FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

TABLE OF CONTENTS

VOLUME 2 OF 2

FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

UTILITY MASTER PLAN

EXHIBIT 11

MAY 2001
REVISED AND APPROVED DECEMBER 2001

PREPARED FOR:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450
PARK CITY, UTAH

UTILITY MASTER PLAN
FOR
FLAGSTAFF MOUNTAIN RESORT
PARK CITY, SUMMIT COUNTY, UTAH

Exhibit 11

Prepared by:

FLAGSTAFF MOUNTAIN PARTNERS (FMP)

May 2001
(Revised and Approved December 2001)

TABLE OF CONTENTS

I. INTRODUCTION

This study is one of several reports that have been prepared to support the Flagstaff Mountain Resort's Large Scale Master Plan Development (LSMPD) application. As LSMPDs are programmatic in nature and subject to refinement at subsequent Master Planned Development (MPD) or Conditional Use Permit (CUP) stages, correspondingly, the contents of this report should be viewed as conceptual in nature and subject to change as specific plans are developed. Details developed at the MPD or CUP stage will not require a modification of this plan provided that they comply with the Goals and Objectives of this Plan.

General Description of the Property

The Flagstaff Mountain Resort (the "Resort") is an assemblage of mining claims totaling approximately 1,655 acres of land (the "Annexation Area") located at the southwestern corner of Summit County, Utah. The Annexation Area is bordered by Deer Valley Resort ("Deer Valley") to the east and State Highway 224 (Marsac Avenue) to the northeast. The southern boundary coincides with the Summit County/Wasatch County line. The Park City Mountain Resort borders the Annexation Area to the west and northwest. The Resort was annexed into the corporate limits of Park City, Utah on June 24, 1999 (refer to Exhibit "A" attached).

The proposed areas of development will be restricted to: i) the "Mountain Village" consisting of three Development Pods ("A", "B-1" & "B-2") limited to a maximum of 84 acres; and, ii) the "Northside Neighborhood" (Development Pod "D") limited to a maximum of 63 acres (refer to Exhibit "B" attached).

The maximum density allowed within the Mountain Village is 705 Unit Equivalents configured in no more than 470 residential units. The residential units may be multi-family units, hotel room units or PUD units. In addition to the above-described residential units, the Mountain Village may also contain a maximum of: i) 16 single-family home sites; and, ii) 75,000 sq. ft. of Resort Support Commercial uses.

The Northside Neighborhood may contain a maximum of 38 single-family home sites of which 30 are currently entitled and eight are subject to further requirements under the Development Agreement.

The Annexation Area is situated on the northern slope of Flagstaff Mountain between Ontario Canyon and Walker and Webster Gulch and includes Empire Canyon. The majority of the Annexation Area is located on a general north-

south oriented ridge bounded on the east by Ontario Canyon and on the west by Empire Canyon. Elevations range from 7,370 to 9,580 feet above sea level.

With the exception of the bottoms of the canyons, several high mountain meadows and land developed by Deer Valley Resort as ski area, the Annexation Area is vegetated with a mix of aspen, conifer and mountain shrubs each with its own mix of understory groundcover.

While similar to the greater Park City area in general climatic conditions, Flagstaff Mountain Resort relates more closely with the conditions experienced at upper Deer Valley Resort and upper Park City Mountain Resort. An average of 45 inches of precipitation falls annually, the majority in the form of snowfall between late fall and early spring. This equates to approximately 350 inches of total annual snowfall resulting in an average snowpack in late March of approximately 70 inches.

As mentioned earlier, the Resort is uniquely situated as an expansion of Deer Valley Resort immediately adjacent to the Park City Mountain Resort. Current uses include skiing, snowshoeing and snowmobiling in the winter and hiking, biking and horseback riding in the summer (refer to Exhibit "C" attached). Adjacent to the Resort, Deer Valley Resort uses include hotel lodging facilities, resort support commercial, multi-family residential units and single-family home sites.

Planned uses for the Resort are intended to include hotel lodging facilities, resort support commercial, multi-family residential units, PUD residential units and single-family home sites. With the exception of snowmobiling, which will be discontinued, recreational uses will remain similar to the current uses described above.

Goals and Objectives of the Utility Master Plan

The primary goal and objective of this plan is to deliver adequate water, sewer, electric power, telephone, natural gas and cable television service to Flagstaff Mountain Resort.

II. UTILITY PROVIDERS AND EXISTING SERVICE

Water

Park City Municipal Corporation ("Park City") will be the water provider for Flagstaff Mountain Resort as a result of its annexation into the corporate limits of Park City.

The closest points of connection to Park City's water infrastructure system are the Empire Canyon and Woodside Water tanks located west and north of the Resort in Empire Canyon and the Silver Lake and Bald Eagle Water Tanks located east of the Resort within the Deer Valley Resort.

Sanitary Sewer

Snyderville Basin Sanitary Improvement District ("SBSID") will be the sanitary sewer provider for Flagstaff Mountain Resort.

The closest point of connection to the SBSID's sanitary sewer collection system is a sewer, which currently extends to the top of Daly Avenue northwest of the Resort in Empire Canyon.

Electric Power

Utah Power Company (UP) will be the electric power provider for Flagstaff Mountain Resort.

UP owns and operates multiple overhead electric power transmission and distribution lines throughout the Annexation Area. The "Ohmstead" line, which crosses through the Annexation Area on a north-south alignment, will be the primary source of power to the Resort. This high voltage transmission line extends electric power from the existing Judge Switchrack Substation located northwest of the Resort in Empire Canyon. From this substation, UP currently provides electric power, via overhead and underground distribution lines, to the United Park City Mines Company Ontario #3 Mine Building Complex and Deer Valley's Flagstaff Mountain ski facilities. The closest point of connection to UP's distribution system is the existing 12.5 Kv distribution line that currently extends power to the base of Deer Valley's Northside Ski Lift.

Telephone

QWest Communications ("Qwest"), formerly US West Communications, will be the telephone service provider for Flagstaff Mountain Resort.

Qwest owns and operates a multi-strand fiber optic cable system located adjacent to the Guardsman Pass Road alignment that runs through the Annexation Area. US West originally installed this system several years ago to serve the Cloud Rim Girl Scout facility located in Bonanza Flat. This system has since been extended into Salt Lake County and provides service to Solitude Ski Resort.

The system consists of a fiber optic cable installed in a 4-inch conduit accompanied by a 4-inch spare conduit for future reinforcement of the system. Although the existing fiber optic line has the capacity to serve the Resort, Qwest has indicated that they may reinforce the existing line by installing a second fiber optic line in the spare conduit to provide additional service capacity for the upcoming 2002 Winter Olympics. Flagstaff Mountain Resort will have the ability to connect into this system at several points along its alignment.

Natural Gas

Questar Natural Gas Company ("Questar") will be the natural gas provider for Flagstaff Mountain Resort.

Questar currently owns and operates natural gas transmission and distribution facilities within the Silver Lake area of Deer Valley Resort northeast of the Resort. These facilities will need to be reinforced and extended in order to provide service to Flagstaff Mountain Resort.

Cable Television

AT&T Cable Services ("AT&T") will most likely be the cable television provider for Flagstaff Mountain Resort.

AT&T currently owns and operates cable television transmissions lines that extend to the Silver Lake area of Deer Valley Resort.

III. PROPOSED UTILITY SERVICE

Water

In order to comply with the requirements of the Development Agreement and to secure an adequate source of water for the potable and irrigation needs of the Resort, Flagstaff Mountain Resort entered into the following two water agreements with Park City:

1) AN AGREEMENT FOR A JOINT WELL DEVELOPMENT PROGRAM dated January 14, 2000 in which Flagstaff Mountain Resort agreed to participate in the costs associated with developing new water sources for Park City and the Resort, and

2) A MEMORANDUM OF UNDERSTANDING BETWEEN PARK CITY MUNICIPAL CORPORATION AND UNITED PARK CITY MINES COMPANY CLARIFYING AND IMPLEMENTING THE WATER SERVICE AND WATER SOURCE DEVELOPMENT PROVISIONS OF THE DEVELOPMENT AGREEMENT DATED JUNE 24, 1999, said memorandum dated January 14, 2000 in which Park City and United Park City Mines Company agreed to, among other things: i) the transfer of Group II water rights; ii) an interim source of water for the Resort; iii) terms related to the provision of water to Flagstaff Mountain Resort, Bonanza Mountain Resort & Richardson Flats; and, iv) the filing of a joint change application with the State Engineer relating to the Group II water rights.

Flagstaff Mountain Resort will extend water transmission lines to the Resort from two different sources in order to provide a "looped" redundant water system (refer to Exhibit D attached).

The primary source of water for the Resort will be the Woodside Water Tank, a 500,000-gallon tank located on Woodside Avenue above Empire Canyon northwest of the Resort. This tank receives water from both the Judge Tunnel via the Empire Canyon Tank and the Spiro Water Treatment Plant via the Thaynes Canyon Tank.

Flagstaff Mountain Resort will make certain improvements to the piping associated with the Woodside Tank to allow water to flow through or around the tank depending on the configuration of the valve system. Water will flow from the Woodside Tank through the existing transmission line to a proposed new pump station (PS #1) to be located south of the tank in Empire Canyon.

This new pump station will pump water through a new 10-inch water transmission line that will run from the pump station uphill to Prospect Ridge, follow the ridge uphill to the proposed re-alignment of Guardsman Pass Road and follow the new road alignment through Development Pods A, B-1 and B-2 to the location of a proposed new water storage tank on Flagstaff Mountain above the Daly West area. This new Daly West Tank (Tank #1) will have an overall capacity of approximately one million gallons, including a fire storage capacity of approximately 540,000 gallons, providing adequate potable and fire storage for all of the proposed development within Development Pods A, B-1 and B-2.

The secondary, or redundant, source of water for the Resort will be the Bald Eagle Tank, a 1,000,000-gallon water tank located east of the Resort within Deer Valley. A tee will be install in the existing water line that runs between the Silver Lake Tank and the Bald Eagle Tank that will connect to a new 10-inch water transmission line. Water will gravity flow through this new line that will run along existing ski runs and trails within the Silver Lake area to the Banner Trail. It will follow the Banner Trail above Development Pod A, cross the Northside ski runs until it intersects with the proposed new alignment of Guardsman Pass Road, and connect to the previously described Daly West Tank.

A proposed new pump station (PS #2) will draw water from the Daly West Tank and pump it through a new 10-inch transmission line uphill to a proposed new water tank to be located near the ridgeline above Development Pod D. This new Flagstaff Mountain Tank (Tank #2) will have an overall capacity of approximately 500,000 gallons, including a fire storage capacity of 180,000 gallons, providing adequate potable and fire storage for all of the development within Development Pod D.

A proposed new pump station (PS #3) will be installed above Development Pod A. This pump station will be connected to the secondary water line from the Bald Eagle Tank. This pump station will pump water through an 8-inch transmission line uphill along the Northside ski runs to Development Pod D to provide a secondary "redundant" source of water to the Flagstaff Mountain Tank.

The system will be designed to provide a minimum static water pressure of 40 psi at the highest floor level of each building constructed.

Finally, Flagstaff Mountain Resort will contribute funding and/or perform work associated with the necessary upgrades to the 13th Street Pump Station and the extension of the Woodside Avenue Water Transmission Line on a "proportionate share basis" as agreed to by both the Park City Water Service District and Flagstaff Mountain Resort.

Sewer

Flagstaff Mountain Resort will enter into the necessary Line Extension Agreements with SBSID in order to secure adequate sanitary sewer service for the Resort.

Flagstaff Mountain Resort will construct a wastewater collection system throughout the Resort. (refer to Exhibit E attached).

Beginning at Development Pod D at the top of Flagstaff Mountain, wastewater will be collected and transported downhill via two separate sewers. The first will follow the alignment of the proposed private road that connects Developments Pod D and B-2. This sewer will collect wastewater from those single-family lots located on the west side of Flagstaff Mountain. This sewer will then collect wastewater from Development Pods B-2 and B-1 and convey it to the sewer line constructed in Empire Canyon during 2001. This is the sewer line that extends from the Empire Canyon Day Lodge to upper Daly Avenue.

The second sewer will collect wastewater from the balance of the single-family lots within Development Pod D and convey it along the Northside ski runs to Development Pod A.

A system of sewers within Development Pod A will collect the wastewater conveyed from Development Pod D, along with the wastewater generated in Development Pod A and convey it to Prospect Ridge.

From Prospect Ridge, a sewer will convey the wastewater down to connections to the existing sanitary sewer system.

The sewer outfall is the connection to be made to the existing sewer at the top of Daly Avenue in Empire Canyon (Alternate A).

Electric Power

As stated in Section II, the source of electric power for the Resort will be the existing switch located at the base of Deer Valley's Northside Ski Lift. Power will be distributed from this point throughout the Resort via an underground distribution system located within either the proposed street rights-of-way or utility easements (refer to Exhibit F attached).

Although the Judge Switchrack Substation has the capacity to serve Flagstaff Mountain Resort, UP has indicated the probable need for an additional substation to serve the proposed Bonanza Mountain Resort. This proposed new substation

would be located on the Wasatch County side of the ridgeline, but would be served from the Park City side. A route for the required new electric transmission facilities to this future substation will be established through the Annexation Area.

Telephone

As stated in Section II, the source of telephone service for the Resort will be the existing fiber optic line that runs along the Guardsman Pass Road alignment. Qwest will install a series of terminal cabinets at strategic locations throughout the Resort to create onsite cable pair capacity necessary for the provision of dial tone to meet the needs of the Resort.

These terminal cabinets become the distribution point for service pairs that extend to the individual telephone customers. Telephone cable will be distributed from these cabinet locations throughout the Resort via an underground distribution system located within either the proposed street rights-of-way or utility easements (refer to Exhibit F attached).

Natural Gas

As stated in Section II, the source of natural gas for the Resort will be the existing natural gas regulator located adjacent to Royal Street in the Silver Lake area of Deer Valley. Questar will reinforce the existing capacity in the area by installing a new 6" gas line adjacent to the existing 3" line.

Questar will then extend a new 6" high-pressure gas line that will run along existing ski runs and trails within the Silver Lake area to the Banner Trail. The line will then follow the Banner Trail above Development Pod A and cross the Northside ski runs and the existing alignment of Guardsman Pass Road. The line will follow an existing drift road alignment to the area of Development Pod B-2. This high-pressure line will eventually extend up to Development Pod D and over the ridge to serve the proposed Bonanza Mountain Resort Project (refer to Exhibit F attached).

Pressure regulator stations will be installed at strategic locations throughout the Resort to reduce the gas pressure down to distribution levels before providing service to individual gas meters. Distribution lines will be located within either proposed street rights-of-way or utility easements.

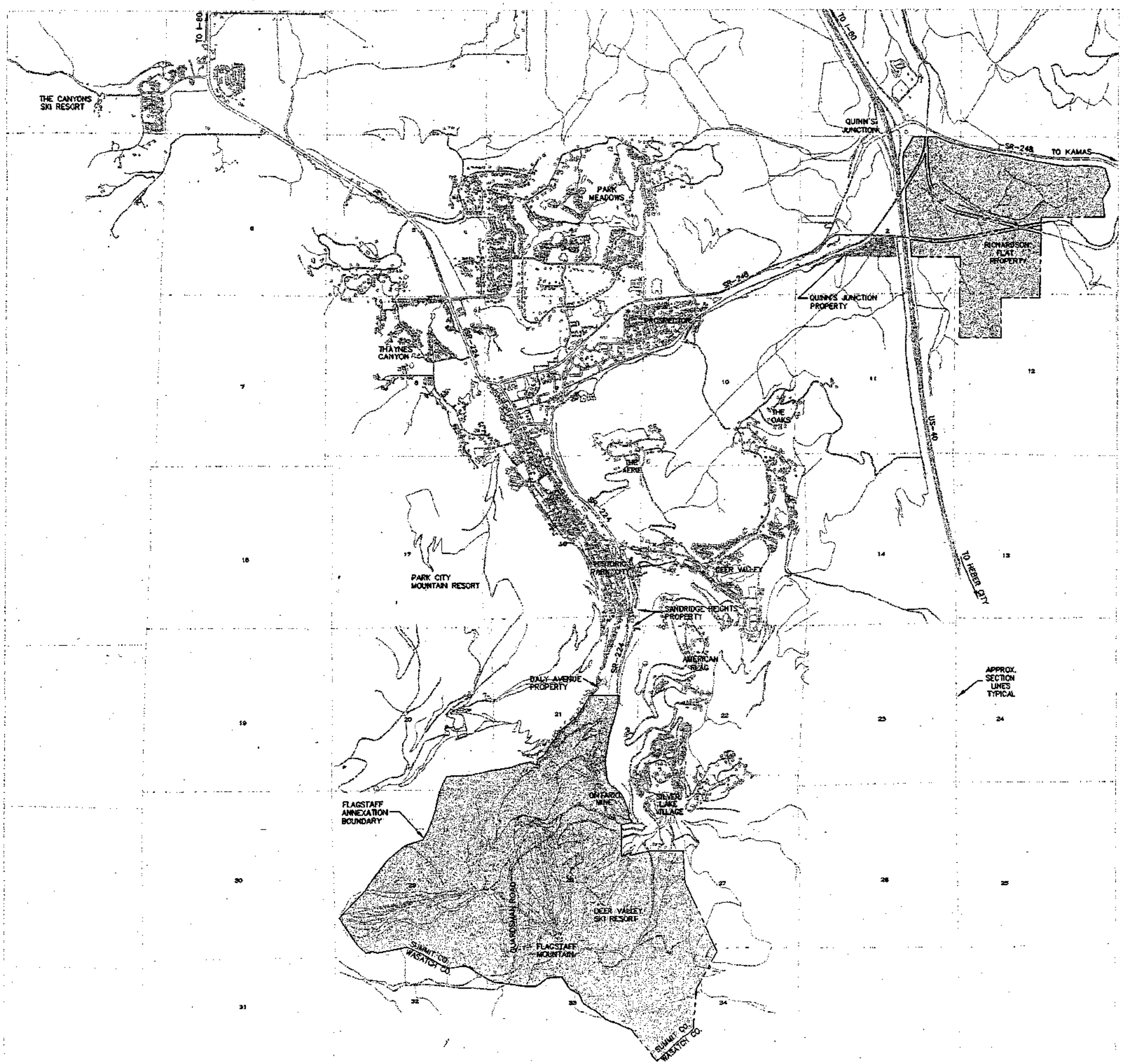
Cable Television

As stated in Section II, one source for cable television service for the Resort is AT&T. Service will run from the point of connection in the Silver Lake area along

existing ski runs and trails to the Banner Trail. The line will then follow the Banner Trail to the area above Development Pod A where it will tie into the Resort's distribution system.

An alternative source could be Qwest who are now providing video, data subscriber line service (VDSL), which, in addition to telephone service, can also provide cable television service in all areas that the utility's electronic serving equipment is configured to carry VDSL signals.

Regardless of the source of the signal, cable television distribution lines will be located throughout the Resort within either proposed street rights-of-way or utility easements (refer to Exhibit F attached).



1600 0 1600 3200 FEET

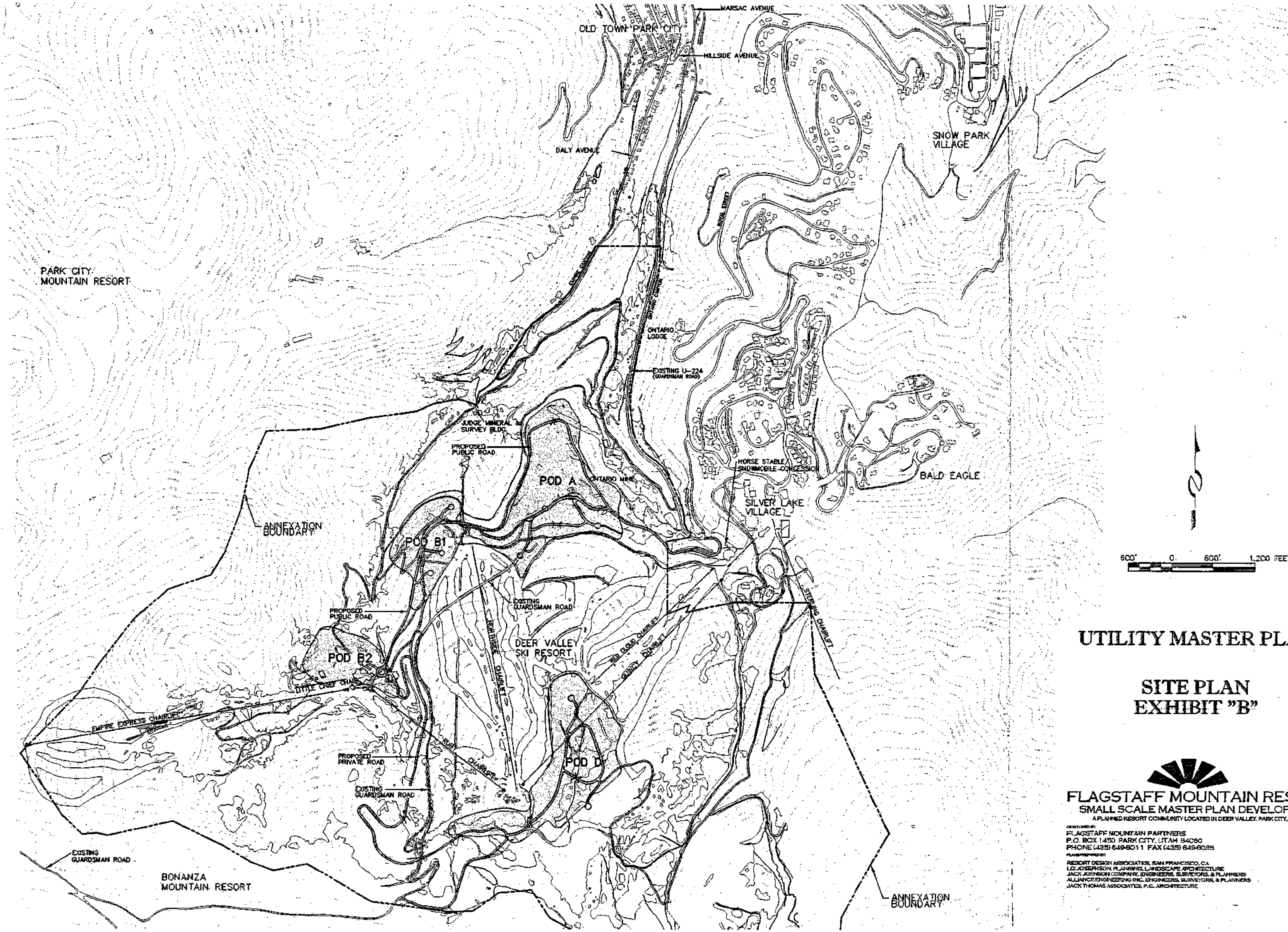
UTILITY MASTER PLAN

REGIONAL MAP
EXHIBIT "A"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE



UTILITY MASTER PLAN

SITE PLAN
EXHIBIT "B"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

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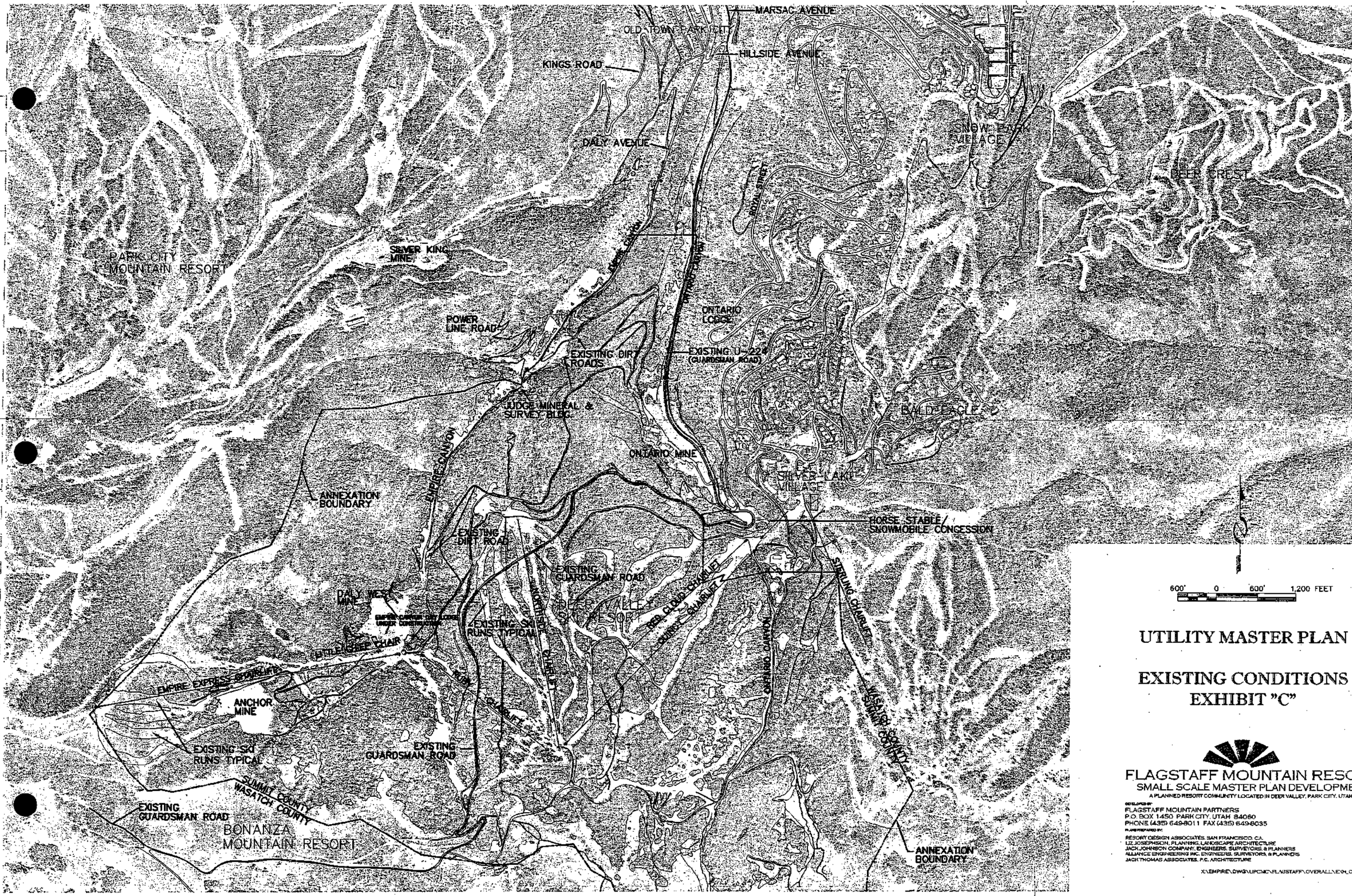

UTILITY MASTER PLAN

EXISTING CONDITIONS EXHIBIT "C"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

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JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

X:\EMPIRE\DWG\UPDMC\FLAGSTAFF\OVERALL\EXH_C

UPGRADE EXISTING 13TH STREET PUMP STATION
INSTALL NEW PUMPS
REPLUMB INTERIOR

EXISTING 10" WATER LINE

INSTALL 12" WATER LINE

INSTALL 12" WOODSIDE CONNECTOR WATER LINE

TO WOODSIDE TANK

EXISTING 12" WOODSIDE WATER LINE

EXISTING WOODSIDE TANK 0.5MG

EXISTING 12" WOODSIDE WATER LINE

INSTALL 12" WOODSIDE CONNECTOR WATER LINE

INSTALL BOOSTER PUMP STATION #1

PRIMARY WATER LINE

LINE #1

SUBSTATION

EXISTING EMPIRE TANK 1.0MG

JUDGE PORTAL

LINE 1. SUPPLY LINE FROM PUMP STATION #1

POD B1

POD B2

POD A

LINE 3. DISTRIBUTION LINE

NEW SUPPLY LINE TO ONTARIO MINE COMPLEX

LINE 2

ISOLATION VALVE

LINE 1. SUPPLY LINE FROM PUMP STATION #1

LINE 2. SUPPLY LINE FROM DEER VALLEY (REDUNDANT LINE)

LINE 3. DISTRIBUTION LINE

INSTALL TANK #1 DALY WEST 1.0MG

INSTALL BOOSTER PUMP STATION #2

LINE 4. SUPPLY LINE FROM PUMP STATION #2

ANNEXATION BOUNDARY

SILVER LAKE VILLAGE

DEER VALLEY MAINTENANCE YARD

EXISTING SILVER LAKE TANK

EXISTING BALD EAGLE TANK 1.0MG

WATER LINE TO ONANZA MOUNTAIN RESORT

LINE 4. SUPPLY LINE FROM PUMP STATION #2

LINE 5. DISTRIBUTION LINE

INSTALL TANK #2 COUNTY LINE 0.5MG

NORTHSIDE (POD D)

LINE 5. DISTRIBUTION LINE

400 0 400 800

LEGEND:

- W — WATER LINE
- EW — EXISTING WATER LINE
- ESM — EXISTING SNOW MAKING
- ISOLATION VALVE

UTILITY MASTER PLAN
CONCEPTUAL
WATER MASTER PLAN
EXHIBIT "D"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

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ALLIANCE ENGINEERING INC, ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

ALTERNATE 'A':
UNDER THIS ALTERNATE 'A' THE DALY AVE. AND UPPER MAIN STREET SEWER SHALL BE CONNECTED TO THE SWEDE ALLEY SEWER AT THE TIME OF TRUNK LINE 2 CONSTRUCTION.

