



MOUNTAIN HIGH
RESORT

Chapter II

II. ALTERNATIVES CONSIDERED

This chapter describes the alternatives that the Forest Service considered in detail in this analysis. Table II-2 summarizes the effects of the alternatives in relation to the issues introduced in Chapter I.

By definition, alternatives to the Proposed Action must 1) reasonably respond to the Purpose and Need and 2) address issues that were raised during the public and internal scoping process. A No Action alternative must also be included in the analysis.¹

A. PROCESS USED TO DEVELOP THE ALTERNATIVES CONSIDERED

Upon completion of the 2001 MDP, the public scoping process was initiated in April 2001. This included mailing scoping letters to approximately 155 interested parties and agencies, a public open house to explain the proposal, and mailing 94 letters to tribal representatives identified by the Forest Archaeologist.

Following the scoping comment period, the ID Team met to synthesize comments and formulate alternatives. In May 2001, the ID Team formalized three alternatives to analyze in detail in the EA. These include the No Action alternative, the original Proposed Action, and an additional action alternative.

In November 2001, the Forest Service sent an update to the public regarding changes to the original Proposed Action for MHR. This letter documented the removal of certain summer activities from the proposal. The changes also included a modification to the proposed parking expansion at MHR West in an attempt to maintain the visual and cultural integrity of the BPHD.

In January 2002, the ID Team reviewed an internal draft of the analysis, which fully described all three alternatives and disclosed their potential effects on the existing conditions and resources at MHR. Due to potentially unacceptable effects to visual and cultural resources, this draft was not released to the public. The ID Team reconvened to develop new alternatives to the original Proposed Action. These alternatives needed to meet the purpose and need for the proposal, while seeking to reduce effects to visual and cultural resources compared to the original Proposed Action. The resulting action alternative is fully analyzed within this document as Alternative B.

As a result of the preliminary analysis presented to the ID Team, the original Proposed Action and several other alternatives have been considered but eliminated from further documentation in this EA. For detailed information regarding the rationale for eliminating these alternatives, refer to section C in this chapter.

¹ 40 CFR §1502.14(d)

B. ALTERNATIVES CONSIDERED IN DETAIL

The following text describes the two alternatives analyzed in detail in this EA. Alternative A is the No Action alternative. Alternative B is not MHR's original proposal; however, it is an adaptation of the original and is based closely on the 2001 MDP. Through the initial analysis, MHR's original proposal was determined to have a high probability of resulting in unacceptable levels of effects to both visual and cultural resources. As a result, the original proposal was modified by the ID Team to reduce these potential effects. Their efforts resulted in the two action alternatives analyzed within.

Following the description of alternatives, Table II-1 provides a comparative matrix of the individual elements of each alternative. Table II-2 provides a summary of the potential environmental effects associated with implementation of each alternative.

Alternative A – No Action

As required by Federal law, a No Action alternative has been included in this analysis. The No Action alternative provides a baseline with which to compare the effects of the two action alternatives. The No Action alternative essentially represents no change from current management direction. The potential effects of both action alternatives have been evaluated against the No Action alternative to facilitate an accurate and consistent evaluation.

Buildings

No new facilities would be constructed under the No Action alternative. The aging modular buildings would remain unable to accommodate existing visitation at MHR. There would continue to be a lack of adequate base area guest service facilities and space. Additionally, ski school participants at MHR East would have no facility in which to buy tickets, get rental equipment, meet, or warm up.

Parking

No new parking would be constructed to accommodate the existing visitation to the resort. Parking at MHR would continue to be a primary limiting factor at the resort with only enough designated spaces to park 6,267 people. Lack of adequate parking for guests and employees, combined with dispersed snowplayers, would continue to result in parking along Highway 2. The entrance road to MHR West in conjunction with Highway 2 and Table Mountain Road converge at a five-way intersection that frequently results in traffic problems and pedestrian safety issues. This situation and the problematic five-way intersection at MHR West would continue to affect public safety and vehicle circulation along Highway 2 between the two base areas.

Lifts

No new lifts would be constructed under Alternative A. As a result, skier circulation in the MHR West base area would remain difficult as a result of the funnel effect caused by terrain features near the base of the Snowflake Chairlift.

The new surface lift at MHR East has eliminated the need for beginners to walk approximately 650 feet to reach the base of the Easy Rider Chairlift. The surface lift accommodates first-time beginners and has improved access to the Easy Rider Chairlift, thus creating a logical teaching progression.

Terrain

There would be no terrain modifications or enhancements under Alternative A. As a result, teaching terrain at MHR West would remain limited and difficult to access. As stated previously, the terrain features, which currently funnel skiers to the bottom of the Snowflake Chairlift, would also continue to result in poor skier circulation and potential skier safety issues in the MHR West base area.

General

Comfortable Carrying Capacity (CCC) is a planning term utilized by most ski areas; a resort's most significant constraint is typically the limiting factor in determining the CCC for the resort. The CCC of a resort is defined as the number of skiers which can be *comfortably* accommodated at a given time. It is the highest level of utilization of a ski area that provides a pleasant recreation experience, while not overburdening its facilities. Guest service space, parking, lift capacity, and terrain density are all used to determine a resort's CCC.

Terrain and lift capacity are used to calculate on-mountain CCC. Under the No Action alternative, MHR would continue to operate with an on-mountain CCC of 6,500 guests (approximately 3,090 at MHR East and 3,410 at MHR West). Although the existing terrain can accommodate 6,900 skiers-at-one-time (SAOT), the existing lift capacity is capable of accommodating only 6,500 SAOT.

Other skier services analyzed in calculating resort CCC include parking, food service, retail/rental, restrooms, and lockers. Existing guest service space is very limited at MHR. The resort currently offers 46,200 square feet of guest service space (including food service seating, restrooms, lockers, etc). Using an industry norm of 10 square feet per person, MHR is only capable of accommodating approximately 4,620 guests within its skier service facilities.

There are currently 878 food service seats at the resort, which are capable of accommodating 3,073 guests per day (at 3.5 turnovers per day). As a result of Alternative A, guest service space would continue to be a limiting factor at the resort and would continue to inhibit the quality of the recreation experience.

By design, it is assumed that a resort will exceed the specified CCC by as much as 20 percent or more on peak days. Because peak days occur relatively infrequently through the season it is simply not financially efficient for a resort to develop the capital infrastructure to comfortably accommodate peak day visitation. An analogy to this is a church not being sized for Easter Sunday attendance. CCC is therefore not intended to be utilized as a cap on daily visitation, but rather a planning tool for the efficient sizing and balancing of resort infrastructure.

