberline Bike Park, mountain bikes are not allowed on this trail. Note: The Alpine Trail serves as a downhill trail for employees who: work at the Timberline complex; take public transportation to work; and elect to commute home via the Alpine Trail.

The Crosstown Trail is a popular, multi-directional 3-mile trail that skirts the northern edge of Government Camp. Summit Pass Sno-Park provides parking for one of its trailheads. This trail is used by hikers, mountain bikers, skiers, and snowshoers and receives its highest use in the summer and winter months.

The Camp Creek Loop Trail is designated as a "more difficult" loop trail and is an extension of the popular Crosstown Trail. Located just north of the most eastern portion of Crosstown Trail and just west of the Alpine Trail, the Camp Creek Loop Trail rolls along for 1.5 miles and 200 feet of vertical gain (easiest for hikers, more challenging for bikers, Nordic skiers, and snowshoeing enthusiasts). For skiing and biking, this year-round trail is typically traveled in the west-to-east direction.

The Alpine Loop Trail is a 0.5-mile, winter only (seasonal) trail appropriate for all skiing and snowshoeing abilities. This short trail serves as a connector for the Alpine and West Leg trails. Combined with the West Leg Trail, the Alpine Loop Trail creates a scenic trek for those accessing the forest from the Village of Government Camp. Accessed by skiing up the lower mile of the West Leg Trail, skiers and snowshoers turn left (or west) and head out onto the Alpine Loop Trail. After approximately 0.5 mile, the Alpine Loop Trail rejoins the West Leg Trail for a return ski/snowshoe to the ODOT Government Camp Maintenance Station Sno-Park.

The West Leg Bypass Trail is a 1.4-mile, winter only, non-motorized, multi-directional trail. This trail was built as mitigation to offset the loss of a segment of winter route on the West Leg Road (lost due to construction of the Jeff Flood Express and associated alpine ski trails). The grade of the trail averages 8% to 10%—making a challenging route for intermediate cross-country skiers. On the south end, the Bypass route ties in with West Leg Road approximately 300 yards below the road gate near the Jeff Flood Express' lower terminal. On the north end, it crosses the Alpine



Trail and Kruser Trail before it ties in just below the West Leg Road's hairpin turn near the bottom of the Stormin' Norman Chairlift. From there, the bypass joins the West Leg Road alpine ski trail. While largely the domain of Nordic skiers, AT enthusiasts and snowshoers have discovered the route in recent years.

Timberline to Town Trail connects Government Camp to Timberline (5.5 miles). The trail is popular for mountain bikers and hikers, many of whom use the Mt. Hood Express Shuttle to access the highest elevation of the trail near Timberline's Magic Mile Express. This trail intersects with Timberline Bike Park Trails and it is multi-directional. In the summer, the strenuous hike/bike ride (from Government Camp) has an ascent of approximately 1,800 feet. The trails that originate at Summit Pass also connect to a variety of other, longer trails, including the Mountaineer Trail (NFS Trail #798) and the 39-mile Timberline Trail (NFS Trail #600).

The Mountaineer Trail is a clockwise loop that starts at Timberline Lodge and connects with the Pacific Crest Trail (NFS Trail #2000) before heading north towards the top terminal of Magic Mile Express. From there, it crosses over to Silcox Hut and then descends and terminates near Timberline's flagpole near the bottom of the Chute. The trail is only open to hikers.

### Pacific Crest National Scenic Trail

The Pacific Crest Trail (PCT), which spans 2,650 miles from Mexico to Canada through California, Oregon, and Washington, is a classic Pacific Northwest trail that circumnavigates Mt. Hood and intersects Timberline SUP. Only hiking and horseback riding are allowed on this multi-directional trail. Timberline serves as a resupply point for many PCT thru-hikers as well as a starting or end point for those hiking the trail in segments. Timberline's hospitality and Cascade Dining Room food are legendary among PCT thru-hikers.

### g) Snowtubing

Summit Pass currently has a 1-acre snow tubing area to the northeast of the Summit Pass Lodge. The tubing area is comprised of three parallel lanes equipped with two fan snowmaking guns to ensure a high-quality snow surface. The lanes do not have lighting for after dark operations, and there is no lift service, which is somewhat uncommon for commercial tubing operations. Tickets and tubing rentals are available in the Summit Pass Lodge. Tubing related visitation can be a significant part of the Summit Pass Base Area visitation, as shown in Table 10 and Table 11. During the 2018/19 season, tubing accounted for 40% of all ticket sales at Summit Pass.

Unmanaged tubing takes place on the permit acreage at Snow Bunny. There is great demand along the Highway 26 corridor for tubing and the Snow Bunny facility serves a very diverse population of National Forest users.

# CHAPTER 4—PREVIOUSLY-APPROVED PROJECTS, NOT YET IMPLEMENTED

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The projects detailed in this section have been previously approved through the NEPA review process, but have not yet been implemented. It is anticipated that these projects will ultimately be implemented as capital for on-mountain improvements becomes available. Prior to project implementation the Forest Service will review project consistency with 1990 Forest Plan and 1994 Northwest Forest Plan standards and guidelines, and determine if additional analysis is warranted due to new or changed conditions. Due to the date of approval, additional environmental review may be necessary prior to implementation.

Previously-approved projects include:

- 1998 Master Plan Amendment Environmental Assessment: Vehicle maintenance shop and ski patrol headquarters

Refer to Figure 8 for previously approved projects at Timberline.

## A. MASTER PLAN AMENDMENT – VEHICLE MAINTENANCE SHOP AND SKI PATROL HEADQUARTERS

As part of the 1998 Timberline Lodge Master Plan Amendment EA, a new vehicle maintenance shop, storage space, and ski patrol headquarters was conceptually approved.

The existing maintenance shop lacks the space for sufficient vehicle maintenance facilities, and room to store the ski area's support equipment and supplies, which are presently stored in the open along the egress route from Timberline Lodge. In addition, the existing first aid/ski patrol base is currently in a small room in the Wy'East Day Lodge. This inhibits the ski patrol's ability to access the ski area and transport injured visitors because of the lack of space and congestion between skier vehicle traffic and rescue vehicles.

The proposed maintenance shop and storage facility would expand the existing maintenance facility by approximately 10,000 square feet and most likely be located immediately south of the existing maintenance shop (or be accomplished with an addition to the existing building). The building would allow the support equipment and other supplies to be stored inside, which would improve the scenic quality of the area. It would also provide a larger space and a better location for the first aid/ski patrol headquarters, which would allow ski patrol to perform its duties more efficiently as well as eliminate congestion caused by emergency care and search and rescue vehicles operating from the Day Lodge. This building concept has been simplified to meet the changing needs of the resort, and the size of the planned building has been reduced from 10,000 square feet to about 5,000 square feet. Additional details are described in Chapter 5.F.2 Maintenance Facilities. Due to the date of approval, additional environmental review may be necessary prior to implementation.

Table 16. MDP Previous NEPA Approvals Tracking Matrix

Project	Date and Title of Approving Document
Vehicle Maintenance Shop	1998 Master Plan Amendment Environmental Assessment Decision Notice and Finding of No Significant Impact

# CHAPTER 5—UPGRADE PLAN





The proposed Upgrade Plan for Timberline builds upon previous planning and approvals at Timberline and Summit Pass. The goal is to continue to evolve the recreational experience and better accommodate the growth in wintertime skier and rider visits at Timberline. The Upgrade Plan is multi-faceted including: upgrading existing facilities at Timberline while preserving the history and character of this unique ski area; developing a long-term and sustainable transportation solution to transport guests and employees to the timberline on Mt. Hood; and improving the overall visitor experience to the National Forest by providing an affordable, seamless transition to NFS lands.

This plan recognizes and builds upon other transportation and parking initiatives currently being developed and promoted in the vicinity of Government Camp by state, federal, and county governmental entities, which are geared towards improving mobility and safety on the area's roads, enhancing parking, and expanding public transportation. R.L.K. and Company has become an active member of the Mt. Hood Transportation Alliance and views these projects as allied interests that should work in concert with the parking plans and additional modes of transportation that are envisioned at Summit Pass. In addition to providing the infrastructure necessary to address current parking and transportation deficiencies, the desired outcome is to provide a more car-free, pedestrian experience for visitors to Government Camp.

The four primary projects of the Upgrade Plan include: the Timberline Express gondola and associated trails and infrastructure; reconfiguring Summit Pass base area; expansion of the snowmaking system; and expansion of operations during the winter and summer. Molly's Portal projects are discussed in Chapter 5; however, these projects would likely be implemented when visitation warrants and after at least some Summit Pass Base Area projects are completed.

This section responds to the findings of the existing conditions analysis, with the assumption that the improvements from Chapter 4 will be implemented. Accordingly, the Upgrade Plan is tailored to improve Timberline's ability to respond to its market/skier demands through the increase in visitation, better utilization of available terrain, and increased capacity of guest service facilities. It also focuses on improve parking capacity and general vehicle circulation throughout the area. The projects in the Upgrade Plan are anticipated to be completed over the next ten to twelve years, depending on environmental analysis timeframe for certain projects.

Note that the existing Timberline SUP includes a 9-acre tubing venue commonly referred to as Snow Bunny. This permit acreage is located 2 miles east on Highway 26. R.L.K. and Company proposes to continue its current operations within the Snow Bunny portion of the permit by maintaining the site for unmanaged snow play, something for which there is great demand along the Highway 26 corridor, or could be the potential site of the relocated ODOT rest area.

Upgrade Plan projects are depicted on Figures 8 – 11.

## A. UPGRADED LIFT NETWORK

The upgrade plan includes new lift installations that will enhance the learning progression, make better use of the available terrain at Timberline, and improve the connectivity between Timberline and Summit Pass.

### 1. NEW LIFT INSTALLATIONS

The Upgrade Plan includes the installation of the Timberline Express Gondola, construction of three beginner surface lifts (two at Timberline Express mid-station and one at Summit Pass) and installation of the Summit Pass Chairlift.

## a) Timberline Express Gondola Installation

The Timberline Express Gondola is the cornerstone of Timberline's Upgrade Plan. The gondola would not only provide direct, aerial access to Timberline from the Summit Pass Base Area for both guests and employees, it would also alleviate the congestion on OR Highway 173 (the Timberline Road). It would serve as an introductory experience to variety of guests to Timberline and the MHN, including beginner skiers, more advanced skiers traveling to Timberline, tourists exploring the area, people sledding or tubing, and more. The proposed gondola would originate adjacent to the existing Summit Pass Chairlift bottom terminal and is planned to move guests to a top terminal adjacent to the top terminal of Jeff Flood Express. It would include a mid-station located adjacent to the West Leg Road about a third of the way up the gondola alignment. The mid-station would provide access to an area of beginner terrain with surface lifts as well as some other programming, like camping sites or yurts and a potential tubing area. Refer to Chapter 5, Section D. for additional detail. The bottom section of the gondola would primarily serve as an up-mountain transport lift used by guests to travel uphill while the top section of the gondola would be used more for repeat skiing of the lower mountain at Timberline. There would be a small warming hut with restrooms provided adjacent the top terminal of the gondola. The gondola is designed to be a top-drive gondola and have an hourly capacity of 1,800 pph. This hourly capacity would accommodate the morning staging period (transport up the mountain) and the late afternoon egress from Timberline (downloading the gondola at the conclusion of Timberline lift operations). It is anticipated that the gondola would be a 10-person gondola with approximately 65 cabins.

Gondola cabins would be stored overnight and during the off season. Cabins would be stored in a facility constructed at the mid-station (approximately 40 feet by 60 feet in size) as well as in the top and bottom terminals.

## b) Beginner Surface Lifts

### Timberline

Depending on market demands, the existing Heidi's carpet may be replaced with an extended carpet which can better serve a greater number of beginner skiers and riders.

### Gondola Mid-Station

In order for Timberline to achieve its goal of providing excellent customer service, and to accommodate entry level skiers with a quality first time experience and learning environment, a new beginner's area is planned to be installed at the mid-station of the Timberline Express Gondola. To serve this terrain, Timberline plans to install two new carpet conveyors. These conveyors would operate at grades ideal for learning progression. The location is of these carpets is ideal for ski and ride school, as it allows new skiers and riders to get away from the busyness of the Summit Pass and Timberline base areas and learn in an area that is less crowded.

### Summit Pass

Summit Pass is an ideal location for children and adults to learn to ski and ride on easily accessible, gently sloped terrain. A beginner carpet is planned for the western edge of the Timberline SUP boundary and would have an hourly capacity of 600 pph. This conveyor lift would be designed for beginner skiers and riders. In addition, two beginner carpets are planned to be located at the mid-station of the Timberline Express Gondola to serve the beginner terrain. These two carpets would have hourly capacities of 600 pph.

## c) Summit Pass Chairlift

The existing Summit Pass Chairlift, a fixed-grip double chairlift with a 1,200 pph capacity, would be shortened and potentially upgraded to a similar capacity lift to accommodate the Summit Pass Base Area design. The existing lift



was originally installed in 1980. The chairlift bottom terminal would be moved uphill and further to the west to better service the terrain and circulation in the base area and accommodate the proposed gondola and base lodge layout. By upgrading the existing chairlift conveyance, the overall guest experience would improve by having updated lift technology, allowing ski school and parties of four or less to ride the chairlift together.

## 2. COMPLETE UPGRADED LIFT NETWORK SPECIFICATIONS

The specifications of the complete upgraded lift network are depicted in Table 17.

Table 17. 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
Stormin' Norman, DC4	6,248	5,464	784	4,411	18%	1,500	1,000	160	Doppelmayr/2000
Jeff Flood Express, DC4	6,027	4,847	1,180	6,539	18%	1,800	1,000	133	Doppelmayr/2007
Magic Mile Express, DC4	6,988	5,915	1,073	5,333	21%	1,600	950	143	Poma/1992
Palmer Express, DC4	8,484	6,952	1,532	5,492	29%	1,800	1,000	133	Doppelmayr/1996
Pucci, DC4	5,915	5,350	565	3,431	17%	1,800	1,000	133	Doppelmayr/2020
Molly's Express, DC4	5,815	4,986	829	5,237	16%	1,200	1,000	200	Doppelmayr/2000
Bruno's, C2	5,885	5,840	45	339	13%	630	300	57	Poma/1987
Heidi's, Carpet	5,879	5,840	38	248	16%	600	120	12	UPGRADE
Timberline Express I, DG10	4,466	3,986	480	4,471	11%	1,800	1,200	400	PROPOSED
Timberline Express II, DG10	5,944	4,466	1,478	8,749	17%	1,800	1,200	400	PROPOSED
Summit Pass, C4	4,294	3,986	308	2,259	14%	1,200	350	70	PROPOSED
Summit Beginner, Carpet	4,010	3,990	20	201	10%	600	160	16	PROPOSED
Mid-Station #1, Carpet	4,385	4,370	15	151	10%	600	150	15	PROPOSED
Mid-Station #2, Carpet	4,385	4,370	15	151	10%	600	150	15	PROPOSED

Source: SE Group

Notes:

C-2 = fixed grip double chairlift

DC-4 = detachable four-passenger chairlift

DG-10 = detachable ten-passenger gondola

The Timberline Express is shown as two separate lifts because the two sections of the lift (separated by the mid-station) would serve different roles at Timberline.

Four surface lifts of variable lengths are installed on the Palmer Snowfield for summer ski operations



## B. UPGRADED TERRAIN NETWORK

The terrain network at Timberline is similar to the existing conditions with the exception of an additional 25 acres of terrain to create a better connection between the previous Timberline and Summit Pass trail networks. Minor terrain modifications and grading projects may be needed once site-specific planning and detailed design work has been completed.

Both existing and new trails are planned to create a better connection between Timberline and Summit Pass terrain networks. The existing trails would be improved to create a better skiing experience and the lower Summit Pass trails would be shortened to accommodate the base area Upgrade Plan design. The terrain upgrades include improving existing trails, such as the Lower Alpine Trail and Lower West Leg Road as a novice egress route. It also includes the expansion of beginner terrain as well as the creation of a ski through route adjacent the gondola mid-station. The ski through route would allow skiers descending from Timberline to bypass the gondola mid-station and would prevent conflicts with guests walking to the tubing area and beginners exiting the gondola. With the gondola and terrain connection to Timberline, this provides Summit Pass guests with a more interesting and challenging experience for a range of ability levels. This would give groups and families the flexibility to experience different terrain options while skiing and riding at the ski areas.

To improve skier egress and maintain an appropriate trail width for grooming, selective tree cutting is planned along the Alpine Trail. Currently, the Alpine Trail is too narrow in multiple locations to facilitate a quality ski connection between Summit Pass and Timberline given the volume of skier traffic expected on this trail. The trail would be widened to a width of approximately 40 feet. Widening of the trail would also improve efficiencies for trail grooming. Tree removal would primarily follow the existing trail; however, in certain areas trees may be cleared to create a new alignment that would improve the skier experience by introducing additional turns and reducing trail gradients in steeper areas. To provide Timberline the ability to improve the Lower Alpine Trail, the Forest Service would administratively remove the trail from the National Forest System and provide responsibility of the trail to Timberline. While the trail would be considered one of Timberline's existing alpine skiing trails, none of the existing uses of the Alpine Trail would be altered by this project. Specifically, the availability of the Alpine Trail as a hiking trail in the summer and Nordic and uphill travel route in the winter would be maintained. Timberline would collaborate with the Forest and Oregon Nordic Club to take on management and maintenance of the Alpine Trail (including funding this work), consistent with recreational uses described above.

In addition to the terrain modifications and grading projects, there will be selective tree cutting in the vicinity of the Molly's Express bottom terminal. This will make the Molly's Express and associated ski terrain more attractive for Timberline guests, as this lift and ski terrain are currently underutilized. Specifically, tree thinning is planned pending NEPA approval in tree islands adjacent to the *Cut Off* and *West Pitch* ski trails, and to the east of *Vicky's Run*. Tree thinning would occur within approximately 9 acres of terrain. Approximately 25-40 percent of trees will be cut in this area. The proposed tree thinning projects will improve the gladed skiing experience in the identified tree islands, allowing guests to ski more comfortably through the trees as an alternative to skiing on adjacent traditionally cleared ski trails. Because this terrain will be gladed terrain, it is not incorporated in the summary of terrain distribution.

Overall, the terrain upgrade projects would involve minor grading to improve beginner terrain, the minor expansion of gladed terrain, and the development of trails connecting Timberline and Summit Pass. The total terrain network of Timberline would be approximately 602 acres.