DALY AVENUE OUTFALL
CONNECT TO EXISTING
S.B.S.I.D. MANHOLE

TRUNK LINE 1

TRUNK LINE 2

SWITCH BACK POWER SUBSTATION

EMPIRE CANYON

JUDGE PORTAL

ANNEXATION BOUNDARY

DALY AVENUE

PROSPECT RIDGE

UT. RT. 224

POD B1

POD B2

POD A

NORTHSIDE (POD D)

ONTARIO MINE

SILVER LAKE VILLAGE

BONANZA MOUNTAIN RESORT RECEIVING MANHOLE

400 0 400 800

LEGEND:

SS SEWER LINE

UTILITY MASTER PLAN

CONCEPTUAL SEWER MASTER PLAN EXHIBIT "E"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

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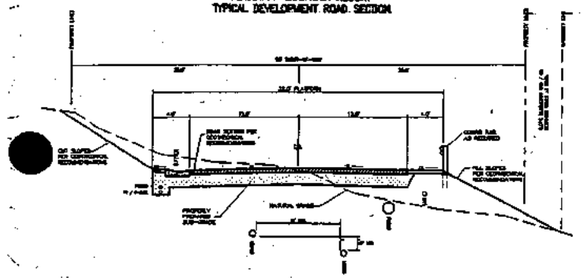
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

FLAGSTAFF MOUNTAIN RESORT
TYPICAL DEVELOPMENT ROAD SECTION



TYPICAL ROAD OUTSIDE DEVELOPMENT SITES

ANNEXATION BOUNDARY
8250
8750
8000
7750
7500
SWITCH BACK
POWER SUBSTATION
DALY AVENUE
PROSPECT RIDGE
BRIGHTON INTERTIE
EMPIRE CANYON
JUDGE PORTAL
POD B1
POD B2
POD A
NEW GAS REGULATOR STATION
UPL POINT OF CONNECTION
UTILITY COORIDOR
SEE TYPICAL ROAD SECTION THIS SHEET FOR UTILITY LOCATION
ONTARIO MINE
NEW FIBER OPTIC TERMINAL CABINET
EXISTING 6" HIGH PRESSURE GAS MAIN
NEW FIBER OPTIC TERMINAL CABINET & GAS REGULATION STATION
SAMPLE CANYON
NORTHSIDE EXPRESS
REDCLOUD
QUINCY
NORTHSIDE
SILVER LAKE VILLAGE
POINT OF CONNECTION FOR AT&T CABLE
POINT OF CONNECTION FOR CATV
GAS LINE EXTENTION TO BONANZA MOUNTAIN RESORT
400 0 400 800

LEGEND:

- EXISTING FIBER OPTIC LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING POWER LINE
- PROPOSED GAS LINE
- PROPOSED POWER, TELEPHONE, CATV LINE

UTILITY MASTER PLAN

CONCEPTUAL DRY UTILITY MASTER PLAN EXHIBIT "F"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

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ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

DRAINAGE STUDY

EXHIBIT 12

MAY 2001
REVISED AND APPROVED DECEMBER 2001

PREPARED FOR:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450
PARK CITY, UTAH

DRAINAGE STUDY

for

Flagstaff Mountain Resort
Park City, Summit County, Utah

Exhibit 12

Prepared By:

JACK JOHNSON COMPANY
for
Flagstaff Mountain Partners

May 2001
(Revised and Approved December 2001)

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FIGURES

APPENDICES

Executive Summary

This study evaluates the Flagstaff Mountain Resort (the "Project") from a storm water management perspective. Based on the data provided in the "Hydrologic Study," this evaluates the anticipated drainage structures and establishes design criteria to be used throughout the design of the Project.

In the "Hydrologic Study", the SCS TR55 method was used to estimate the runoff from precipitation. Using soil types, vegetation, topography, and rainfall probability functions, flows for pre-development and post-development conditions were calculated. As expected, the flows increase due to the development.

If left unchecked, the increased flows caused by the proposed improvements could cause pollution, erosion, and flooding problems downstream of the Project. The goal of the storm system design is to maintain or improve the existing site drainage and water quality. This will be accomplished by the use of storage, conveyance, and erosion control structures.

The storage structures intended for use are detention ponds and contour ditches. They will serve two purposes: 1) Prohibit downstream flooding by releasing no more than existing levels of the 10-year and 100-year storm events, and 2) Remove pollutants and sediment by capturing the 2-year storm event volume.

Conveyance structures include catch basins, pipes, ditches, and channels. All will be designed to safely carry the 10-year storm event.

Erosion control structures will be used during all construction activities including ski runs, roadways, and buildings. The Best Management Practices (BMPs) including silt fencing, straw bales, diversion dikes, erosion control mats, and revegetation will be implemented. Additional BMPs may be used if deemed necessary during the design and construction process. Maintenance and inspection of the BMPs will be employed to ensure all are installed and functioning properly.

I. Purpose and Scope of the Study

This study is one of several reports that have been prepared to support the Flagstaff Mountain Resort's Large Scale Master Plan Development (LSMPD) application. As LSMPDs are programmatic in nature and subject to refinement at subsequent Master Planned Development (MPD) or Conditional Use Permit (CUP) stages, correspondingly, the contents of this report should be viewed as conceptual in nature and subject to change as specific plans are developed. Details developed at the MPD or CUP stage will not require a modification of this plan provided that they comply with the Goals and Objectives of this Plan.

The purpose of this study is to outline the methodology and criteria that will be used to design the drainage structures and systems for Flagstaff Mountain Resort that will handle storm water runoff. The goal of the drainage system for this Project is to minimize the impacts that the proposed development will have on the existing site drainage and water quality. The drainage structures and systems that will be constructed, temporarily and permanently, throughout the Project will accomplish this.

This study provides an overview of the Project, a summarization of the results of the Hydrologic Study that has been prepared, and a discussion of the structures for use throughout the Project with their respective applications and the design criteria to be used.

II. Project Overview

The Flagstaff Mountain Resort Property is an assemblage of mining claims totaling approximately 1,655 acres of land located at the southwestern corner of Summit County, Utah. The Property is bordered by Deer Valley Resort to the east and State Highway 224 (Marsac Avenue) to the northeast. The southern boundary coincides with the Summit County/Wasatch County line. The Park City Mountain Resort borders the Property to the west and northwest. The Property is situated on the northslope of Flagstaff Mountain between Ontario Canyon and Walker and Webster Gulch and includes Empire Canyon. The majority of the Property is located on a general north-south oriented ridge bounded on the east by Ontario Canyon and on the west by Empire Canyon. The Property was annexed into the corporate limits of Park City, Utah on June 24, 1999. Elevations range from 7,370 to 9,580 feet above sea level and is at approximate latitude 40°37'15" and longitude 111°30'10". See Figure 1 for the Project Location Map.

The Property is vegetated with a mix of aspen, conifer and mountain shrubs each with its own mix of understory groundcover. Some of the most notable features on the Property are, however, of human origin. Large piles of mine waste rock, or overburden, are located on the Property. These features consist predominantly of un-vegetated grayish-white crushed rock associated with the former Flagstaff, Little Bell, Quincy, Anchor, and Daly West Mines. Ski lifts and runs are another notable human-made feature on the Property. Within the Flagstaff Mountain portion of Deer Valley Resort, there are six existing ski lifts and approximately 36 ski runs, many of which have been cut through forest stands, graded, and seeded with grasses and forbs.

Planned uses for the Property are intended to include hotel lodging facilities, resort support commercial, multi-family residential units, PUD residential units and single-family home sites. The proposed areas of development will be restricted to i) the "Mountain Village" consisting of (3) Development Pods ("A", "B-1" & "B-2") limited to a maximum of 84 acres and ii) the "Northside Neighborhood" (Development Pod "D") limited to a maximum of 63 acres. See Figure 2.

The maximum density allowed within the Mountain Village is 705 Unit Equivalents configured in no more that 470 residential units. The residential units may be multi-family units, hotel room units or PUD units. In addition, the Mountain Village may also contain a maximum of i) 16-single family home sites and ii) 75,000 sq. ft. of Resort Support Commercial uses. The Northside Neighborhood may contain a maximum of 38 single-family home sites of which 30 are currently entitled and eight- (8) are subject to further requirements.

III. Hydrologic Study Results

The Hydrologic Study supplied data and calculations of pre-development and post-development flows that are to be used to convey and mitigate development impacts on the site concerning storm runoff. The SCS TR-55 method was used for estimating the amount of runoff that will occur. Technical Release 55 was released by the Engineering Division of the Soil Conservation Service of the United States Department of Agriculture as a procedure that can be used to calculate storm runoff volumes, peak rates of discharge, and storage volumes. This method calculates runoff from basin area, SCS curve number, precipitation, and time of concentration. The results of the Hydrologic Study have been included in the following table.

	Pre-Development Flows (cfs)				Post-Development Flows (cfs)			
Basin	**2-Yr**	**10-Yr**	**25-Yr**	**100-Yr**	**2-Yr**	**10-Yr**	**25-Yr**	**100-Yr**
A	2.7	12.2	38.1	97.6	2.8	12.5	38.8	98.7
B	0.61	2.7	9	24	2.2	6.7	15.8	35
C	0.78	4	14.6	40.3	1.4	6.7	19.6	47.7
D	0.33	1.1	3	7.1	1.1	2.5	5.1	10.4
E	0.7	2.9	8.8	22.7	5.2	11.2	22	41.8
F	2.4	9.8	29.8	75.8	3.3	12.6	34.8	84
G	2	5.1	11.1	23.3	5.7	10.6	19	34
H	1.2	5.7	17.7	43.2	2.5	9.2	23.2	52
J	1.1	5.5	17.1	42.8	1.5	7.1	20.1	47.1

It is important to realize that any references to 2-Year, 10-Year, 25-Year, or 100-Year storm events are referring to the mathematical probability of the magnitude of a storm event recurring within that time interval. There is no method to accurately predict the weather and/or the ramifications of it. Because of this, it is generally understood that there is a certain amount of uncertainty in hydrologic calculations.

Structure Discussion

Structures will be located, temporarily and permanently, at individual lots, roadways, buildings, ski runs and trails to control storm runoff and erosion at Flagstaff Mountain Resort.
For purposes of this study, the structures will be grouped into categories of storage, conveyance, and erosion. The following discussion will outline the structures to be incorporated, their application, and their design criteria. The

following is not intended to be an all-inclusive list, instead it is intended to be a list of structures that are anticipated at this time. The substitution, inclusion, or exclusion of structures will continue over the course of the Resort design process.

Storage

As shown in the results of the Hydrologic Study, the Resort will increase the anticipated storm flows. Storage is required to ensure that post-development flows do not exceed pre-development flows from the site and cause negative impacts downstream in the form of flooding and/or erosion of the existing downstream conveyances.

Many methods of storage are available for use. One alternative that has been suggested is a deep hole boring that would capture the increased storm water and convert it to groundwater by infiltration. Percolation and infiltration tests have already been performed that support this alternative. More information needs to be gathered before this alternative could be seriously considered. Instead the primary methods of storage will be detention ponds and contour ditches.

Detention ponds will be constructed to attenuate peak flows so that the post-development flows from the 10-year storm event and the 100-year storm event do not exceed pre-development flows from the Property. The pond size will be based on the calculated 100-year storm event. The detention areas may be constructed as wet or dry ponds.

The approximate storage necessary for each basin has been calculated from the flows generated in the Hydrologic Study and is summarized in the following chart (see Appendix for calculations):

Estimated Storage	
Basin	**Acre-Feet**
A	0.131
B	0.747
C	0.519
D	0.235
E	1.275
F	0.925
G	0.822
H	0.358
J	0.383

Preliminary pond locations have been determined and are shown on the attached figures for each development pod. See Figure 3 through Figure 9. The grading and sizing of the ponds will still need to be finalized as the design process continues. At present the locations and sizes of the ponds should be viewed as a budget for storm water storage.

Outlet structures for those ponds will be designed to release no more than the pre-development flows for both the 100-year and the 10-year storm events. Consideration will be given to the overtopping of the detention structure in the case of a storm with a magnitude greater than the 100-year storm event.

Storage in the detention ponds will also provide treatment for water quality. It is generally accepted that the most substantial concentration of pollutants occurs when the frequently occurring storm produces limited runoff. For that reason, retention will be designed to catch the approximate runoff from the impervious areas of the 2-year storm event.

Contour ditches are another method of detention to be used. Contour ditches are narrow detention ponds that run perpendicular to the natural slope. The purpose is to contain the sediment and mitigate the peak outfall from pipes. Concentrated flows are directed into the ditch and the water either infiltrates or is converted to sheet flow. Velocities are slowed, allowing sediment to settle. Contour ditches will be used primarily for small, disconnected impervious areas where conveyance to an engineered pond is impractical.

Conveyance

Conveyance of storm water can be described as any method used to collect and carry storm water. The following outlines the type of structures to be used for conveyance and the design criteria used for the placement and sizing of each structure.

Catch Basins and Clean-out Boxes

Catch basin size and location will be based on the 10-year storm event. The allowable spread onto the roadway will not exceed half of the adjacent travel lane for the 10-year storm event. Catch basins will also be used in all roadway sag locations. Clean-out boxes will be used outside of gutter, outside of roadways, and for area inlets. For clean-out purposes, the maximum spacing between catch basins or clean-out boxes will not exceed 500 feet. Bicycle-safe grating will be used throughout the Project.

Pipe Culverts

A 15-inch minimum pipe size will be used throughout. Pipe systems will be sized to handle the 10-year 24-hour storm event. Pipe sizing will be based on Manning's equation, the industry standard for open channel flow. Pipe culverts crossing under roadways and ski trails will be placed as needed to allow conveyance of runoff.

Ditches and Channels

Roadside ditches will be sized for the 10-year storm event. Channels will be sized based on the application for the runoff it is intended to carry. The 100-year storm event will be examined to protect buildings and emergency facilities. Sizing will be based on Manning's equation, the industry standard for open channel flow.

Preliminary pipe-routing with catch basin and clean-out box locations are shown on Figure 3 through Figure 9.

Erosion

The Resort is most susceptible to erosion during construction activities when the soils are stripped of vegetation. Therefore, the erosion control devices are primarily designed for the early stages of construction and will remain in place until the construction is finished and vegetation has been re-established.

One of the primary mechanisms of soil erosion is storm runoff and is addressed in the most detail in this Study. Water velocity is the largest factor in erosion potential. The following methods attempt to slow water to either prevent erosion or remove sediment: Erosion control mats, Straw bales, and Silt fencing. Park City Municipal Details of erosion control matting and straw bales will be used (Standard Drawings 901, 902, and 903). Also silt fencing will be used. See Appendix 2 for erosion control details.

Erosion control measures will be designed and implemented based on the construction area to be protected. The following describes the various improvements and the erosion control methodology proposed.

Individual Lots/Building Locations

Silt fencing or diversion berms will be placed at the bottom of disturbed areas in order to control sediment during construction. Disturbed areas will be reclaimed by re-vegetation, building construction or paving. Where possible, runoff from

impervious areas will be dispersed over non-paved surfaces to encourage infiltration and deposit of sediment.

Paved and Non-Paved Roadways

During construction, silt fencing will be placed at the bottom of all roadway fill slopes until re-vegetation occurs. Fill slopes will be re-vegetated and erosion control blankets will be placed as necessary. Straw bales or equivalent will be placed around all existing impacted catch basins to ensure minimal passage of sedimentation into pipe systems.

Ski Runs and Ski Trails

Silt fencing will be placed at the toe of fill slopes to control erosion during construction. Erosion control will consist of re-vegetating all exposed ski run surfaces including cut and fill slopes. Where appropriate, ditches will be placed to protect cut slopes. Lined-channels may be used to convey runoff along ski runs and trails depending on design conditions. Erosion control blankets will be placed as necessary.

Maintenance and Inspection

An on-going inspection and maintenance schedule will be adopted during construction to ensure proper operation and up-keep of drainage structures and to identify problem drainage and erosion areas. Problem areas will be addressed and corrected as needed.

Riprap

Riprap will be placed to protect soils from erosion by concentrated flows. Riprap aprons will be placed at pipe outfalls to help dissipate energy and minimize the erosion potential of the runoff. Riprap will also be placed as a liner to prevent the erosion of channels and ditches where necessary. Energy dissipation structures in the form of berms and sediment basins will be constructed primarily of riprap when appropriate.

Detention Ponds/Contour Ditches

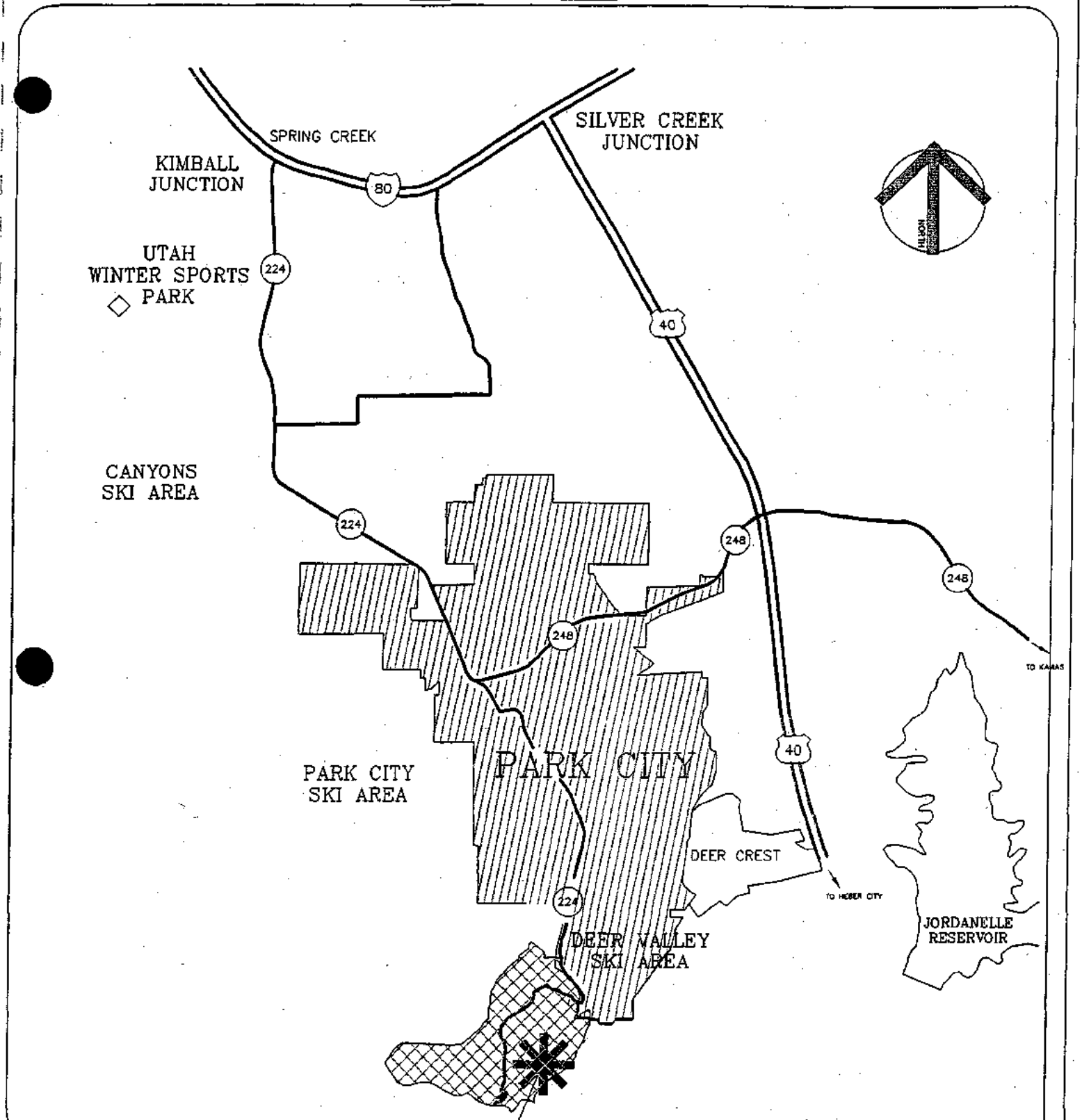
Detention ponds and contour ditches create a situation that slows the velocity of the water, allows sediment to settle, and provides a means of containing any unexpected contaminants or spills. In order to allow the finer particles of sediment time to settle, the outlet of the 2-year storm event will be a gradual release over a minimum of 48 hours.

IV. Summary

The drainage system for Flagstaff Mountain Resort can be summarized as follows:

All current methods will be used to minimize the impacts of Flagstaff Mountain Resort on the volume and quality of storm water with the safety of the individual foremost.