Another measure of ski area utilization is skier visitation. MHR currently experiences peak visitation in excess of 8,000 skiers per day. Peak days usually occur on weekends and holidays. Based on the top ten peak days over the past six seasons, the average peak day is approximately 8,630 skiers.

Using data collected during the 2002/03 season, it is assumed that approximately 81 percent of these skiers visit during the day and 19 percent ski at night. This equates to peak daytime visitation of 6,990 and peak nighttime visitation of approximately 1,640.

These numbers account for guests only and do not include the need for employee parking. They also do not account for the flexible ticketing system utilized by MHR and its guests, which often results in overlap between day and night skiers. Lastly, these numbers do not consider the number of dispersed snowplayers who utilize MHR's parking lots and base area facilities. As a result, MHR would continue to operate with under-proportioned guest facilities in terms of parking, food service, and restroom capacities under the No Action alternative.



MOUNTAIN HIGH
RESORT

Alternative A Existing Conditions

Legend

-  Existing Lift
-  Existing Trail
-  Existing SUP Boundary
-  Existing Parking
-  Existing Building
-  Riparian Area
-  Ski Patrol

Resort Facilities

- A** Base Lodge
- B** Bullwheel Saloon
- C** Cabins
- D** Restrooms
- E** Snowmaking Generation Plant
- F** Group Sales/Compressor Building
- G** Ski Rentals
- H** Upper Parking Lot
- I** Lower Parking Lot
- J** Bullwheel Parking Lot
- K** Teaching Platforms
- L** Base Lodge
- M** Rental/Retail Shop
- N** Grand View Bistro
- O** Facility Maintenance Shop
- P** Maintenance/Snowmaking/Administration
- Q** Ski/Snowboard School Meeting Area
- R** Parking Lot
- S** East Snowmaking Reservoir
- T** West Snowmaking Reservoir

Figure II-1

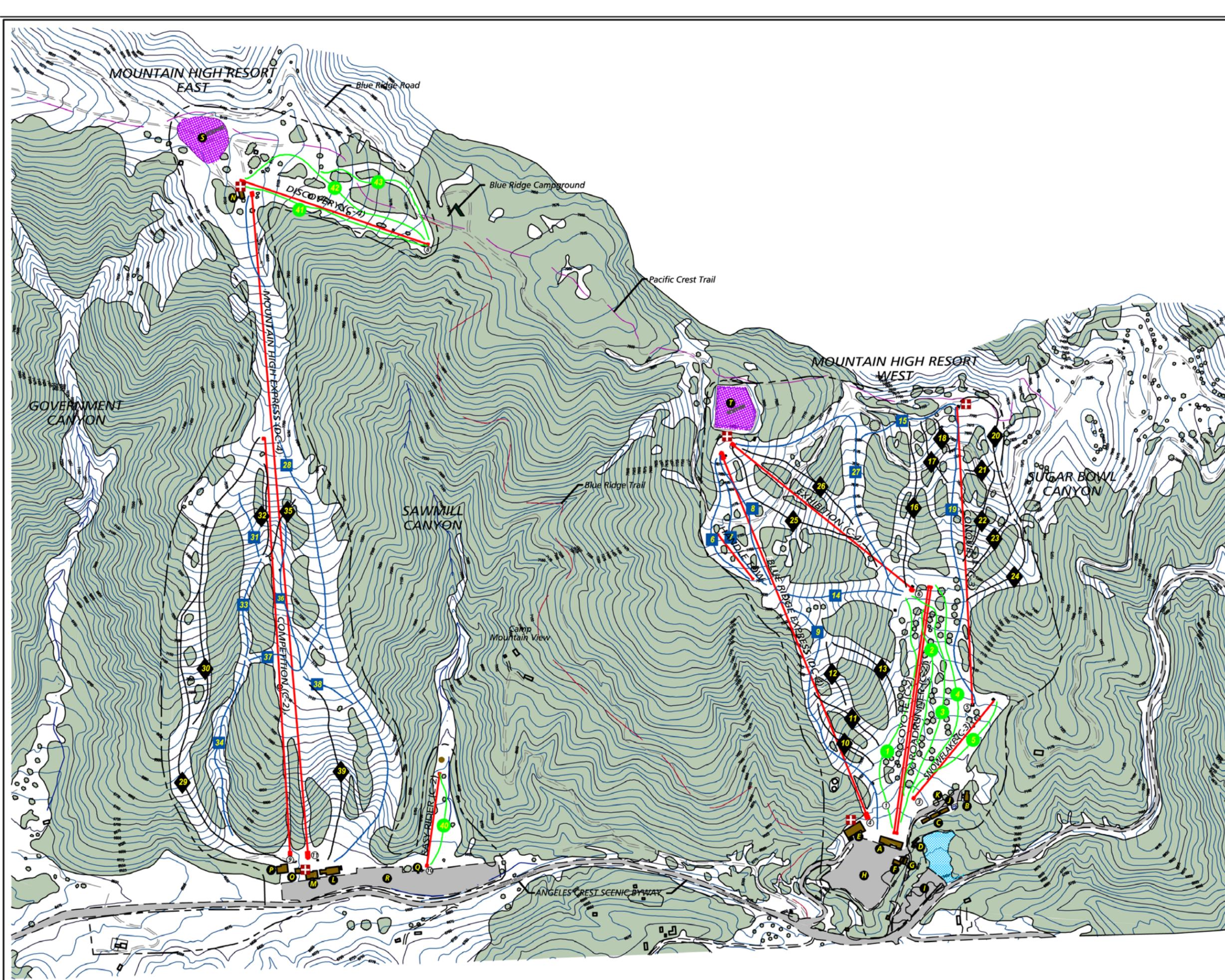
PREPARED FOR:



PREPARED BY:



Date: February 2004
Contour Interval: 25'



Alternative B

Alternative B was developed by the ID Team and is based closely on the 2001 MDP, but it differs slightly from MHR's original Proposed Action in an effort to reduce potential impacts to the visual and cultural integrity of the BPHD. Project elements of the proposal analyzed within this EA are grouped into four categories: buildings, parking, lifts, and terrain.

Buildings

Alternative B would upgrade base area facilities and services in order to better accommodate existing visitation within the bounds of public health and safety. It would also help to meet guests' increasing expectations for quality and availability of services.

MHR West

Currently, skier service facilities at MHR West are located in several modular buildings, which total 15,000 square feet in size. These buildings were not designed to accommodate the level of use currently experienced, nor are they sized to adequately accommodate space for food preparation or food service seating, ski/snowboard rental, or ticketing.