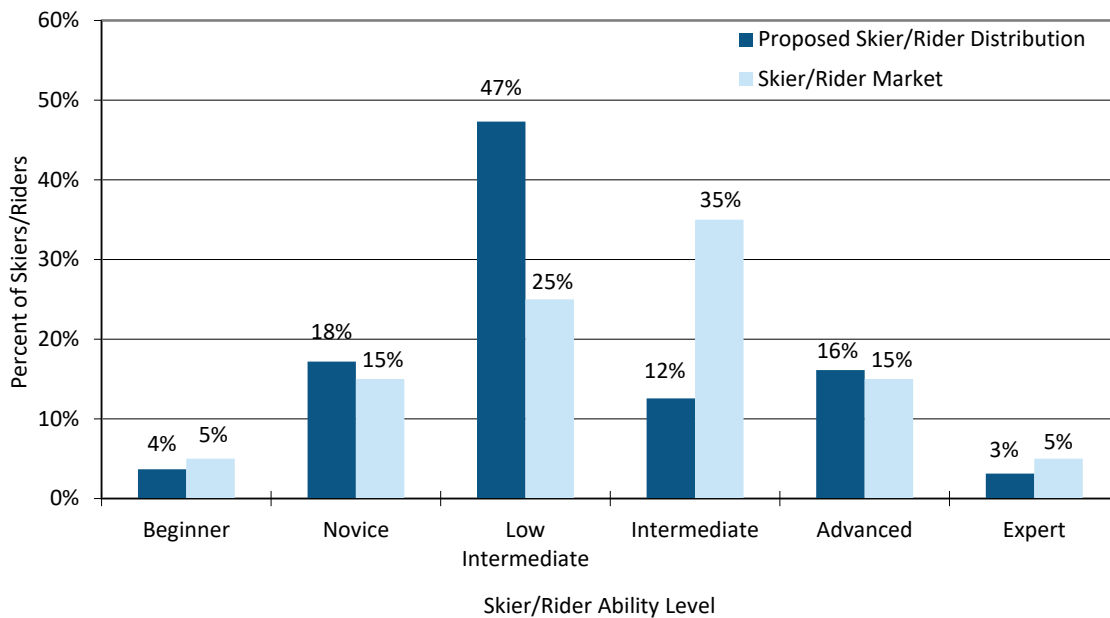
A complete terrain specification table can be found in Appendix A, Table A-3.

Table 18. Upgrade Terrain Distribution by Ability Level

Skier/Rider Ability Level	Trail Area (acres)	Skier/Rider Capacity (guests)	Skier/Rider Distribution (%)	Skier/Rider Market (%)
Beginner	8.1	243	4%	5%
Novice	66.5	1,198	18%	15%
Low Intermediate	222.6	3,116	47%	25%
Intermediate	83.3	833	12%	35%
Advanced	152.6	1,068	16%	15%
Expert	69.1	207	3%	5%
<b>TOTAL</b>	<b>602.2</b>	<b>6,665</b>	<b>100%</b>	<b>100%</b>

Source: SE Group

Chart 5. Upgrade Terrain Distribution by Ability Level







## C. UPGRADED CAPACITY ANALYSIS

### 1. COMFORTABLE CARRYING CAPACITY

While the existing CCC of the Timberline and Summit Pass are presented separately, the upgrade CCC is combined into one capacity because functionally, Timberline would operate as one ski area with the use of the Timberline Express Gondola. Timberline's existing CCC is 4,080 guests per day and is limited by parking and restaurant seating limitations. Summit Pass' existing CCC is 410 guests per day. Combined, this equals a total existing CCC of 4,490 guests. The projects included in this upgrade plan would bring the capacities of all resort components into better balance so that the potential CCC of the entire resort can be realized. The planned CCC of Timberline operation would increase to 5,170 guests. This increase is attributed to the installation of the Timberline Express Gondola and the installation of the additional surface lifts/carpets.

Table 19. Comfortable Carrying Capacity—Upgrade Plan

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)	Daily Lift Capacity (guests)
Stormin' Norman, DC4	4,411	784	1,500	7.0	0	10	1,350	7,413	14,612	510
Jeff Flood Express, DC4	6,539	1,180	1,800	7.0	0	10	1,620	13,380	15,820	850
Magic Mile Express, DC4	5,333	1,073	1,600	7.0	10	5	1,360	10,216	17,634	580
Palmer Express, DC4	5,492	1,532	1,800	6.5	0	5	1,710	17,032	25,049	680
Pucci, DC4	3,431	565	1,800	7.0	5	10	1,530	6,053	13,013	470
Molly's Express, DC4	5,237	829	1,200	7.0	0	10	1,080	6,264	14,399	440
Bruno's, C2	339	45	630	7.0	0	15	536	169	2,979	60
Heidi's, Carpet	248	38	600	7.0	0	5	570	152	2,198	70
Timberline Express I, DG10	4,471	480	1,800	7.0	30	15	990	3,326	8,052	410
Timberline Express II, DG10	8,749	1,478	1,800	7.0	30	15	990	10,243	15,688	650
Summit Pass, C4	2,259	308	1,200	7.0	0	15	1,020	2,199	6,666	330
Summit Beginner, Carpet	201	20	600	7.0	0	10	540	76	1,318	60
Mid-Station #1, Carpet	151	15	600	7.00	0	10	540	57	1,771	30
Mid-Station #2, Carpet	151	15	600	7.00	0	10	540	57	1,771	30
<b>Total</b>	<b>47,011</b>		<b>17,530</b>				<b>14,376</b>	<b>76,637</b>		<b>5,170</b>

Source: SE Group

Notes:

C-2 = fixed grip double chairlift

DC-4 = detachable four-passenger chairlift

DG-10 = detachable ten-passenger gondola

Daily Lift Capacity values in this table differ from those found in the 2005 Timberline Express DEIS because of adjustments made in operating assumptions related to lift line waits, skier circulation patterns, etc. that better represent how skiers are distributed throughout the ski area complex



## 2. PERSONS-AT-ONE-TIME

As discussed in Chapter 3, PAOT is a snapshot of the resort visitation at a given point in time and accounts for both skiing and non-skiing guests.

For this analysis, PAOT was categorized into seven subcategories: skiers/riders; snow play users; Timberline Lodge and Silcox Hut overnight guests; mountain bikers; tourist/general milling; gondola riders; and hikers/mountaineers. These calculations were completed for both winter and summer seasons.

For the Upgrade Plan during the winter months, the largest group of at-one-time Timberline users are skiers and riders, with tourists being the second largest group, followed by snow play users, gondola riders, climbers, and then hotel guests. The upgrade skiers PAOT is 5,404, based on the upgrade plan overall CCC number (5,170) assuming 80% capacity. The capacity of the Timberline Lodge is 220 guests at full occupancy. Only 58 guests are accounted for in the winter PAOT calculation or about 25%, because it was assumed the other Lodge guests were on the mountain skiing and riding and are captured in the skiers PAOT number.

During the summer months, the largest at-one-time user group is tourists with the second largest group being summer adventure recreationists, mountain bikers, skiers and riders, gondola riders, climbers and finally hotel guests. During these busy periods, facilities are less stressed due to the timing of each user group using the facilities. Typically, skiers and riders in the summer take advantage of the cold night and hard snow conditions in the early morning. They typically leave the mountain around noon, when tourist and day hikers might be arriving at the base area. In this regard, the turnover of the parking facilities works in favor of Timberline.

Table 20. Persons-At-One-Time—Upgrade Plan

Type of Guest	Winter	Summer
Skiers	4,136	750
Snow Players/Summer Recreationalist	400	400
Mountain Bikers	0	338
Hotel Guests	58	176
Tourists	400	400
Gondola Riders	180	180
Climbers + Hikers	230	560
<b>TOTAL</b>	<b>5,404</b>	<b>2,804</b>

Source: SE Group

Notes:

The skier PAOT is assumed to be 80% of CCC.

Skiers and riders for summer is Palmer only.

Snow players/summer recreationalist are based on 360 snow tubers and 40 other snow players used in the previous Molly’s Portal analysis in the winter and a similar number of guests in the summer for camping/staying at the mid-station yurts or other structured summer activities besides hikers, bikers and climbers.

Mountain bikers are from the PAOT calculation in the Mountain Bike Trails and Skills Park EA.

Timberline Lodge guests are from 70 rooms/220 pillows, with 80% occupancy rate, and assumed 20% non-skiers in winter.

Silcox Hut guests are from 24 beds; 90% winter occupancy, 60% summer occupancy; and 65% winter non-skiers, 90% summer non-skiers/hikers/climbers.

Tourists PAOT is estimated at 350 and 50 at Summit in the summer and winter and are assumed to be originating from Timberline Lodge area.

Summer and winter climbers are calculated by assuming 80% of peak climber counts (based on permits issued) of 285 people per day. Summer hikers are estimated at 300 per day.

Mountain bikers are from the PAOT calculation in the Mountain Bike Trails and Skills Park EA.

Gondola users are assumed to be 10% of hourly capacity and originating from Summit Pass.

Similar to Chapter 3, the total daily visitation at Timberline was estimated. The following table presents an estimated daily visitation level based on PAOT.

Table 21. Estimated Daily Visitation—Upgrade Plan

Type of Guest	Winter			Summer		
	PAOT	Average Turnover	Estimated Daily Visits	PAOT	Average Turnover	Estimated Daily Visits
Skiers	4,136	1	4,136	750	1	750
Snow Players/Summer Recreationalist	400	4	1,600	400	4	1,600
Mountain Bikers	0	3	0	338	3	1,014
Hotel Guests	58	1	58	176	1	176
Tourists	400	6	2,400	400	6	2,400
Gondola Riders	180	3	576	180	3	576
Climbers + Hikers	230	1	230	560	1	560
<b>TOTAL</b>	<b>5,404</b>		<b>9,000</b>	<b>2,804</b>		<b>7,076</b>

Source: SE Group

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

### 1. SUMMIT PASS LODGE

The Summit Pass base area—including the Summit Pass Lodge, parking facilities, and access and circulation roads—would be reconfigured to improve the guest arrival and overall visitation experience for both skiers who exclusively use the Summit Pass terrain as well as guests who park at Summit Pass to access the rest of the terrain at Timberline. The Lodge and reconfigured base area strive to create connectivity to Government Camp, Mt. Hood and create a strong sense of place through honoring past architectural design of the region.<sup>23</sup>

Illustration 2. Summit Pass Lodge Base Area and Gondola Terminal



Guests would access the new Summit Pass Lodge via the realigned FSR 530 from the south. Guests would turn onto Timberline Road from Highway 26, turn left onto FSR 530, and then drive to the planned parking lots, drop-off zone, or the Summit Pass Lodge. The current entrance to Summit Pass Lodge would likely be reconfigured or restricted for public transit and buses.

The planned Summit Pass Lodge would be built to expand all guest services offered at Summit Pass and to improve the role Summit Pass will have as an entry point for the larger Timberline area. Guests could use the drop-off zone, public transit or parking lots. The views of Mt. Hood are a central component of Summit Pass Lodge design. A deck is planned to be constructed on the northern and eastern sides of the lodge to provide a viewing platform of Mt. Hood and a variety of windows would provide views from within the lodge.

The lodge itself would be approximately 20,000 square feet. It would include space for restaurant service and seating, ticketing, ski school, retail, restrooms, and more. The deck would offer additional seating opportunities

<sup>23</sup> In addition to USFS regulations within the SUP boundary Development in Government Camp is governed by the Clackamas County Comprehensive Plan. Specifically, refer to sections 10.A.1 and 10.C for further details on the municipal planning processes governing Summit Pass

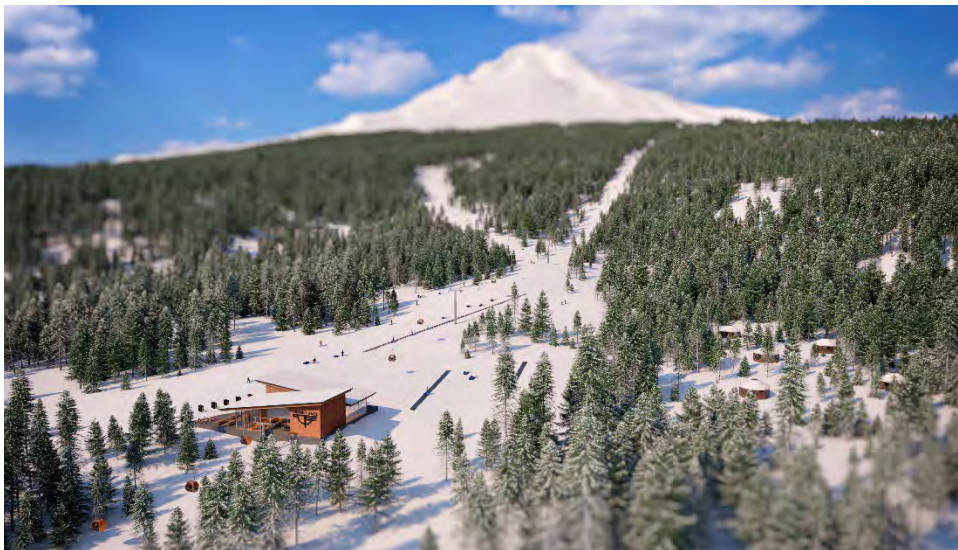
during nice weather. This deck would provide direct access to the planned gondola and Summit Pass Chairlift. A small building for rentals and ski patrol would be constructed proximate to the lodge to provide additional space for these services. The lodge would also help Timberline provide year-round recreation programming by providing space for guests and/or summer ski and snowboard camps to use during the non-winter seasons. The base area buildings plan to incorporate and house native design elements.

In addition to the standard suite of guest services facilities, the Summit Pass Lodge design also includes a daycare center for guests and employees. This part of the lodge will be designed with child safety and comfort in mind and would be regularly staffed to provide parents and caregivers the opportunity to ski and ride on their own.

Although final design of the Summit Pass Lodge has not been completed, Timberline is currently working with Skylab Architecture to develop schematics and design concepts. Illustration 2, 3 and 4 are artists renderings illustrating conceptual designs of the gondola bottom, mid- and top- terminals, respectively. These images are conceptual and are not finalized. Building materials and design specifics will be determined through the NEPA process.

## 2. GONDOLA MID-STATION

Illustration 3. Gondola Mid-Station



The gondola mid-station would provide access to a beginner ski area with two carpet lifts, a planned tubing site, an area for camping sites and/or overnight yurts, and a small guest service facility. The guest service facility is planned to include food service, restrooms, and a small dining space. Future planning would define the design of this facility. A small tubing facility would be constructed to serve the tubing area, including lift. Refer to Chapter 5, Section H. for additional details on the potential tubing sites and the area for camping and/or overnight yurts. This tubing would replace the existing Summit Pass tubing operations.

### 3. GONDOLA TOP TERMINAL AND TIMBERLINE LODGE

Illustration 4. Gondola Top Terminal



To provide guest services for guests arriving at Timberline via the Timberline Express Gondola, a small warming facility with restrooms would be installed at the top of the gondola. In addition, an ADA accessible path would be created from the gondola to Timberline Lodge from summer accessibility. During the winter, guests not on skis or snowboards would be managed with roping and signage to a singular access point for ski crossings. An over the snow shuttle or transport system would be available to guests to provide ADA access over the snow. The warming hut and restroom would allow skiers to exit the gondola and use the facilities without having to traverse over to Timberline Lodge while the pathway and signage would provide a welcoming experience for those who wish to do so. A deck would provide panoramic views.

Upon completion of these two upgrades, Timberline would remove part of the existing parking lot in front of Timberline Lodge and replace it with a large green space, a vehicle turnaround loop, and a milling area for guests. This is a restoration project to recreate the historical appearance of the front of Timberline Lodge. Covered deck parking on a portion of the existing parking lot is planned. A detailed discussion about parking and resort access can be found in Section E of this chapter.

### 4. MOLLY'S PORTAL DAY LODGE

Timberline may decide to implement the Molly's Portal at the base of Molly's Express if visitation warrants. Part of the plan is the construction of a day lodge to provide guest services to skiers and riders. The main floor would be constructed with a large seating area/warming room for brown bag lunches and groups to gather. There would be a fireplace situated at one end of the building for guests to gather around. The lower level of the day lodge would contain restrooms, public lockers, a skier lounge with seasonal lockers and changing area, administrative space, and storage areas. A small ski patrol station would be constructed adjacent to the entrance/exit. Guests would exit the lower level and ski across a bridge to access the loading area for the existing Molly's Express.

A version of the planned Molly's Portal was previously contemplated in the Timberline Conceptual Master Plan which was accepted by the Forest Service in 2009. As this plan was not analyzed under a NEPA process, environmental review would be necessary prior to implementation.

## 5. SPACE USE ANALYSIS

The Upgrade Plan winter PAOT is 5,404 guests. Table 22 presents the proposed space use allocations for Timberline as a whole in accordance with industry standards for a resort of similar market orientation and regional context as Timberline. Square foot figures contained in this table are based on industry averages; they should not be considered absolute requirements. Individual space use tables are in Appendix A.

Table 22. Space Use Analysis—Upgrade Plan—Resort Total

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	940	1,140
Public Lockers	2,800	3,410
Rentals/Repair	6,050	7,100
Retail Sales	2,430	2,970
Bar/lounge	3,650	4,460
Adult Ski School	1,480	1,820
Kid's Ski School	2,980	3,640
Restaurant Seating	18,630	22,770
Kitchen/Scramble	13,980	17,080
Rest rooms	4,660	5,700
Ski Patrol	1,860	2,280
Administration	2,430	2,970
Employee Lockers/Lounge	970	1,190
Storage	2,840	4,210
Circulation/Waste	11,310	16,830
<b>TOTAL SQUARE FEET</b>	<b>77,010</b>	<b>97,570</b>

Source: SE Group





## 6. FOOD SERVICE SEATING

With the increased PAOT that would occur under the Upgrade Plan, Timberline would need approximately 1,447 restaurant seats for guests. The number of seats available at Timberline Lodge and Phlox Point Cabin would remain the similar and therefore, a variety of additional food service seats would be required. The expanded Summit Pass Lodge and Molly’s Portal would provide the majority of these additional food service seating under the Upgrade Plan. Outdoor seats on decks, which would be used on days with nice weather, would also provide guest seating at both of these locations. The final design of both buildings has not yet been completed; however, Summit Pass Lodge is anticipated to have 350 to 450 indoor and outdoor seats (about half would be indoor and half outdoor seats). Both Summit Pass Lodge and Molly’s Portal are anticipated to provide a variety of restaurant seats and would help address the current deficiency of restaurant seats.

In addition to these two locations, additional food service seats would be provided at the Timberline Express Gondola mid-station. This location would primarily provide seats for beginner-level guests circulating on the gondola at Summit Pass and guests tubing or staying at the overnight camping/yurt accommodations.

Table 23. Restaurant Seats—Upgrade Plan

	Timberline	Summit Pass Lodge	Phlox	Molly’s	Gondola Mid-Station	Total Resort
Lunchtime Capacity (PAOT)	3,265	869	106	726	208	5,174
Average Seat Turnover	3.5	4.0	3.5	3.5	3.5	
Existing Seats	688	--	30	--	--	718
Required Seats	933	217	30	207	59	1,447

Source: SE Group

Lunchtime PAOT is the total PAOT (5,404) minus the climbers and hikers (230). It was assumed this group would not use the restaurants.

## E. UPGRADED PARKING CAPACITY AND RESORT ACCESS

As discussed in the Preface, the merger of Timberline and Summit ski areas is intended to shift parking patterns to improve access and the guest experience for visitors. Following the completion of this plan, it is expected that most skiers and riders will choose to park at the expanded Summit Pass Base Area, increasing the availability of the Timberline Lodge parking area for hotel guests and sightseers.

Upgrades to Timberline’s parking capacity and improvements in resort access would primarily be through the planned Summit Pass Lodge upgrades, Molly’s Portal improvements, and development of a larger entry plaza at Timberline Lodge. Overall, the additional parking included in this upgrade plan would help address Timberline’s deficit of parking spaces even with the anticipated increase in capacity and visitation at the resort as a result of the planned projects.

### 1. SUMMIT PASS LODGE

Parking lots are planned on the hillside adjacent to the Summit Pass Lodge and would provide approximately 500 to 600 parking spaces. Sections of the planned parking areas would be dedicated to the Mazama Lodge and Art Cabins guests. In addition to day parking, parts of the Summit Pass parking lots are planned to be designated to permit overnight camper van and RV use. In the winter, the Summit Pass Lodge parking lots are expected to be used almost exclusively by skiing and riding guests.