FIGURE 1



FLAGSTAFF MOUNTAIN RESORT

LOCATION MAP

NOT TO SCALE

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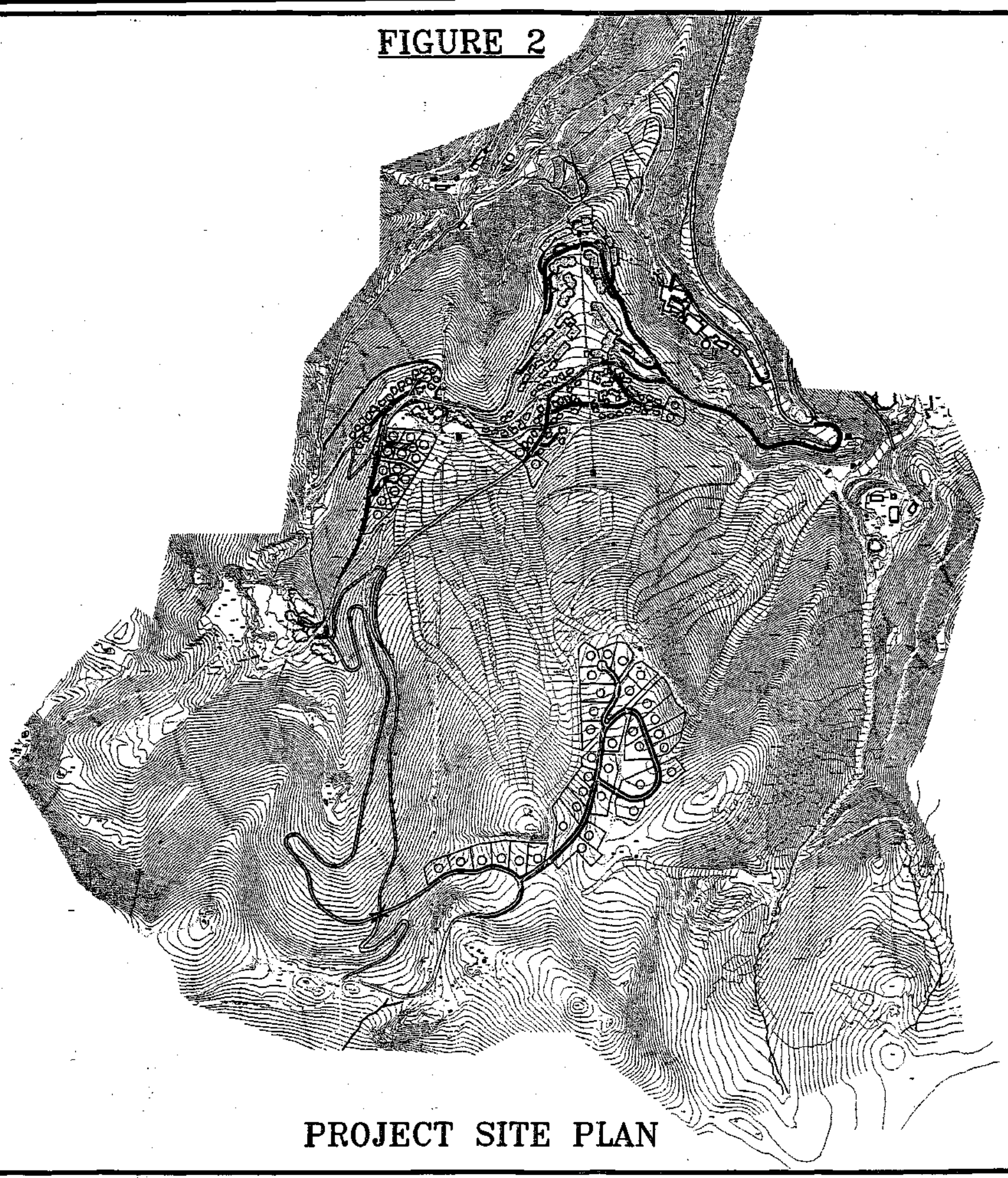
1777 Sun Peak Drive, Suite 200 • Park City, Utah 84098
(435) 645-9000 • fax (435) 649-1620

FIGURE 2



PROJECT SITE PLAN

NOTE:
DEVELOPMENT AREA IS CONCEPTUAL AND SUBJECT TO CHANGE.

NOT TO SCALE

THE JACK JOHNSON COMPANY
1777 Sun Peak Drive • Park City, Utah 84098
(435) 645-8000 • fax (435) 645-1920

DATE	BY	REVISIONS COMMENTS

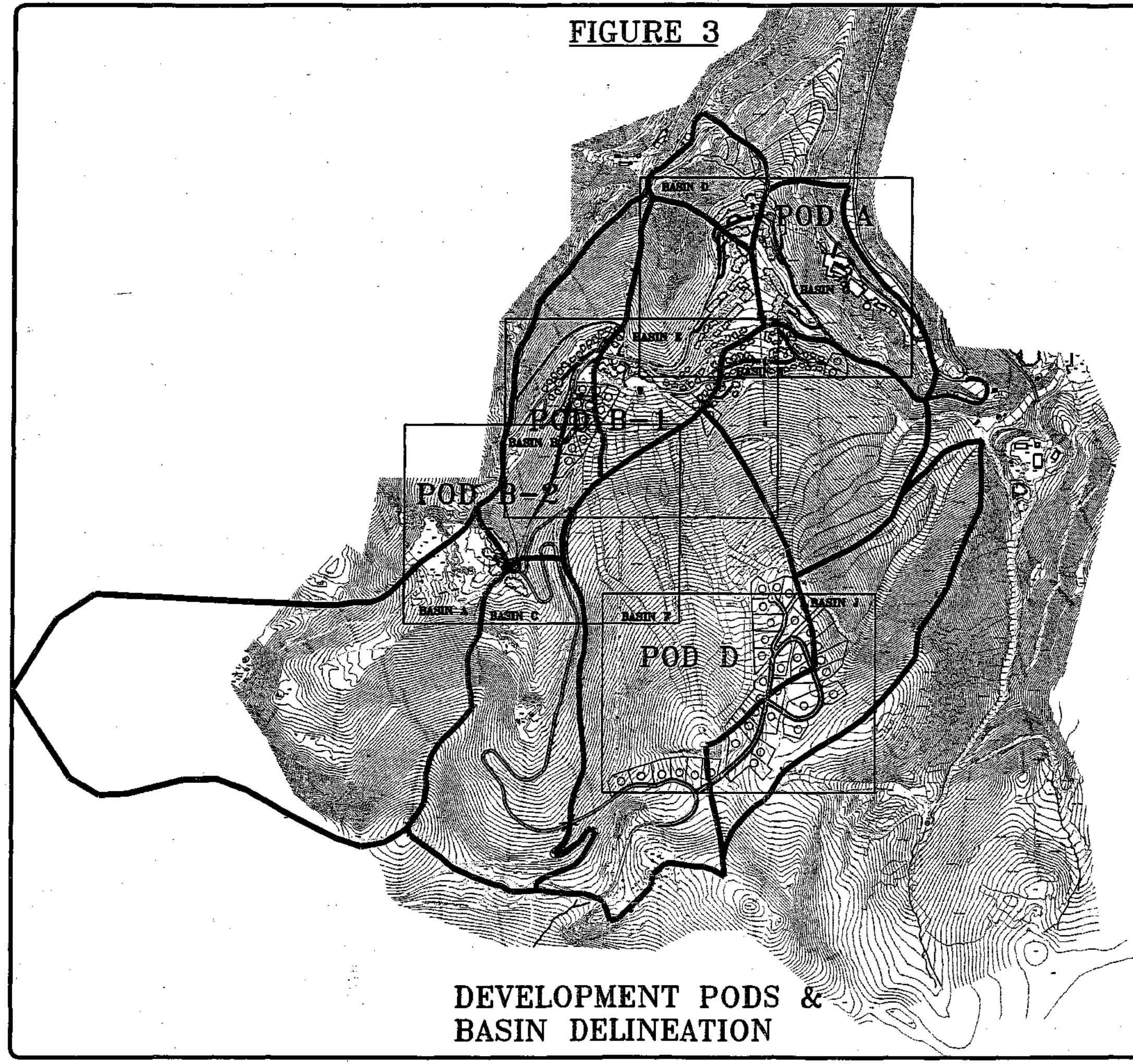
DESIGNED BY: CFH
DRAWN BY: CFH
REVIEWED BY:

FLAGSTAFF MOUNTAIN RESORT
HYDROLOGIC STUDY
PROJECT SITE PLAN

FOR: DMB FLAGSTAFF
JOB NO: 632.020
DWG NO: SITEPLAN.DWG
VIEW:

FIGURE 2

FIGURE 3



DEVELOPMENT PODS & BASIN DELINEATION

NOTE:
DEVELOPMENT AREA IS CONCEPTUAL AND SUBJECT TO CHANGE.

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1777 San Pedro Drive • Park City, Utah 84098
(435) 645-9000 • fax (435) 649-1979

REVISIONS		
DATE	BY	COMMENTS

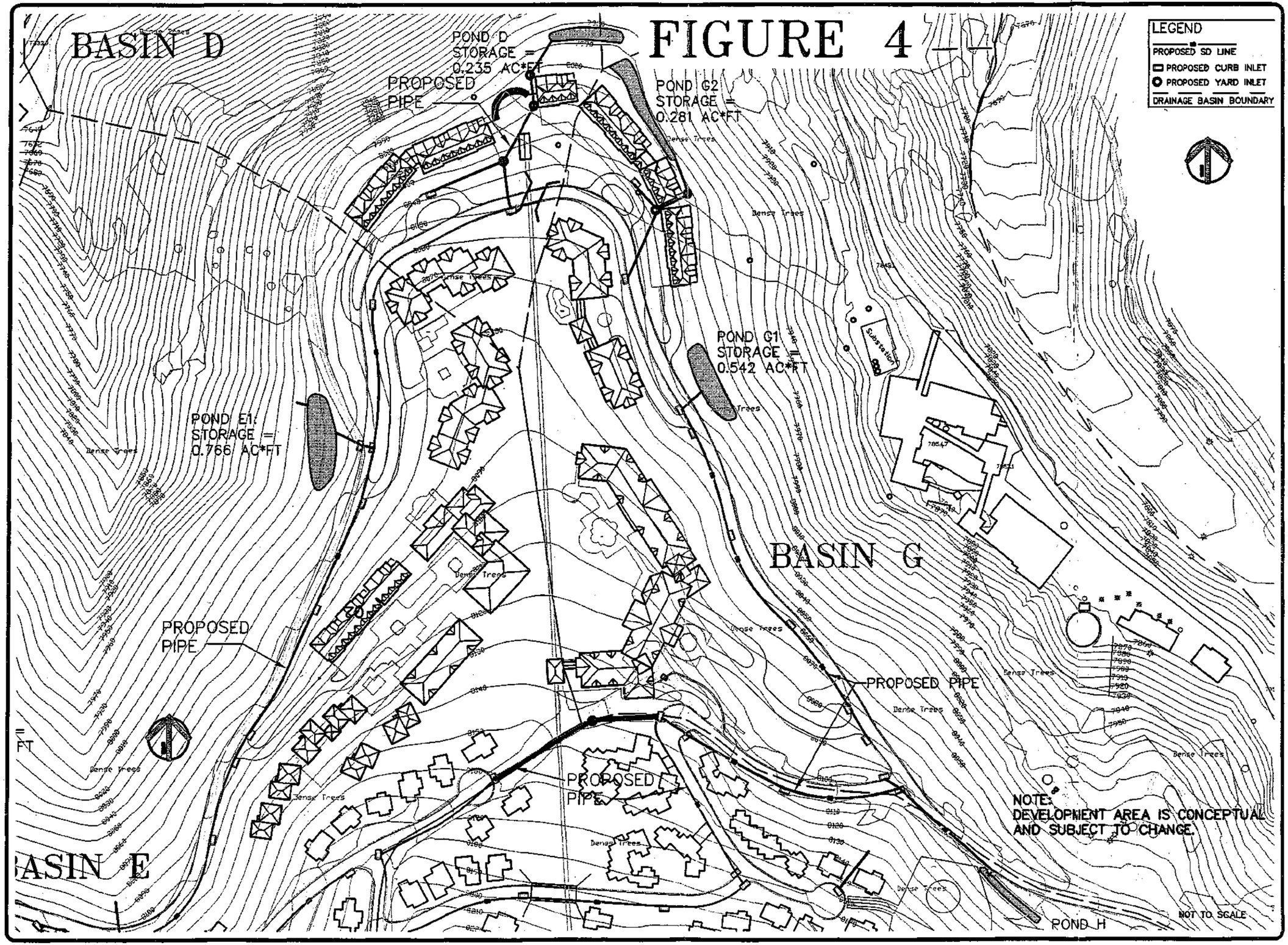
DESIGNED BY: CFH
DRAWN BY: CFH
REVIEWED BY:

FLAGSTAFF MOUNTAIN RESORT
HYDROLOGIC STUDY
PROJECT SITE PLAN

DWG DMB FLAGSTAFF | JOB NO. 632.020 | DWG NO. SITEPLAN.DWG | RATIO:

FIGURE 3

FIGURE 4



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DATE	BY	REVISIONS COMMENTS

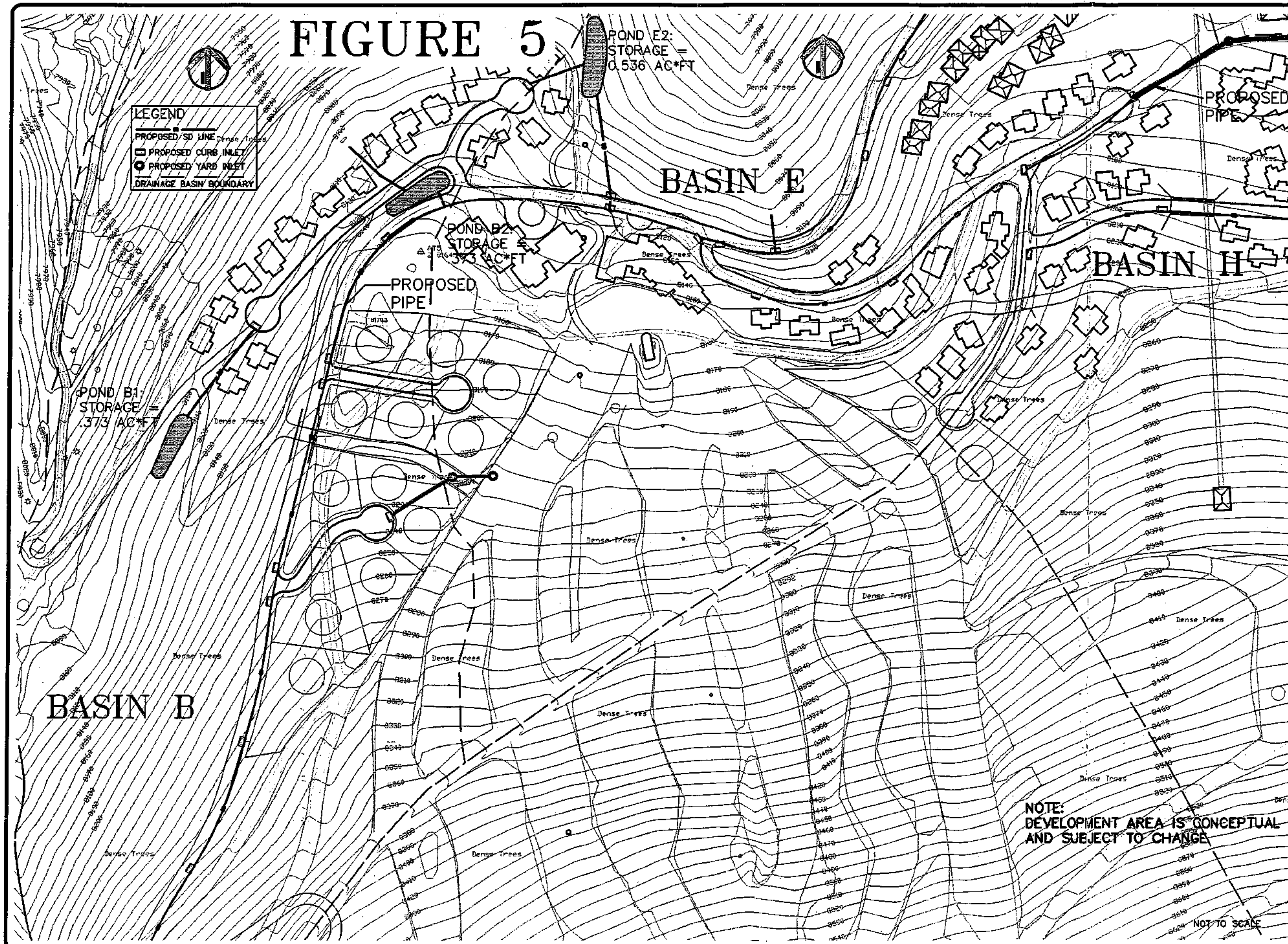
DESIGNED BY: CFH
DRAWN BY: CFH
REVIEWED BY:

FLAGSTAFF MOUNTAIN RESORT
DRAINAGE STUDY
PRELIMINARY PIPE LAYOUT-POD A

FOR: DMB FLAGSTAFF
JOB NO. 632.020
DWG NO. PPDPIPES.DWG
SCALE

FIGURE 4

FIGURE 5



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(435) 645-9000 • fax (435) 649-1620

DATE	BY	COMMENTS
		REVISIONS

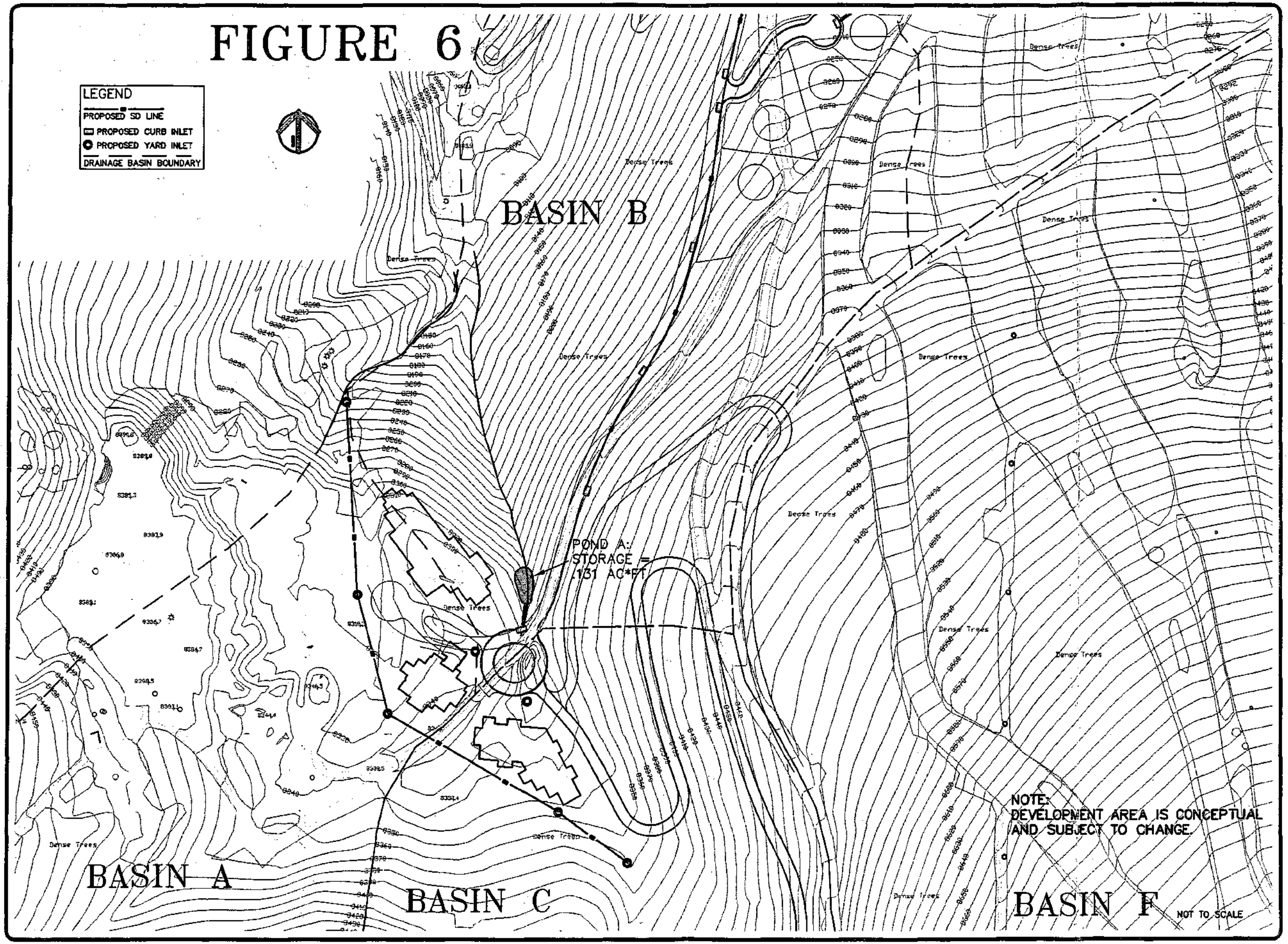
DESIGNED BY: CFH
DRAWN BY: CFH
REVIEWED BY:

FLAGSTAFF MOUNTAIN RESORT
DRAINAGE STUDY
PRELIMINARY PIPE LAYOUT-POD B1

FOR: DMB FLAGSTAFF
JOB NO. 532.020
DWG NO. PPDPIPES.DWG

FIGURE 5

FIGURE 6



THE JACK JOHNSON COMPANY

1777 Sun Peak Drive • Park City, Utah 84098
(435) 649-8000 • fax (435) 649-1820

DATE	BY	REVISIONS COMMENTS

DESIGNED BY: CFH
DRAWN BY: CFH
REVIEWED BY:

FLAGSTAFF MOUNTAIN RESORT
DRAINAGE STUDY
PRELIMINARY PIPE LAYOUT--POD B2

FOR: DMB FLAGSTAFF
JOB NO. 512.02b
DWG NO. FPDPIPES.DWG
SHEET NO.

FIGURE 6

FIGURE 7

BASIN F

BASIN J

LEGEND
- PROPOSED SD LINE
- PROPOSED CURB INLET
- PROPOSED YARD INLET
- DRAINAGE BASIN BOUNDARY

POND F3:
STORAGE =
0.730 AC*FT

PROPOSED
PIPE

POND J:
STORAGE =
0.413 AC*FT

BASIN
BOUNDARY

POND F2:
STORAGE =
0.195 AC*FT

NOTE:
DEVELOPMENT AREA IS CONCEPTUAL
AND SUBJECT TO CHANGE.

NOT TO SCALE

Dense Trees

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1777 Sun Peak Drive • Park City, Utah 84098
(435) 649-9000 • fax (435) 649-1620

DATE	BY	REVISIONS COMMENTS

DESIGNED BY: CFH
DRAWN BY: CFH
REVIEWED BY:

FLAGSTAFF MOUNTAIN RESORT
DRAINAGE STUDY
PRELIMINARY PIPE LAYOUT- NORTHSIDE NEIGHBORHOOD

FOR: DMB FLAGSTAFF | JOB NO. 632.020 | DWG NO. PPDPIPES.DWG | VERS.

FIGURE 7

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DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 98.73 cfs
Max Outflow = 97.60 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.001	12.0945	12.1139
Linear	.131	11.9000	12.1139
Curvilinear	.007	12.0575	12.1139
Upper Boundary	1.229	11.6500	12.1139
Total Inflow	9.553	11.6500	24.9500

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-B.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 35.04 cfs
Max Outflow = 24.00 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.165	12.0235	12.3224
Linear	.403	11.8500	12.3224
Curvilinear	.747	11.6000	12.3224
Upper Boundary	.944	11.6000	12.3224
Total Inflow	3.574	11.6000	25.1500

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-C.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 47.66 cfs
Max Outflow = 40.30 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.055	12.0201	12.1628
Linear	.247	11.8500	12.1628
Curvilinear	.519	11.7000	12.1628
Upper Boundary	.835	11.7000	12.1628
Total Inflow	4.235	11.7000	24.8000

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-D.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 10.37 cfs
Max Outflow = 7.10 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.069	12.0790	12.4949
Linear	.168	11.8000	12.4949
Curvilinear	.310	11.5500	12.4949
Upper Boundary	.384	11.5500	12.4949
Total Inflow	1.275	11.5500	25.5000

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-E.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 41.84 cfs
Max Outflow = 22.70 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.434	11.9900	12.4504
Linear	.779	11.7500	12.4504
Curvilinear	1.275	11.4500	12.4504
Upper Boundary	1.485	11.4500	12.4504
Total Inflow	4.337	11.4500	25.3000

Stretch Factor = .000 % (Curvilinear Estimate Only)

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DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 35.44 cfs
Max Outflow = 13.96 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.593	11.9198	12.5392
Linear	.863	11.7000	12.5392
Curvilinear	1.302	10.6000	12.5392
Upper Boundary	1.469	10.6000	12.5392
Total Inflow	3.355	10.6000	25.2500

Stretch Factor = .000 % (Curvilinear Estimate Only)

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 84.03 cfs
Max Outflow = 75.80 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.061	12.0937	12.2398
Linear	.431	11.9000	12.2398
Curvilinear	.925	11.6500	12.2398
Upper Boundary	1.719	11.6500	12.2398
Total Inflow	9.158	11.6500	25.2000

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-D2.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 5.12 cfs
Max Outflow = 1.88 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.113	11.9325	12.7213
Linear	.159	11.6500	12.7213
Curvilinear	.235	10.3500	12.7213
Upper Boundary	.262	10.3500	12.7213
Total Inflow	.553	10.3500	25.3000

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-F2.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 8.81 cfs
Max Outflow = 1.94 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.126	11.7481	12.1954
Linear	.152	11.5500	12.1954
Curvilinear	.195	10.7000	12.1954
Upper Boundary	.218	10.7000	12.1954
Total Inflow	.509	10.7000	24.3000

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-F3.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 26.01 cfs
Max Outflow = 6.20 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.456	11.8010	12.4024
Linear	.568	11.6000	12.4024
Curvilinear	.764	10.2500	12.4024
Upper Boundary	.849	10.2500	12.4024
Total Inflow	1.798	10.2500	24.7000

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-G.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 33.95 cfs
Max Outflow = 23.30 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.229	12.0581	12.4690
Linear	.535	11.8000	12.4690
Curvilinear	1.018	11.1500	12.4690
Upper Boundary	1.281	11.1500	12.4690
Total Inflow	3.865	11.1500	25.6000

Stretch Factor = .000 % (Curvilinear Estimate Only)

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 15.72 cfs
Max Outflow = 3.56 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.506	11.8358	12.9186
Linear	.610	11.5500	12.9186
Curvilinear	.822	8.7000	12.9186
Upper Boundary	.923	8.7000	12.9186
Total Inflow	1.622	8.7000	25.4500

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-H.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 52.03 cfs
Max Outflow = 43.20 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.067	11.9977	12.1452
Linear	.271	11.8500	12.1452
Curvilinear	.542	11.6000	12.1452
Upper Boundary	.911	11.6000	12.1452
Total Inflow	4.236	11.6000	24.7500

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-H2.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 15.84 cfs
Max Outflow = 6.58 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.160	11.8833	12.2609
Linear	.235	11.7000	12.2609
Curvilinear	.358	11.1500	12.2609
Upper Boundary	.418	11.1500	12.2609
Total Inflow	1.127	11.1500	24.6500

Stretch Factor = .000 % (Curvilinear Estimate Only)

File.... Y:\532 DMB FLAGSTAFF\HYDROLOGY\CALCS\DEV-BASIN-J.PPW

DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 47.06 cfs
Max Outflow = 42.80 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.026	12.0288	12.1344
Linear	.180	11.8500	12.1344
Curvilinear	.383	11.6500	12.1344
Upper Boundary	.755	11.6500	12.1344
Total Inflow	4.086	11.6500	24.7500