Under Alternative B, the existing modular buildings at the MHR West base area would be removed. A single base area lodge, totaling approximately 40,000 square feet in size, would be constructed in three stories to be on grade with the slopes for each level. The new building would have a footprint of approximately 15,000 square feet, and would be located slightly uphill and to the west of the current base area facilities.

The building design of the proposed Day Lodge would respond to the cultural and aesthetic traditions of the Big Pines historic region and its rustic architectural theme. It would be constructed of materials and colors that would blend with the natural forest setting, including browns, grays, and greens. Some forest product would be displayed at the exterior, such as large logs and stone, to provide a strong link to the historic buildings in the region. Similarly, the landscaping would aim to tie the building to the natural setting. The use of pitched roofs with dormers, roof overhangs, and wood decks is typically associated with the architectural style MHR is striving to attain with the proposed Day Lodge. Final designs would be submitted to the Forest Service for review and approval. The Forest Service will also submit these designs to the State Historic Preservation Officer (SHPO) for consultation and concurrence prior to construction.

The location of the proposed Day Lodge would require the removal of all six existing cabins (the six cabins are contained in three buildings, and all six cabins are currently utilized for the resort's administrative operations and storage). Most of MHR West's guest amenities, including restaurants; bar/lounge; restrooms; ski school offices; rentals/repair; retail shops; ticket sales; and public lockers, would be located in the proposed new building.

Removal of the existing facilities at MHR West would result in a loss of approximately 300 seats. The new Day Lodge would provide roughly 1,300 indoor and outdoor food service seats

(accommodating approximately 4,550 guests at MHR West at a turnover rate of 3.5 people per seat). The entire resort would be able to accommodate approximately 6,500 people.

The Day Lodge would be fitted with an approved automatic sprinkler system. Water for fire suppression at the new building would be supplied by the reconstruction of a previously existing, although deteriorated, water tank located east of the Blue Ridge Express Chairlift. The capacity of the reconstructed water tank would be based on final design of the Day Lodge, and would range from 180,000 to 540,000 gallons, as per the 1997 Uniform Fire Code Fire-Flow Requirements for Buildings.

MHR West currently has no dedicated storage facilities for grooming vehicles, which results in frequent on-snow parking. Under Alternative B, construction of a maintenance facility is proposed at MHR West approximately 75 feet south of the existing Bullwheel Saloon building. This structure would be approximately 2,400 square feet in size, housing up to five grooming vehicles (with diesel fuel storage), maintenance equipment, and shop functions.

A concrete surface for parking grooming vehicles would serve as a catchment for potential oil or fuel drips/spills. This area would incorporate drains and oil separators as necessary. Construction of this facility would require some earth disturbance and vegetation removal. The existing access road to the Bullwheel Saloon would be relocated behind the proposed Day Lodge and would continue behind the Bullwheel Saloon to the proposed maintenance facility. The majority of the runoff created by this road will be diverted to the upper lot and its drainage system. The placement of the Day Lodge would enable MHR to construct the access road and retain many of the large trees in the vicinity; this would assist in visually screening the proposed facilities from Highway 2.

MHR East

At MHR East, no facilities exist to accommodate beginner-level skiers. A learning center (estimated at 2,000 square feet in size) would be located immediately to the west of the lower terminal of the Easy Rider Chairlift. The learning center would provide easily accessible restrooms, ski school ticketing, limited ski and snowboard rentals, and a place for first-time skiers to rest and warm up that is proximate to beginner terrain. Due to its visible location, the learning center would incorporate a similar architectural style as the proposed Day Lodge to maintain the feel of the BPHD.

The existing vehicle maintenance facility at MHR East is currently undersized to accommodate both vehicle maintenance and storage. To provide increased storage space, a 2,500-square foot storage building is proposed along the eastern edge of the proposed parking lot across from MHR East, which is detailed in the next section. This facility would be dedicated to summer and winter storage. No vehicles would be stored in this facility. Because this proposed building would alleviate storage needs at MHR East's existing vehicle maintenance area, the existing vehicle maintenance shop would have more space to dedicate to grooming vehicle maintenance.

Parking

Parking capacity currently available at MHR is insufficient to accommodate both guests and employees. The purpose of Alternative B is to provide expanded parking facilities for guests and employees on peak days.

MHR West

With selection of Alternative B, MHR would expand the eastern edge of the existing upper parking lot by approximately 2.6 acres. This would create a total of 7.5 acres of parking in the upper lot, accommodating approximately 1,163 vehicles (using an industry norm of approximately 155 vehicles per acre). The expanded lot would be graded to drain to the south into an interceptor and utilize the current drainage system in the existing lot.

With the new configuration, MHR would no longer push snow over the edge; instead, the resort would pile snow along the southern edge of the lot and allow the snow to melt so that it would drain into the existing oil separator system. As a result, several parking spaces may be sacrificed during periods of heavy snow.

The entrance road to the resort and the existing lower lot (with 279 parking spaces in 1.8 acres) would remain in their current state. Total parking at MHR West under Alternative B would accommodate 1,432 vehicles and 3,892 people (at 2.7 people per vehicle). This would be an increase of 1,087 more people able to park at MHR West than currently.

The proposed parking lot configuration was designed to retain as much of the existing natural vegetation on the north and western edges of the current lot as possible. The total disturbance area for the proposed parking lot enhancement would require approximately 10.2 acres of disturbance. Of this total, two acres would be reclaimed and revegetated to enhance the aesthetic characteristics of the area.

Alternative B also includes the construction of a small employee parking lot in an area north of the Bullwheel Saloon. This parking lot would be roughly 35 feet by 80 feet, and would accommodate approximately eight vehicles.

MHR East

Alternative B includes the construction of a 2.7-acre gravel-surfaced parking area for both guests and employees across from MHR East, on the north side of Highway 2. The proposed lot would accommodate 419 vehicles and 1,131 people. The lot would be engineered to have adequate drainage with an oil separator, and there would be sufficient access for heavy equipment to the proposed storage building.

This lot would be located above Highway 2 on a natural bench of land. Implementation of this project element would involve slope grading to create a parking lot with approximately 2.6 acres of surface area. Approximately 5.6 acres of ground disturbance would be required for the construction of this parking area; of this disturbed land, approximately 2.4 would be reclaimed and revegetated. Refer to Appendix A for a description of the landscaping and revegetation plan.

The existing parking lot at MHR East would remain intact, providing 7.2 acres of parking (1,116 spaces). Total parking at MHR East under Alternative B would accommodate 1,535 vehicles and 4,144 people (at 2.7 people per vehicle).

Total Resort Parking

Under Alternative B, MHR would provide a total of 19.2 acres of parking. This would accommodate approximately 2,976 vehicles and 8,035 people. The proposed parking expansion would enable MHR to adequately accommodate its guests and employees, even on peak visitation days.