A 0.6-acre area, include the building operated as a Oregon Rest Area, directly to the east of the existing Summit Pass Sno-Park, is currently managed by the Travel Information Council Oregon. The Government Camp Rest Area is a popular stop for travelers along Highway 26. The rest area is planned for future re-location and upgrade and is an Oregon Priority Project designated by Governor Kate Brown in 2020. Plans presented in this MDP assumed the rest area will be relocated.

As noted previously, parking and access to Summit Pass would be reconfigured to improve the guest parking and access experience as well as to address noted traffic pattern issues along Highway 26. The planned reconfigurations are a synthesis of the following research and recommendations: the December 2018 Preliminary Site Access Evaluation by David Evans and Associates, Inc; the Summit Pass traffic and circulation memo by Nelson/Nygaard; and input and ideas from Timberline management and R.L.K. and Company.

To reduce traffic backups along Highway 26 at the intersection with both ends of Government Camp Loop Road, access to Summit Pass would change to only occur off Timberline Road and FSR 530. The junction of FSR 530 and Highway 26 would be removed. Vehicles traveling east along Highway 26 would be required to turn left onto Timberline Road and then left again onto a widened and improved FSR 530 that would travel to the planned parking lots, planned drop-off plaza, and Summit Pass Lodge. To manage the potential increase in traffic, several possible changes are considered for this intersection. One option would be to signalize the intersection, similar to the ones located at Warm Springs and Welches. Another alternative is to create a dynamic center turn lane which can be shifted depending on the time of day to allow Timberline guests turn onto or off of Timberline Road without backing up the flow of traffic on Highway 26.

A benefit of the current design is the frontage road between Government Camp Loop Road and Timberline Highway could be used by public transit. Currently, eastbound transit uses Government Camp Road, then must turn left onto Highway 26, then left onto Timberline Highway. The left turn movement from Government Camp Road to Highway 26 can take minutes for operators to find a gap. The frontage road connection concept would reduce transit delay and improve circulation.

The junction of Government Camp Loop Road and the Summit Pass Lodge turn around will become managed. A gate may be installed at this intersection to control traffic during peak hours or to allow for specific high-capacity vehicles (i.e., buses and public transit) to more easily access the Summit Pass Lodge.

## 2. TIMBERLINE LODGE

The creation of the green space and milling area will remove guests parking spaces at Timberline Lodge. Covered parking in the main parking lot would replace the existing parking in front of Timberline Lodge to achieve a no net loss of parking spaces at Timberline. The addition of the Summit Pass Lodge parking lots is expected to shift the use pattern of parking at Timberline. Most guests parking in the Timberline Lodge/upper lots are expected to be non-skiers or skiers who are also residing in Timberline Lodge. The Timberline Lodge parking lots will *not* be designated for exclusive use by Lodge residents and will remain accessible to members of the public. Nevertheless, depending on usage patterns following implementation, R.L.K. and Company may work with the Forest Service to implement strategies and programming to incentive behavior and to ensure the parking and resort access capacities remain balanced.

Table 24. Recommended Parking at Staging Portals—Upgrade Plan

	Timberline	Summit Pass Lodge	Molly's Portal	Total
PAOT	2,432	1,891	1,081	5,404
Number of guests arriving by drop off or within walking distance (10% of PAOT)	--	189	--	189
Number of guests arriving by shuttle service (10% of PAOT for Timberline, 20% for Summit Pass and Molly's)	486	341	216	1,043
Number of guests arriving by car (70% of PAOT)	1,702	1,192	756	3,650
Number of guests arriving by public transit (20% of PAOT for Timberline, 10% for Summit Pass and Molly's)	243	170	108	521
Required car parking spaces (average 2.7 guests per car)	631	441	280	1,352
Required employee car parking spaces	97	76	43	216
Total required spaces	759	539	337	1,635
Existing parking spaces at base area	1,100	--	--	1,100

Source: SE Group

Notes: Public transit percentages were assumed based on future partnerships with local and regional authorizes that would be needed to achieve these percentages.

### 3. MOLLY'S PORTAL

It is thought that the reconstruction of the Summit Pass Base Area will relieve the congestion and use conflicts at Timberline Lodge. Following completion of the base area upgrades and the Timberline Express Gondola, the management of Timberline Summit Pass plans to continue to monitor staging, parking, and resort capacity.

Should visitation warrant, Timberline may determine it necessary to construct the Molly's Portal. The Molly's Portal is planned at the bottom terminal of Molly's Express. Guests would access the portal by turning left onto the new entrance drive as they make their way up Timberline Road. A new sign would be constructed at the entrance informing guests that this is a day use skier portal and there is access to Timberline's snowplay area.

This portal may include a day lodge, parking, and other guest services. If implemented, the Molly's Portal proposal included in this MDP will be constructed as a secondary portal, whose facilities function as supplements to parking, and guest services proposals at Summit Pass. The timing for implementation of the Molly's Portal will be considered within the context of the overall Timberline and Summit Pass complex.

## F. PROPOSED RESORT OPERATIONS

### 1. SKI PATROL/FIRST AID

In order to ensure guest safety, modifications to ski patrol facilities are planned to be made in collaboration with mountain safety staff. Two patrol base-of-operations are planned. The existing Wy'East ski patrol facility is planned to remain in place or to be expanded, while the Summit Pass ski patrol hut is planned to be reconstructed and/or relocated. Both of these facilities are planned to have medical beds and all equipment necessary to stabilize injured guests in preparation for evacuation to a full-sized medical facility. There is also potential for a medical facility at Molly's Portal. Additional small ski patrol stations are planned to be dispersed throughout the mountain at the gondola mid-station, among others

## 2. MAINTENANCE FACILITIES

The existing Timberline Lodge maintenance building is planned to be improved to accommodate the needs of the resort's expanded and year-round operations. Immediately south of the existing maintenance shop, Timberline plans to construct a building of approximately 5,000 square feet. The intent of the building is to house Mountain Department staff thus separating them from the existing vehicle maintenance operations, and consequently improving workplace conditions. This new building would also provide storage for Mountain Department supplies and equipment currently stored outdoors in sight of visitors. This building would be a simple one story, shed-roofed design with board and batten cedar siding and Cascadian design features borrowing from and complimenting the design features of the Timberline complex. A 10,000 square foot vehicle maintenance shop was previously approved in 1998. Additional NEPA review would likely be needed prior to implementation of the smaller maintenance facility.

A maintenance facility is also planned at the Summit Pass Lodge base area adjacent to the parking lots. This 7,000 – 9,000 square foot facility would support the lower mountain operations. A small gondola storage and maintenance would also be located at the gondola mid-station or at the bottom terminal of the gondola.

## 3. SNOWMAKING

An expanded snowmaking system is planned as part of the Upgrade Plan (refer to Figure 9). The planned snowmaking coverage would extend from the top of Pucci Chairlift to the base of Jeff Flood Express and down the Summit Pass, following *Main Run Pucci, Uncle Jon's Band, Brother Beau, Thunder, Lower Alpine, Bumblebee*, planned run *B2* and a portion of *Kruser* trails. The Bruno's beginner terrain would also be covered by the new system and would no longer use fire hydrants for water supply. The planned snowmaking system expansion would cover approximately 72 acres of terrain. Accompanying snowmaking water pipe, electricity to supply the snowmaking guns, and snowmaking guns would need to be installed. The snowmaking pipe and power lines would be constructed in existing ski ways to the extent that is practical to reduce the extent of vegetation removal.

Water for snowmaking would be drawn from Timberline's existing water supply system. A new water storage tank, with a capacity of 375,000 to 500,000 gallons, and a snowmaking water pumping facility would be constructed in an existing tree clearing adjacent to lower Uncle Jon's Band at the 5,000-foot elevation. Snowmaking water would be drawn directly from the storage tank, and the tank would be filled and replenished with water on an as-available basis from the existing resort water supply system (i.e., domestic water uses would have priority). Power for the snowmaking pumps would come from the snow gun power line on lower Uncle Jon's Band trail.

## 4. NIGHT LIGHTING

To consolidate night lighting operations around the Pucci chairlift, existing night lighting along *Vicky's Run* will to be removed and night skiing in this area will be discontinued. In addition, night lighting will be installed along the *Walt's Baby* and *Schoolyard* trails. Approximately 11 lights will be installed and approximately 12 lights will be removed.

## 5. INFRASTRUCTURE AND UTILITIES

### a) Power and Communication

The Summit Pass Lodge Base Area currently receives power from Portland General Electric Company. A few changes are anticipated for the power delivery system in this area. Most importantly is a powerline near the Summit Pass Lodge Base Area which currently disrupts the viewshed of the planned lodge. As part of the lodge construction R.L.K. and Company plans to bury this line. Any other changes to the power system for Summit Pass Lodge will be documented and analyzed as part of the NEPA process.



Power for Molly's Staging portal is planned to come from the existing power line connected to the bottom terminal of Molly's Express.

#### b) Water

Water supply will be needed for the upgraded maintenance facility, top of gondola warming hut, Summit Pass Base Area and Molly's Portal. Water for the planned maintenance facility will be plumbed in from the existing maintenance facility supply. Water for the top of the gondola warming facility will be plumbed from the existing water line running to Wy'East Day Lodge. Water at Summit Pass Base Area and snowmaking water for *Lower Alpine*, *Bumblebee*, planned run *B2* and a portion of *Kruser* will come from the Government Camp Water Company. Snowmaking water for *Main Run Pucci* and *Uncle Jon's Band* will come from Timberline waterline. To provide potable water to the Molly's Portal, Timberline plans to drill a new well near the planned facilities. Alternatively, the new facility could be tied into the existing water system with some modifications to existing filtration systems.

#### c) Wastewater

Wastewater infrastructure will be needed for the planned maintenance facility, top of gondola warming hut, Summit Pass Base Area and Molly's Portal. Wastewater from the planned maintenance facility will be plumbed into the existing maintenance facility wastewater line. For the restroom facilities at the top of the gondola, wastewater lines will be brought in from the Wy'East Day Lodge lines. Wastewater from Summit Pass would continue to utilize the community sewer system. Wastewater from the planned Molly's Portal will either be treated on-site with a new septic system or pumped offsite to the existing Government Camp community sewer system.

### 6. ROADS

#### a) Mountain Roads

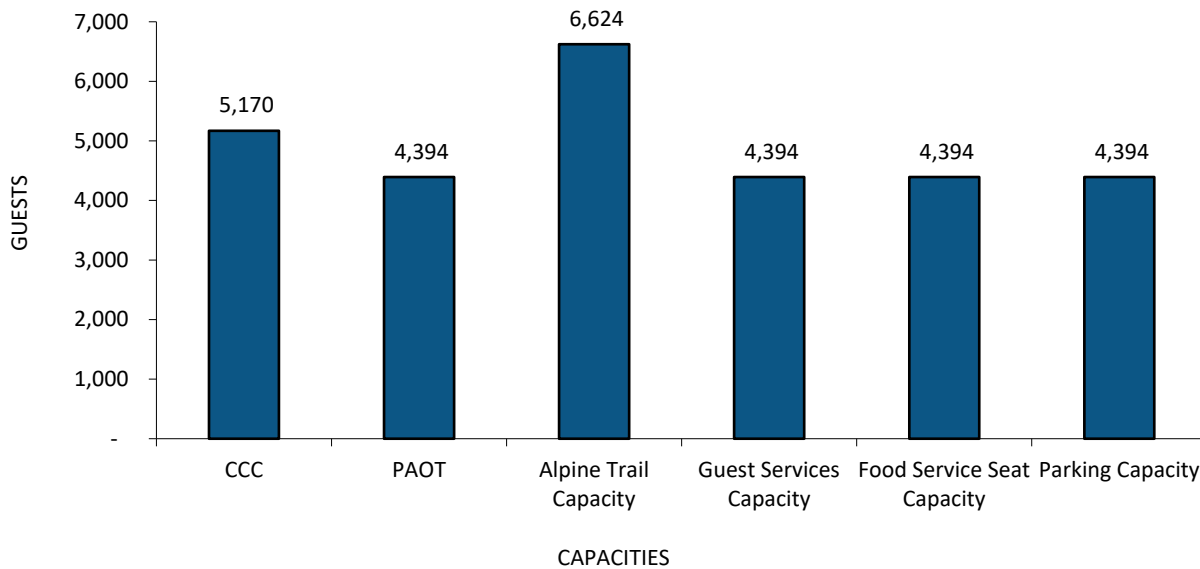
No new major mountain roads would be constructed. Small temporary construction access routes may be needed for construction of the gondola, chairlift, and portions of the proposed snowmaking infrastructure. A short access lane from West Leg Road would be required for the proposed maintenance facility. Also, a construction access and long-term maintenance route would be required for the proposed snowmaking water storage tank or pond. The West Leg Road will continue to serve an important role for year-round maintenance, and resort operations within the SUP area and at Timberline and Summit ski areas. Although the West Leg Road is a Forest Service Road, Summit would provide maintenance of the road to ensure any necessary access to the SUP area.

#### b) Molly's Portal

The proposed Molly's Portal, if implemented, would require the construction of a short entrance drive approximately 1,200 feet off of Timberline Road. The proposed location of this intersection and driveway has been engineered by David Evans and Associates and subsequently approved by ODOT; however, it is anticipated that it would be subject to renewed review and approval by ODOT.

## G. RESORT CAPACITY BALANCE AND LIMITING FACTORS

Chart 6. Resort Capacity—Upgrade Plan



**Notes:**

Lift Network Capacity is based on Daily Lift Capacity/CCC calculation from Table 17.

PAOT is based on PAOT calculation in Table 20.

Alpine Trail Capacity is based on on-slope capacity plus skiers on the lift, in lift line, and using support facilities.

Guest Services Capacity is based on total square feet of guest services building space divided by a commonly accepted, average required square feet per skier capacity (In the case of Timberline and Summit Pass, 17 square feet per skier capacity).

Indoor/Outdoor Food Service Seat Capacity is based on total seats available times 3.5 or 4 uses per seat, depending on the facility.

Parking Capacity is based on total parking spaces available to guests, times 2.7 guests per car, plus guests arriving by shuttle or bus.

## H. UPGRADED MULTI-SEASON ACTIVITIES

To provide alternative recreation during the winter season for guests who are not skiing, Timberline is planning a tubing park adjacent the Timberline Express Gondola mid-station. As discussed previously, a small tubing facility and guest service facility would be adjacent to the tubing runs to support the tubing operation. This tubing area would provide backcountry tubing experience (i.e., out of view of Highway 26) while still being easily accessible via the gondola.

Continuing to provide diverse opportunities to a spectrum of visitors is central to Timberline’s summer activity goals. To support this goal Timberline recently constructed their mountain bike trails and skills park. The park will bring a new type of guest to Timberline in the summer, and further diversify the resort’s spectrum of offerings. Timberline will continue to improve its mountain biking and hiking trail networks and connect trail networks between Timberline Lodge and Summit Pass. An additional bike park or pump track features at the Summit Pass Lodge would support the existing system and provide easy to access features and connectivity to the trail system.

The overnight camping sites and/or yurts would allow overnight camping in the MHNH while still being close enough to existing infrastructure (e.g., the gondola mid-station, restrooms, etc.) to be an appropriate introductory



experience for guests of all levels. These camping and/or yurt sites would likely be part of some outdoor programming by Timberline but could also be used by summer camps and other outdoor groups.

In addition to these specific programs, the Timberline Express Gondola would provide a year-round experience for guests wishing to ride the gondola to Timberline. This gondola would create the quintessential “Mt. Hood” experience by letting guests ride the gondola, hike to the Silcox hut and back down, and then return to their vehicles.





# APPENDIX A. ADDITIONAL TABLES

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Table A-1. Existing Terrain Specifications—Timberline

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
A01_Upper Kruser	6,238	5,936	302	1,669	124	4.8	19	30	Low Intermediate
A02_Lower Kruser	5,917	4,854	1,063	6,754	116	18.0	16	28	Low Intermediate
A03_Paintbrush	5,935	5,542	393	2,358	107	5.8	17	27	Low Intermediate
A04_Spraypaint	6,114	5,906	207	1,097	81	2.0	19	31	Low Intermediate
A05_Norm's	6,250	5,558	692	3,779	113	9.8	19	28	Low Intermediate
A06_Conways	6,240	5,660	580	3,337	112	8.5	18	27	Low Intermediate
A07_Lodge Getback	6,236	5,923	312	2,401	84	4.6	13	27	Novice
A08_The Bonezone	6,070	5,703	367	2,361	92	5.0	16	27	Low Intermediate
B01_Upper Glade	5,924	5,463	461	2,998	147	10.1	16	23	Novice
B02_Lower Glade	5,518	5,397	121	892	111	2.3	14	24	Novice
B03_Nona's Bologna	5,682	5,630	52	377	99	0.9	14	18	Novice
B04_Upper Mustang Sally	5,876	5,689	187	1,012	142	3.3	19	31	Low Intermediate
B05_Mid Middle Mustang Sally	5,589	5,500	89	480	131	1.4	19	29	Low Intermediate
B06_Mid Upper Mustang Sally	5,675	5,596	79	625	157	2.3	13	22	Low Intermediate
B07_Mid Lower Mustang Sally	5,490	5,421	69	630	115	1.7	11	20	Low Intermediate
B08_Lower Mustang Sally	5,380	5,085	295	1,426	69	2.2	21	40	Advanced
B09_Upper Alpine	5,766	5,508	258	2,007	57	2.6	13	32	Low Intermediate
B10_Lower Alpine	5,454	5,312	142	1,093	82	2.1	13	22	Low Intermediate
B11_Christine's	5,894	5,848	45	301	171	1.2	15	21	Novice
B12_Buzz Cut	4,990	4,867	123	522	46	0.5	25	52	Advanced
B13_EZ Way	4,979	4,884	94	819	26	0.5	12	21	Novice
B14_Phlox	5,730	5,627	103	862	67	1.3	12	20	Novice

Table A-1. Terrain Specifications—Existing Conditions (cont.)

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
B15_Walt's Baby	5,620	5,349	271	2,097	81	3.9	13	24	Novice
B16_Pete's Plunder	5,248	5,098	150	877	112	2.3	17	23	Intermediate
B17_Upper Jojami	5,511	5,465	46	284	134	0.9	16	18	Novice
B18_Middle Jojami	5,458	5,081	377	2,336	132	7.1	16	39	Intermediate
B19_Lower Jojami	5,061	4,855	206	718	74	1.2	30	45	Advanced
B20_Upper Uncle Johns Band	5,461	5,420	41	265	155	0.9	16	19	Novice
B21_Lower Uncle Johns Band	5,004	4,850	154	611	94	1.3	26	43	Intermediate
B22_Lower Big Brother Beau	5,170	5,069	101	742	110	1.9	14	18	Novice
B23_Upper Big Brother Beau	5,335	5,268	67	340	81	0.6	20	28	Low Intermediate
B23_Upper Big Brother Beau	5,346	5,343	3	472	73	0.8	1	8	Novice
B24_Mid Big Brother Beau	5,251	5,186	65	246	134	0.8	28	29	Low Intermediate
B25_Upper Middle Uncle Johns Band	5,416	5,139	277	1,485	98	3.4	19	29	Low Intermediate
B26_Lower Middle Uncle Johns Band	5,126	5,013	113	708	124	2.0	16	20	Low Intermediate
B27_Upper Upper Glade	6,026	5,992	35	235	82	0.4	15	17	Novice
C01_Coffel's Run	6,993	6,186	807	3,654	322	27.0	23	32	Low Intermediate
C02_Kip's Run	6,991	6,116	874	4,239	406	39.5	21	38	Intermediate
C03_Gordo's Mile	6,990	5,921	1,069	5,398	380	47.0	20	31	Low Intermediate
C04_Otto Lang	6,937	5,923	1,015	6,031	266	36.8	17	33	Low Intermediate
D01_Outer West	8,494	6,964	1,530	5,711	379	49.7	28	42	Advanced
D02_Willis	8,478	6,950	1,528	5,600	650	83.6	29	42	Advanced
D03_Bean's Run	8,459	6,980	1,479	5,843	506	67.9	27	55	Expert
E01_Upper Thunder	5,919	5,661	258	1,532	81	2.8	17	25	Low Intermediate
E02_Lower Thunder	5,661	5,350	311	2,049	112	5.3	15	41	Intermediate



Table A-1. Terrain Specifications—Existing Conditions (cont.)