Stretch Factor = .000 % (Curvilinear Estimate Only)

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DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 22.38 cfs
Max Outflow = 11.15 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.161	11.8953	12.1881
Linear	.259	11.7500	12.1881
Curvilinear	.413	11.4000	12.1881
Upper Boundary	.509	11.4000	12.1881
Total Inflow	1.540	11.4000	24.5500

Stretch Factor = .000 % (Curvilinear Estimate Only)

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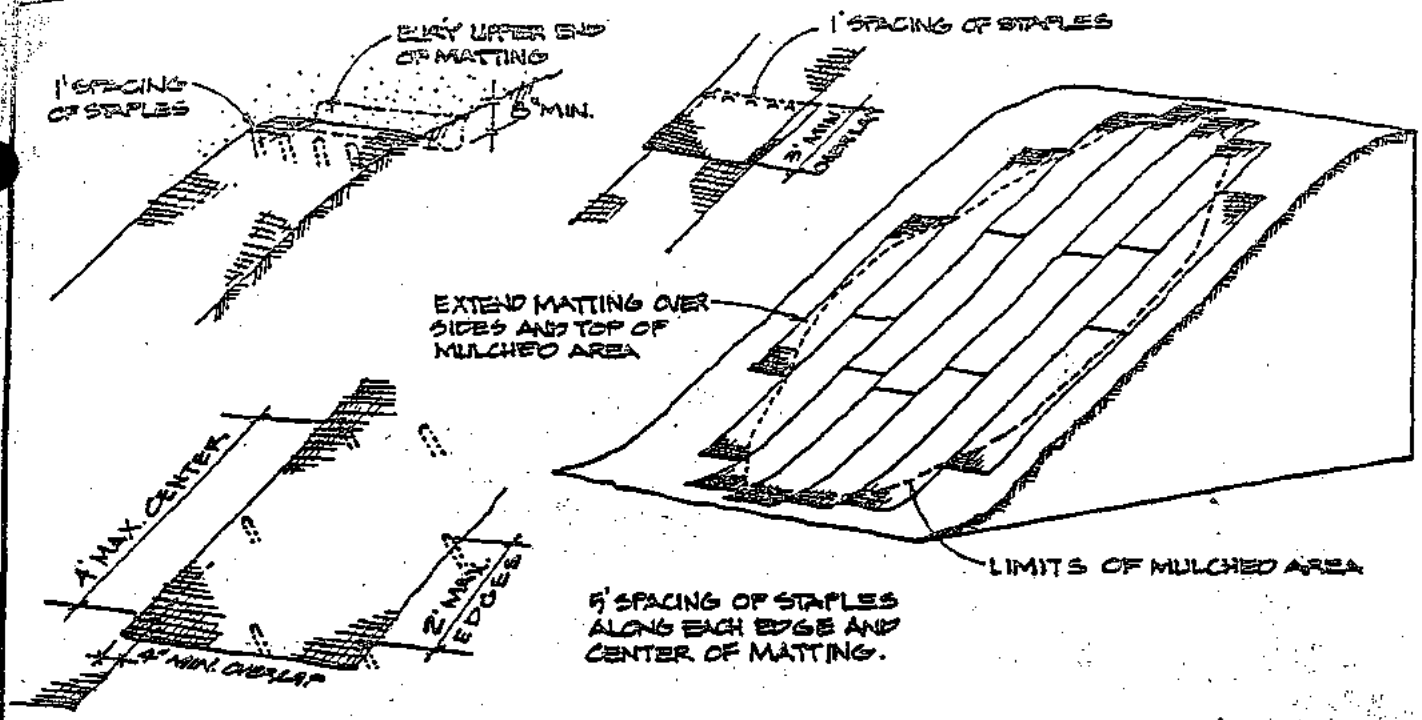
DETENTION STORAGE ESTIMATE
Estimated from Max Allowable Outflow
(Outflow Hydrograph Approximation)

Peak Inflow = 20.48 cfs
Max Outflow = 11.15 cfs

Estimate Type	Est.Storage ac-ft	From hrs	To hrs
Lower Boundary	.138	11.9248	12.2289
Linear	.242	11.7500	12.2289
Curvilinear	.411	11.4000	12.2289
Upper Boundary	.500	11.4000	12.2289
Total Inflow	1.541	11.4000	24.7000

Stretch Factor = .000 % (Curvilinear Estimate Only)



The soil must be reasonably smooth. Gullies and rills must be filled and compacted. Rocks or other obstructions which rise above the level of the soil or mulch must be removed.

Due to the difficulty of placing wood excelsior matting and its less predictable results in controlling erosion, jute matting is preferred.

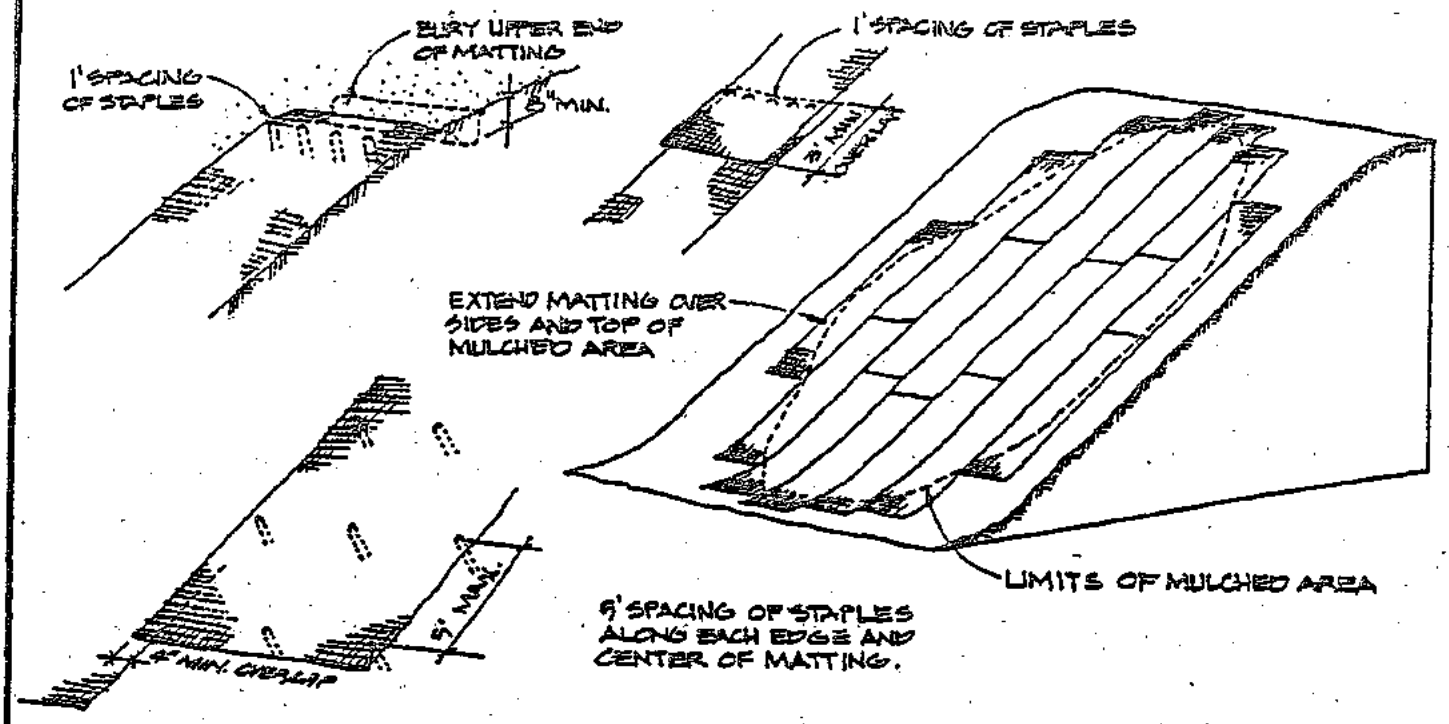
- Excelsior blankets shall consist of machine-produced mats of curled wood excelsior, 80 percent of which have an 8-inch or longer fiber length. It shall be of consistent thickness with the fiber evenly distributed over the entire area of the blanket. The top side of each blanket shall be covered with a 3-inch by 1-inch weave of twisted Kraft paper or biodegradable plastic mesh that has a high wet strength. Blankets shall be fire and smolder resistant and contain no chemical additives. Blankets shall be in 3-foot by 150-foot rolls or in 4-foot by 180-foot rolls.
- If the wood excelsior mat is to be applied without other mulches, the minimum thickness of mat shall be 1¼ inches.
- If the wood excelsior mat is to be applied over other mulches, the minimum thickness shall be ¼-inch.
- After site preparation and seeding (if any), the rolls of wood excelsior matting shall be rolled onto the surface from the top of the slope to the bottom of the slope, never along the contour.
- The upper end of each blanket shall be buried in a trench at least 8 inches deep, and the trench shall be backfilled and tamped.
- Staples shall be applied at 2 feet on center along the sides of the blanket and 4 feet on center along the center of the blanket.
- Blankets placed side-to-side shall be snugly butted together to prevent rilling and gullying along the joint.
- Blankets placed end-to-end shall be overlapped. The top of the lower blanket shall be placed in an 8-inch deep trench which shall then be backfilled and tamped. The lower end of the upper blanket shall be overlapped onto the lower blanket, and staples shall be placed through both blankets.
- Staples shall be of heavy gauge wire, 0.091 inches in diameter or greater, which have been bent into a "U" shape, with legs at least 8 inches long, and a 1-inch crown. Longer staples are required in loose or sandy soil.

STANDARD DRAWING

901

EXCELSIOR MAT INSTALLATION

PARK CITY MUNICIPAL CORPORATION



- Jute mat shall be cloth of a uniform plain weave of undyed and unbleached single jute yarn, 48 inches in width plus or minus 1 inch and weighing an average 1.2 pounds per linear yard of cloth with a tolerance of plus or minus 5 percent, with approximately 78 warp ends per width of cloth and 41 weft ends per linear yard of cloth. The yarn shall be of a loosely twisted construction having an average twist of not less than 1.5 turns per inch and shall not vary in thickness by more than 1/2 of its normal diameter.
- Individual rolls should be applied up and down the slope, never along the contour.
- Sides of rolls shall overlap at least 4 inches, and rolls shall have at least a 3-foot overlap when an uphill roll joins to a downhill roll. The uphill roll shall overlie the downhill roll.
- Staples shall be made of wire, 0.091 inches in diameter or greater, "U" shaped with legs at least 6 inches in length and a 1-inch crown. Longer staples are required in loose or sandy soils.
- Staples shall be driven perpendicularly into the slope face, and shall be spaced approximately 5 feet apart down the sides and center of the roll. Spacing between staples at the upper end of a roll or at the end overlap of two rolls shall not exceed 1 foot.
- Matting shall be continued beyond the edge of the mulched or seeded area at least 1 foot at the sides and 3 feet at the top and bottom of the area. If existing vegetation or structures mark the boundaries of the area, the matting shall be continued into the stable vegetated area or to the edge of the structure.
- The upper end of the matting at the top of the area shall be buried in a trench at least 8 inches deep.
- The matting shall make uniform contact with the slope face underneath. No "bridging" of rills or gullies is allowed.

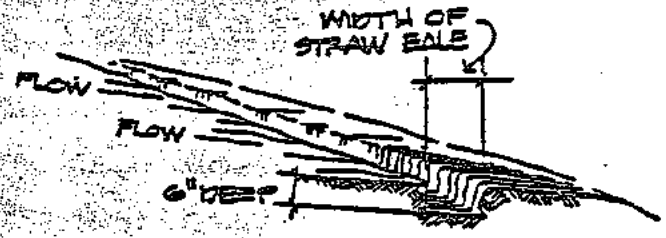
STANDARD DRAWING
902

JUTE MESH INSTALLATION

PARK CITY MUNICIPAL CORPORATION

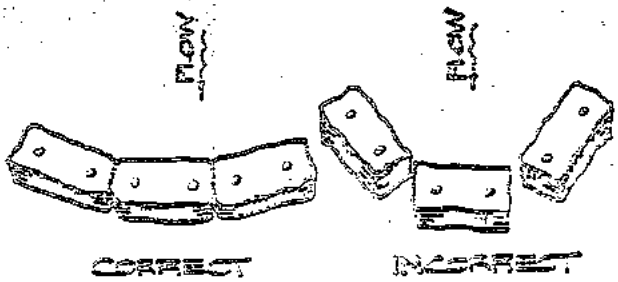
MATERIALS:

- STRAW BALES BOUND WITH WIRE OR TWINE.
- WOOD OR STEEL STAKES 4' LONG MIN. (2"x2" WOOD, RE-BAR OR STEEL PICKETS, 2 STAKES PER BALE).

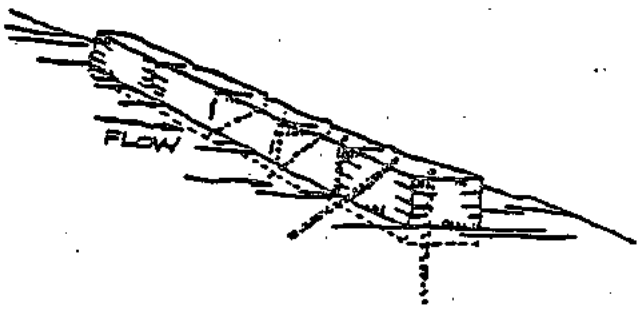


1. DIG A 6" X 2' TRENCH. ALIGN TRENCH ALONG CONTOUR BUT CURVED SLIGHTLY UPHILL SO RUNOFF CANNOT ESCAPE AROUND THE END BALES (SEE (2) BELOW)

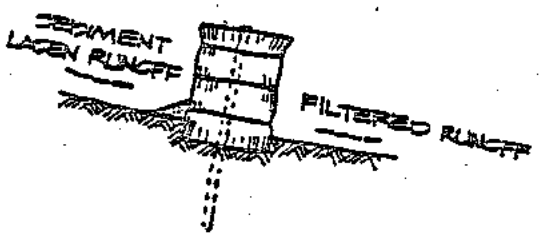
2. PLACE BALES IN TRENCH WITH ENDS TIGHTLY ABUTTED.



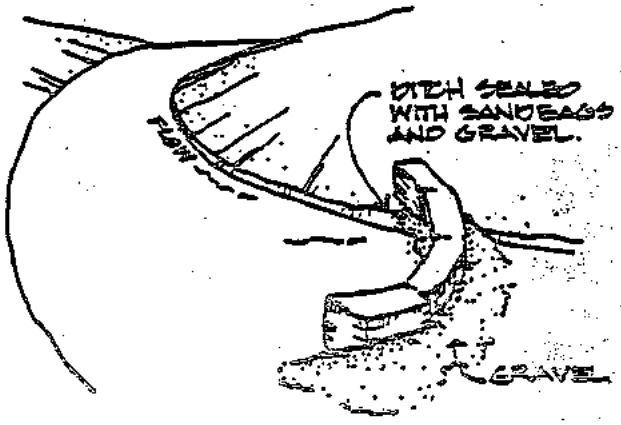
3. ANCHOR EACH BALE WITH 2 STAKES HAMMERED 1½' TO 2' INTO GROUND. ANGLE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE.



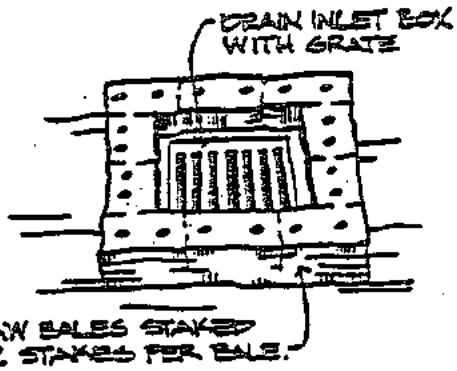
4. WEDGE LOOSE STRAW BETWEEN BALES. BACKFILL AND COMPACT THE EXCAVATED SOIL AGAINST THE UPHILL SIDE OF BARRIER.



WHEN INSTALLING BALES ON PAVEMT, PILE GRAVEL OR ROCK BEHIND THE BALES TO HOLD THEM IN PLACE

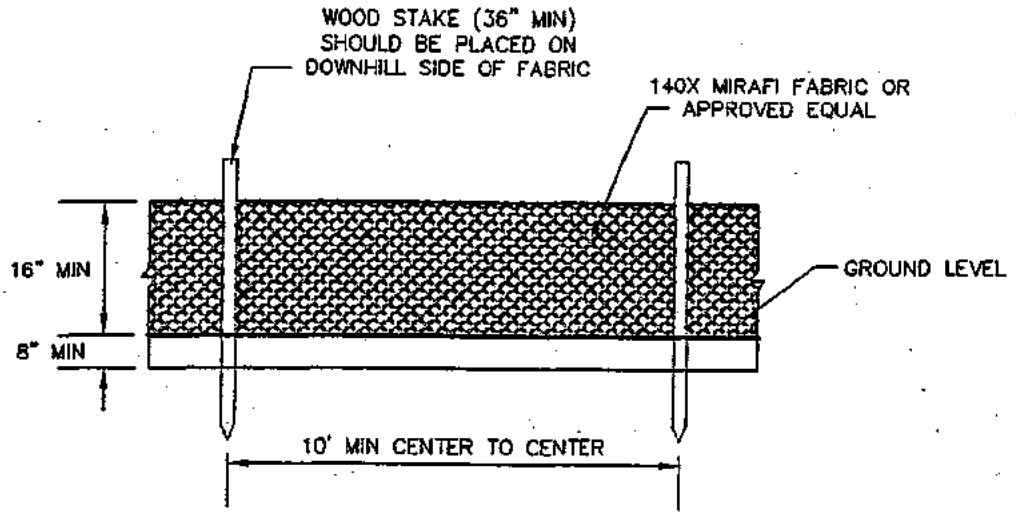


- INSPECT PERIODICALLY AND AFTER EACH STORM. REPLACE DAMAGED BALES; RE-ANCHOR DISPLACED ONES.
- CLEAN OUT SEDIMENT BEFORE IT REACHES THE TOP OF BALES.
- DISPOSE THE SEDIMENT WHERE IT WILL NOT ENTER A DRAINAGE WAY.

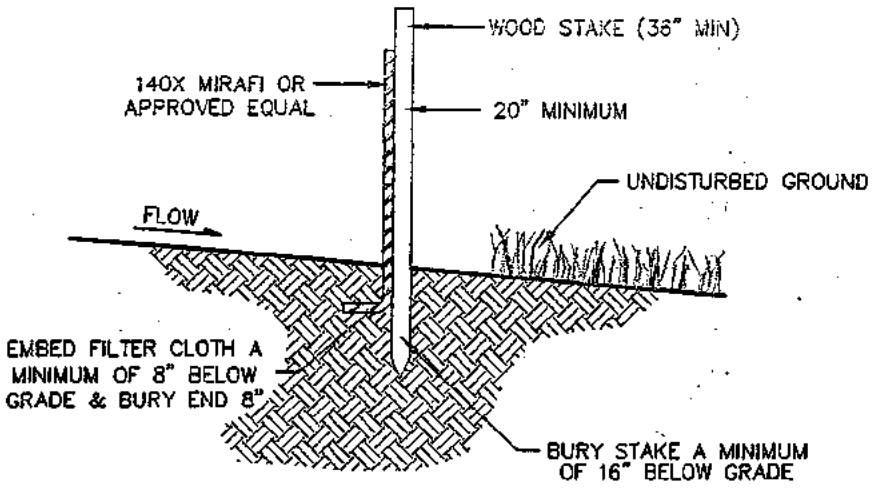


STRAW BALE / DRAIN INLET SEDIMENT FILTER

STANDARD DRAWING 903	STRAW BALE INSTALLATION FOR EROSION CONTROL
	PARK CITY MUNICIPAL CORPORATION



FRONT VIEW



SIDE VIEW

SILT FENCE DETAIL

FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

WILDLIFE MANAGEMENT PLAN

EXHIBIT 13

MAY 2001
REVISED AND APPROVED DECEMBER 2001

PREPARED FOR:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450
PARK CITY, UTAH

WILDLIFE MANAGEMENT PLAN

FLAGSTAFF MOUNTAIN RESORT

EXHIBIT 13

Prepared for

Flagstaff Mountain Partners
P. O. Box 1450
Park City, Utah 84060

Prepared by

SWCA, INC.
Environmental Consultants

MAY 2001
(Revised and Approved December 2001)

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Flagstaff Mountain Resort Wildlife Management Plan describes the major habitat types that occur within the Plan Area (e.g., conifer, conifer/aspen, and aspen forests; mountain shrub herbaceous, willow/tall forb, and rock talus communities) and provides information on common wildlife species associated with these habitats.

There are no federally listed threatened and endangered species likely to occur in the Plan Area.

A discussion of human-wildlife interactions within the Plan Area describes past impacts associated with the mining era, current influences associated with ski area development and summer trail use, and future effects likely to result from increased recreation and the development of a new resort community.

Two sensitive wildlife areas, Lady Morgan and Centennial Draw, are described and delineated on Figure 2. A discussion of existing and desired future conditions for these two areas is also presented. Potential seasonal wildlife movement corridors are defined and shown on Figure 2.

General Plan Area-wide management prescriptions including minimizing human impacts and habitat fragmentation, vegetation management, forest cutting guidelines, speed limits, wetland protection, pet control, fencing, and nuisance wildlife and off-road vehicle prohibitions are presented. Management directions for the Lady Morgan and Centennial Draw Sensitive Wildlife Areas as well as for the semi-urban settings of the proposed development pods are also discussed. An appendix to the plan lists all wildlife observed in the Plan Area during field surveys conducted by Bio-Resources in 1993 and SWCA in 1999.

1.0 INTRODUCTION

This study is one of several reports that have been prepared to support the Flagstaff Mountain Resort's Large Scale Master Plan Development (LSMPD) application. As LSMPDs are programmatic in nature and subject to refinement at subsequent Master Planned Development (MPD) or Conditional Use Permit (CUP) stages, correspondingly, the contents of this report should be viewed as conceptual in nature and subject to change as specific plans are developed. Details developed at the MPD or CUP stage will not require a modification of this plan provided that they comply with the Goals and Objectives of this Plan.

1.1 Flagstaff Mountain Resort

The Flagstaff Mountain Resort (Flagstaff Mountain) Plan Area is a 1,600-acre parcel of land located in the southwest corner of Summit County, Utah. Ranging from elevations of 7,800 to 9,000 feet above sea level, it forms the western portion of Deer Valley Resort, a four-season resort facility that specializes in alpine skiing in the winter; hiking, mountain biking, and horseback riding in the summer. Flagstaff Mountain Partners (FMP) will develop four distinct sites as additional year-round residential communities within the boundary of the existing ski area. These sites, or development pods, are depicted along with the overall Plan Area in Figure 1. The proposed development pods include the Mountain Village area (Pods A and B-1), the Daly West area (Pod B-2), and the Northside Neighborhood (Pod D). These pods conform to those sites identified in the Annexation Resolution: Development Agreement for Flagstaff Mountain, Bonanza Flat, Richardson Flat, the 20-acre Quinn's Junction Parcel, and Iron Mountain (Park City Municipal Corporation Ordinance no. 99-30) hereafter referred to as the Development Agreement.

Within the Plan Area, native vegetation comprises a mosaic of quaking aspen and coniferous (primarily Engelmann spruce, subalpine fir, and Douglas fir) forests, Gambel oak, and mountain shrub communities. A few natural meadows occur in the area and are characterized by a variety of native grasses and wildflowers. Willows, sedges, and rushes dominate wet areas. Rock outcrops occur on the eastern boundary of Pod D and along the ridgeline at the head of Empire Canyon.

Some of the most notable features of the Plan Area are, however, of human origin. Large piles of mine waste rock, or overburden, are located in the Flagstaff Mountain Plan Area. These features consist predominantly of un-vegetated grayish-white crushed rock associated with the former Flagstaff, Little Bell, Quincy, Anchor, and Daly West Mines. Ski lifts and runs are another notable human-made feature of the Plan Area. Within the Flagstaff Mountain portion of Deer Valley Resort, there are six existing ski lifts and approximately 36 ski runs, many of which have been cut through forest

stands, graded, and seeded with non-native grasses and forbs. Four additional lifts are currently planned for Flagstaff Mountain. One of these will serve the ski in/ski out needs of Pod A, one will access existing terrain between the Red Cloud and Northside Lifts (Ski Pod D), and the other two (Ski Pods X and Z) will access new intermediate and advanced ski terrain in Empire Canyon.

1.2 Wildlife Management Goals and Objectives

The goal of this management plan is to preserve wildlife habitat values within the Plan Area by minimizing habitat loss and human/wildlife conflicts. This plan identifies existing wildlife species and habitats that occur within the Flagstaff Mountain Resort Plan Area, and establish management guidelines to help maintain the biotic integrity of the area while ensuring the long-term attractiveness and marketability of the proposed developments.

2.0 FLAGSTAFF MOUNTAIN WILDLIFE

2.1 Background

Three summer wildlife inventory surveys of the Plan Area have been conducted. Bio-Resources, Inc. undertook the first of these in June and July of 1993. The second survey was conducted by SWCA, Inc. Environmental Consultants in September of 1999 and was used to produce the Preliminary Biological Resources Report, Flagstaff Mountain Development (SWCA 2000). A third survey was conducted in June and July of 2000 by SWCA. These surveys documented and described the various habitat types present in the Plan Area and provided lists of wildlife species observed in each of the habitats.

While there are no federally listed threatened or endangered species likely to make substantive use of the Plan Area, SWCA has identified several sensitive or special status plant and animal species with potential to occur at Flagstaff Mountain.