Lifts

MHR West

Teaching facilities at MHR West are limited and poorly oriented. The existing Snowflake Chairlift is not appropriately located for beginner and novice skiers, who must walk to it from the current MHR West base facilities. Additionally, the terrain that is accessible from the Snowflake Chairlift is too steep for beginners.

Under Alternative B, the bottom terminal of the Snowflake Chairlift would be relocated approximately 160 feet downhill of its current location to make it more proximate to skier service facilities. The top terminal would remain in the same location. The bottom terminals of both the Coyote and Roadrunner lifts would also be relocated slightly uphill for improved access and circulation in the base area.

Two beginner surface lifts have been recently installed on the proposed teaching terrain at MHR West. These help provide the first step in the teaching progression. A proposed baby double chairlift, approximately 425 feet in length, would be installed adjacent to the existing Snowflake Chairlift. The bottom terminal of the baby double would be located immediately west of the proposed Day Lodge for easy beginner access, serving terrain that is appropriate for beginner level skiers and boarders. The proposed lift upgrades at the MHR West base area would provide a logical teaching progression for first-time skiers who would start at the teaching flats and eventually work their way up to the lifts that serve more advanced terrain.

Terrain

The nature of terrain grades and topography in the MHR West base area creates skier congestion on busy days and during periods of mass egress. Additionally, beginner-level terrain is not easily accessible from base area facilities at either MHR East or West.

MHR West

The existing Snowflake Chairlift at MHR West is not appropriately located for beginner and novice skiers, who must walk to it from the MHR West base facilities. In addition, terrain that is easily accessible via the Snowflake Chairlift is not well suited for beginners.

Terrain modification at MHR West would retain some of the visual breaks provided by large trees on the mountain, but it would create a larger opening in vegetation at the base area

facilities. This would facilitate the movement of skiers back to the bottom of the base area lifts rather than through the proposed teaching area. Regrading would occur on Easy Street Trail (to accommodate entry-level skiers) and portions of Catch Ya Later, Sunnyside, Creekside, and Woodworth Gulch. The milling area at the base of chairlifts 1, 3, and 4 would be leveled to create sufficient space for circulation, milling, and lift mazes. Proposed ground disturbance at MHR West would be approximately 8.5 acres.

MHR East

MHR East has a marked deficiency in beginner terrain; the terrain that is available is not located proximate to base area facilities. Terrain served by the proposed surface lift at MHR East would be graded to an average slope gradient of approximately eight percent; this would enhance its appropriateness for beginner-level skiers. Approximately 1.9 acres would be disturbed, and roughly 25 percent of this area would require tree clearing. By providing appropriate and accessible terrain, with commensurate services for first-time beginners, MHR East would greatly improve its level of guest service and better balance the level of utilization between MHR East and West.

At both base areas, earth disturbance associated with Alternative B may necessitate the removal and reinstallation of existing snowmaking lines to accommodate newly created grades. All areas proposed for grading have been designed to blend with the surrounding existing grades.

A post-construction erosion control/ rehabilitation and revegetation plan would be completed by MHR for all ground-disturbing activities. These plans would be submitted to the Forest Service for review and approval prior to commencement of any construction.



MOUNTAIN HIGH RESORT

Alternative B MHR East & West

Legend

- Existing Lift
- Existing Lift with Proposed Modification
- Proposed Lift
- Existing Trail
- Proposed Trail
- Existing Building
- Proposed Building Envelope
- SUP Boundary
- Proposed Grading w/ Revegetation
- Proposed Trail Clearing w/ Revegetation
- Proposed Grading w/ Reclamation and Landscaping
- Proposed Clearing w/ Reclamation and Landscaping
- Proposed Parking
- Riparian Zone
- Ski Patrol
- Advanced Trail
- Intermediate Trail
- Beginner Trail

Resort Facilities

- Base Lodge Envelope
- Bullwheel Saloon
- Restrooms
- Snowmaking Generation Plant
- Existing Upper Parking Lot
- Existing Lower Parking Lot
- Base Lodge
- Rental/Retail Shop
- Grand View Bistro
- Facility Maintenance Shop
- Maintenance/Snowmaking/Administration
- Parking Lot
- East Snowmaking Reservoir
- West Snowmaking Reservoir
- Proposed Ski/Snowboard Learning Center
- Proposed Storage Facility
- Proposed Water Tank Reconstruction

Figure II-2

PREPARED FOR:

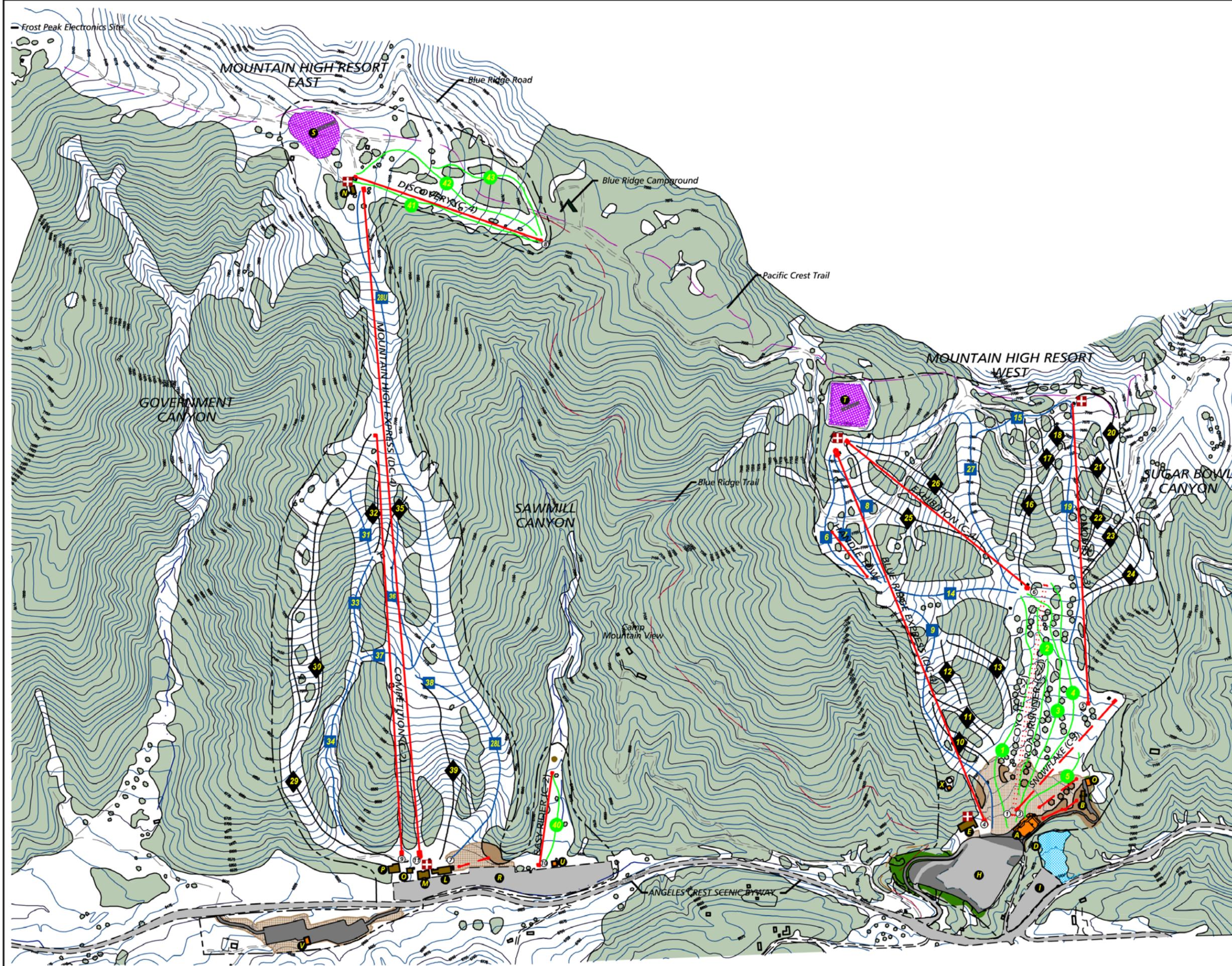


PREPARED BY:



Date: February 2004

Contour Interval: 25'





MOUNTAIN HIGH
RESORT

Alternative B MHR West

Legend

-  Existing Lift
-  Existing Lift with Proposed Modification
-  Proposed Lift
-  Existing Trail
-  Blue Ridge Trail Realignment
-  SUP Boundary
-  Existing Building
-  Proposed Building Envelope
-  Proposed Grading w/ Revegetation
-  Proposed Trail Clearing w/ Revegetation
-  Proposed Grading w/ Reclamation and Landscaping
-  Proposed Clearing w/ Reclamation and Landscaping
-  Proposed Parking
-  Meadow

Figure II-3

PREPARED FOR:

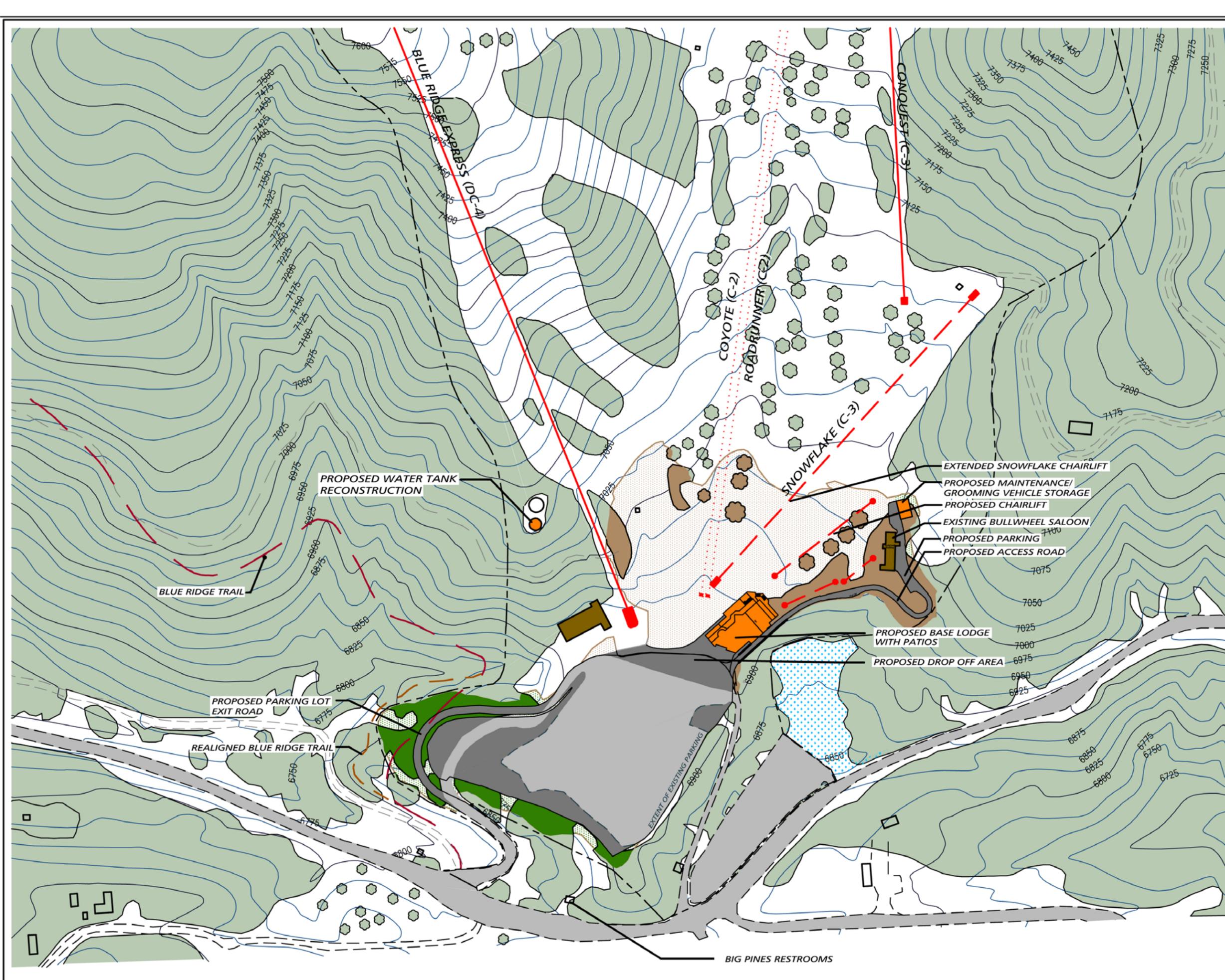


PREPARED BY:



Date: February 2004

Contour Interval: 25'



BIG PINES RESTROOMS



MOUNTAIN HIGH
RESORT

Alternative B MHR East

Legend

-  Existing Lift
-  Proposed Lift
-  Existing Trail
-  SUP Boundary
-  Existing Building
-  Proposed Building Envelope
-  Proposed Grading w/ Revegetation
-  Proposed Trail Clearing w/ Revegetation
-  Existing Parking
-  Proposed Parking