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
E03_Lift Line	5,913	5,682	231	1,280	56	1.6	18	28	Low Intermediate
E04_Lower Lift Line	5,670	5,506	163	848	59	1.1	20	29	Low Intermediate
E05_Upper Main Run Pucci	5,920	5,688	232	1,382	70	2.2	17	28	Low Intermediate
E06_Lower Main Run Pucci	5,681	5,530	150	806	100	1.9	19	26	Low Intermediate
E07_Upper West Leg Road	5,882	5,361	522	6,118	39	5.5	9	28	Novice
E08_Mid West leg	5,530	5,463	67	536	71	0.9	13	20	Novice
E09_Lower West Leg Road	5,375	4,849	526	8,905	41	8.4	6	16	Novice
E10_Waterline	5,344	5,234	110	1,087	45	1.1	10	20	Novice
E11_Wingle's Wiggle	5,598	5,438	160	865	57	1.1	19	50	Advanced
E12_Bob Elmer	5,635	5,478	157	700	76	1.2	23	47	Advanced
E13_Schoolyard	5,433	5,360	73	416	68	0.7	18	25	Novice
F01_Joszi	5,668	5,439	230	812	117	2.2	30	43	Advanced
F02_Wy's East	5,566	5,379	187	778	95	1.7	25	52	Advanced
F03_West Run	5,536	5,322	213	1,163	73	2.0	19	48	Advanced
F04_Back Way	5,348	4,995	354	3,454	95	7.6	10	31	Low Intermediate
F05_Cut Off	5,129	5,017	112	350	89	0.7	34	42	Advanced
F06_West Pitch	5,194	4,999	194	581	91	1.2	36	60	Expert
F07_Molly's Run	5,629	5,267	362	1,933	94	4.2	19	51	Advanced
F08_Upper Vicky's Run	5,814	5,774	40	212	83	0.4	19	21	Novice
F09_Lower Vicky's Run	5,760	5,000	760	4,931	105	11.8	16	48	Intermediate
F10_Huck Bowl	5,266	5,044	222	1,278	76	2.2	18	54	Advanced
I1_Bruno's	5,885	5,840	45	356	169	1.4	13	17	Beginner
Lower Lower West Leg Road	5,233	3,977	1,256	9,370	50	10.6	14%	32%	Low Intermediate

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Lower Alpine	4,851	4,210	641	9,024	41	8.4	7%	13%	Novice
<b>TOTAL</b>				<b>146,455</b>		<b>558.2</b>			

Table A-2. Existing Terrain Specifications—Summit Pass

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
Bumblebee	4,290	3,985	305	2,624	171	10.3	12	18	Novice
Bumblebee Alt 2	4,225	4,117	108	695	74	1.2	16	18	Novice
Bumblebee Alt 3	4,195	4,176	18	157	43	0.2	12	12	Low Intermediate
Yellowjacket	4,290	3,985	305	2,553	95	5.5	12	27	Low Intermediate
Yellowjacket Alt 2	4,170	4,143	27	428	37	0.4	6	9	Low Intermediate
Yellowjacket Alt 3	4,123	4,055	68	315	108	0.7	22	26	Low Intermediate
Yellowjacket Alt 4	4,080	4,021	58	248	121	0.7	24	27	Low Intermediate
<b>TOTAL</b>				<b>7,020</b>		<b>19.0</b>			

Source: SE Group



Table A-3. Terrain Specifications—Upgrade Plan

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
<b>Timberline</b>									
A01_Upper Kruser	6,238	5,936	302	1,669	124	4.8	19	30	Low Intermediate
A02_Lower Kruser	5,917	4,854	1,063	6,754	116	18.0	16	28	Low Intermediate
A03_Paintbrush	5,935	5,542	393	2,358	107	5.8	17	27	Low Intermediate
A04_Spraypaint	6,114	5,906	207	1,097	81	2.0	19	31	Low Intermediate
A05_Norm's	6,250	5,558	692	3,779	113	9.8	19	28	Low Intermediate
A06_Conways	6,240	5,660	580	3,337	112	8.5	18	27	Low Intermediate
A07_Lodge Getback	6,236	5,923	312	2,401	84	4.6	13	27	Novice
A08_The Bonezone	6,070	5,703	367	2,361	92	5.0	16	27	Low Intermediate
B01_Upper Glade	5,924	5,463	461	2,998	147	10.1	16	23	Novice
B02_Lower Glade	5,518	5,397	121	892	111	2.3	14	24	Novice
B03_Nona's Bologna	5,682	5,630	52	377	99	0.9	14	18	Novice
B04_Upper Mustang Sally	5,876	5,689	187	1,012	142	3.3	19	31	Low Intermediate
B05_Mid Middle Mustang Sally	5,589	5,500	89	480	131	1.4	19	29	Low Intermediate
B06_Mid Upper Mustang Sally	5,675	5,596	79	625	157	2.3	13	22	Low Intermediate
B07_Mid Lower Mustang Sally	5,490	5,421	69	630	115	1.7	11	20	Low Intermediate
B08_Lower Mustang Sally	5,380	5,085	295	1,426	69	2.2	21	40	Advanced
B09_Upper Alpine	5,766	5,508	258	2,007	57	2.6	13	32	Low Intermediate
B10_Lower Alpine	5,454	5,312	142	1,093	82	2.1	13	22	Low Intermediate
B11_Christine's	5,894	5,848	45	301	171	1.2	15	21	Novice
B12_Buzz Cut	4,990	4,867	123	522	46	0.5	25	52	Advanced
B13_EZ Way	4,979	4,884	94	819	26	0.5	12	21	Novice

Table A-3. Terrain Specifications—Upgrade Plan (cont.)

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
B14_Phlox	5,730	5,627	103	862	67	1.3	12	20	Novice
B15_Walt's Baby	5,620	5,349	271	2,097	81	3.9	13	24	Novice
B16_Pete's Plunder	5,248	5,098	150	877	112	2.3	17	23	Intermediate
B17_Upper Jojami	5,511	5,465	46	284	134	0.9	16	18	Novice
B18_Middle Jojami	5,458	5,081	377	2,336	132	7.1	16	39	Intermediate
B19_Lower Jojami	5,061	4,855	206	718	74	1.2	30	45	Advanced
B20_Upper Uncle Johns Band	5,461	5,420	41	265	155	0.9	16	19	Novice
B21_Lower Uncle Johns Band	5,004	4,850	154	611	94	1.3	26	43	Intermediate
B22_Lower Big Brother Beau	5,170	5,069	101	742	110	1.9	14	18	Novice
B23_Upper Big Brother Beau	5,335	5,268	67	340	81	0.6	20	28	Low Intermediate
B23_Upper Big Brother Beau	5,346	5,343	3	472	73	0.8	1	8	Novice
B24_Mid Big Brother Beau	5,251	5,186	65	246	134	0.8	28	29	Low Intermediate
B25_Upper Middle Uncle Johns Band	5,416	5,139	277	1,485	98	3.4	19	29	Low Intermediate
B26_Lower Middle Uncle Johns Band	5,126	5,013	113	708	124	2.0	16	20	Low Intermediate
B27_Upper Upper Glade	6,026	5,992	35	235	82	0.4	15	17	Novice
C01_Coffel's Run	6,993	6,186	807	3,654	322	27.0	23	32	Low Intermediate
C02_Kip's Run	6,991	6,116	874	4,239	406	39.5	21	38	Intermediate
C03_Gordo's Mile	6,990	5,921	1,069	5,398	380	47.0	20	31	Low Intermediate
C04_Otto Lang	6,937	5,923	1,015	6,031	266	36.8	17	33	Low Intermediate
D01_Outer West	8,494	6,964	1,530	5,711	379	49.7	28	42	Advanced





Table A-3. Terrain Specifications—Upgrade Plan (cont.)

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
D02_Willis	8,478	6,950	1,528	5,600	650	83.6	29	42	Advanced
D03_Bean's Run	8,459	6,980	1,479	5,843	506	67.9	27	55	Expert
E01_Upper Thunder	5,919	5,661	258	1,532	81	2.8	17	25	Low Intermediate
E02_Lower Thunder	5,661	5,350	311	2,049	112	5.3	15	41	Intermediate
E03_Lift Line	5,913	5,682	231	1,280	56	1.6	18	28	Low Intermediate
E04_Lower Lift Line	5,670	5,506	163	848	59	1.1	20	29	Low Intermediate
E05_Upper Main Run Pucci	5,920	5,688	232	1,382	70	2.2	17	28	Low Intermediate
E06_Lower Main Run Pucci	5,681	5,530	150	806	100	1.9	19	26	Low Intermediate
E07_Upper West Leg Road	5,882	5,361	522	6,118	39	5.5	9	28	Novice
E08_Mid West leg	5,530	5,463	67	536	71	0.9	13	20	Novice
E09_Lower West Leg Road	5,375	4,849	526	8,905	41	8.4	6	16	Novice
E10_Waterline	5,344	5,234	110	1,087	45	1.1	10	20	Novice
E11_Wingle's Wiggle	5,598	5,438	160	865	57	1.1	19	50	Advanced
E12_Bob Elmer	5,635	5,478	157	700	76	1.2	23	47	Advanced
E13_Schoolyard	5,433	5,360	73	416	68	0.7	18	25	Novice
F01_Joszi	5,668	5,439	230	812	117	2.2	30	43	Advanced
F02_Wy's East	5,566	5,379	187	778	95	1.7	25	52	Advanced
F03_West Run	5,536	5,322	213	1,163	73	2.0	19	48	Advanced
F04_Back Way	5,348	4,995	354	3,454	95	7.6	10	31	Low Intermediate
F05_Cut Off	5,129	5,017	112	350	89	0.7	34	42	Advanced
F06_West Pitch	5,194	4,999	194	581	91	1.2	36	60	Expert

Table A-3. Terrain Specifications—Upgrade Plan (cont.)

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
F07_Molly's Run	5,629	5,267	362	1,933	94	4.2	19	51	Advanced
F08_Upper Vicky's Run	5,814	5,774	40	212	83	0.4	19	21	Novice
F09_Lower Vicky's Run	5,760	5,000	760	4,931	105	11.8	16	48	Intermediate
F10_Huck Bowl	5,266	5,044	222	1,278	76	2.2	18	54	Advanced
G1_Bruno's I	5,885	5,832	53	464	120	1.3	11	12	Beginner
G2_Bruno's II	5,887	5,877	10	110	95	0.2	9	9	Beginner
G1_Bruno's I	5,885	5,832	53	513	160	1.9	10	12	Beginner
<b>Summit Pass</b>									
01_Bumblebee	4,290	3,985	305	2,624	171	10.3	12%	18%	Novice
02_Bumblebee Alt 2	4,225	4,117	108	695	74	1.2	16%	18%	Novice
03_Bumblebee Alt 3	4,195	4,176	18	157	43	0.2	12%	12%	Beginner
04_Yellowjacket	4,290	3,985	305	2,553	95	5.5	12%	27%	Low Intermediate
05_Yellowjacket Alt 2	4,170	4,143	27	428	37	0.4	6%	9%	Low Intermediate
06_Yellowjacket Alt 3	4,123	4,055	68	315	108	0.8	22%	26%	Low Intermediate
07_Beginner Carpet	4,069	4,012	56	512	134	1.6	11%	12%	Beginner
B_02	5,105	4,474	631	3,550	97	7.9	18%	43%	Intermediate
B_03	4,372	4,248	124	1,577	63	2.3	8%	11%	Beginner
B_05	5,497	5,226	271	1,901	73	3.2	14%	26%	Low Intermediate
B_06	5,168	4,505	663	3,520	100	8.0	19%	42%	Intermediate



Table A-3. Terrain Specifications—Upgrade Plan (cont.)

Trail/Area Name	Top Elevation (ft.)	Bottom Elevation (ft.)	Vertical Drop (ft.)	Slope Length (ft.)	Avg. Width (ft.)	Slope Area (acres)	Avg. Grade (%)	Max. Grade (%)	Skier/Rider Ability Level
B_07 Mid-station beginner terrain	4,384	4,368	16	166	182	0.7	10%	12%	Beginner
Lower Lower West Leg Road	5,233	3,977	1,256	9,370	50	10.6	14%	32%	Low Intermediate
Lower Alpine	4,851	4,210	641	9,024	41	8.4	7%	13%	Novice
<b>TOTAL (TIMBERLINE)</b>				<b>165,183</b>		<b>602.2</b>			



Table A-4. Space Use Analysis—Upgrade Plan—Timberline

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	420	510
Public Lockers	1,250	1,530
Rentals/Repair	2,970	3,340
Retail Sales	1,090	1,330
Bar/lounge	1,640	2,000
Adult Ski School	740	910
Kid's Ski School	1,480	1,810
Restaurant Seating	11,760	14,370
Kitchen/Scramble	8,820	10,780
Rest rooms	2,940	3,590
Ski Patrol	1,180	1,440
Administration	1,450	1,780
Employee Lockers/Lounge	580	710
Storage	1,630	2,430
Circulation/Waste	6,540	9,700
<b>TOTAL SQUARE FEET</b>	<b>44,490</b>	<b>56,230</b>

Source: SE Group

Table A-5. Space Use Analysis—Upgrade Plan—Summit Pass Lodge

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	320	400
Public Lockers	970	1,190
Rentals/Repair	1,950	2,380
Retail Sales	850	1,040
Bar/lounge	1,270	1,560
Adult Ski School	740	910
Kid's Ski School	1,480	1,810
Restaurant Seating	3,070	3,750
Kitchen/Scramble	2,300	2,820
Rest rooms	770	940
Ski Patrol	310	380
Administration	970	1,190
Employee Lockers/Lounge	390	470
Storage	690	1,040
Circulation/Waste	2,770	4,140
<b>TOTAL SQUARE FEET</b>	<b>18,850</b>	<b>24,020</b>

Source: SE Group

Table A-6. Space Use Analysis—Upgrade Plan—Phlox

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	380	460
Kitchen/Scramble	290	350
Rest rooms	100	120
Ski Patrol	40	50
Administration	--	--
Employee Lockers/Lounge	--	--
Storage	40	50
Circulation/Waste	150	220
<b>TOTAL SQUARE FEET</b>	<b>1,000</b>	<b>1,250</b>

Source: SE Group

Table A-7. Space Use Analysis—Upgrade Plan—Molly’s

Service Function	Recommended Range	
	Low	High
Ticket Sales/Guest Services	190	230
Public Lockers	560	680
Rentals/Repair	1,110	1,360
Retail Sales	480	590
Bar/lounge	730	890
Adult Ski School	0	0
Kid’s Ski School	0	0
Restaurant Seating	2,610	3,190
Kitchen/Scramble	1,960	2,390
Rest rooms	650	800
Ski Patrol	260	320
Administration	0	0
Employee Lockers/Lounge	0	0
Storage	380	570
Circulation/Waste	1,540	2,300
<b>TOTAL SQUARE FEET</b>	<b>10,470</b>	<b>13,320</b>

Source: SE Group



Table A-8. Space Use Analysis—Upgrade Plan—Gondola Mid-Station

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	750	920
Kitchen/Scramble	560	690
Rest rooms	190	230
Ski Patrol	70	90
Administration	--	--
Employee Lockers/Lounge	--	--
Storage	70	110
Circulation/Waste	280	420
<b>TOTAL SQUARE FEET</b>	<b>1,920</b>	<b>2,460</b>

Source: SE Group



# FIGURES





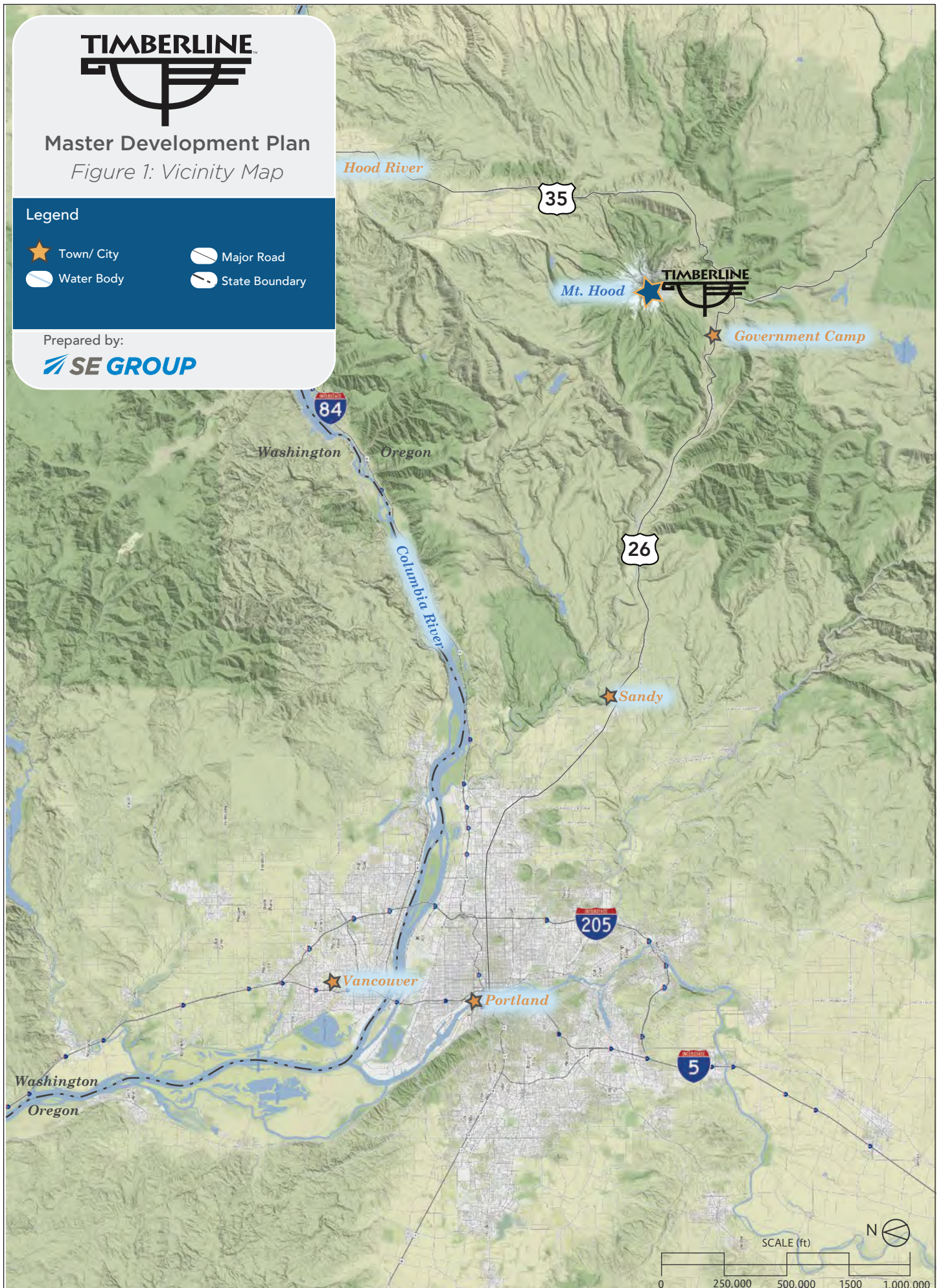
# Master Development Plan

Figure 1: Vicinity Map

### Legend

- Town/ City
- Major Road
- Water Body
- State Boundary

Prepared by:





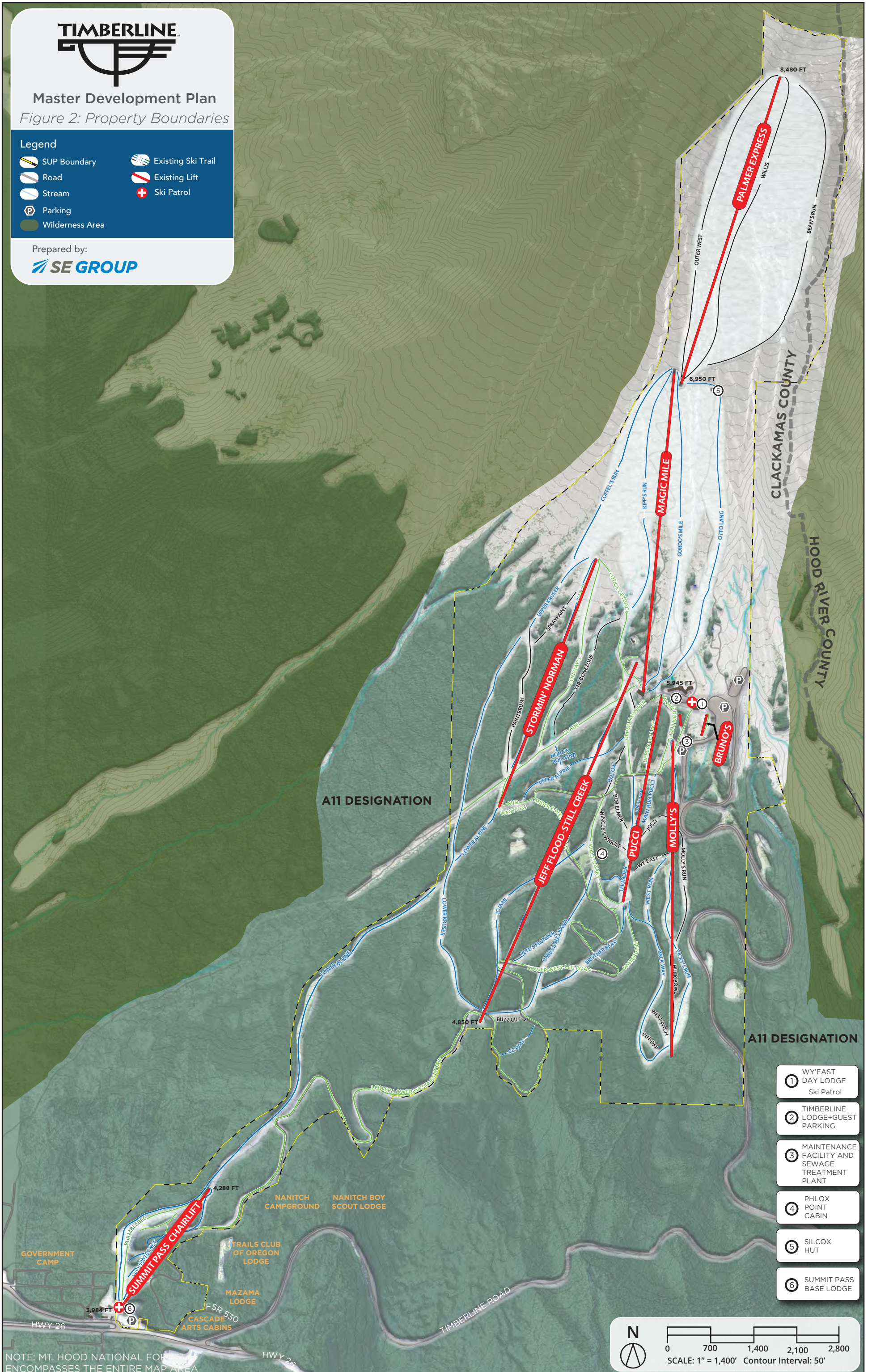
# Master Development Plan

Figure 2: Property Boundaries

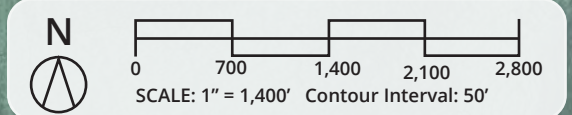
## Legend

- SUP Boundary
- Road
- Stream
- Parking
- Wilderness Area
- Existing Ski Trail
- Existing Lift
- Ski Patrol

Prepared by:



- 1 WYEAST DAY LODGE  
Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 4 PHLOX POINT CABIN
- 5 SILCOX HUT
- 6 SUMMIT PASS BASE LODGE



NOTE: MT. HOOD NATIONAL FOREST ENCOMPASSES THE ENTIRE MAP AREA



Master Development Plan

Figure 2.1: Timberline Lodge Special Interest Area

Legend

- Existing Lift
- Paved Road
- Mountain Road
- Parking
- Timberline Lodge Special Interest Boundary
- Mountain Road
- Parking

Prepared by:



MAGIC MILE

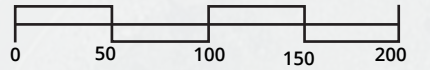
PUCCI

HEIDI'S

BRUNO'S

MOLLY'S

Timberline Lodge



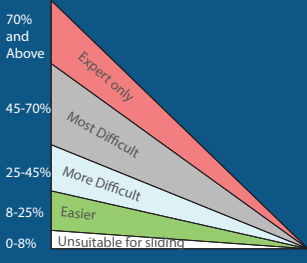


# Master Development Plan

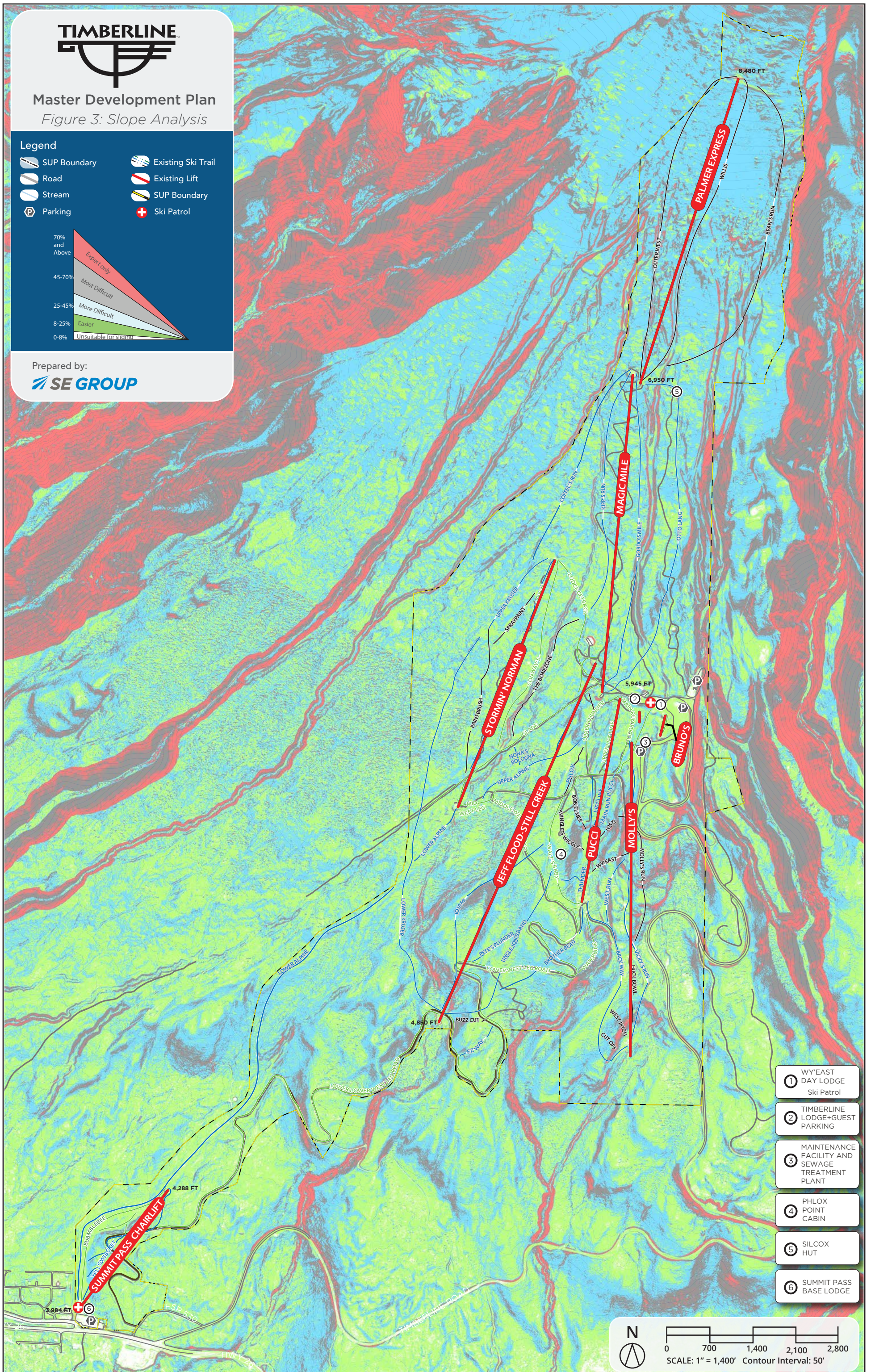
## Figure 3: Slope Analysis

### Legend

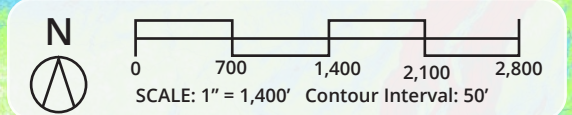
- SUP Boundary
- Road
- Stream
- Parking
- Existing Ski Trail
- Existing Lift
- SUP Boundary
- Ski Patrol



Prepared by:



- 1 WYEAST DAY LODGE  
Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 4 PHLOX POINT CABIN
- 5 SILCOX HUT
- 6 SUMMIT PASS BASE LODGE





# Master Development Plan

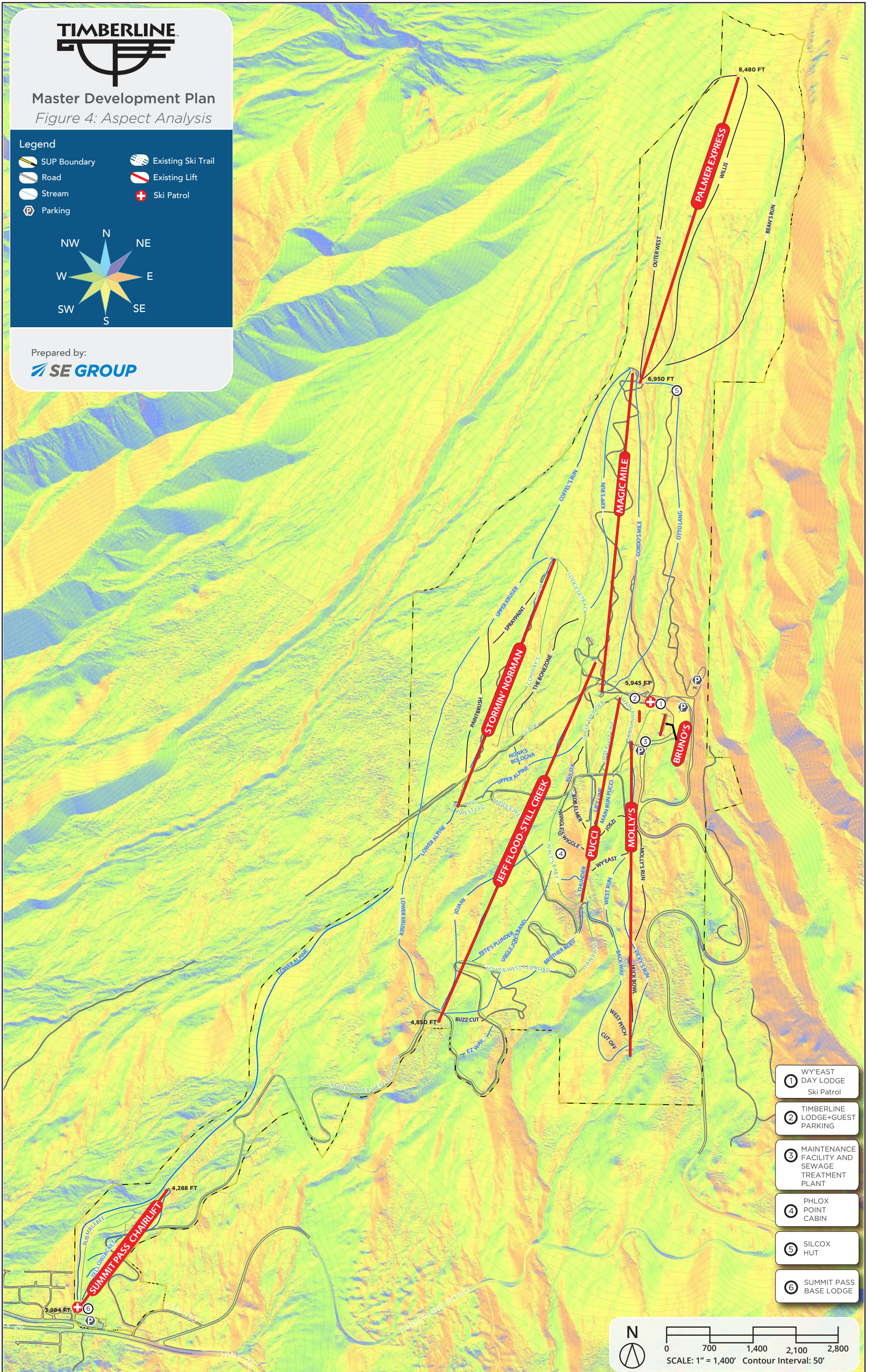
Figure 4: Aspect Analysis

## Legend

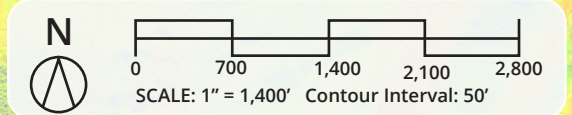
- SUP Boundary
- Road
- Stream
- Parking
- Existing Ski Trail
- Existing Lift
- Ski Patrol



Prepared by:



- 1 WYEAST DAY LODGE  
Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 4 PHLOX POINT CABIN
- 5 SILCOX HUT
- 6 SUMMIT PASS BASE LODGE







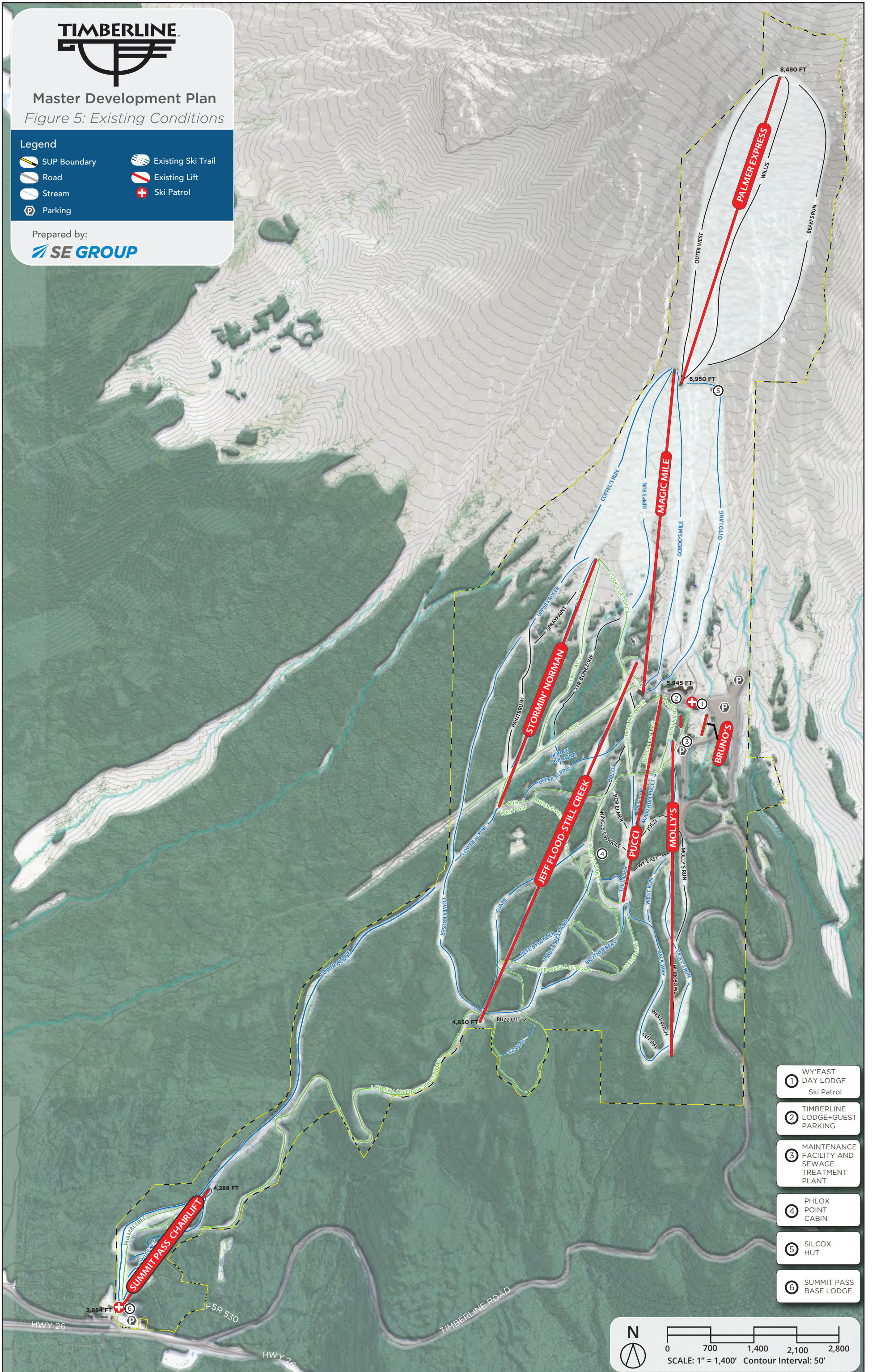
# Master Development Plan

## Figure 5: Existing Conditions

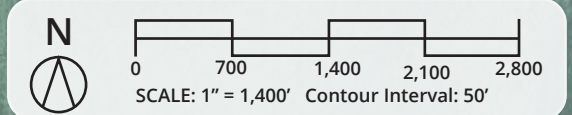
### Legend

- SUP Boundary
- Road
- Stream
- Parking
- Existing Ski Trail
- Existing Lift
- Ski Patrol

Prepared by:



- 1 WYEAST DAY LODGE  
Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 4 PHLOX POINT CABIN
- 5 SILCOX HUT
- 6 SUMMIT PASS BASE LODGE