2.2 Common Wildlife

The Flagstaff Mountain Plan Area is located in the Northern Utah Ecoregion. This ecoregion is characterized by a variety of topographic and climatic conditions providing habitat for numerous species of wildlife. Public forestlands adjacent to the Plan Area in the Wasatch and Uinta Mountains are known to contain an estimated 300 species of vertebrates including 67 species of mammals, 186 species of birds, 18 species of reptiles, 6 species of amphibians, and 23 species of fish. Typical large mammal species include elk, mule deer, coyote, bobcat, and mountain lion. Common small mammals are yellow-bellied marmot, American beaver, snowshoe hare, pika, northern pocket gopher, red squirrel, least chipmunk, and golden-mantled ground squirrel. Clark's nutcracker, Steller's jay, northern flicker, mountain chickadee, and red-breasted nuthatch are familiar bird species in the Wasatch Mountains. Reptiles and amphibians common to the region include the Great Basin gopher snake, wandering garter snake, and boreal chorus frog. A brief description of wildlife habitats and common wildlife species associated with these habitats is presented below. A map showing where these habitats occur within the Plan Area is provided in Figure 2. Figure 2 also depicts disturbed lands within the Plan Area. Disturbed ground comprises approximately 85 acres (five percent) of the Plan Area and consists primarily of mine waste rock piles, road scars, and other areas devoid of vegetation and wildlife habitat value.

Conifer

The conifer community is dominated by engelmann spruce and subalpine fir with white fir common in some locations. Douglas fir is a dominant species at lower elevations near the Judge Portal. Overall, the spruce/fir association is the most common upper montane forest type in the Wasatch Mountains. On more biologically productive sites

(i.e., sites with deeper, more fertile soils and good water availability), the shrub layer contains snowberry while the forb/grass layer commonly consists of englemann aster, aspen bluebell, fireweed, sticky geranium, and Colorado columbine. In areas characterized by a dense forest canopy, the groundcover consists primarily of duff and downed wood, with very little herbaceous plant material present. Within the Plan Area, conifer stands tend to be located on north and west-facing slopes. A large contiguous conifer stand is located on the north-facing slope just south of the Ruby and Empire Express Lift bases. Wildlife species most commonly found in coniferous forest include mountain chickadee, dark-eyed junco, ruby-crowned kinglet, American robin, hermit thrush, yellow-rumped warbler, pine siskin, red squirrel, porcupine, snowshoe hare, southern red-backed vole, and elk. Conifer habitats comprise approximately 128 acres or eight percent of the Plan Area.

Conifer/Aspen

The conifer/aspen community consists of a combination of aspen and conifers, with the conifers comprising over 50 percent of the over-story. In the absence of fire, succession will favor the gradual replacement of aspen by subalpine fir. As a result, this community typically succeeds to the conifer community. The groundcover is similar to that of the aspen/tall forb community, but tends to be sparser as a result of the higher tree density. The conifer/aspen community occurs around the Northside Neighborhood and in various other locations (e.g., Centennial Draw) within Empire Canyon. Wildlife species most commonly found in the conifer/aspen habitat type include a combination of those listed in the conifer and aspen, aspen/tall forb sections of this plan. Conifer/aspen habitats occur on approximately 491 acres or 30 percent of the Plan Area.

Aspen/Tall Forb

The aspen/tall forb community is dominated by quaking aspen. Scattered subalpine fir, and occasional engelmann spruce and white fir occur near transitional areas. Shrub cover includes mountain snowberry, mallow ninebark, and red and blue elderberries. Common herbaceous species in these communities include cow parsnip, which provides up to 100 percent groundcover in some places, western coneflower, Colorado columbine, Fendler meadowrue, sticky geranium, horsemint, and Jacob's ladder. Within the Plan Area, the aspen/tall forb vegetation type is most prevalent in upper Ontario Bowl, Prospect Ridge (including Pod A) and the east-facing slopes on the west side of Empire Canyon. American robin, house wren, mountain bluebird, warbling vireo, townsend's solitaire, least chipmunk, and elk frequent aspen stands. Aspen/tall forb habitats occupy approximately 439 acres or 27 percent of the Plan Area.

Mountain Shrub

The mountain shrub community occurs intermittently on dry, rocky slopes and ridgelines throughout the Plan Area. Dominant shrub species include snowberry, chokecherry, and mountain lover. Rock mountain ash, Gambel oak, mallow ninebark, Wood's rose, serviceberry, and sagebrush may be locally abundant. Common herbaceous species include a variety of native grasses, showy golden-eye, whorled buckwheat, and sticky geranium. Mammal species typically associated with mountain shrub habitat include the elk, mule deer, moose, and pika. Associated bird species include the American pipit, broad-tailed hummingbird, ruffed grouse, American robin, and white-crowned sparrow. Mountain shrub habitats comprise approximately 194 acres or 12 percent of the Plan Area.

Herbaceous

Within the Plan Area, the herbaceous cover type is generally comprised of two communities dominated by non-woody plant species: native herbaceous and seeded herbaceous. The native herbaceous community is further divided into three associations: tall forb, short forb, and graminoid. Figure 2 depicts the native and seeded herbaceous communities but does not differentiate between these three associations. The tall forb association occurs in open areas between aspen and conifer stands. This community appears to be relatively stable in the Wasatch Mountains and covers extensive areas. False hellebore, or skunk cabbage, is a common component within the wetter extremes of this community. Showy forbs including bluebells, glandular cinquefoil, lupine, Louisiana sagewort, Jacob's ladder, sticky geranium, scarlet paintbrush, fireweed, Engelmann aster, Colorado columbine, Fendler meadowrue, sulfur buckwheat, cow parsnip, duncecap larkspur, valerian, anise sweetroot, and numerous other wildflower species are common throughout.

The short forb association also occurs in open areas, but is generally found at higher elevations than the tall forb community described above. It is typically shorter in stature with sparser coverage. Some of the species that distinguish the short forb association from the taller type include scarlet gilia, stonecrop, mountain monardella, and lobeleaf groundsel. Other species that commonly occur on drier sites include yarrow, elkweed, whorled buckwheat, sulfur buckwheat, little sunflower, and various species of beardtongue. Graminoids may include slender wheat grass, western needle grass, mutton grass, spike fescue, and onion grass.

The graminoid association is similar to that described above and occurs where grasses and grass-like species are dominant and forbs form a relatively minor component of the overall species composition. Within this association, sedges may be locally dominant. An example of the sedge-dominated variant of this plant association may be found on a

northeast-facing hillslope in the southeast corner of the Plan Area. Overall, the native herbaceous habitat type covers approximately 137 acres or nine percent of the project area.

The seeded herbaceous community occurs where native vegetation types have been cleared to provide for open ski slopes. These areas are often dominated by introduced grass species including various cereal grains, timothy, smooth brome, and orchard grass. Forbs observed in seeded areas include yarrow, curly dock, an unidentified orange-flowered mustard, and varieties of California golden poppy. Various thistles and other undesirable plant species have become established along seeded ski trails and the sides of access roads. Seeded herbaceous habitats comprise approximately 181 acres or 11 percent of the Plan Area.

In the native herbaceous community type and, to a lesser extent, in the seeded type, commonly observed species include white-crowned sparrow, horned lark, mountain bluebird, American robin, American pipit, northern pocket gopher, montane vole, western jumping mouse, deer mouse, Uinta groundsquirrel, elk, mule deer, and yellow-bellied marmot.

Willow/Sedge

Within the Flagstaff Mountain Plan Area, the willow/sedge community covers a small area (approximately 0.3 acre) around Lady Morgan Pond. Willows approximately 10 feet in height form a discontinuous ring around the pond. Interspersed between the willows and extending downslope into the pond itself are a variety of sedges likely including beaked sedge, water sedge, and others. In the arid west, wetland and riparian area habitats often support a greater diversity of species per unit area than other habitat types. In particular, these habitats may harbor a variety of birds including MacGillivray's, Wilson's, and yellow warblers, and a number of sparrows including the song sparrow and Lincoln's sparrow. In alpine areas and wet meadows, American pipits may be locally common. Also commonly present are moose, elk, mule deer, and a variety of amphibians and invertebrates.

Rock/Talus

Non-vegetated areas including rock outcrops, and talus and scree slopes dominate this cover type. High elevation rock outcrop areas are habitat for some sensitive plants described in the section below. Other low-growing plants adapted to these harsh environments may occur in the crevices of rocks and in shallow soils associated with higher elevations. While there are no boulder or talus slopes *per se* within the Plan Area, rock outcrops occur on the east-facing slopes below Flagstaff Mountain on the eastern portion of the Northside Neighborhood area. Rock/talus habitats typically support yellow-bellied marmot, least chipmunk, pika, and white-crowned sparrow. Reptiles often associated with rock/talus habitat include the gopher snake and

wandering garter snake. Rock/talus habitats comprise approximately 15 acres (less than one percent) of the Plan Area.

2.3 Threatened, Endangered, and Sensitive (TES) Species

Two federally listed threatened and endangered species, the bald eagle (threatened) and the Canada lynx (endangered), have potential to occur within the Flagstaff Mountain Plan Area. The following state listed wildlife species of concern, many of which are also considered Forest Service sensitive species, also have potential to occur in the Flagstaff Mountain Plan Area: the American marten, northern flying squirrel, Townsend's big-eared bat, three-toed woodpecker, northern goshawk, smooth green snake, and boreal toad. While not on the state list, the flammulated owl is a Forest Service sensitive species known to occur in the Plan Area. Brief descriptions of these TES wildlife species are presented below.

Bald Eagle

The Bald Eagle is federally listed as a threatened species under the Endangered Species Act of 1973, as amended. This species has been proposed for de-listing in 2000. Bald Eagles typically construct large, conspicuous stick nests in sizeable trees, or on cliffs adjacent to streams or lakes supporting fish populations, which are capable of serving as this species' primary prey base. Secondary food sources include small mammals and birds. Four known nesting pairs of Bald Eagles currently exist within the State of Utah. There are no records of this species nesting or roosting in the Flagstaff Mountain Plan Area and this behavior is unlikely given the relative lack of water. Bald Eagles are thus only likely to occur within the Plan Area on a transitory basis during migration.

Canada Lynx

The Canada lynx became federally listed as endangered as of April 2000. This species occurs within northern boreal forests in association with its primary prey species, the snowshoe hare. Early successional forest stands characterized by high densities of shrubs and seedlings are optimal for hares and, subsequently, important hunting grounds for lynx. Large, contiguous stands of mature forest are used by lynx for denning, providing cover for kittens, and as travel corridors. Given that the forest stands within the Plan Area are relatively small and/or highly fragmented and snowshoe hare are uncommon, Flagstaff Mountain is unlikely to support Canada lynx. Furthermore, the lack of any documented lynx sightings in Utah for over 17 years suggests that this species has been extirpated from the region.

American Marten

American marten primarily utilize mature coniferous forest habitats between 8,000 and 13,000 feet elevation. These carnivores are generally associated with 30 percent or more canopy cover. Coarse woody debris, especially in the form of large-diameter tree boles, is an important habitat component for marten, providing thermal protection, access to subnivean spaces, and escape cover. Although there are tracts of mature coniferous forest habitat within the Plan Area, the capability of this habitat to support marten is questionable due to its highly fragmented condition.

Flying Squirrel

In the Intermountain West, the northern flying squirrel is typically associated with mature coniferous forests and riparian woodlands. Nests occur either inside tree cavities or on limbs where they are built of twigs, bark, and/or roots. According to the Utah Division of Wildlife Resources' (UDWR) Sensitive Species List, the northern flying squirrel is well distributed throughout forested riparian habitats in the mountain ranges of central and eastern Utah. Despite the lack of forested riparian habitats within the Plan Area, a flying squirrel was observed in the Centennial Draw area on July 10, 2000. The presence of a flying squirrel in this area suggests that this species may be common in other mesic, mixed forest stands at Flagstaff Mountain.

Townsend's big-eared bat

The Townsend's big-eared bat utilizes a variety of vegetation types in rocky, broken landscapes up to about 9,500 feet elevation. Vegetation types used include western shrubland, piñon/juniper woodland, oak woodland, and open montane forest. This species is typically associated with caves and abandoned mines and buildings for use as day roosts and winter residences. During summer, individuals may use cracks within cliffs as day roosts. This species typically forages over water, along the margins of vegetation, and over sagebrush. Suitable summer roosts likely occur in and adjacent to the Plan Area in the form of abandoned mine buildings. Suitable winter hibernacula may be present within and adjacent to the Plan Area in various abandoned mine shafts and adits located in the area.

Three-toed woodpecker

The three-toed woodpecker is a year-round resident primarily associated with mature and old growth spruce/fir and mixed forest types up to about 9,000 feet elevation. Given that they attract large populations of wood-boring insects, forest stands with extensive damage due to disturbance such as fire, storm, and/or avalanche, provide an important food source for the three-toed woodpecker. Other food sources utilized by the three-toed woodpecker include berries and some cambium and inner bark. The Forest Service has documented the presence of three-toed woodpeckers at Brighton,

approximately three miles west of Flagstaff Mountain. While this species could occur at Flagstaff Mountain on a sporadic basis during insect outbreaks in larger, contiguous conifer stands, species-specific surveys conducted by SWCA in June 2000 did not detect three-toed woodpeckers within the Plan Area.

Northern goshawk

Goshawks typically breed in mature stands of aspen, lodgepole pine, spruce/fir, or mixed forests at elevations of between 7,500 and 11,500 feet. Nesting areas are typically 20-25 acres in size. In southwestern spruce/fir forests, stands containing nests tend to be greater than 150 years old with moderately high densities of trees (35 trees per acre of 20 inches dbh) and an overstory canopy cover of at least 70 percent. Nest sites are also typically located on either north-facing slopes with gradients less than 60 percent, or in drainages or canyon bottoms protected by such slopes. Goshawks require water within 0.25 mile of the nest site and a given nest may be reused on successive years. The goshawk's preferred prey includes the American robin, blue grouse, hairy woodpecker, northern flicker, golden-mantled ground squirrel, chipmunk, and red squirrel. Goshawks are found throughout the neighboring Wasatch-Cache National Forest, including one pair which nests south of Brighton Circle in Big Cottonwood Canyon. This pair is known to use areas near Clayton Peak, Hidden Canyon, and the Guardsman Pass Road (Salt Lake County portion) for foraging. A stick nest found in the Bonanza Flat area (approximately one mile from the Plan Area) during wildlife surveys conducted approximately six years ago (Bio-Resources 1993), indicates the potential for goshawk to occur in the immediate vicinity of Flagstaff Mountain.

Flammulated Owl

The flammulated owl is listed as a sensitive species by Region 4 of the U.S. Forest Service (including Utah) but it is not federally threatened or endangered and generally does not receive any special consideration outside of National Forest System lands. Nevertheless, given the potential for this species to be added to the Utah State sensitive species list and/or be proposed for federal listing in the future, the potential for it to be affected by development of Flagstaff Mountain is being considered here. The flammulated owl's apparent preference for mature ponderosa pine, montane conifer, or aspen forests above approximately 7,000 feet (in Utah), and its general avoidance of cut over areas, suggests that the species may be largely dependent on mature and old-growth forest. Flammulated owl surveys were conducted in the Plan Area on June 21 and 22 and July 10, 2000. A single flammulated owl was detected in an aspen stand.

Smooth Green Snake

The smooth green snake typically inhabits meadows, grassy marshes, and moist grassy fields along forest edges. Although this species is known to occur in the Uinta

Mountains of northeastern Utah, its distribution is unclear. While there is potential for this species to occur in the Plan Area in sites such as the meadow in Northside Neighborhood, and the area around Lady Morgan Pond, there are no records of occurrence for this species in the area. No smooth green snakes were observed during field surveys conducted during the summer of 2000.

Boreal Toad

The boreal toad inhabits areas near springs, streams, meadows, or woodlands ranging from 7,500 to 12,000 feet elevation. Beaver ponds with abundant riparian vegetation are considered preferred habitat. Although suitable breeding habitat is present at Lady Morgan Pond, there are no records of occurrence for this species within the Plan Area. Surveys conducted for this species during the summer 2000 field season did not detect any boreal toads at Lady Morgan Pond.

2.4 Humans and Wildlife

2.4.1 Past Impacts

Several factors in human behavior and practice affected wildlife during the mining era. Most directly, there was a massive influx of people, vehicles, machinery, and associated noise. Most wildlife species, with the exception of those species, which have adapted to urban or semi-urban environments, deliberately avoid human contact. Thus, many animals moved away from the immediate area when miners moved in. The loud noise from mining explosions and machinery operations could be heard for quite a distance and undoubtedly frightened animals from the vicinity. In addition to noise disturbance, mining activities caused sedimentation of area streams. Increased turbidity and influx of heavy metals diminished water quality and impacted or even extirpated aquatic life in affected waters.

Deforestation was another direct result of mining activities and was a major source of habitat loss for cavity-nesting birds and small mammals, as well as a loss of adequate cover and associated understory for a variety of animals including deer, black bear, and others.

By the 1950's, the price of metals had dropped and the mining era came to a close. Miners left the mountains and the forest began to grow again. Along with this new growth, early successional species inhabited the mountain and surrounding areas.

2.4.2. Current Influences

Following the mining era, the alpine ski industry slowly started to become the primary developed land use in the area. Ski runs were cut through the young forest stands, lifts were installed, and resort establishments were built to offer amenities for vacationing

recreationists. Snowshoeing and cross-country skiing have become popular in the backcountry and snowmobiling is a popular winter pasttime. At Deer Valley Resort, facility operations began in the fall of 1981. Since then, this area has not only become a popular winter destination; summer recreationists such as hikers, mountain bikers, horseback riders, and wildlife and birding enthusiasts enjoy the area, as well. Each of these activities has added to the overall impact on wildlife in the area.

Habitat fragmentation and loss have resulted from cutting and grading roads, lift alignments, ski runs, and trails through forest stands. From an increase in noise to a decrease in habitat, the development of ski resorts and resort communities has pushed wildlife increasingly farther into the backcountry. As recreationists have expanded unauthorized trail systems (often by utilizing established game trails), certain forest-interior or otherwise sensitive wildlife species have been forced into more remote areas of the property or extirpated from the area altogether.

2.4.3. Future Influences

Each of the impacts described in the previous section will apply to new development within the Plan Area. However, given that the developed portion of Flagstaff Mountain Resort will be limited to 147 acres out of a total of approximately1600 acres (nine percent of the Plan Area), development of the resort itself will not result in extensive habitat fragmentation. While habitat conversion occurring within the development pods will likely cause an increase in adaptable, open habitat and edge-tolerant species and a localized decrease in forest-interior species, with proper management, negative impacts can be partially mitigated and positive effects may result.

Many species of wildlife may become habituated to human activity if it is consistent and non-threatening. This means wildlife species would be less likely to alter their natural behavior in response to people. This could potentially become dangerous for both animals and wildlife watchers. For this reason, it is imperative that backcountry users remain on established trail systems.

In the future, snowmobiling will no longer be allowed as a backcountry recreational activity within the Plan Area. This change in management will eliminate a substantial source of impacts to winter resident wildlife such as voles and other subnivean (under the snow) small mammals.

3.0 SENSITIVE WILDLIFE AREAS

Sensitive wildlife areas have been designated because they include habitats that are uncommon and/or necessary to support certain species. These areas are identified in Figure 2.

3.1 Lady Morgan Area

3.1.1 Existing Condition

Lady Morgan Pond is the only natural pond within the Plan Area. This open water/emergent marsh complex and surrounding watershed is considered sensitive because of its high plant, animal, and habitat diversity, and its overall uniqueness within the Flagstaff Mountain Plan Area. The Lady Morgan subwatershed contains aspen, conifer, and mixed forest communities, as well as mountain shrub, willow/tall forb, herbaceous, wet meadow, emergent marsh, and open water habitats. This habitat diversity allows for a high level of species diversity in this area. During a general wildlife survey on July 7, 2000, a variety of deer, elk, and moose sign, including bedding areas, were observed in mountain shrub habitat to the north of the pond. This evidence of bedding and the abundant forest cover adjacent to water suggest that this area may be an important calving/fawning area in the spring.

3.1.2 Desired Future Condition

The desired future condition of Lady Morgan Pond is to maintain the natural successional trajectory of the ecosystem. Over the next 20 years the pond will likely progress into an emergent marsh complex dominated by reeds and sedges. The marsh will eventually turn into a seasonally flooded depressional wet meadow. This transition will limit the water-associated species, which previously inhabited the Lady Morgan Pond area. However, the new meadow will provide habitat for species such as the white-crowned sparrow, meadow vole, and American pipit. Big game will also likely continue to use the area, particularly in the spring when open water is still present.

Previous management prescriptions made for the Lady Morgan area included dredging the pond, constructing a wildlife viewing area to the east of the pond, and placing three to five wood duck nesting boxes in the vicinity. These recommendations are not consistent with the desired future condition of the area because they disrupt the natural successional dynamics of this system. In addition, periodic dredging of the pond would be costly, labor intensive, and require a Section 404 permit from the U.S. Army Corps of Engineers Utah Regulatory Office.

3.2 Centennial Draw

3.2.1 Existing Condition

Centennial Draw contains closed canopy habitat comprised of the aspen/tall forb community on south-facing slopes and mixed forest stands on north-facing slopes. In 1993, Bio-Resources identified a portion of this area as elk calving habitat, and several deer were observed at the same location by SWCA in 1999. Evidence of deer bedding was observed by SWCA in mountain shrub-dominated opening in the aspen canopy in the upper right fork of Centennial Draw on July 7, 2000. This area also contains prime habitat for forest-interior bird species including the hermit thrush, and ruby-crowned kinglet (in mixed and coniferous stands), and the warbling vireo (in aspen stands). Several narrow trails currently wind through the trees offering summertime hiking and mountain biking opportunities. At present, winter use consists only of occasional back-country ski access along the north ridge.

3.2.2 Desired Future Condition

To the extent practicable, the desired future condition for Centennial Draw is to maintain closed canopy forest habitats and preserve the integrity of the elk calving area.

3.3 Potential Wildlife Movement Corridors

Wildlife movement corridors are areas that tend to be used by a large number of deer and/or elk and moose in their seasonal altitudinal migrations. These corridors are typically found in saddles along prominent ridgelines. Based on this criterion, four potential wildlife movement corridors have been identified and are depicted on Figure 2. With the exception of the potential movement corridor located where Guardsman Pass road crosses the Wasatch/Summit County line, none of these corridors would be directly affected by development of Flagstaff Mountain Resort.

4.0 MANAGEMENT

4.1 Management Authority

Two groups will have management authority for wildlife within the Plan Area. Within the development pods, the appropriate Homeowners' Association will deal with wildlife management issues. Outside of the development pods, Deer Valley Resort will be responsible for implementing the management prescriptions detailed below.

4.2 General Management Prescriptions

Wildlife Education

Minimizing human impacts to wildlife at Flagstaff Mountain will require a variety of approaches centered around public education. A combination of education, signs, and enforcement is the best method of control. An educated public is best obtained through outreach activities and the distribution of appropriate information. During the spring, summer, and fall seasons FMP will sponsor weekly talks and/or field trips by qualified naturalists. The goal of these talks will be to garner interest and a sense of stewardship in Flagstaff Mountain's abundant wildlife.

In addition, a "Living with Wildlife" brochure will be produced and any person(s) wishing to rent equipment or rent or purchase property within the area will be required to sign a statement that they have read, understand, and will abide by the rules for living with wildlife at Flagstaff Mountain Resort. The goal of this literature will be to educate and provide guidelines to the public regarding interaction with wild animals. The guide will include information on wildlife species known to occur in the area, their relative abundance, animals they are likely to encounter while utilizing the trail system, proper interaction behavior, preventative instruction and contact information for problem wildlife, and safety tips. It will also include the natural history and behavior patterns of animals commonly encountered (e.g., a cow moose will fiercely defend her young against any apparent threat including a curious visitor who decides to approach the young for a better view or photograph). These brochures along with posters presented at trailhead kiosks will help to ensure that appropriate wildlife information is disseminated throughout the various user groups. Wildlife notices and information will also be provided on Flagstaff Mountain Resort's Intranet system. In addition to providing detailed information on wildlife habitats and species present within the Plan Area, the Intranet will contain a variety of links to other pertinent web sites such as the Utah Division of Wildlife Resources and the Wasatch-Cache National Forest.

Interpretive signs are another form of outreach and will be combined with regulatory signs to control access in sensitive areas such as Lady Morgan Pond. Most outdoor recreationists tend to obey directions presented along a trail system. However, there is a small segment of the population that will disregard the posted requests and proceed

into protected wildlife areas. For this reason, enforcement is necessary. Deer Valley Resort currently uses bike patrols to respond to backcountry emergencies and enforce proper trail use. These patrollers will take on the additional task of ensuring that recreationists obey restrictions associated with protected wildlife areas.

Habitat Fragmentation

Any type of development that divides a large, continuous area of habitat may cause fragmentation. To the extent feasible, large habitat patches will be left intact and be separated from heavy human use areas by a buffer zone characterized by less intensive human uses. Where unavoidable, the effects of habitat fragmentation can be ameliorated by clearing vegetation in the fall and winter (rather than during the breeding/nesting season) and by providing suitable movement corridors. Where conventional (cleared and graded) ski runs are constructed through dense forest stands, large forest "islands" will be left to provide cover for forest-interior species as they cross these openings. These islands will help to maintain habitat connectivity while still allowing for a quality skiing experience.

It should be noted that the primary cause of habitat fragmentation within the Plan Area is associated with the clearing of lift alignments and construction of ski runs. Residential development will be limited to approximately 84 acres in Pods A, B-1 and B-2 and 63 acres in Pod D. This will minimize fragmentation by keeping the highest level of human use in the most developed areas and keeping less intensively used areas largely intact. Recreational open space will provide a buffer between these concentrated use areas and protected areas such as Lady Morgan Pond.

Wildlife Plantings

The term wildlife plantings refers to plant species used for revegetation with the intent of attracting wildlife. While this practice may be quite successful in attracting wildlife species to developed areas, many negative impacts may result including nuisance animals, dangerous animals, health risks for animals, safety concerns for people and animals, displeasing appearance of animal droppings and footprints, and property damage. Because of these risks, planting preferred forage species in and around development pods will be minimized. Wildlife plantings will, however, be used to mitigate project-related habitat loss by enhancing habitat in previously unattractive areas and encouraging wildlife use in open space well away from the development pods.