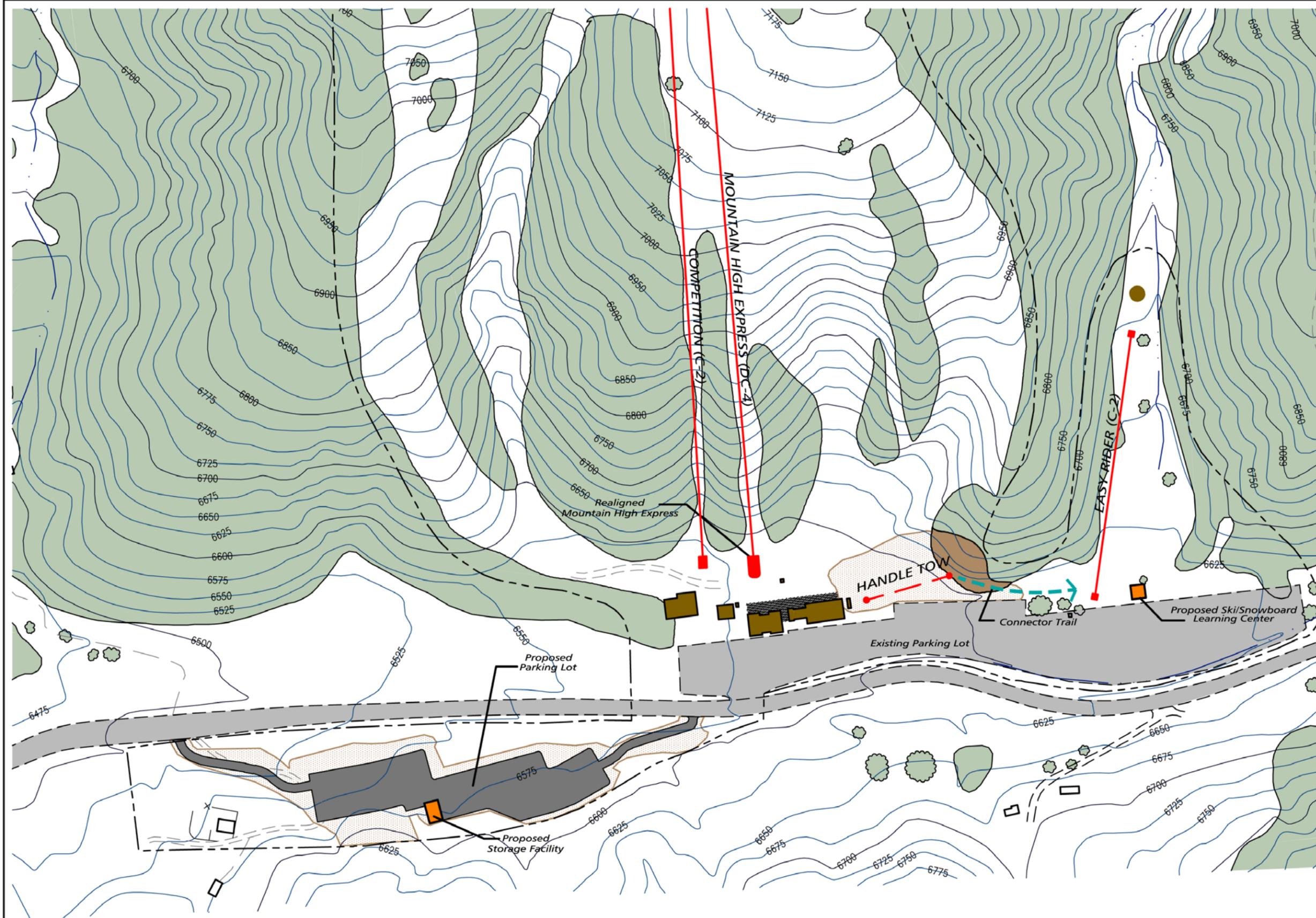


Figure II-4

PREPARED FOR:



PREPARED BY:



Date: February 2004
Contour Interval: 25'



C. ALTERNATIVES AND DESIGN COMPONENTS CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Introduction

In 2001, MHR submitted a revised Master Development Plan (2001 MDP) to the Forest Service for review. The project elements contained in the 2001 MDP comprised the original Proposed Action to be analyzed in this Environmental Assessment. Over the past several years, as the 2001 MDP proposal has undergone analysis as required by NEPA, the Proposed Action has been substantially revised. The revisions to the proposal have been comprised of new design components as well as an analysis of whole new alternatives; each of these was developed in response to issues raised by either the public or the Forest Service reviewing specialists.

The original Proposed Action, its subsequent design components, and tangential alternatives have been analyzed in detail and reviewed by the Forest Service in several internal review drafts of the EA. Through these review processes, many of these alternatives and design components have successively been eliminated from further detailed analysis in the EA document. The majority of these elements were eliminated due to potential effects to cultural and visual resources within and adjacent to the project area. Although only two alternatives are considered in full detail within this EA, the alternatives and design components that have been analyzed and eliminated from further consideration comprise a substantial range of alternatives as required by 40 CFR 1502.14a.

The following text describes each of the alternatives or design components which were developed, analyzed and eliminated from further inclusion in this EA. A brief description of the rationale for their elimination is included. For purposes of brevity and clarity, only the details that differ from the current action alternative are described below.

Alternative 1 (original Proposed Action)

MHR's original Proposed Action entailed merging the existing upper and lower parking lots and relocating the entrance road to MHR West. This would have been accomplished by extensive regrading of both lots to create one larger parking lot on a single grade. This design would have provided four additional acres of parking at MHR West. However, this parking lot design was sufficiently extensive that it would have encroached on the Big Pines Restroom complex.

The proposed merging of the two existing parking lots would have created an extensive fill slope (approximately 25-30 feet tall) along the edge of Highway 2. A tall retaining wall would have been necessary to maintain the structural integrity of the parking area; this, too, was determined to be likely to detract from the overall setting and cultural integrity of the area. The entrance road would have been relocated approximately 250 feet further west along Highway 2 and followed the southern edge of the proposed parking lot. The original Proposed Action also included the construction of a 1.5 acre employee parking lot across Highway 2 from MHR East.

In conjunction with the parking expansion, this alternative also entailed relatively large scale terrain modifications at MHR West. This would have removed many of the large trees in the

base area and up the slopes from the base area; the terrain modifications and the parking expansion worked together to generate enough fill material to raise the lower parking lot at MHR West to the grade of the upper parking lot. The terrain modifications would have improved skier circulation at the base of MHR West and allowed for the creation of a ski and snowboard learning center in front of the Bullwheel Saloon.