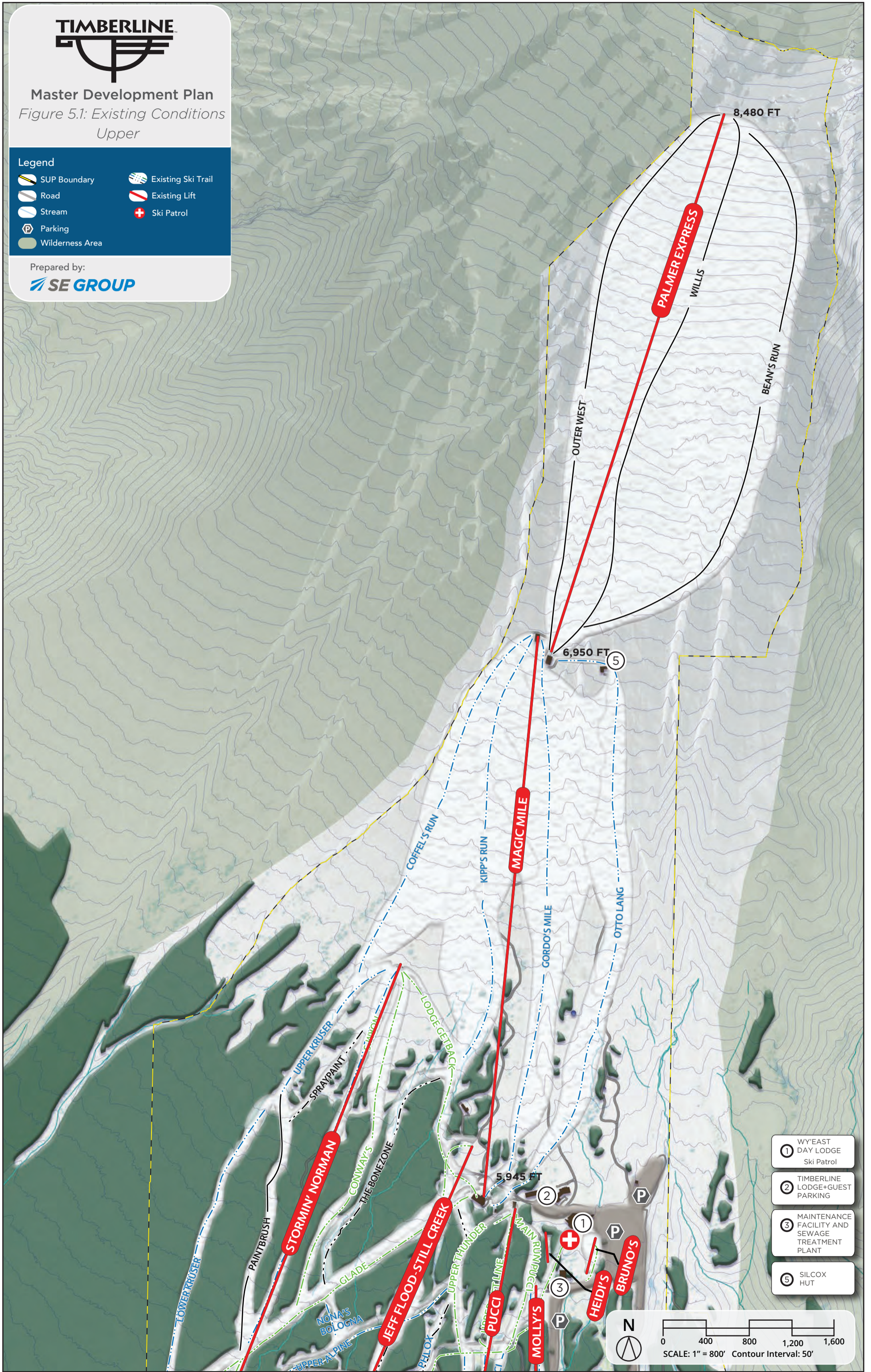


Master Development Plan  
Figure 5.1: Existing Conditions  
Upper

Legend

- SUP Boundary
- Road
- Stream
- Parking
- Wilderness Area
- Existing Ski Trail
- Existing Lift
- Ski Patrol

Prepared by:



- 1 WY'EAST DAY LODGE Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 5 SILCOX HUT

N

0 400 800 1,200 1,600

SCALE: 1" = 800' Contour Interval: 50'

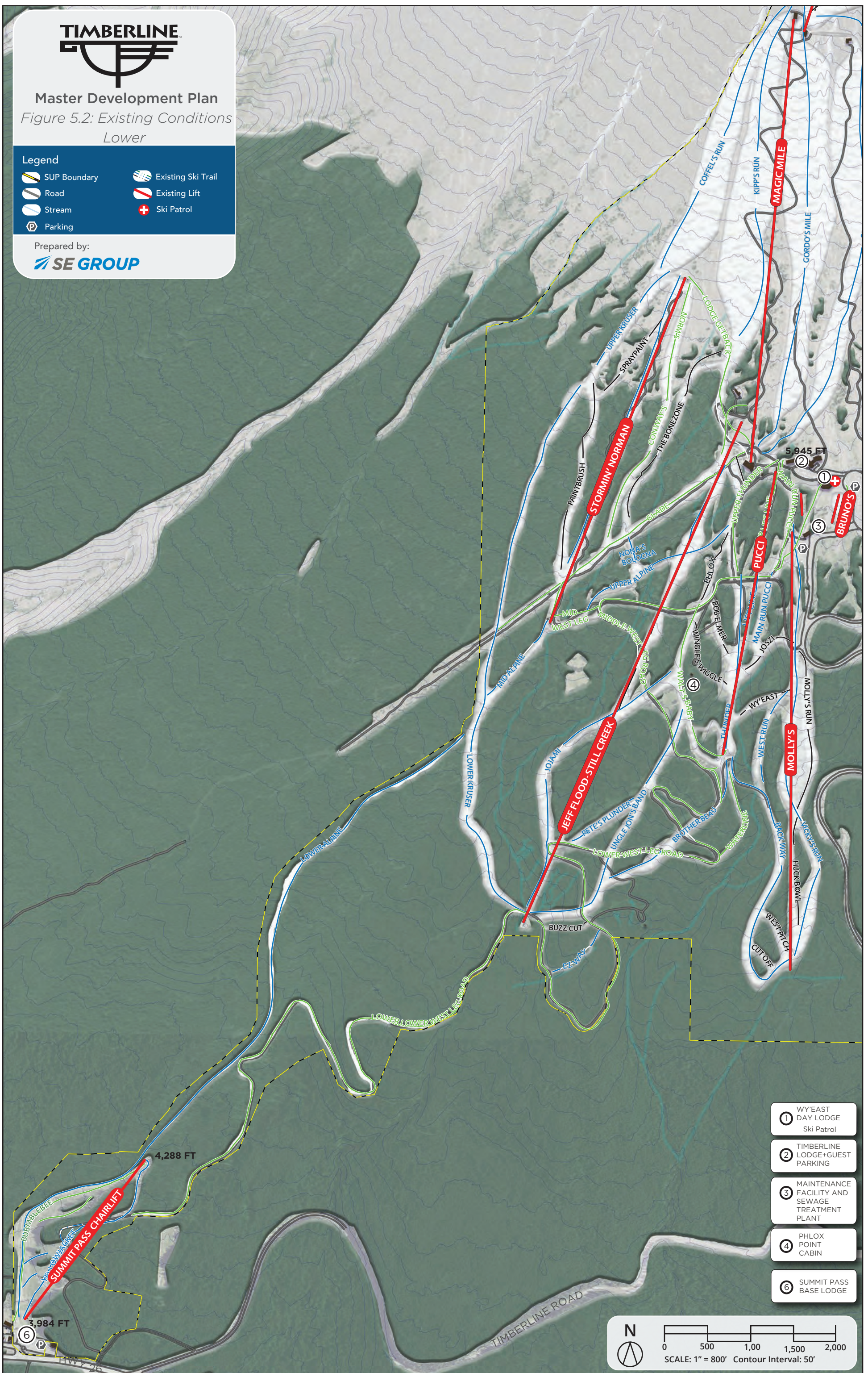


Master Development Plan

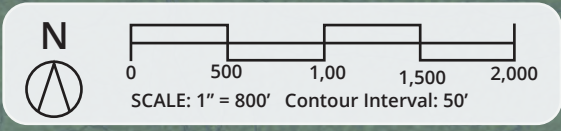
Figure 5.2: Existing Conditions  
Lower

- Legend
- SUP Boundary
  - Road
  - Stream
  - Parking
  - Existing Ski Trail
  - Existing Lift
  - Ski Patrol

Prepared by:



- 1 WY'EAST DAY LODGE  
Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 4 PHLOX POINT CABIN
- 6 SUMMIT PASS BASE LODGE



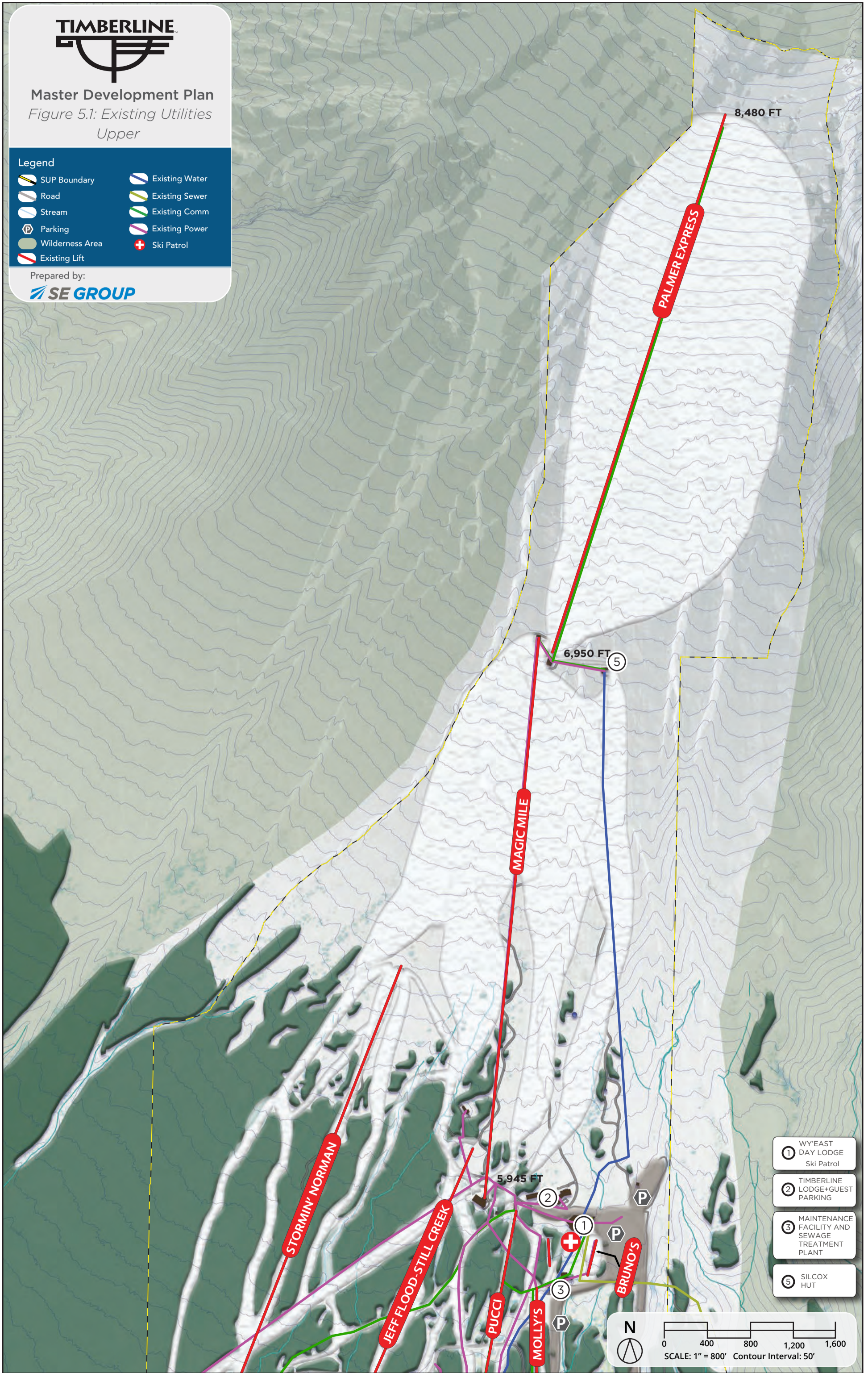


Master Development Plan  
Figure 5.1: Existing Utilities  
Upper

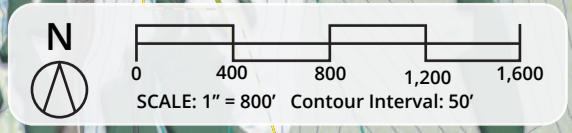
Legend

- SUP Boundary
- Road
- Stream
- Parking
- Wilderness Area
- Existing Lift
- Existing Water
- Existing Sewer
- Existing Comm
- Existing Power
- Ski Patrol

Prepared by:



- ① WYEAST DAY LODGE Ski Patrol
- ② TIMBERLINE LODGE+GUEST PARKING
- ③ MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- ⑤ SILCOX HUT





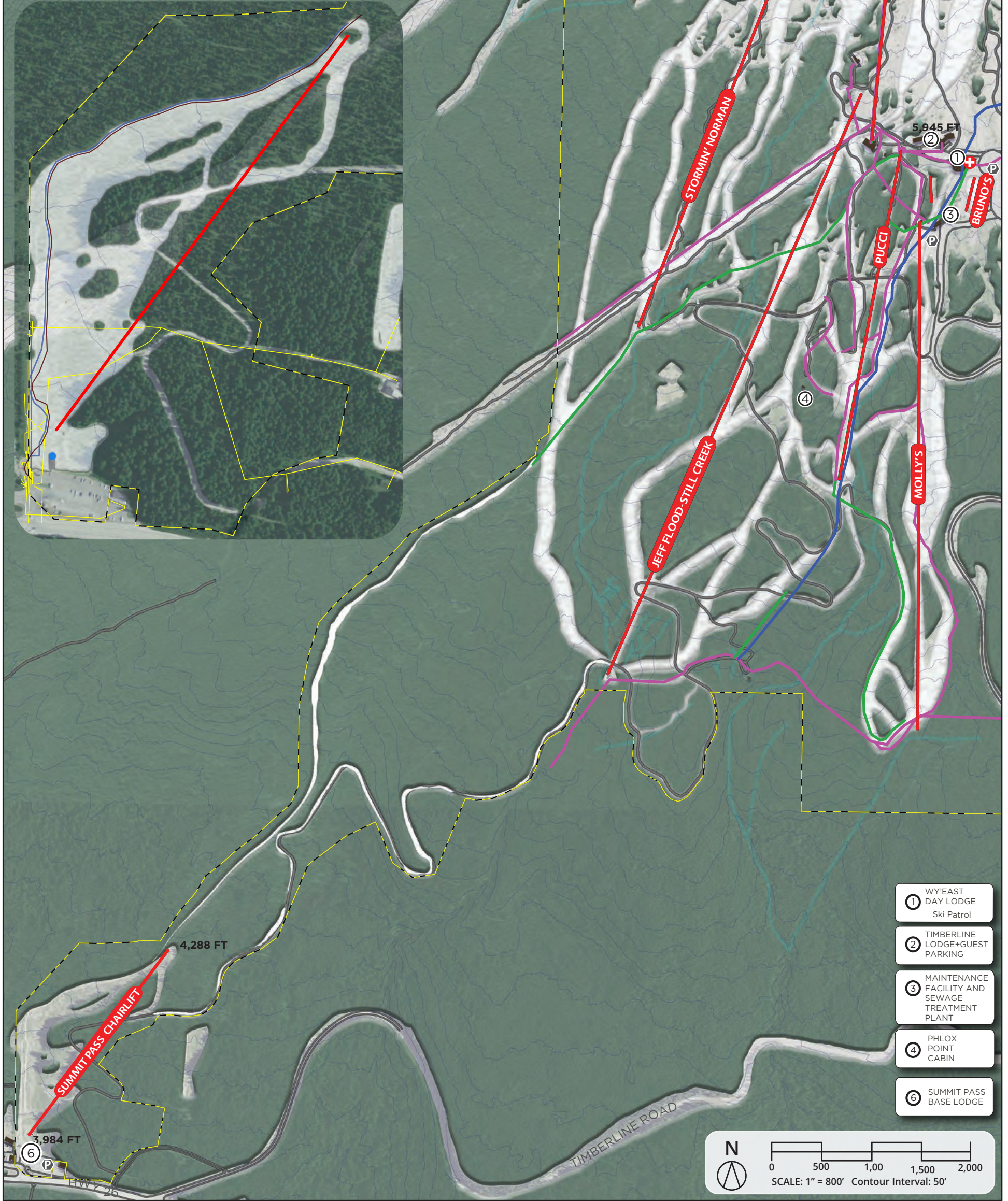
# Master Development Plan

Figure 6.2: Existing Utilities  
Lower

### Legend

- |  |               |  |                  |
|--|---------------|--|------------------|
|  | SUP Boundary  |  | Existing Water   |
|  | Road          |  | Existing Sewer   |
|  | Stream        |  | Existing Comm    |
|  | Parking       |  | Existing Power   |
|  | Existing Lift |  | Ski Patrol       |
|  | Electric Line |  | Maintenance Road |
|  | Water Well    |  |                  |

Prepared by:



- ① WYEAST DAY LODGE  
Ski Patrol
- ② TIMBERLINE LODGE+GUEST PARKING
- ③ MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- ④ PHLOX POINT CABIN
- ⑥ SUMMIT PASS BASE LODGE

N

0 500 1,000 1,500 2,000

SCALE: 1" = 800' Contour Interval: 50'