Soft Edge

Another method that will be used to minimize the impacts to wildlife associated with urban development will entail creating a gradual transition from natural landscape to urban environment, thereby creating a "soft edge." This practice will include planting

and/or maintaining native vegetation cover around the immediate perimeter of the development pods. Using native vegetation in these areas will make the development less aversive to wildlife without actively luring them into the area where they may become a problem.

Vehicle Speed and Road Signs

For the safety of people and wildlife, roads built in existing habitat will be designed for a maximum vehicle speed of 25 mph or less. These roads will have wildlife-crossing signs posted at regular intervals throughout their length.

Protection of Wetlands

Wetlands are critical habitat because many species depend entirely upon them for survival, and many more species are frequent or occasional users. In September,1993, the developer contracted with Natural Resources Consulting; Bio-Resources, Inc.; and Basin Hydrology to identify and delineate wetland areas within the Plan Area. Three wetland types were identified: forested riparian wetlands, scrub-shrub wetlands, and wet meadow wetlands. Forested riparian wetlands are located along the tributary that joins Empire Canyon from the east in the vicinity of the Judge Mine. The scrub-shrub wetlands occur in Centennial Draw and, to a limited extent, around Lady Morgan Pond. The scrub-shrub wetlands in Centennial Draw are discontinuous along the drainage and consist of patches of hydrophytic shrubs over a groundcover of hydrophytic herbaceous vegetation. Wet meadow wetlands are extensive around Lady Morgan Pond and occur in two other areas at Flagstaff Mountain. One of these areas is located near the mouth of Centennial Draw and the other occurs at the base of the Anchor Mine overburden. Any ground-disturbing activities (e.g., the grading of ski runs) slated to occur in these areas may require a Section 404 permit from the U.S. Army Corps of Engineers (ACOE) Utah Regulatory Office. The 404 permit process is sufficient to ensure that wetland wildlife habitat values are maintained during and after development of Flagstaff Mountain Resort. FMP will address these issues directly with the ACOE on an as-needed basis.

In addition to the areas identified as jurisdictional wetlands, several stream channels within the Plan Area qualify as waters of the United States due to the presence of a defined bed and bank. These jurisdictional waters occur in both Ontario and Empire Canyons. In Empire Canyon, these stream channels are interrupted by the Anchor, Little Bell, and Daly West Mine overburden piles but are continuous above and below these features. Any development activities resulting in impacts to these channels will require a state stream alteration permit issued through the Utah Division of Water Rights.

Hunting Policies

Hunting activities will not be permitted within the confines of Flagstaff Mountain Resort. Discharge of firearms is prohibited within the city limits of Park City, which encompasses the entire resort property. No archery hunting will be allowed. Nuisance and/or dangerous animals will be dealt with according to established Park City Police Department procedure. Should overpopulation of deer or elk become an issue, state management authorities will determine the best method of control.

Dog Policies

Unleashed dogs will not be permitted in the Plan Area. Unleashed dogs have the potential to harass wildlife and Park City ordinances require that dogs be leashed within city limits. Enforcement of this dog policy will be the responsibility of Park City and the Homeowners' Associations within development pods and of Park City and Deer Valley Resort in the remainder of the Plan Area.

Protection of Calving Areas

Based on the results of wildlife surveys within the Plan Area, there are two areas with potential to shelter calving elk. These areas include Lady Morgan Pond and Centennial Draw. Refer to Section 4.2 for management of these sensitive wildlife areas.

Revegetation of Disturbed Areas

There are several major mine overburden areas on the Flagstaff Mountain property. These areas will be dealt with in accordance with the Mine/Soil Hazard Mitigation Plan. Where feasible and appropriate, a mixture of native seed will be used to establish and stabilize the organic layer and attract wildlife. Native trees and wildlife plantings will be utilized for landscaping purposes and, if necessary for aesthetics, native vegetation having low forage or cover value to deer and elk will be used for landscaping along roadsides.

Perimeter Fencing

Perimeter fencing around individual properties (e.g., single family residential lots and multi-family parcels) will not be permitted as it may impede the natural movement of wildlife in and out of the Plan Area.

Nuisance Wildlife Control

At the urban/wildland interface, there are often conflicts between wildlife and people. Consequently, there is a broad range of potential nuisance wildlife situations. For example, raccoons, skunks, and even black bears may proliferate in areas where

garbage or other human-generated food sources become readily available. Deer and elk may become problematic when residential areas are landscaped with preferred forage. Bats and rodents may colonize buildings and European starlings often develop nests in cavities accessible from the exterior of buildings.

One method of nuisance wildlife control, which will be employed by the resort, will be to maintain adequate garbage collection facilities and enforce the proper use of these facilities. Uncovered garbage tends to attract wildlife and, in the course of feeding, refuse may be strewn across the property creating a displeasing appearance and attracting additional wildlife. Garbage-fed animals tend to lose their fear of humans and may become dangerous. Exercising garbage control will greatly reduce the incidences of nuisance wildlife. Due to the wide variety of potential nuisance wildlife situations, it is impossible to develop a contingency plan for every type of occurrence. There are individual contractors who specialize in removing problem wildlife. These individuals are specialists and have a great deal of knowledge regarding nuisance wildlife and methods of control. Wildlife control contractors will be utilized when and where they are necessary.

Off-Road Vehicles

The public within the Flagstaff Mountain Plan Area expressly forbids off-road vehicles from use. These include, but are not limited to, dirt bikes, ATV's, snowmobiles (with the exception of Wasatch County landowners winter access), and off-road vehicles. Residents and landowners are also included in this ban. The only exceptions are the use of off-road vehicles for routine maintenance, public safety, and mountain operations activities.

4.3 Management of Sensitive Wildlife Areas

4.3.1 Lady Morgan Pond

Clearing trees for downhill ski runs or developing summer trails through the Lady Morgan Pond area is prohibited. Spring and summer access will not be permitted due to the sensitivity of breeding and calving animals. Interpretive signage will be placed at the perimeter of this area indicating its biological/habitat value and prohibiting access during these times. Non-mechanized fall and winter access (e.g., hiking, downhill and cross-country skiing, snowshoeing, etc.) will be permitted, but only along the established loop trail on the south end of the pond. Mountain bikes will be prohibited from entering this area. Pets will be allowed in the Lady Morgan area only during the fall and winter and leash laws will be strictly enforced during this time.

4.3.2 Centennial Draw

Centennial Draw has been proposed for development as a portion of a ski pod (Pod Z) by Deer Valley Resort. Cutting and grading of ski runs through this area during the development of Pod Z will fragment forest habitat and reduce thermal and hiding cover for deer and elk. In order to maintain the suitability of this site as a calving ground, the clearing and grading associated with the proposed ski run development will be minimized in the area delineated in Figure 2. The Development Agreement states that only two graded runs will be allowed in Pod Z. Forest thinning and other, limited vegetation removal may occur in the balance of Pod Z for skier safety and glade skiing. No more than two ski runs will be created in the delineated wildlife management area portion of this ski pod. In addition, Run 121 nearest the center of the drainage (north end of ski pod) will be a gladed rather than conventionally cleared run. In order to preserve hiding cover for calves, no ground disturbance or removal of the shrub layer will be permitted in this area. Large tree islands containing suitably dense forest and shrub cover to hide calves will be maintained following lift development. Native herbaceous ground cover will be maintained in the cleared run.

While habitat conversion due to ski run development could reduce the extent of suitable calving habitat in Centennial Draw, as long as hiding cover is preserved elk should still use the site. A more important consideration during the calving period is human (and domestic dog) intrusion and disturbance. Elk calving can begin as early as April and extend into July. This area will therefore be closed to recreationists and their pets from the time of snowmelt through the end of the calving season each year. Given that this is an important recreation area that is crossed by a number of popular trails, it will be opened as soon as possible after a qualified wildlife biologist has confirmed that elk are no longer calving in the area. It is anticipated that, on average, these trails will be suitable for opening by the July 4 holiday. The above measures will help to ensure that the area retains at least some suitable habitat for calving elk and forest-interior bird species.

4.3.3 Potential Wildlife Movement Corridors

It is imperative that existing wildlife movement corridors continue to function in this capacity. Accordingly, habitat modifications should be minimized, fencing prohibited, and recreationists should be directed away from these areas in the spring and fall migration periods. It is critical that game trails remain intact as wildlife movement corridors and recreationists utilize only established back-country trails designed specifically for their use. Adherence to the established trail system will be encouraged through education, signs, and enforcement.

4.4 Management of Wildlife in Development Pods

Initial Loss of Habitat

The initial loss of habitat associated with clearing, grading, and construction within the development pods has the potential to impact sensitive wildlife species that currently utilize these areas (e.g., flammulated owl in Pod A). In order to minimize such impacts, the clearing of construction sites will be conducted in the fall, winter, and early spring, outside of the wildlife breeding/nesting season. When it is not feasible to clear vegetation during this period, pre-clearing surveys will be conducted by a qualified wildlife biologist to ensure that there are no sensitive species within a given project site. If sensitive species are present, appropriate measures, such as maintaining nest trees and a suitable buffer around them, will be taken to avoid impacts.

Urban Wildlife Considerations

Some species of animals have adapted to urban environments. Typical examples of this are the house sparrow, pigeon, American robin, European starling, black-capped chickadee, Steller's jay, raccoon, mule deer, and coyote. Some of these animals are popular and desirable while others are not. Regardless of general popularity, all of these animals will eventually become part of the overall wildlife picture at Flagstaff Mountain Resort.

Backyard feeders can bring tremendous benefits to local bird populations if regularly cleaned and stocked. However, this responsibility should not be taken lightly. Unsanitary conditions may promote bacterial growth, which can lead to death in several species of common backyard birds. Another consideration is regular stocking of the feeder. Wild birds become dependent upon backyard feeders during winter and once a feeding station is established, it must continue to supply the necessary feed or the birds may die of starvation. Coyotes and raccoons are both omnivorous and will be found near garbage. In the wild, both species tend to avoid human contact but may become bold in urban settings if food is made consistently available (see Nuisance Wildlife Control above).

Mule deer and elk may graze in backyards and feed on ornamental plantings, often to the frustration of the landowner. However, these animals are generally popular as viewing species and most people are excited to have them near their homes. In fact, some people will be so excited about seeing these large animals that they will deliberately entice them with food. This is an unacceptable practice and will not be allowed on the property. Just as with birdfeeders, deer and elk may become dependent on an artificial food source that is likely to disappear arbitrarily and/or impact the health of dependent animals.

5.0 RELATED PLANNING DOCUMENTS

5.1 Flagstaff Mountain Resort Open Space Management Plan

The Open Space Management Plan identifies two general types of open space designations within the Plan Area: Recreational Open Space (ROS) and Protected Open Space (POS). ROS is further divided into Developed and Undeveloped Recreational Open Space (DROS and UROS, respectively). POS also include historic sites susceptible to damage and/or posing safety hazards to unsuspecting individuals. The Open Space Plan overlaps the Wildlife Management plan in its designation of the Lady Morgan sub-watershed as Sensitive Land and its designation of Centennial Draw as a special wildlife management area within DROS (Future Ski Pod Z).

5.2 Flagstaff Mountain Resort Trails Master Plan

The Trails Master Plan identifies existing and proposed hiking, biking, and equestrian trails within the Plan Area. It outlines trail management and use considerations and restrictions. The Trails Plan interfaces with this Wildlife Management Plan where trails pass adjacent to or through the Lady Morgan and Centennial Draw Sensitive Wildlife Areas.

APPENDIX A

Wildlife Species/Sign Observed Within The Flagstaff Mountain Plan Area (Bio-Resources 1993, SWCA 1999 & 2000)

Appendix A

Wildlife Species/Sign Observed Within The Flagstaff Mountain Plan Area (Bio-Resources 1993, SWCA 1999 & 2000)			
Scientific Name	**Common Name**	**Habitat Associations***	**Relative Abundance****
Mammals			
Alces alces	Moose	C, CA, A, W	C
Canis latrans	Coyote	E	U
Cervus elaphus	Elk	CA, MSO, W	C
Erethizon dorsatum	Porcupine	C, CA	C
Eutamius minimus	Least chipmunk	C, CA, MSO	C
Lepus americanus	Snowshoe hare	C, CA, MSO	U
Lynx rufus	Bobcat	CA	R
Marmota flaviventris	Yellow-bellied marmot	RT	U
Microtus spp.	Vole	C, CA, A, MSO, H, W	R
Neotoma cinerea	Bushytail woodrat	RT	U
Odocoileus hemionus	Mule deer	E	A
Procyon lotor	Racoon	W	U
Spermophilus armatus	Uinta ground squirrel	MSO	C
Tamiasciurus hudsonicus	Red squirrel or chickaree	C, CA	A
Ursus americanus	Black bear	MSO	R
Birds			
Accipiter cooperii	Cooper's hawk	E	U
Bonasa umbellus	Ruffed grouse	CA	R
Buteo jamaicensis	Red-tailed hawk	E	C
Carduelis pinus	Pine siskin	C, CA, A, MSO	C

Wildlife Species/Sign Observed Within The Flagstaff Mountain Plan Area (Bio-Resources 1993, SWCA 1999 & 2000)			
Scientific Name	**Common Name**	**Habitat Associations***	**Relative Abundance****
Carpodacus cassinii	Cassin's finch	MSO	U
Catharus guttatus	Hermit thrush	C, CA, A	A
Colaptes auratus	Northern flicker	C, CA, A, MSO	A
Contopus sordidulus	Western wood peewee	CA, A	C
Contopus borealis	Olive-sided flycatcher	C, CA	U
Cyanocitta stelleri	Steller's jay	C, CA, MSO	C
Dendroica coronata	Yellow-rumped warbler	CA, A, MSO	C
Empidonax oberholseri	Dusky flycatcher	A	U
Euphagus cyanocephalus	Brewer's blackbird	MSO	R
Junco hyemalis	Dark-eyed junco	C, CA, A, MSO, W	A
Melospiza melodia	Song sparrow	W	R
Myadestes townsendi	Townsend's solitaire	A	R
Nucifraga columbiana	Clark's nutcracker	CA	R
Oporornis tolmiei	MacGillivray's warbler	CA, A, MSO	C
Parus atricapillus	Black-capped chickadee	A, MSO	U
Parus gambeli	Mountain chickadee	C, CA, A	A
Passerina amoena	Lazuli bunting	W	R
Pheucticus melanocephalus	Black-headed grosbeak	C, CA, A	C
Pica pica	Black-billed magpie	RT	C
Pipilo chlorurus	Green-tailed towhee	CA, A, MSO	C
Piranga ludoviciana	Western tanager	A, MSO	U

Wildlife Species/Sign Observed Within The Flagstaff Mountain Plan Area (Bio-Resources 1993, SWCA 1999 & 2000)			
Scientific Name	**Common Name**	**Habitat Associations***	**Relative Abundance****
Selasphorus platycercus	Broad-tailed hummingbird	CA, A, MSO, H	C
Sitta canadensis	Red-breasted nuthatch	C, CA, A	A
Spizella passerina	Chipping sparrow	C, CA, A, MSO, W	A
Spizella breweri	Brewer's sparrow	MSO	C
Tachycineta thalassina	Violet-green swallow	CA, A, MSO	U
Tachycineta bicolor	Tree swallow	CA	R
Troglodytes aedon	House wren	A, MSO	U
Carduelis tristis	American goldfinch	MSO	C
Cathartes aura	Turkey vulture	E	U
Certhia americana	Brown creeper	C	C
Dendroica townsendi	Townsend's warbler	C	R
Picoides villosus	Hairy woodpecker	C, CA, A	U
Pinicola enucleator	Pine grosbeak	C	U
Regulus satrapa	Golden-crowned kinglet	C	U
Falco mexicanus	Prairie falcon	MSO	R
Actitus macularia	Spotted sandpiper	W	R
Sphyrapicus nuchalis	Red-naped sapsucker	CA, A	U
Sialia currucoides	Mountain bluebird	MSO	U
Vermivora celata	Orange-crowned warbler	CA, A, MSO	C
Molothrus ater	Brown-headed cowbird	MSO	U
Loxia curvirostra	Red crossbill	CA	A
Cocothraustes	Evening grosbeak	C, CA	U

Wildlife Species/Sign Observed Within The Flagstaff Mountain Plan Area (Bio-Resources 1993, SWCA 1999 & 2000)			
Scientific Name	**Common Name**	**Habitat Associations***	**Relative Abundance****
Turdus migratorius	American robin	E	A
Vireo gilvus	Warbling vireo	CA, A	A

**Key to habitat types: C = conifer; CA = conifer/aspen; A = aspen, aspen/tall forb; MSO = mountain shrub, mountain shrub/oak; H = herbaceous; W = willow/tall forb, wetland pond/wet meadow; RT = rock/talus; and E = every habitat type.*
***Relative Abundance: A = abundant, C = common; U = uncommon; and R = rare.*

APPENDIX B

Figures

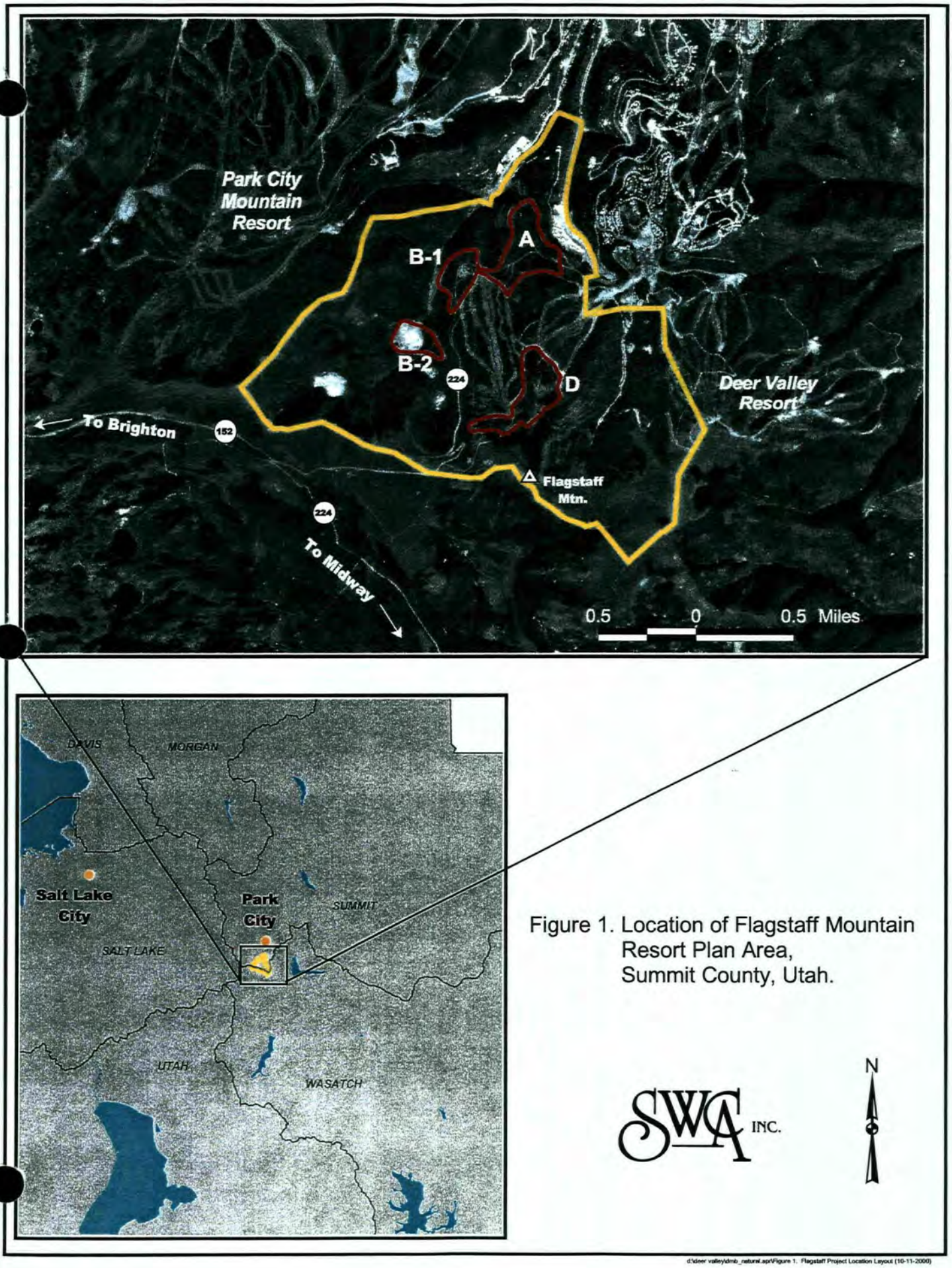
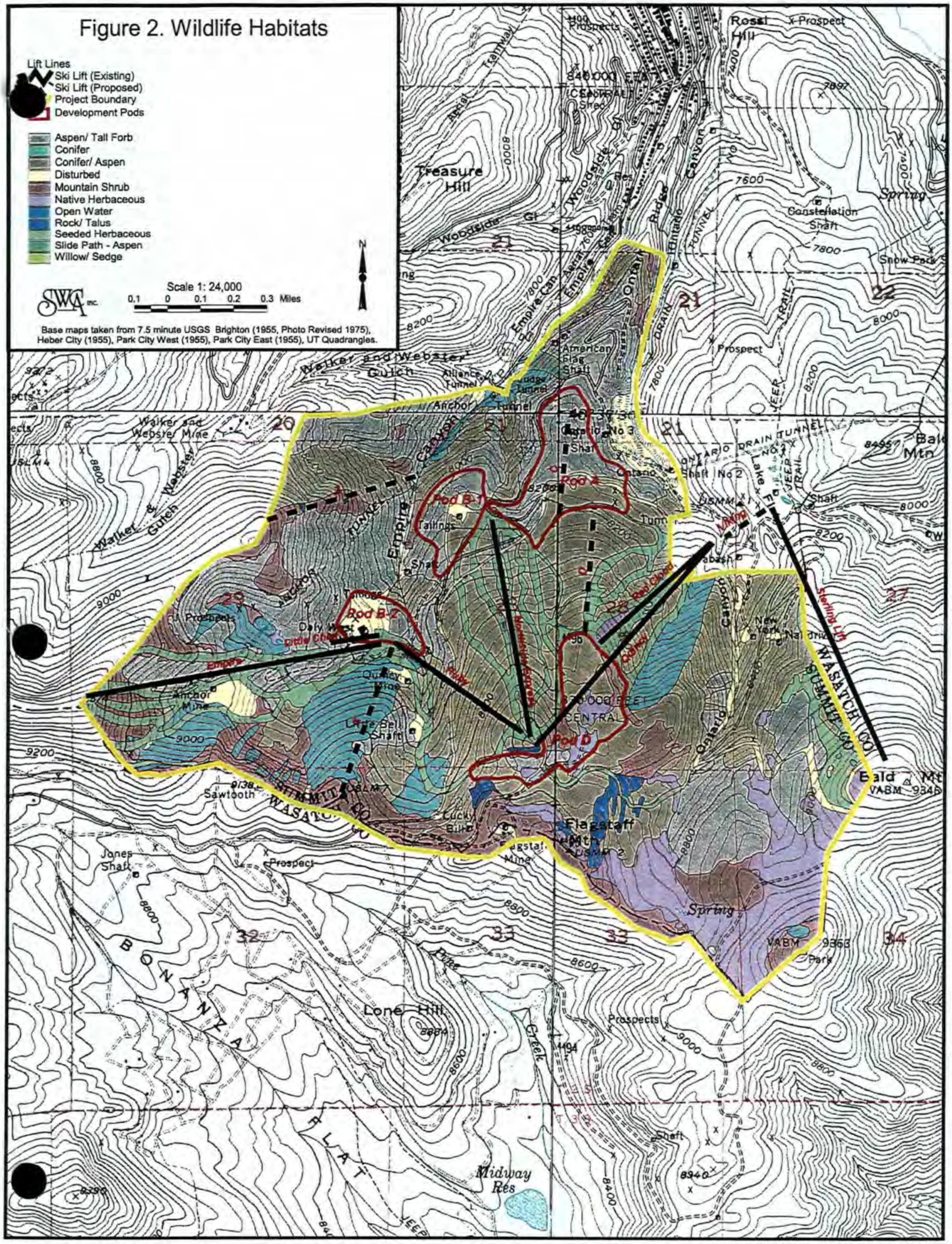


Figure 1. Location of Flagstaff Mountain Resort Plan Area, Summit County, Utah.