With respect to proposed buildings, the Proposed Action originally located the Day Lodge and the Bullwheel access road slightly further west than currently analyzed, necessitating the removal of several large screening trees that also serve as habitat for the pileated woodpecker. This location would have required the removal of only two of the six existing cabins near the Bullwheel Saloon. The architectural style of the Day Lodge was very modern, with an extensive glass and steel façade; this style, as originally proposed, did not blend well with the National Park Rustic style of the surrounding BPHD. The existing snowmaking generation plant was also proposed for expansion to accommodate the administrative space lost with removal of the cabins, rather than incorporating the administrative space into the proposed Day Lodge.

Under the original Proposed Action, all of the large trees (18-24 inches, or greater, in diameter) would have been removed along the north and western edges of the existing upper parking lot at MHR West. The Forest Service determined that this level of vegetation removal would have dramatically altered the setting and feel of the area, thereby adversely affecting the visual and cultural integrity of the BPHD. Although an aggressive revegetation plan proposed by MHR which may have served to effectively mitigate much of the impacts, it would have taken several years to succeed and longer for the area to become reestablished.

Additional Design Elements for this Alternative

In an attempt to develop a design which allowed the upper and lower MHR West parking areas to be expanded and the entrance road to be relocated further to the west, several other designs were extensively developed and analyzed. However, none of the design concepts were shown to provide the necessary reduction to the anticipated affects to the scenic and cultural integrity of the BPHD. Some examples are included below:

Alternative 1, Design Concept 2

Under this design concept the parking expansion at MHR West would have resulted in 10.6 acres of parking at MHR West, which would have been an increase of four acres as described in the original Proposed Action, and a 1.5-acre employee parking lot at MHR East. The differences were that all six cabins (contained in three buildings) at MHR West would have been removed, instead of just the northern-most two cabins, as in the original Proposed Action. Removal of all six cabins would have provided additional space adjacent to the proposed Day Lodge. This would have allowed the proposed road accessing the Bullwheel Learning Center to be realigned slightly west. This new alignment would have decreased overall vegetation disturbance, especially to granary trees, which provide important foraging habitat for acorn woodpeckers. Removal of all six cabins would also have created a more aesthetically cohesive resort in light of the upgraded Day Lodge that is proposed at MHR West. Although these differences evolved from the original Proposed Action, they have now been incorporated into the current Alternative B.

This design concept would also have entailed a reduced ground disturbance associated with the project elements in the MHR West base area. Under this alternative, approximately 7.7 acres would have been graded to enhance circulation and create teaching terrain (rather than the original 10.4 acres), thereby reducing the effects to the visual resources in the area. The reduced terrain modification plan has been incorporated into the current Alternative B.

Alternative 1, Design Concept 3

This design concept entailed expansion of the existing upper lot by approximately 3.1 acres via the expansion along the eastern and western edges. The expansion of the western edge would have been accomplished by lowering the overall grade of the upper lot by approximately ten feet. The fill generated from the upper parking lot expansion would have been used to partially raise the overall grade of the existing lower lot at MHR West. This action would have created new parking surfaces totaling of 9.8 acres, which would have accommodated approximately 1,519 vehicles or approximately 4,100 people.

Implementation of these two lots would have entailed approximately 13.8 acres of ground disturbance. The disturbed area was to be landscaped and revegetated promptly, utilizing native vegetation and/or transplanted native trees from other areas of the SUP area that are proposed for vegetation disturbance (see the following discussion of proposed terrain improvements). A detailed landscape and revegetation plan was developed as an integral part of this design concept to potentially mitigate the effects to visual and cultural resources.

In conjunction with the parking lot reconfiguration, the entrance road to MHR West would have been relocated further west along Highway 2 to eliminate the problematic five-way intersection that currently exists at MHR West. The entrance road would have then continued along the southern edge of the new lower lot and behind the proposed Day Lodge, as the partial blending of the two existing parking lots would have created a manageable grade.

This design concept also entailed relocating the proposed Day Lodge approximately five feet further southeast to avoid the removal of several important visual screening trees. The new location would have also allowed the Bullwheel access road to go behind the proposed Day Lodge. Again, this design element has been incorporated into the current Alternative B.

This design concept also included construction of a gravel-surfaced parking area for guests and employees across from MHR East, on the north side of Highway 2. This new parking lot would have accommodated approximately 341 vehicles. With this design concept, total parking at MHR East (existing and proposed) would have been approximately 9.9 acres, accommodating 1,485 vehicles and 4,010 people.

Although concessions were made to reduce vegetation clearing, the parking lot expansion at MHR West under this design element was still anticipated to result in adverse effects to the cultural and visuals resource of the area.

Alternative 2

Under this alternative, the existing upper parking lot at MHR West would have remained the same. The entrance road would have been relocated further west along Highway 2 and wound back through the existing lower lot at MHR West. It then would have traversed north, creating an S shape through the lot, to join the existing entrance road accessing the ski area. The area in which the entrance road currently exists would have been reclaimed and revegetated. This would have resulted in a loss of approximately 0.2 acres of parking.

This alternative would still have developed a 1.5-acre employee parking lot across from MHR East. The remaining guest parking would have been moved off-site to areas located east of Wrightwood on both private and NFS lands. From these remote lots, guests would have utilized shuttle buses to access the resort.

This alternative was eliminated from further analysis because it relied heavily on expanding the shuttle system at MHR. An increase in shuttle service between MHR and Wrightwood (more buses operating for longer periods of time) had the potential to create unnecessary additional air quality issues in this area of severe non-attainment for ozone. Additionally, this alternative had the potential to create serious traffic and parking issues in the town of Wrightwood.

Alternative 2, Design Concept 2

Natural gas and other forms of alternative fuels were also considered as design elements to reduce air quality impacts. The nearest fueling stations are in Victorville and Lancaster (45 and 60 miles away respectively) making the logistics of refueling very difficult. Although a natural gas pipeline does run through the town of Wrightwood with a sufficient capacity to address the needs of MHR, the cost of building a fueling station has been estimated to cost \$250,000; this does not include the cost of the buses. As a result, this option was determined to be cost prohibitive.

Two other forms of alternative fuel include electric and propane. Electric buses are in the infantile stages of development. Additionally, the terrain at MHR is not conducive to this type of bus due to the steepness of grade coupled with high capacity levels. As a result of these existing conditions, switching to electric powered buses was deemed a poor business investment on the part of MHR. Propane buses are in use in transit operations currently. Although propane is a readily available source of fuel, the cost of buses that utilize propane is prohibitive, especially for the ski area, which operates only a portion of the year, or seasonally. As a result, investing in propane buses was also deemed a poor business decision by MHR management.