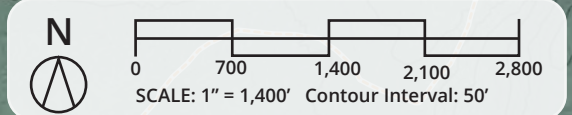
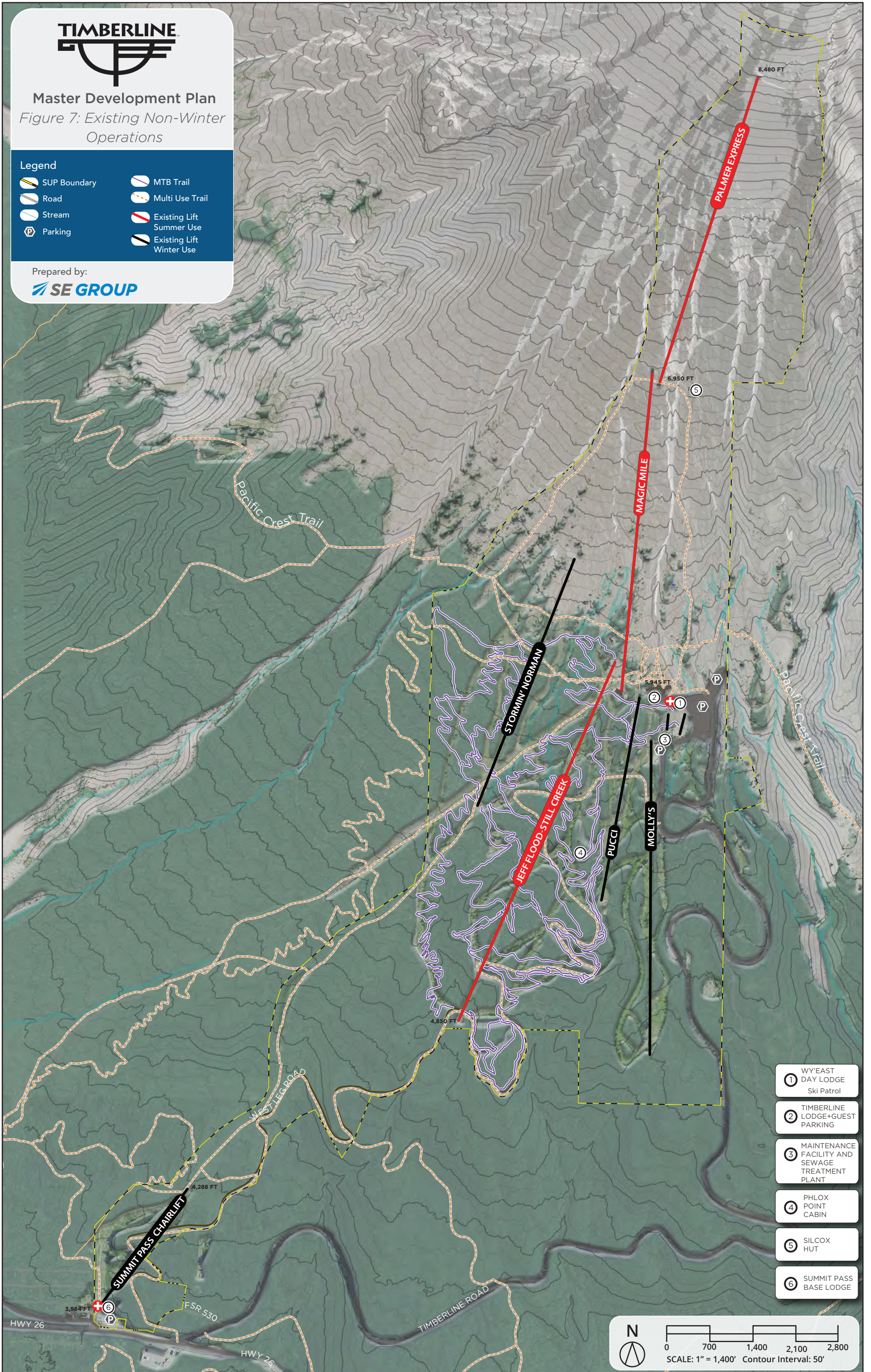
# Master Development Plan

## Figure 7: Existing Non-Winter Operations

### Legend

- SUP Boundary
- Road
- Stream
- Parking
- MTB Trail
- Multi Use Trail
- Existing Lift Summer Use
- Existing Lift Winter Use

Prepared by:





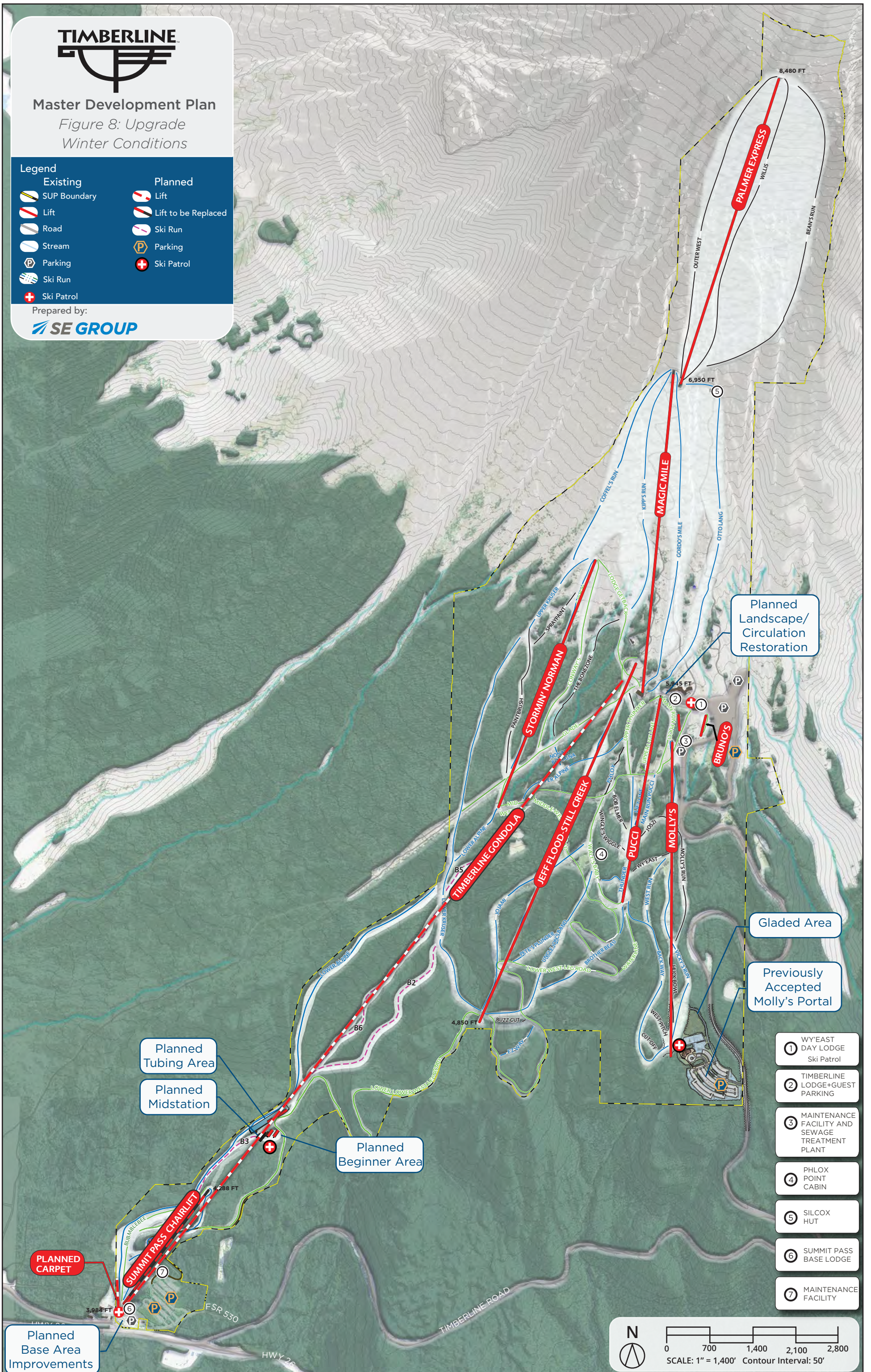
# Master Development Plan

## Figure 8: Upgrade Winter Conditions

### Legend

- |                       |                     |
|-----------------------|---------------------|
| Existing SUP Boundary | Planned Lift        |
| Lift                  | Lift to be Replaced |
| Road                  | Ski Run             |
| Stream                | Parking             |
| Parking               | Ski Patrol          |
| Ski Patrol            |                     |

Prepared by:



Planned Landscape/Circulation Restoration

Gladed Area

Previously Accepted Molly's Portal

Planned Tubing Area

Planned Midstation

Planned Beginner Area

PLANNED CARPET

Planned Base Area Improvements

- WYEAST DAY LODGE Ski Patrol
- TIMBERLINE LODGE+GUEST PARKING
- MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- PHLOX POINT CABIN
- SILCOX HUT
- SUMMIT PASS BASE LODGE
- MAINTENANCE FACILITY

N

SCALE: 1" = 1,400' Contour Interval: 50'



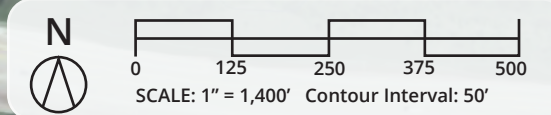
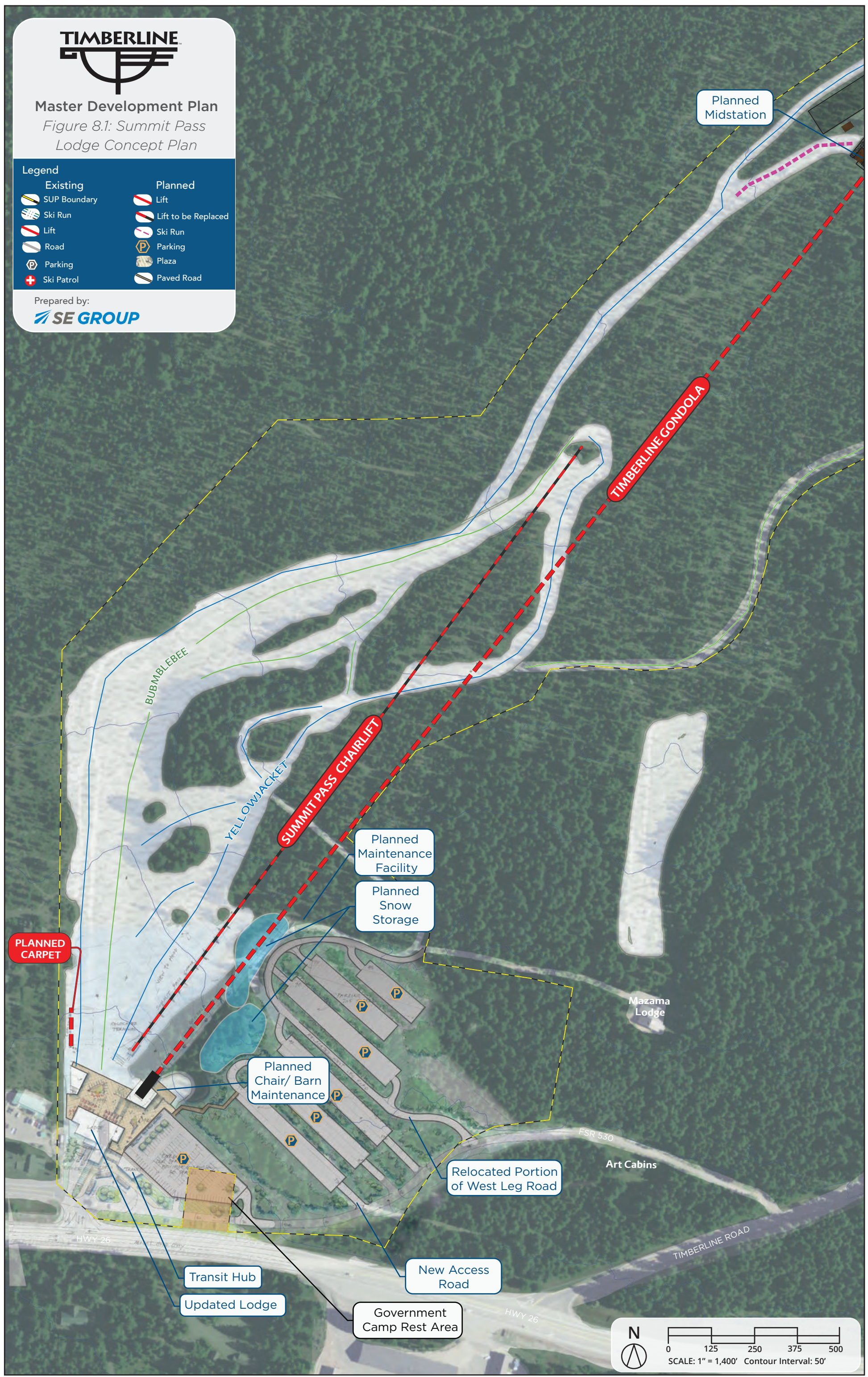
# Master Development Plan

Figure 8.1: Summit Pass Lodge Concept Plan

## Legend

Existing		Planned	
	SUP Boundary		Lift
	Ski Run		Lift to be Replaced
	Lift		Ski Run
	Road		Parking
	Parking		Plaza
	Ski Patrol		Paved Road

Prepared by:







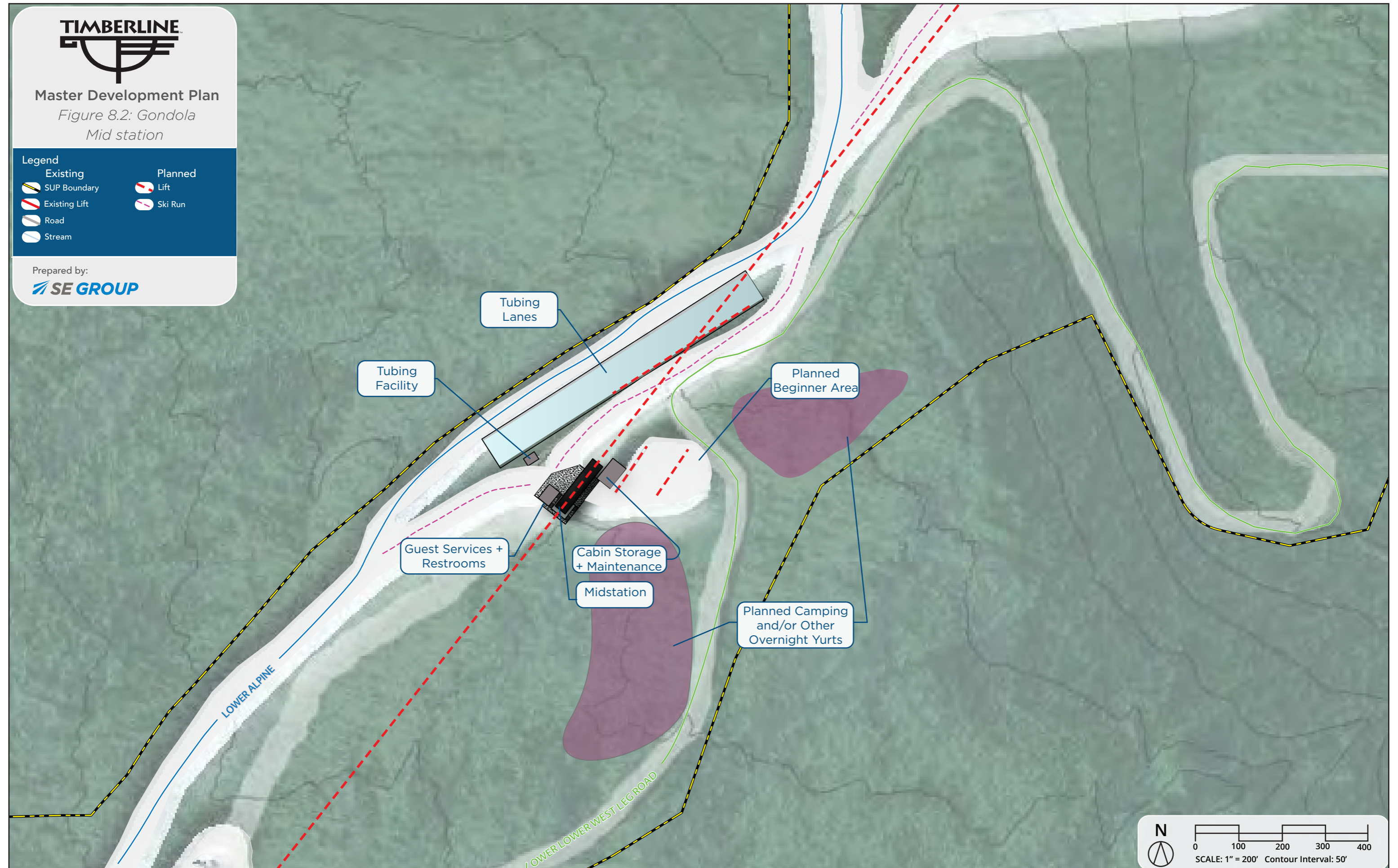
# Master Development Plan

Figure 8.2: Gondola  
Mid station

Legend

Existing		Planned	
	SUP Boundary		Lift
	Existing Lift		Ski Run
	Road		
	Stream		

Prepared by:

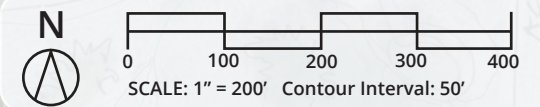
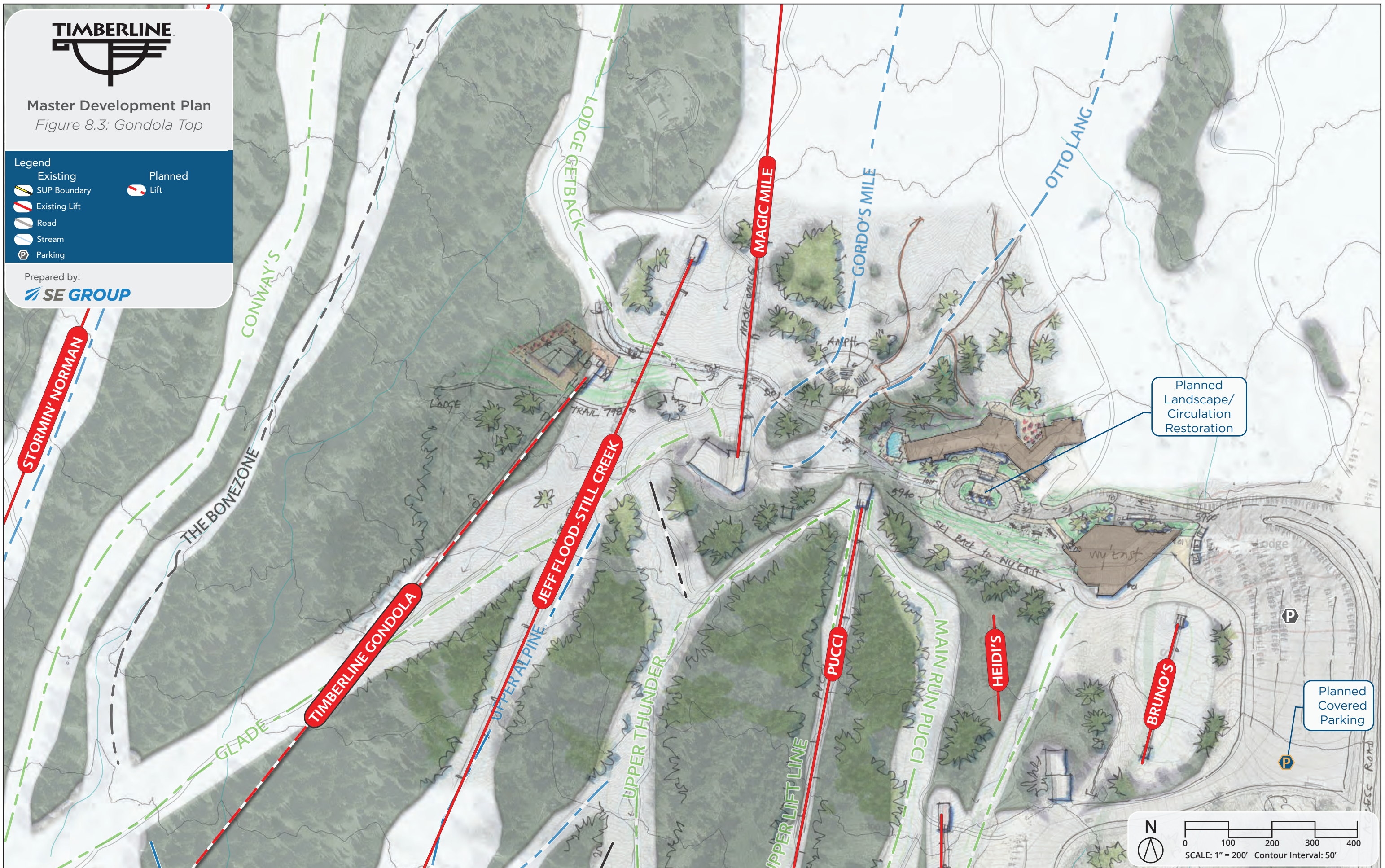