SWCA INC.

d:\deer valley\dmb_natural.apr\Figure 1. Flagstaff Project Location Layout (10-11-2000)



d:\deer valley\dmb_natural.apr\Figure 2. Wildlife Habitats layout (10-11-2000)

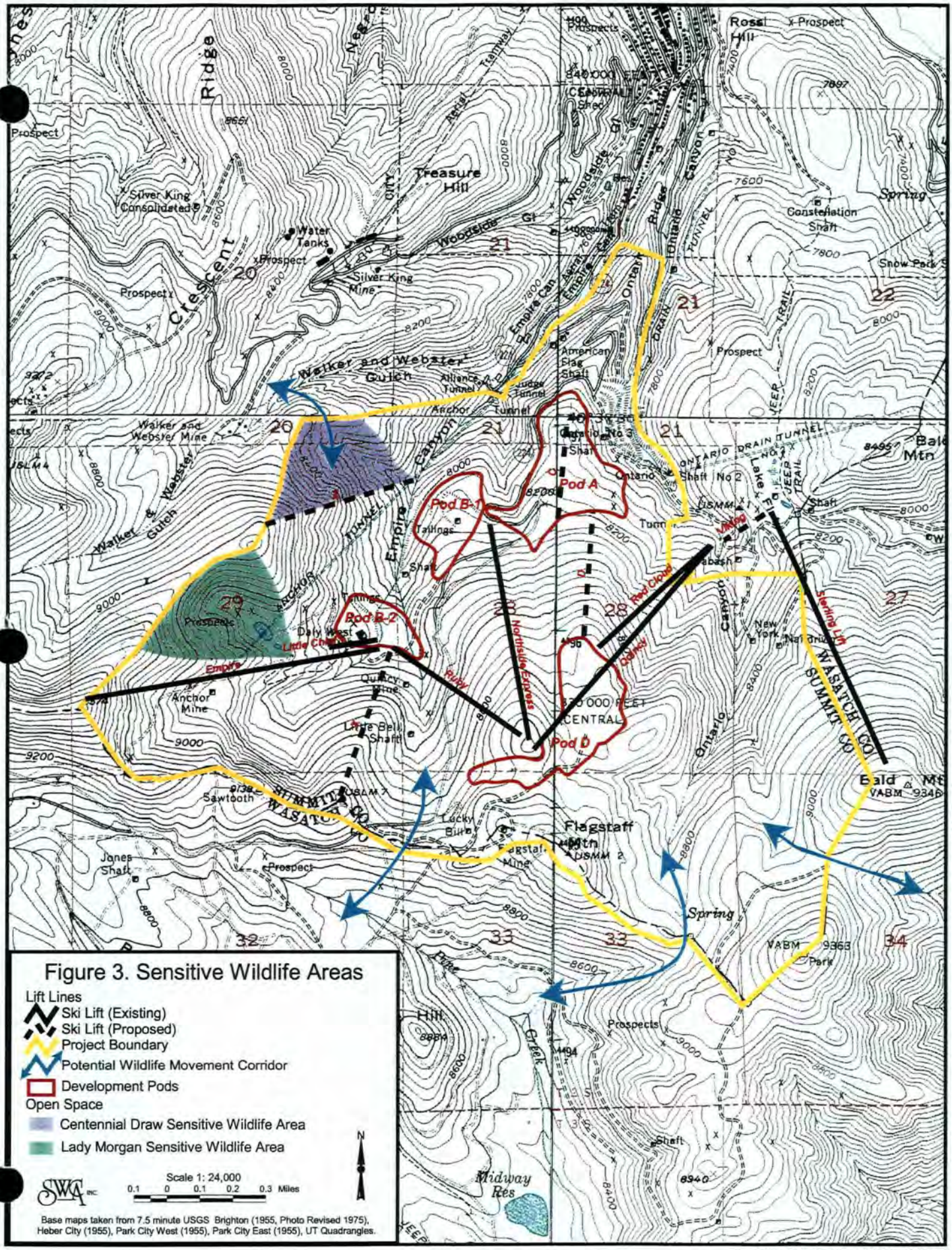


Figure 3. Sensitive Wildlife Areas

Base maps taken from 7.5 minute USGS Brighton (1955, Photo Revised 1975), Heber City (1955), Park City West (1955), Park City East (1955), UT Quadrangles.

d:\deer valley\dmb_natural.apr\Figure 3. Flagstaff Wildlife layout\ (10-11-2000)

FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

EMPLOYEE/AFFORDABLE HOUSING PLAN

EXHIBIT 14

MAY 2001
REVISED AND APPROVED DECEMBER 2001

PREPARED FOR:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450
PARK CITY, UTAH

EMPLOYEE / AFFORDABLE HOUSING PLAN
FOR
FLAGSTAFF MOUNTAIN RESORT
PARK CITY, SUMMIT COUNTY, UTAH

Exhibit 14

Prepared by:
Flagstaff Mountain Partners (FMP)May 2001
Revised and Approved December 2001

TABLE OF CONTENTS

I. INTRODUCTION

A. General Description of the Property

This study is one of several reports that have been prepared to support the Flagstaff Mountain Resort's Large Scale Master Plan Development (LSMPD) application. As LSMPD's are programmatic in nature and subject to refinement at subsequent Master Planned Development (MPD) application or Conditional Use Permit (CUP) stage, correspondingly, the contents of this report should be viewed as conceptual in nature and subject to change as specific plans are developed. Details developed at subsequent MPD and/or CUP stages will not require a modification of this plan provided that they comply with the Goals and Objectives of this Plan.

The Flagstaff Mountain Resort (the "Resort") is an assemblage of mining claims totaling approximately 1,655 acres of land (the "Annexation Area") located at the southwestern corner of Summit County, Utah. The Annexation Area is bordered by Deer Valley Resort to the east and State Highway 224 (Marsac Avenue) to the northeast. The southern boundary coincides with the Summit County/Wasatch County line. The Park City Mountain Resort borders the Annexation Area to the west and northwest. The Resort was annexed into the corporate limits of Park City, Utah, on June 24, 1999 (refer to Exhibit A, Regional Map attached).

The proposed areas of development will be restricted to i) the "Mountain Village" consisting of three Development Pods ("A", "B-1" and "B-2") limited to a maximum of 84 acres and ii) the "Northside Neighborhood" (Development Pod "D") limited to a maximum of 63 acres (refer to Exhibit B, Site Plan attached).

The maximum density allowed within the Mountain Village is 705 Unit Equivalents configured in no more than 470 residential units. The residential units may be multi-family units, hotel room units or PUD units. In addition to the above-described residential units, the Mountain Village may also contain a maximum of i) 16 single-family home sites and ii) 75,000 sq. ft. of resort support commercial uses.

The Northside Neighborhood may contain a maximum of 38 single-family home sites of which 30 are currently entitled and eight (8) are subject to further requirements under the Development Agreement.

Planned uses for the Resort are intended to include hotel lodging facilities, resort support commercial, multi-family residential units, PUD residential units and single-family home sites.

B. Goals of the Employee/Affordable Housing Plan

The goal of this Plan is to recommend alternatives relating to the development of deed-restricted employee/affordable ("affordable") housing units mandated by the Development Agreement in an attempt to offset the demand for affordable housing units generated by the Resort. The Plan relies on a policy framework defined by affordable housing guidelines and standards adopted by Park City.

II. PROJECT REQUIREMENTS

Paragraph 2.10.4 of the Development Agreement requires Flagstaff Mountain Resort to "provide deed-restricted employee/affordable housing units as defined by the City's affordable housing policy in an amount equal to 10% of the residential and 20% of the commercial Unit Equivalents (UEs) approved by the City for the Project." It further requires that "a minimum of 25% of the affordable housing obligation shall be located on-site within the Project, unless otherwise directed by the Housing Authority."

Assuming Flagstaff Mountain Resort is developed to its maximum approved density, the total affordable housing UEs required would be calculated as follows:

705 Multi-family UEs @ 10%=	71 UEs
54 Single-family home sites @ 10%=	5 UEs
75,000 sq. ft. of Commercial/1,000 sq. ft. @ 20 %=	15 UEs
Total	91 UEs

Of the total 91 UEs required, 25% or 23 UEs, are required to be located on-site unless otherwise directed by the Housing Authority.

In accordance with the City's affordable housing policy, an affordable housing UE is defined as a 2-bedroom unit with a minimum size of 800 square feet.

III. DEFINITION OF AFFORDABLE HOUSING

The first step in compliance with the City's affordable housing requirements is to agree upon a common definition of the term "affordable housing." Affordable housing refers to a formula based upon the "area's median income," not any particular type of housing. Just because certain properties are valued at market rate or are subsidized does not necessarily mean that they are actually affordable. These types of housing could actually be "unaffordable" depending on a particular household's actual level of income.

Housing is considered affordable if a household spends 30% or less of its monthly income for either i) rent and utilities or ii) principal, interest, taxes and insurance (PITI).

Generally, discussions relating to affordable housing target particular income groups of the area's population and their relationship to the area's median income. For example, income groups earning 30% of the area's median income are considered in a "very low" income category. Those earning 50% of the area's median income are considered in a "low" income category. And those earning 80% of the area's median income are considered in a "moderate" income category.

This Plan will focus on those households in the low and very low categories earning 60% or less of the area median income. This is the income group identified by the Mountainlands Community Housing Trust as having the greatest housing need and also being the most difficult to serve.

In 1999, the annual median income (AMI) of the Park City area was $64,200. Based upon this median income, Table 1 illustrates the maximum housing cost a family of four could afford for each of the three income levels described above.

Table 1: Affordable Housing Costs by Income Level

Percent of AMI	Annual Household Income (family of four)	Maximum Monthly Housing Cost	Maximum Mortgage Amount (7.5 % at 30 years)
80%	$51,360	$1,284	$183,636
50%	$32,100	$803	$114,772
30%	$19,260	$482	$68,863

IV. DEMOGRAPHIC DATA

In order to develop an affordable housing plan that meets the local housing needs, it is important to understand the dynamics of the population of the region.

In 1999, the Governor's Office of Planning and Budget (GOPB) estimated the population of the Park City area to be 6,670. In 1990, the United State Census Bureau stated that Park City's population was 4,468. This would indicate a growth rate of 2,202 persons over a nine-year period, an annual population growth rate of approximately five percent. Table 2 illustrates this estimated growth rate over the referenced nine-year period.

Table 2: Population trends from 1990 to 1999

Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Park City	4,468	4,875	5,170	5,484	5,590	5,582	6,104	6,287	6,475	6,670

Source: Governor's Office of Planning and Budget; 1997 – 1999 estimates based on growth patterns 1990 – 1996

In-migration plays a significant role in the growth of Park City and the surrounding Snyderville Basin area. The rate of in-migration to this area is significantly higher than that of the balance of the State of Utah. Over the last eight years, in-migration has accounted for more than 75% of the region's growth versus less than 33% statewide. The GOBP estimates that the percent of Summit County in-migration will increase by an average of 6.5% annually while the State percentage is projected to remain constant (refer to Table 3).

Table 3: In-migration as a Component of Population Change in Summit County and the State of Utah

Year	Summit County				State of Utah			
	Total Population	Percent Population Increase	Natural Increase	In-Migration	Total Population	Percent Population Increase	Natural Increase	In-Migration
1990	15,700	4%	33%	67%	1,729,100	2%	100%	(15%)
1996	23,562	5%	24%	76%	2,002,400	2%	69%	31%
1997	24,675	5%	29%	71%	2,048,753	2%	67%	33%
1998	25,630	4%	34%	66%	2,083,238	2%	94%	6%

The economic profile of new in-migrants highlights a growing economic imbalance in Summit County. About 49% of the new residents between 1990 and 1997 earn 50% or less of the County median income.

As stated earlier, the 1999 median income of Summit County was $64,200. The median income is not the average wage of residents, but rather the income level that falls at the 50th percentile of all of the household incomes in the County. Put another way, 50% of the County households earn more than $64,200 and 50% earn less.

Summit County's area median income is 26% higher than the State's median income of $50,823. The County has the highest area median income in the State, and one of the highest in the nation. The area median income has steadily and dramatically increased from $36,756 in 1990 to $64,200 in 1999. This represents a 75% increase in the County median income in less than a decade. No other city or county in the State has had a more dramatic increase. In comparison, between 1990 and 1999, the statewide median income increased 48%.

Unfortunately, this information does not indicate the relationship of households to the area median income. Assuming the average household size is 2.89 persons with 1.54 full-time equivalents ("FTEs") per household and assuming an hourly wage of $8.50 to $9.50, these households are earning between $27,227 and $30,430 annually. This is between 42% and 46% of the area median income. Households earning less than 50% of the area median income make up nearly one third of the households in Park City. This is an increase from 25% in 1990.

Contrary to the stereotype that resort industry communities are populated by college students "hanging out" for a semester or two, the population of Park City is quite stable. It is important to recognize that 74% of resort industry employees work year round and have the equivalent of full time jobs. Of these employees, 38% have lived and worked in the Park City area for more than four years with a substantial majority living in the area for more than two years.

In addition to residents falling into the lower income groups, seniors and persons with disabilities represent another group with special housing needs. Housing without adequate accessibility is frequently encountered within the market, limiting housing options for elderly and disabled individuals. No recent information has been collected regarding disabled individuals in the Park City area. However, anecdotal information suggests a growing need for special needs housing, especially for persons with mobility impairments. Of the 168 affordable multi-family housing units constructed in Park City in the last five

years, only five were wheelchair accessible units. Projects constructed outside of the City limits within this same period include only four such units.

In 1999, the Mountainlands Community Housing Trust Affordable Housing Resource Center reported an increase in requests for handicapped accessible units. This trend is predicted to increase as the City moves closer to the 2002 Paralympics and disabled athletes look to move into the region to train. Additional accessible units will also help meet the needs of an aging population, as well as the inevitable injuries that come with living in a ski town. This type of unit can also help households to "age in place" rather than leaving the community when alternative housing types are required.

V. EXISTING AND PROJECTED AFFORDABLE HOUSING NEEDS

Prior to 1990, the housing value profile of Summit County, and Park City in particular, resembled many other rural communities. Beginning in 1990, however, and continuing to the present, the value of homes in Park City and the Snyderville Basin area have experienced tremendous appreciation.

Housing affordability is a function of housing prices and residents' incomes. In the Park City area, housing prices are considerably higher than elsewhere in the State.

The affordable housing market in 1999 showed a continuation of trends from prior years including a growing economic disparity and imbalance among housing need, availability and affordability. Availability is limited and the purchase price is increasing. Rents in the Park City area increased approximately 5% in 1999. The price of owner-occupied units increased by approximately 16%. In both cases, these increases exceeded the regional averages.

The cost of entry, the income required to purchase the median priced market rate home, has increased by an average of 13% for single-family units and 18% for multi-family units annually since 1992 in Park City. In the Heber area, these costs have increased approximately 15%. Rents in the region have increased on average 5-6% per year. Conversely, wages have not kept pace with these increases with an average increase of only 6% annually.

The median price for a condominium in Park City in 1999 was $386,000. To purchase a median-priced condominium within Park City requires a household income of nearly $116,000, or nearly 170% of the area median income. In the Snyderville Basin area, a household would need an annual income of $53,000 to purchase the median priced condominium of $175,000. In contrast, in 1992 a median-priced condominium would have required an income of 80% of the area median income.

The potential of purchasing a single-family home is even more remote. The median purchase price for a single family home is $636,250 in Park City and is $386,000 in the Snyderville Basin area (*1998 Park City Affordable Housing Survey, Rosenthal and Associates*).

In 1990, the affordable housing deficit was estimated to be 166 units for households earning 50% or less of the area median income. By 1998, that deficit had increased dramatically to 650 housing units affordable to households earning less than 80% of the area median income.

The supply of affordable units is quantified based on a needs estimating model that relies on Census information to define a 1990 baseline and on research to estimate the net change between 1990 and 1999. The deficit does not define an exact number, but rather an order of magnitude estimate of need. It is an estimate of the number of households that are inadequately housed, living doubled-up, or living one paycheck away from homelessness because of high housing costs. It does not mean that there are 650 households that want to move to the area but can not because of housing costs. It means that there are 650 households currently within the community that cannot find appropriate housing. This is an important distinction.

Conventional living arrangements, one (1) person per studio or one-bedroom apartment for example or one (1) family per single family unit, are less attainable this year as compared to last. This is particularly true with respect to households below 60% of area median income, those earning less than $38,000.

Demand for households earning approximately 50% of the area median income, or $31,200, an important population of service and resort employees, remains unfulfilled and perhaps is increasing. In 1999, the shortage was approximately 450 units for families at or below 50% of the area median income. The estimated deficit in 1998 was approximately 650 units. This income level is typically composed of teachers; city government employees; resort, hospitality, and restaurant employees; and minimum wage retail employees. This group can typically afford a monthly rent payment of $800 or a mortgage of approximately $115,000.

A needs assessment model created recently by Rosenthal and Associates suggests that, for households above 80% of the area median income, demand for affordable housing has been largely satisfied within the Snyderville Basin area. However, within Park City, housing remains largely unaffordable for households at 100% of the area median income.

Table 4 illustrates the average wage by industry in Park City and the amount of rent or mortgage payment a household can afford.

Table 4: Wages and Housing Affordability

Job Category	Effective Hourly Wage	Estimated Wages and Other Income	Percent of Area Median Income	Maximum Monthly Housing Costs (Rent and util. or PI) (Excl. tax & ins.)	Maximum Purchase Price (Assumes 5% down and 7.5% for 30 years)
Average Park City Wage and Salary	$12.40	$39,598	62%	$990	$133,649
Average Minimum Wage Household	$5.40	$17,321	27%	$433	$50,006
Entry Level Teacher	$13.20	$27,533	43%	$668	$88,349
City Government					
General Office Clerk	$10.70	$22,267	35%	$557	$68560
Bus Driver	$14.70	$30,630	48%	$766	$100,013
Emergency Services Worker	$19.20	$39,927	55%	$998	$134,867
Resort. Retail and Restaurant					
Health Club, Commercial, Retail, Day Care, Ski Staff Employee	$8.90	$18,564	29%	$464	$52,058
Housekeeping and Front Desk Employee	$9.20	$19,110	30%	$478	$56,6764
Bell Staff	$9.90	$20,654	32%	$516	$63,785
Accounting	$10.50	$21,840	34%	$471	$72,800
Reservations	$10.50	$21,840	34%	$471	$72,800
Supervisors	$10.50	$21,840	34%	$471	$72,800
Restaurant & Bar	$12.00	$24,927	39%	$548	$83,090
Maintenance	$12.10	$25,116	39%	$553	$83,720
Administrative Assistant	$14.20	$29,484	46%	$682	$98,280
Middle Management	$20.40	$44,625	70%	$1,041	$148,750
Senior Management	$24.00 +	$50,000 +	>80%	$1,175	$167,000

From 2000 to 2002, projections by the GOPB indicate a substantial increase in these indicators as the County prepares for the Winter Olympics. During this period, the Summit County population is expected to increase by about 15% annually while Park City's population is expected to increase by about 14%. A substantial part of this growth will be new wage and salary workers who will require affordable, below market housing.

The number of these new workers and their respective income characteristics can be approximated base upon current trends. If the population of new residents demonstrates about the same income distribution as that shown to date during the 1990s, then future demand for affordably priced housing will be about 570 units for households at or below 50% of the area median income level. This translates into a demand for approximately 1,220 units by the year 2002.

Based upon population trends in the region, this level of unsatisfied demand from lower income households should be expected to continue. Virtually every economic index shows the region in the midst of continued economic expansion. These jobs have certain characteristics including seasonal employment, lower wage rates and greater percentage of part-time and secondary jobs. As the local economy expands, demand for service workers will rise and the population of this income group will increase. In a strong real estate market where wages lag behind price, this income group will be the hardest to serve and the most likely to have its housing needs go unmet. Households at 30% of the area median income level were the fastest growing group among affordable housing constituents between 1990 and 1997 and the total for those below 50% of the area median income comprise nearly three-quarters of all potential affordable housing demand.

As would be expected, demand for seasonal employees increases significantly during the winter months. This influx of seasonal workers places a strain on the existing housing inventory. Generally, these workers are looking for short term housing, defined as less than six months, and preferably within the "Old Town" area. For the most part, these workers are younger and interested in the nighttime activities this part of town offers. Many of these workers do not have automobiles, which makes living within Park City, with its associated transit system, a necessity.

The housing market for seasonal workers is becoming increasingly constrained. Based upon trends in the Affordable Housing Resource Center of the Mountainlands Community Housing Trust, housing options for transient, seasonal employees may be diminishing, especially for conventional rentals. Apartments and condominiums nearby that formerly accepted short-term tenants on a month-to-month or six-month lease basis have revised their leasing strategy and been successful in attracting more permanent residents. This trend had a noticeable impact on housing availability for the 1999-2000 winter season.

There is also a growing demand for owner-occupied units. Ownership units are considered a priority because they are in demand by a workforce increasingly composed of year-round residents seeking a permanent stake in the community. Housing production trends within the marketplace indicate the need for owner-

occupied units affordable to households between 50% and 60% of the area median income level. In 1998, no units were sold within the region that were affordable to households below 80% of the area median income level. Units priced in the $110,000 to $125,000 range would fill a significant percentage of this owner-occupied housing demand. Households looking for this type of housing are year-round residents now in rental units who are seeking a stake in the community and who anticipate being priced out of the market before too long. They are positioned to purchase these homes if they existed.

VI. PROPOSED AFFORDABLE HOUSING PLAN

A. Overview

Creating affordable housing that is an asset to the individual household and the community is a delicate balance of community values, individual needs, aesthetic judgments and technical requirements. The entire community is affected by the affordable housing issue and the entire community needs to be involved in the solution. There are disadvantages associated with a transient, non-resident labor force including: i) difficulty in recruiting an employee base that will take a long-range view of the employment because of an inability to settle within the community due to housing affordability issues; ii) a constrained labor supply with a high wage rate; iii) reduced job satisfaction and consequently reduced employee reliability; and iv) increased traffic congestion. These facts can result in an overall higher cost of doing business both directly to the public and private sector due to increased labor costs and indirectly in terms of reduced competitiveness and loss of business for the recreation and hospitality industry if the quality of service were to degenerate. The effect of this trend over the long run could be to erode the quality of life for all residents of the area.

Obviously, there is no single solution, but rather a need for a variety of approaches to solving the problem. This Plan presents an affordable housing recommendation that is equitable to both the community and Flagstaff Mountain Resort. The recommendations are intended to address the current and projected housing demands presented in Section V, specifically the need for housing affordable to households at 60% of the area median income level, and to comply with the statutory requirements of the Development Agreement and the City Affordable Housing Ordinance.

As stated in Section II, the Development Agreement required Flagstaff Mountain Resort to provide a maximum of 91 affordable housing unit equivalents, a minimum of 25 % of which must be located on-site, unless otherwise provided by the Housing Authority.

The Park City Affordable Housing Guidelines and Standards require:

1) Affordable housing units be constructed on the project site unless the developer can demonstrate to the Housing Authority compelling evidence that the project cannot accommodate on-site units.
2) Rental rates and re-sale price limitations shall remain in place for a minimum of 40 years with perpetuity being the preferred alternative. First right of refusal and/or option to purchase shall be granted to the Housing Authority. Longer terms of limitations may be negotiated on individual projects as directed by the Housing Authority.

3) Projects shall be integrated in design and income. Large-scale projects that provide the same unit type at the same price or rent and that are isolated from community services and public transportation are discouraged. Smaller projects located near community services that provide for mixed incomes and mixed unit types are preferred.

The City Housing Ordinance defines an Affordable Housing Unit Equivalent as a two-bedroom, 800 square foot unit. The number of Unit Equivalents can be further reduced by providing units affordable to households earning 45% of the area median income. Table 5 below outlines how Unit Equivalents may be satisfied in alternative configurations.

Table 5: Unit Equivalent Fulfillment

Unit Type	Unit Equivalent	Square Footage	Maximum Monthly Rent	Maximum Purchase Price
Single Resident Occupancy unit	0.25	200	$252	$38,329
Studio Unit	0.50	400	$402	$59,781
One Bedroom Unit	0.75	600	$548	$80,662
Two Bedroom Unit	1.00	800	$658	$95,394
Three Bedroom Unit	1.25	1,200	$769	$112,269
Four Bedroom Unit	1.50	1,400	$916	$133,150

In addition to housing demand and statutory requirements, the recommendations of this Plan are designed to achieve high quality housing that fits comfortably into the community and is an asset to its residents and the community as a whole. To achieve this requires a diversity of housing options including rental and ownership opportunities. Housing types may include single-family detached, single-family attached, town-homes, stacked multi-family or single room occupancy units. Housing tenure should include seasonal, transitional and permanent opportunities.

As stated previously, market trends dictate the need for units affordable to households between 50% and 80% of the area median income levels, with the majority of the demand for units between the 50% and 60% levels. Owner-occupied units are increasingly in demand by the expanding year-round workforce that currently resides in rental units. An increased supply of units at this level may not only reduce the pressure on this segment of the affordable housing need but may also have the added benefit of reducing the pressure for affordable housing across the board.

This Plan recommends the following affordable housing targets:

1) 45% of the units as permanent rental units configured as single-family attached, single-family detached or multi-family units.
2) 30% of the units as affordable owner-occupied units configured as single-family attached, single-family detached or multi-family condominiums.
3) 25% of the units as on-site employee units configured as manager units incorporated into the multi-family condominium buildings developed as part of the Resort.

These percentages are initial targets. They are intended to be flexible in order to respond to emerging economic, market, labor force and property conditions. This Plan will be reviewed and updated frequently to ensure that the housing developed meets the current conditions and demand.

It is important to note that it is generally very difficult to develop housing for targeted households earning less than 80% of the area median income level without significant subsidies. These subsidies traditionally have come in the form of below-market construction financing, equity raised through the syndication of Low Income Housing Credits for rental housing, fee reductions or waivers, or government sponsored programs such as the HUD 202 Elderly Housing Program. Affordability is generally achieved by layering these subsidies. In many communities, these tools are frequently sufficient to create affordable housing.

Creating affordable housing in the Park City market place is further complicated by the limited availability of inexpensive land on which to construct. Given no additional subsidy, affordable housing could be developed to meet the needs of households at 80% of the area median income level. While there is certainly a need for this type of product in the market, this Plan has identified the greatest affordable housing need for those households at or below 60% of the area median income level. In order to achieve this goal, the cost of the land will need to be greatly reduced or removed from the equation altogether and additional subsidies will be required.

United Park City Mines Company, a partner in FMP, has within its current land holdings several parcels that could be contributed for affordable housing development in order to achieve these targeted affordability goals. Contribution of these infill holdings would have the added benefit of shortening the development schedule since time associated with site identification and acquisition would be eliminated.

Land can be contributed in a variety of ways. The most straightforward way would be in the form of a donation of the land to a non-profit organization or the

Park City Housing Authority for development of affordable housing units. Park City Housing Authority could solicit development proposals from either non-profit or for-profit affordable housing developers. Another option would be for United Park City Mines Company to retain the underlying ownership of the land with a right of first refusal that could be exercised after the 40-year restriction period required by the Park City Housing Authority has expired. With regard to rental units, the value of the land could be structured as an equity investment by United Park City Mines Company or as a deferred or cash flow loan to the Resort. Whatever the case, the exact mechanism will be a function of the economics of the Resort.