Alternative 2, Design Concept 3

This design element would have relocated the entrance road at MHR West as described above under Alternative 2; however, rather than relocating all necessary parking off site, this design component would have created approximately 4.3 acres of parking at MHR East, including the 1.5-acre employee parking area, on the north side of Highway 2.

Although enough land (private and NFS) could have been acquired to develop this alternative, several undesirable obstacles led to the omission of this design concept. For example, some of

the available land for the proposed lot at MHR East is an existing leaching field. Although this would not have prohibited the development of a parking lot in this area, certain issues would have needed to be resolved prior to construction, including the use of a porous surface and access to the field for maintenance. Other obstacles pertained to the amount of cut and fill slopes that would have been necessary to create a consistent grade for the parking lot and the associated visual impact of the terrain modifications. Because other, more desirable options were developed, this design concept was dropped from further analysis.

Alternative 3

Provision of mass transit from the LA metro area was also discussed, as it relates to the Forest Plan, but was dropped from further consideration because it is not considered practical at MHR due to the great distance from the metropolitan area. Shuttle buses are already used to shuttle guests between the base areas at MHR East and West. As stated previously, an increase in shuttle service also had the potential to create air quality issues in this area of severe non-attainment for ozone.

Alternative 4

The Forest Service considered analyzing an alternative that would move all skier parking away from the MHR base areas to an off-site location in or below Wrightwood. It was determined that this alternative would not meet the Purpose and Need for the proposal. Additionally, this alternative would have the potential create serious traffic and parking issues within the town of Wrightwood.

**Table II-1
Comparison of Proposed Project Elements**

	Alternative A	Alternative B
RESORT CAPACITY (CCC)		
MHR East	3,090 guests	3,090 guests
MHR West	<u>3,410 guests</u>	<u>3,410 guests</u>
Total Resort CCC	6,500 guests	6,500 guests
TERRAIN IMPROVEMENTS		
Re-contour MHR West	No	~8.5 acres
Re-contour MHR East	No	~1.8 acres
LIFTS		
Relocate Bottom Terminal of Snowflake Lift	No	Yes
Surface lifts	2	5
Double Chairs	3	4
Triple Chairs	2	2
Quad Chairs	<u>4</u>	<u>4</u>
Total lifts	11	15
PARKING		
Parking at MHR West (upper)		
Acres	4.9	7.5
Vehicles ^a	818	1,163
People ^b	2,209	3,139
Parking at MHR West (lower)		
Acres	1.8	1.8
Vehicles	301	279
People	813	753
Parking at East (base area)		
Acres	7.2	7.2
Vehicles	1,202	1,116
People	3,245	3,013
Parking at East (across Hwy 2)		
Acres	0	2.7
Vehicles	0	419
People	0	1,131
Total Resort Parking ^c		
Acres	13.9	19.2
Vehicles	2,321	2,976
People	6,267	8,035
GUEST SERVICE FACILITIES		
Remove Modular Buildings	No	Yes
New Day Lodge at MHR West	No	Yes
New Ski/Snowboard Learning Center at MHR East	No	Yes
Food Service Seats	878	1,878
Guest Service Space	~46,200 sq. ft.	~70,000 sq. ft.
RESORT OPERATIONS		
MHR West Maintenance Facility	No	Yes ~2,400 sq. ft.
MHR East Storage Facility	No	Yes ~2,500 sq. ft.

MISCELLANEOUS IMPROVEMENTS		
Water Tank at MHR West	No	Yes
Remove All Six Cabins	No	Yes

^a This analysis assumes approximately 167 vehicles per acre for existing conditions and a more realistic 155 vehicles per acre for proposed conditions.

^b Based on an average of 2.7 persons/car.

^c Total includes existing parking of 1.8 acres for the lower lot at MHR West and 7.2 acres at MHR East.

Source: SE GROUP, 2003

**Table II-2
Summary Comparison of Environmental Consequences**

	Alternative A	Alternative B
VISUAL RESOURCES		
	Does not meet the intent of the VQOs in the LRMP. Areas in need of rehabilitation. Under achieves the VQOs by one to two levels.	Proposed project elements do not meet the intent of the VQOs in the LRMP. Under achieves the VQOs by one to two levels.
HERITAGE/CULTURAL RESOURCES		
Day Lodge	No effect	Construction of the Day Lodge would result in no adverse effect to setting or feel of BPHD as viewed from the Clubhouse (pending SHPO concurrence)
MHR West parking lot reconfiguration	No effect	No adverse effect to BPHD with implementation of the approved landscaping and revegetation plan (pending SHPO concurrence)
Removal of cabins	No effect	Remove all six cabins. Cabins are considered not historically significant (pending SHPO concurrence)
BIG PINES MEADOW		
	No additional effects identified – parking at MHR West would continue to encroach on the Meadow’s northeastern corner	No additional effects identified – parking at MHR West would continue to encroach on the Meadow’s northeastern corner
VEGETATION		
Vegetation removal as a result of MHR West parking expansion	None	51 (18-24” dbh trees) 11 (24”+ dbh trees)
Vegetation removal as a result of terrain modifications	None	34 (18-24” dbh trees) 21 (24”+ dbh trees)
Effects to special-status plant species within SUP	None	No special-status species were identified in the project area
WILDLIFE		
Effects to general wildlife	None	May result in displacement of individuals but would not affect populations.
Effects to T&E species	None	None

	Alternative A	Alternative B
Effects to R5 Sensitive species	None	May affect certain <i>individuals</i> but will not lead towards a trend for federal listing
GEOLOGY AND SOILS		
<i>Ground disturbance at MHR West</i>		
Buildings		
Day Lodge construction	0	0.93
Maintenance building construction	0	.13
Parking		
Total ground disturbance	0	10.2
Total to be revegetated	0	2.0
Terrain		
Slope re-grading, including lift modifications	0	7.7
Bullwheel access road	0	1.3
<i>Ground disturbance at MHR East</i>		
Buildings		
Storage barn in parking lot at MHR East	0	.13
Learning center construction	0	.15
Parking		
Total ground disturbance	0	8.7
Total to be revegetated	0	3.8
Lifts		
Install surface lift	0	.06
Terrain		
Grading for new beginner terrain	0	1.8
<i>Geologic/Safety Hazards</i>		
	Potential risk to public safety due to location of guest service facilities on faults within the A-P zone	Proposed facilities would be located in areas that are in compliance with the A-P Zoning Act

Source: SE GROUP, 2003