Master Development Plan  
Figure 8.3: Gondola Top

- Legend
- Existing SUP Boundary
  - Existing Lift
  - Road
  - Stream
  - Parking
  - Planned Lift

Prepared by:  
**SE GROUP**





Master Development Plan

Figure 8.4: Molly's Portal  
Concept Plan

Legend

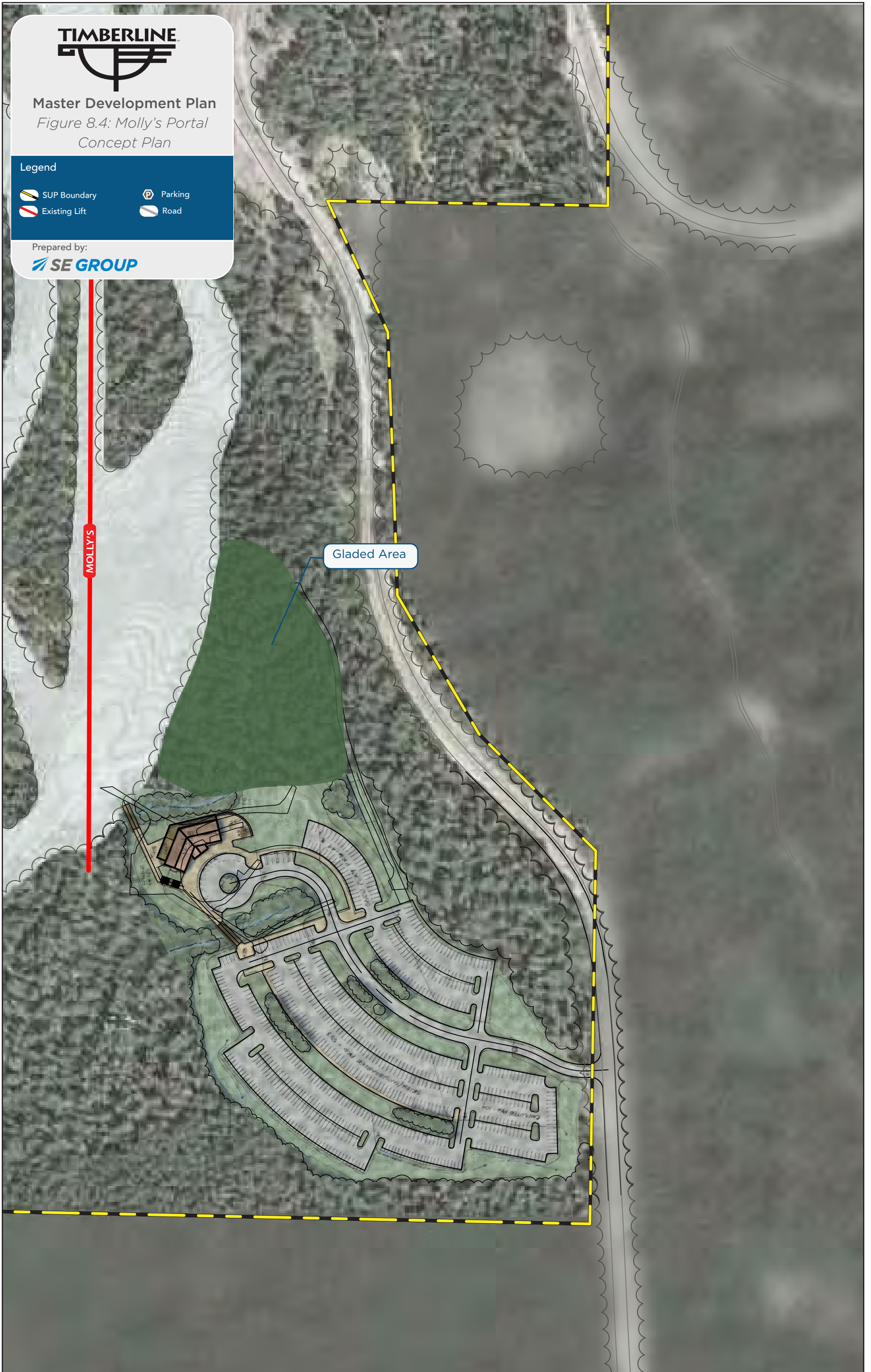
- SUP Boundary
- Existing Lift
- Parking
- Road

Prepared by:



MOLLY'S

Gladed Area



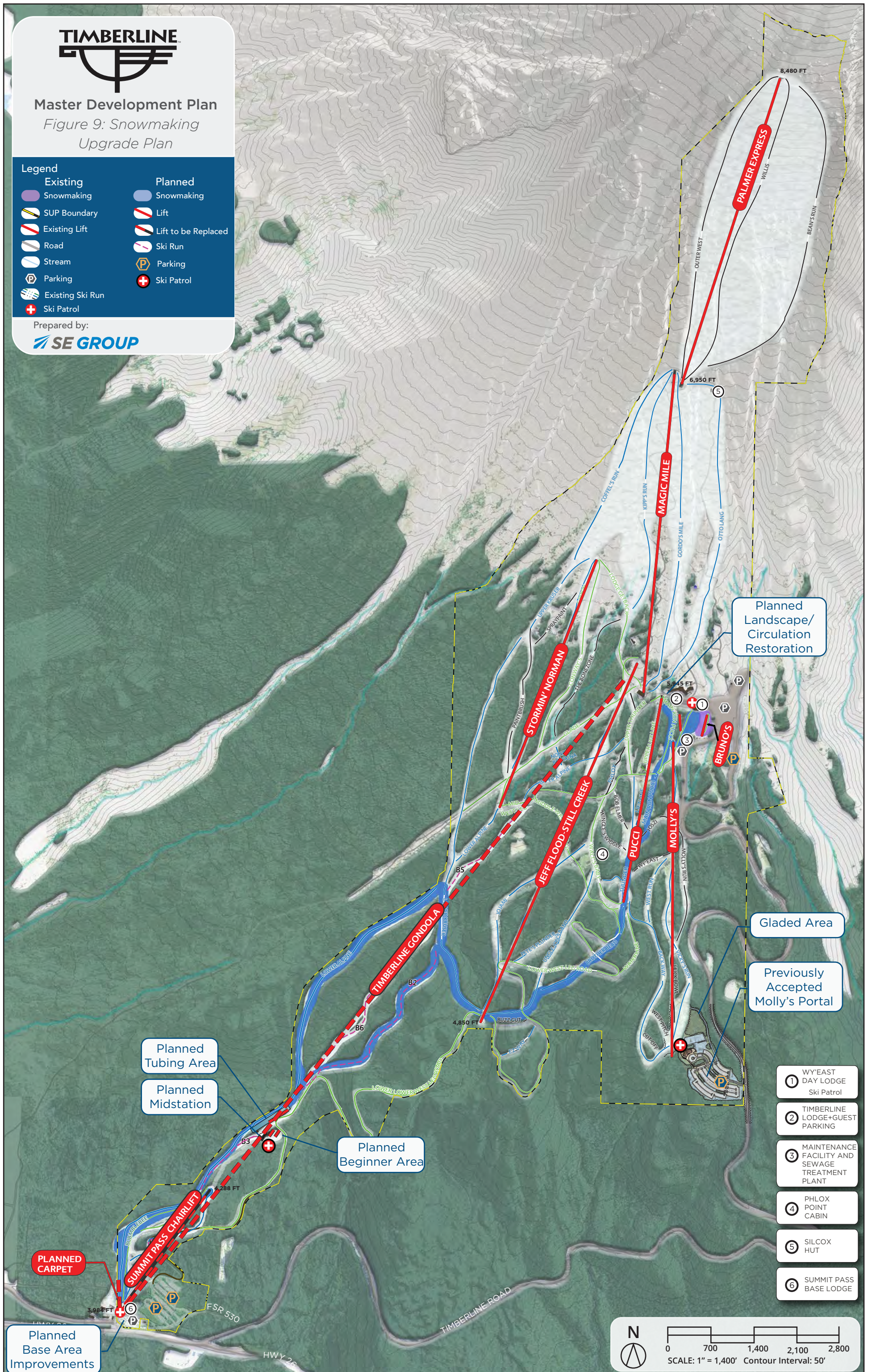


Master Development Plan  
Figure 9: Snowmaking Upgrade Plan

Legend

- |                     |                     |
|---------------------|---------------------|
| Existing Snowmaking | Planned Snowmaking  |
| SUP Boundary        | Lift                |
| Existing Lift       | Lift to be Replaced |
| Road                | Ski Run             |
| Stream              | Parking             |
| Parking             | Ski Patrol          |
| Existing Ski Run    | Ski Patrol          |

Prepared by:



Planned Landscape/Circulation Restoration

Gladed Area

Previously Accepted Molly's Portal

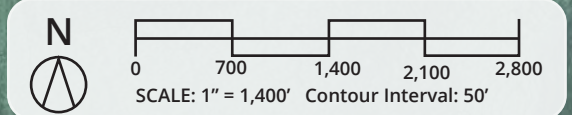
Planned Tubing Area

Planned Midstation

Planned Beginner Area

Planned Base Area Improvements

- ① WYEAST DAY LODGE  
Ski Patrol
- ② TIMBERLINE LODGE+GUEST PARKING
- ③ MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- ④ PHLOX POINT CABIN
- ⑤ SILCOX HUT
- ⑥ SUMMIT PASS BASE LODGE



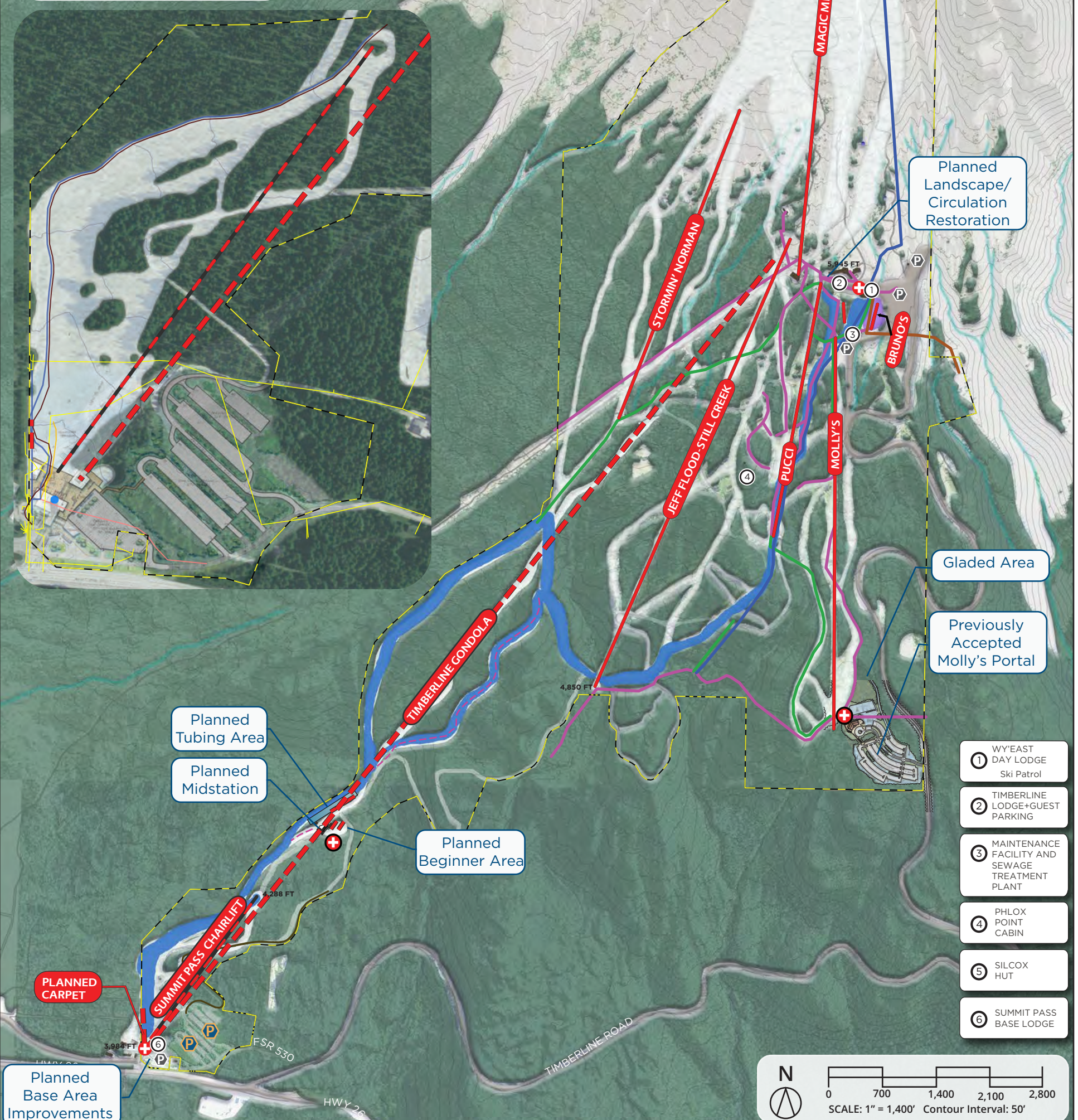


Master Development Plan  
Figure 10: Utilities Upgrade  
Plan

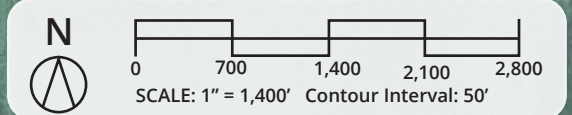
Legend

- |                     |                                       |
|---------------------|---------------------------------------|
| <b>Existing</b>     | <b>Planned</b>                        |
| SUP Boundary        | Lift                                  |
| Ski Run             | Lift to be Replaced                   |
| Lift                | Ski Run                               |
| Road                | Parking                               |
| Stream              | Plaza                                 |
| Parking             | Paved Road                            |
| Ski Patrol          | Snowmaking Coverage                   |
| Water Utilities     | Ski Patrol                            |
| Sewer Utilities     | Water, Sewer, and Power to Day Lodge  |
| Comm Utilities      | Water, Sewer, and Power to Main Lodge |
| Power Utilities     |                                       |
| Snowmaking Coverage |                                       |
| Electric Line       |                                       |
| Maintenance Road    |                                       |
| Water Well          |                                       |

Prepared by:  
**SE GROUP**



- WY'EAST DAY LODGE  
Ski Patrol
- TIMBERLINE LODGE+GUEST PARKING
- MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- PHLOX POINT CABIN
- SILCOX HUT
- SUMMIT PASS BASE LODGE





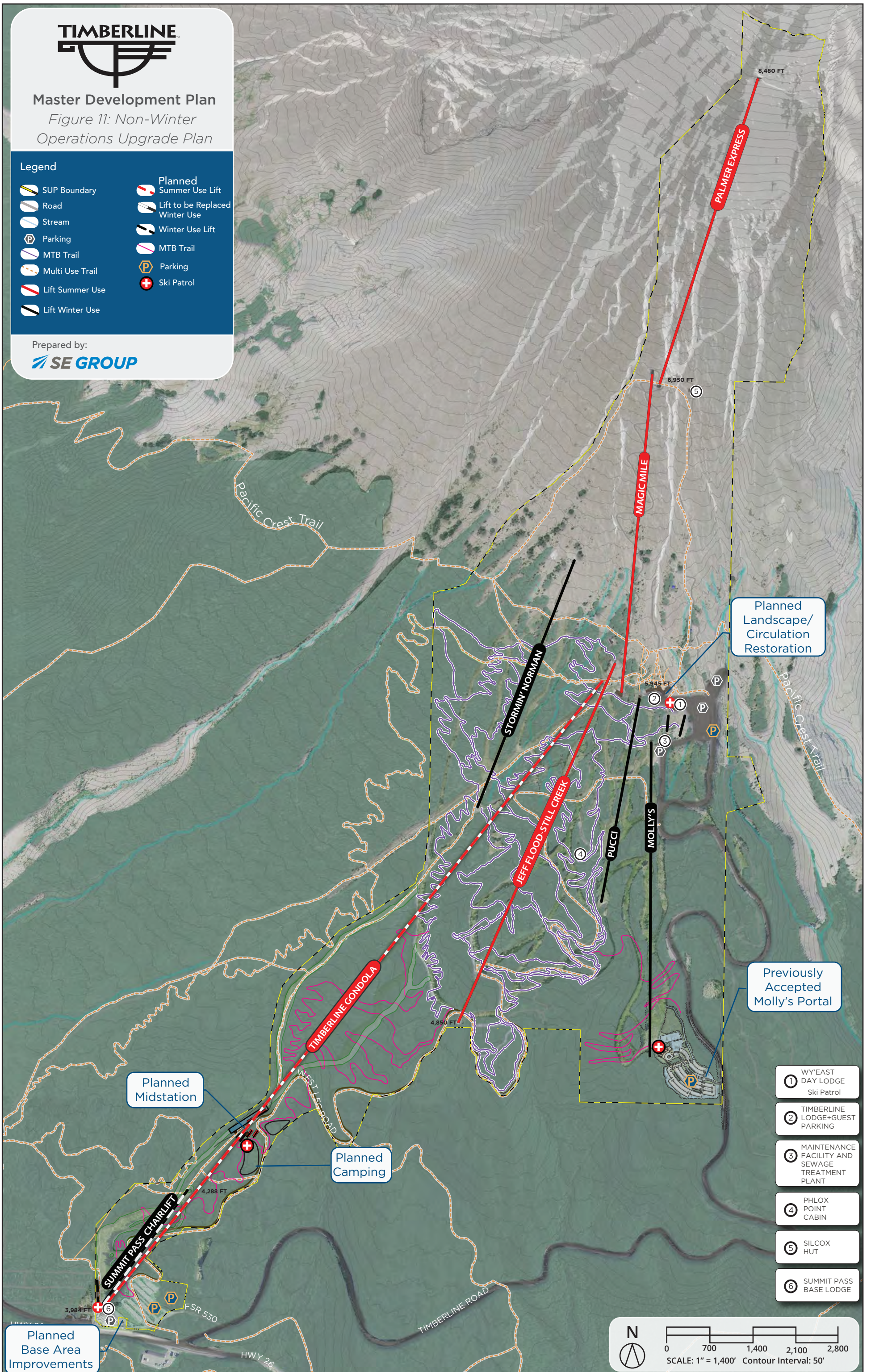
# Master Development Plan

Figure 11: Non-Winter Operations Upgrade Plan

## Legend

- SUP Boundary
- Road
- Stream
- Parking
- MTB Trail
- Multi Use Trail
- Lift Summer Use
- Lift Winter Use
- Planned Summer Use Lift
- Lift to be Replaced Winter Use
- Winter Use Lift
- MTB Trail
- Parking
- Ski Patrol

Prepared by:



Planned Landscape/Circulation Restoration

Previously Accepted Molly's Portal

Planned Midstation

Planned Camping

Planned Base Area Improvements

- 1 WYEAST DAY LODGE Ski Patrol
- 2 TIMBERLINE LODGE+GUEST PARKING
- 3 MAINTENANCE FACILITY AND SEWAGE TREATMENT PLANT
- 4 PHLOX POINT CABIN
- 5 SILCOX HUT
- 6 SUMMIT PASS BASE LODGE