B. Affordable Housing Options

Option A: As was stated above, the Development Agreement stipulates that a minimum of 25% of the total affordable housing unit requirement be located on-site, unless otherwise directed by the Housing Authority. This percentage equates to approximately 23 affordable housing unit equivalents. Flagstaff Mountain Resort intends to fulfill this requirement by incorporating employee units into each of the proposed multi-family buildings developed as part of the Resort. These units will be leased to "key" employees of the individual developed projects.

Option B: United Park City Mines Company owns a parcel of land known as the Ontario Mill Property located on the east side of Marsac Avenue at the intersection of Hillside Avenue (refer to Exhibit C, Sandridge Heights Properties, attached). Paragraph 2.9.13 of the Development Agreement limits the use of this site to either affordable housing or open space.

The City Housing Ordinance 17-99 identifies a preference for smaller affordable housing projects located near community services that provide for a mix of unit types that accommodate a range of income levels. The Ontario Mill Property could potentially be developed as an affordable housing project with an overall density of 8 to 10 units. It is along a City bus route, just uphill of the City's new transit center and is convenient to employment, shopping and recreational opportunities. As an infill site, existing infrastructure could provide cost savings possibilities.

A development plan for this property could include up to ten, two-bedroom rental-housing units targeted to households earning 40% to 50% of the area median income.

One drawback to this particular site is that it is adjacent to and associated with the site of the former Ontario Mill. The portal of the Ontario Drain Tunnel No.1

is located on this site along with the remnants of the Union Pacific "High Line" railroad spur, a materials loading bay, and the Judge loading station. This site may be deemed to be historically significant and as such, its development potential could be restricted. In addition to the potential historic significance of this site, the fact that it was associated with the Ontario Mill will require some environmental remediation.

These concerns will be investigated, researched and reviewed as part of the due diligence, land planning and entitlement process associated with the development of this site.

Option C: United Park City Mines Company owns a second parcel of land across Marsac Avenue from and slightly uphill of the Ontario Mill Property (refer to Exhibit C attached).

This parcel could potentially be developed as an affordable housing project with an overall density of 8 to 10 units. As was the case with the Ontario Mill Property, it is along a City bus route, just uphill of the City's new transit center and is convenient to employment, shopping and recreational opportunities. As an infill site, existing infrastructure could again provide cost savings possibilities.

A development plan for this property could include up to eight, three-bedroom owner-occupied units affordable to households earning between 50% and 60% of the area median income. This translates into a sales price between $102,000 and $129,000 assuming a 30-year, 7.5% mortgage with a 5% down payment

These concerns will be investigated, researched and reviewed as part of the due diligence, land planning and entitlement process associated with the development of this site.

Option D: United Park City Mines Company owns a parcel of land at the top of Daly Avenue (refer to Exhibit D, Daly Avenue Property, attached).

This property has the potential to be developed as an affordable owner-occupied townhouse product given the high number of nightly and long-term rentals existing on Daly Avenue. The Property has the ability to carry approximately six units. Deed restriction could be recorded in order to ensure that the units remain owner-occupied units.

This property is close to Old Town and again has the benefit of existing infrastructure being in place in close proximity.

Option E: The 20-acre Quinn's Junction Parcel owned by United Park City Mines Company provides an excellent opportunity to create a successful mixed-

income housing development that could be a model for other public agencies and developers throughout the region. Located at the southwest corner of the intersection of US 40 and SR 248, (refer to Exhibit E, 20-Acre Quinn's Junction Property, attached), development of this parcel as a master planned community with a mix of incomes, housing types and ownership models offers an opportunity to mitigate the critical need for affordable housing in the Park City area.

Developing a mixed-income project in this location could benefit from surplus funds generated from market-rate units that would create a subsidy for lower income units and the diversity required for community acceptance. This type of project may also provide an opportunity for a joint venture between for-profit and non-profit developers working together to bring a variety of expertise, private and public financing, community values and political and public approval.

Based upon the experiences of similar communities developed across the country, a target income level mix that might be successful in this case would be a community that includes 25% low income, 50% moderate income and 25% market income units. The affordable housing needs in the Park City area are diverse and encompass a wide range of household configurations. A development that includes a mix of styles and ownership opportunities could meet the needs of multiple market segments and maximize the impact upon affordable housing.

A mixed income, planned community at this site could advance the objectives of the City Housing Plan by providing a development that is integrated in design and income level. This could be further enhanced by a set of amenities within the development including common open space, multi-purpose room and a community meeting space to facilitate integration and interaction.

Obviously, it will be important from a community planning perspective that the development of this master planned community not occur in a manner that isolates its residents. The goal will be to create a project that is integrated into the surrounding community. While there are a number of development projects proposed along this corridor, this Plan recognizes that it could be several years before there is significant development activity underway. Therefore, the timing of this project is important.

Option F. Flagstaff Mountain Resort will evaluate the purchase of existing market rate units throughout the Park City area under Park City's Moderate Income Rental Program. There are a number of units available in the Park City area that could provide affordable housing opportunities, not due to deed restriction, but simply by virtue of their age and condition. A portion of the required affordable housing unit equivalents could be fulfilled by the acquisition

of these units by the Resort and placement into the Moderate Income Rental Program. This could be accomplished by either an outright purchase of the units by the Resort or an in-lieu of contribution that could be used to write-down the cost of the unit for purchase by the City or another non-profit organization.

Option G: Flagstaff Mountain Resort will work with the Mountainlands Community Housing Trust to explore and evaluate other options available related to the development, purchase or subsidy of new and/or existing affordable housing properties.

Option H: In accordance with Paragraph 2.10.4.2 of the Development Agreement, Flagstaff Mountain Resort will evaluate the potential of donating the 20-acre Quinn's Junction Parcel to Park City without restrictions or encumbrances in lieu of some, or all, of the Project's affordable housing obligation.

Option I: In accordance with Paragraph 2.10.4.3 of the Development Agreement, Flagstaff Mountain Resort will evaluate the potential of exchanging the 20-acre Quinn's Junction Parcel for an alternative parcel provided to the Resort by Park City for development of affordable housing units.

Option J: Finally, in accordance with Paragraph 2.10.4.4 of the Development Agreement, and if mutually acceptable to Flagstaff Mountain Resort and Park City, the Resort will agree to pay to the City a fee in lieu of constructing affordable housing. It would be stipulated that this fee must be used for the acquisition and/or construction of affordable housing units consistent with the City's affordable housing policy.

VII. PHASING

The Development Agreement requires that the affordable housing be phased with the development of the Resort. The goal of this Plan is to develop affordable housing units at a rate in excess of that required by the Resort's development schedule in order to mitigate the impact on the community.

The Planning Commission has directed Staff to implement, to the extent practical, the units propose in options B, C and D (sites inside the City) first. Additional requirements will occur incrementally as the project is developed. The Quinn's Junction site should be considered for the later phases of the program. Detailed plans for site-specific design, phasing of occupancy and ownership mix, and price structure will be a requirement of the subsequent CUP(s) that trigger the commitment as laid out in the phasing schedule in this section.

Phase One of this Plan will focus on the smaller infill projects identified in Options B, C and D. Flagstaff Mountain Resort will complete its due diligence and planning relating to these sites, meet with the City, neighbors and the public in general to review any concerns and/or comments they might have relating to the development of these sites, and process the appropriate approvals for development. All of this work will commence immediately after the approval of this Plan in an attempt to develop these parcels as quickly as possible.

Phase Two of this Plan will coincide with the actual development of the Resort. As the Resort's built product comes on line, and the demand for employees grows, the proposed on-site units associated with Option A will be developed.

Phase 3 of the Plan will be the development of the 20-acre Quinn's Junction Parcel, Option E. The intention is to coordinate and integrate the development of this parcel with the other developments proposed for this corridor.

Finally, Flagstaff Mountain Resort is committed to pursuing Options F, G, H, I and J at any time those opportunities present themselves.

Additionally, FMP and City Planning staffs have negotiated the following phasing commitment to insure that affordable housing is being constructed concurrently with the development of the Flagstaff Mountain Resort.

Table 6: Phasing Commitment

Density Increment or Number of Flagstaff Unit Equivalents, with Certificate of Occupancy	Affordable Housing Units Construction or Fees Paid Before Next Density Increment is Permitted
0 – 150	15
151 – 300	30
301 – 450	45
451 – 600	60
601 – 750	75

VIII. TRACKING

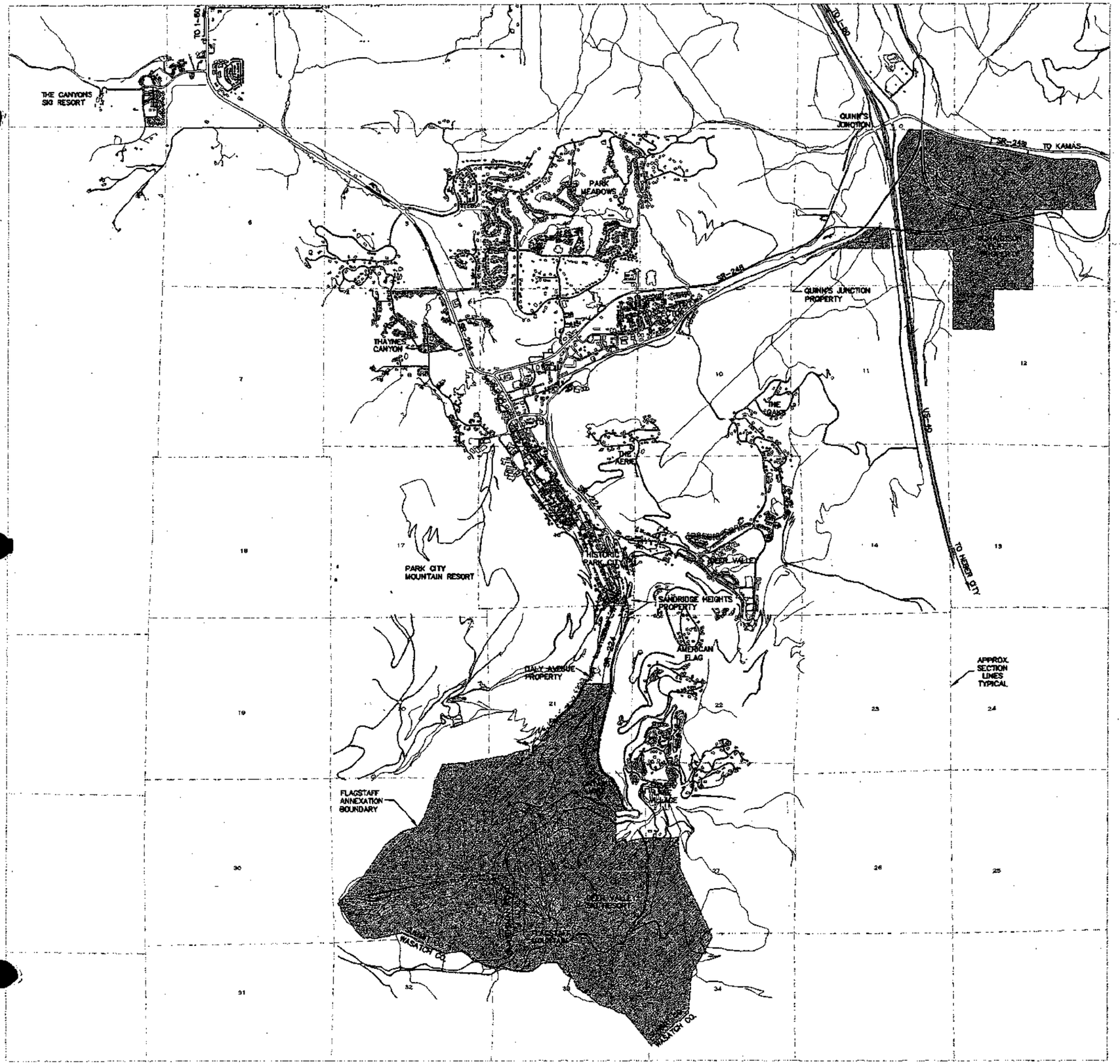
The following tables are proposed to be used as a tool for the City, Developer, and Mountainlands Community Housing Trust to monitor the concurrent development of affordable housing.

Example 1: Residential Development Matrix – 10%

Development Pod	Units Proposed	Required Affordable Units	Phasing Proposed	Affordable Housing Units Under Construction or Fees in Lieu Paid
A				
B-1				
B-2				
D	38 (+8)			
TOTAL	705 mf ue's 54 sf homes	71 54		

Example 2: Commercial Development Matrix – 20%

Development Pod	Commercial Square Footage Proposed	Required Affordable Units	Phasing Proposed	Affordable Housing Units Under Construction or Fees in Lieu Paid
A				
B-1				
B-2				
D	38 (+8)			
TOTAL	75,000 sf (1,000 sf = I ue)	15		



1600 0 1600 3200 FEET

EMPLOYEE/AFFORDABLE HOUSING PLAN

REGIONAL MAP
EXHIBIT "A"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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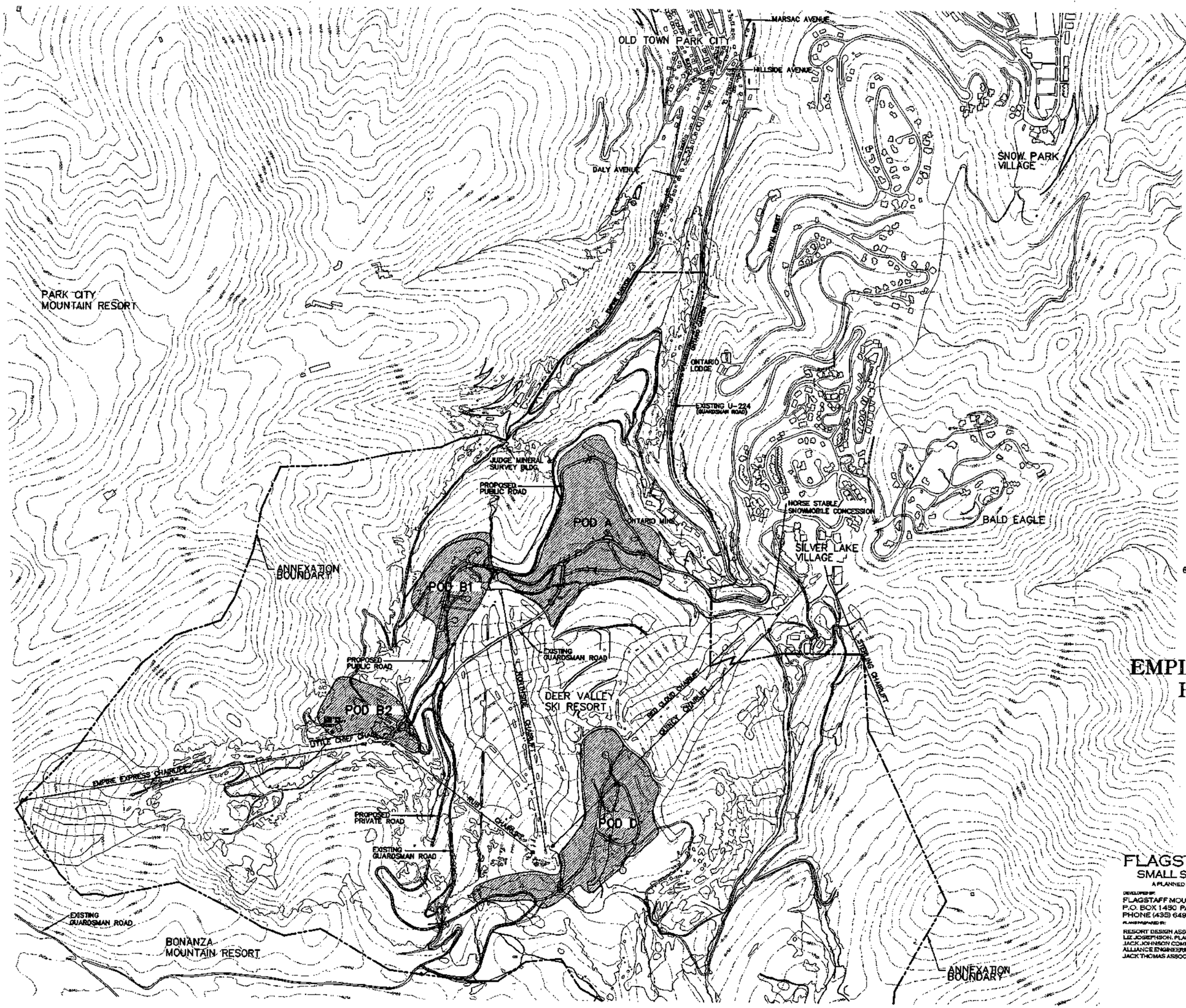

EMPLOYEE/AFFORABLE HOUSING PLAN

SITE PLAN EXHIBIT "B"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
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PLANS PREPARED BY:
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ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

VIRGINIA MINING CLAIM

BLOCK 81

PROPOSED SITE 1

ONTARIO MINE TUNNEL

DEER VALLEY RESORT COMPANY

MILLSITE RESERVATION

P.C.M.C

RUNAWAY TRUCK RAMP UNDER CONSTRUCTION

MARSAC AVE.

BLOCK 64

PROPOSED SITE 2

STATE ROAD U-224 (MINE ROAD)

SANDRIDGE

PROSPECT STREET

PROSPECT STREET SUBDIVISION

BLOCK 19

HILLSIDE STREET

MAIN STREET

PARK AVENUE

KING ROAD

DALY AVENUE

7210 7220 7230 7240 7250 7260 7270 7280

40 0 40 80 FEET

EMPLOYEE / AFFORDABLE HOUSING PLAN

SANDRIDGE HEIGHTS PROPERTIES
EXHIBIT "C"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

EXISTING MILLSITE RESERVATION TO PARK CITY LOTS

EXISTING DALY WEST SUBDIVISION

DALY AVENUE

PROPOSED SITE 3

EXISTING DETENTION POND TO BE RELOCATED AND STORM DRAIN EXTENDED UP EMPIRE CANYON

N 21000 N 21000

N 20500 N 20500

40 0 40 80 FEET

EMPLOYEE/AFFORDABLE HOUSING PLAI

DALY AVENUE PROPERTY
EXHIBIT "D"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA
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JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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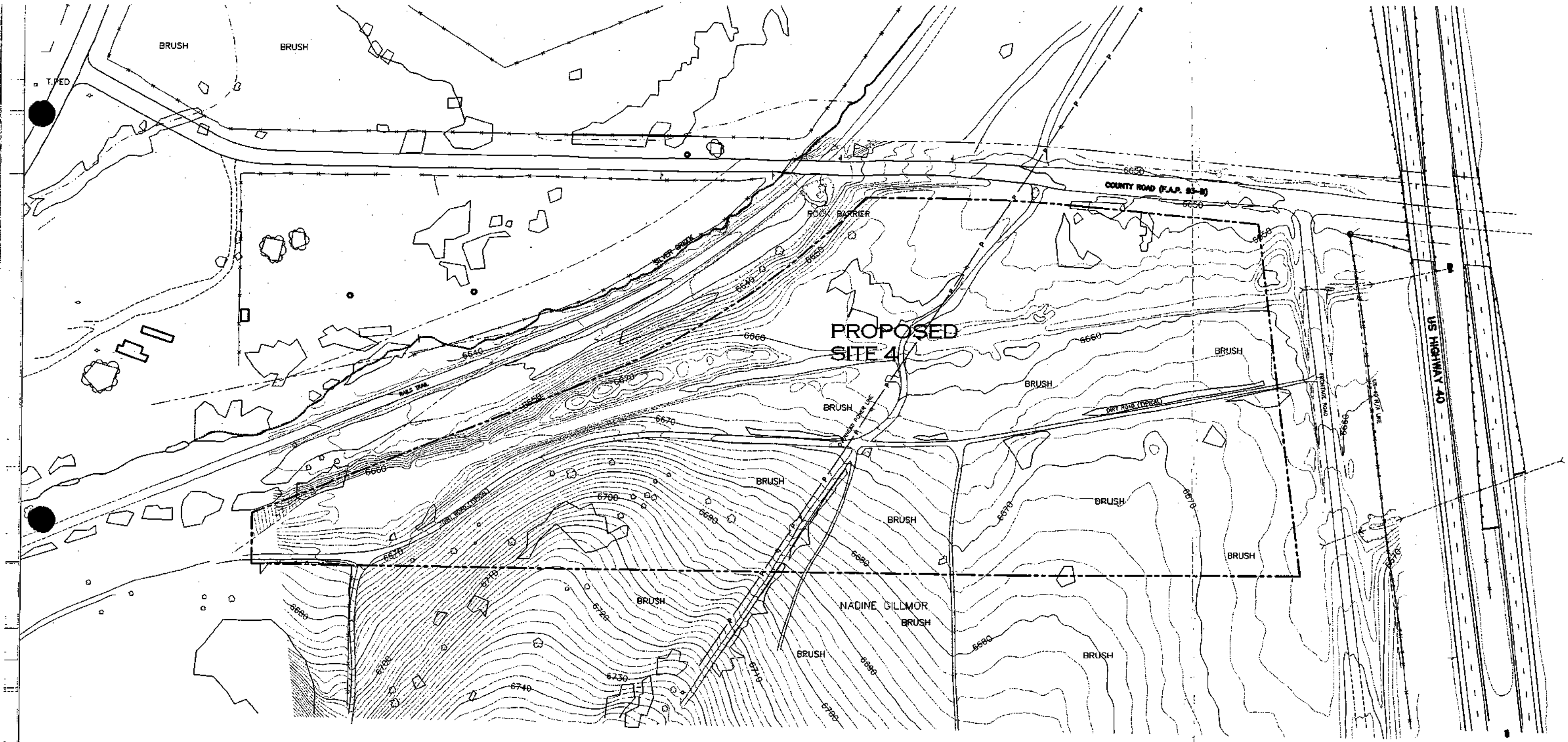

80 0 80 160

EMPLOYEE/AFFORDABLE HOUSING PLAN

20-ACRE QUINN'S JUNCTION PROPERTY

EXHIBIT "E"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
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JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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FLAGSTAFF MOUNTAIN RESORT

A PLANNED RESORT COMMUNITY
DEER VALLEY, UTAH

CONSTRUCTION MITIGATION PLAN

EXHIBIT 15

MAY 2001
REVISED AND APPROVED DECEMBER 2001

PREPARED FOR:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450
PARK CITY, UTAH

CONSTRUCTION MITIGATION PLAN
FOR
FLAGSTAFF MOUNTAIN RESORT
PARK CITY, SUMMIT COUNTY, UTAH
also known as
EMPIRE PASS

EXHIBIT 15

Prepared by:
United Park City Mines Company

May 2001
(Revised and Approved December 2001)
Revised ~~February~~ 2004
Adopted April 2005

TABLE OF CONTENTS

I. INTRODUCTION, GOALS & OBJECTIVES

This study is one of several reports that have been prepared to support the Flagstaff Mountain Resort's Large Scale Master Plan Development (LSMPD) application. As LSMPDs are programmatic in nature and subject to refinement at subsequent Master Planned Development (MPD) or Conditional Use Permit (CUP) stages, correspondingly, the contents of this report should be viewed as conceptual in nature and subject to change as specific plans are developed. Details developed at the MPD or CUP stage will not require a modification of this plan provided that they comply with the Goals and Objectives of this Plan.

General Description of the Property

Flagstaff Mountain Resort (the "Resort") is an assemblage of mining claims totaling approximately 1,655 acres of land (the "Annexation Area" located at the southwestern corner of Summit County, Utah. The Annexation Area is bordered by Deer Valley Resort to the east and State Highway 224 (Marsac Avenue) to the northeast. The southern boundary coincides with the Summit County/Wasatch County line. The Park City Mountain Resort borders the Annexation Area to the west and northwest. The Resort was annexed into the corporate limits of Park City, Utah on June 24, 1999 (refer to Exhibit "A" attached).

The proposed areas of development will be restricted to a) the "Mountain Village" consisting of three Development Pods ("A", "B-1" and "B-2") limited to: a) maximum of 84 acres and b) the "Northside Neighborhood" (Development Pod "D") limited to a maximum of 63 acres.

The maximum density allowed within the Mountain Village includes 705 Unit Equivalents configured in no more than 470 residential units. The residential units may be multi-family units, hotel room units or PUD units. In addition, the Mountain Village may also contain a maximum of: i) 16 single-family home sites; and, ii) 75,000 sf of resort support commercial uses.

The Northside Neighborhood (aka Red Cloud) may contain a maximum of 38 single-family home sites of which 30 are currently entitled and 8 are subject to further requirements under the Development Agreement.

In addition to the Deer Valley Resort "Empire" Day Lodge near the Daly West waste rock pile, uses for the Resort are intended to include hotel lodging facilities, resort support commercial, multi-family residential units, PUD-style

residential units and single-family home sites. Recreational uses will remain similar to the current uses described above, with the exception of commercial snowmobiling, which will be discontinued.

Construction and Potential Construction Impacts

Development of the Resort will include two (2) basic types of construction, infrastructure which includes roads, utilities, etc. and the actual residential and commercial buildings themselves. This Construction Mitigation Plan primarily addresses the infrastructure development of the Resort, although the guidelines set forth herein will be incorporated into the individual construction mitigation plans that will be required for each of the building development projects.

The proposed infrastructure development includes construction of: i) roadways, with the associated bridges and tunnels; ii) storm water drainage facilities; and, iii) utility systems including sanitary sewer, water storage & pumping, water distribution, natural gas, electric power transmission and telecommunication systems along with trail systems, ski lifts and other Resort improvements.

As stated above, each individual building project will be required to submit a site-specific construction mitigation plan prior to commencement of construction. These individual building construction mitigation plans will supplement and be consistent with this Plan. Section VI, "Construction Mitigation Plan Management" addresses this supplemental process to ensure compliance and implementation of these Plans.

Construction Mitigation Planning Goals and Objectives

The primary goal and objective of this Construction Mitigation Plan is to identify and mitigate the impacts of infrastructure construction associated with the Resort, adhering to the standard Park City Municipal Corporation ("Park City") required construction impact mitigation measures along with additional site-specific mitigation measures required by the Development Agreement.

In addition, a complete Storm Water Pollution Prevention Plan ("SWPPP") will be prepared and implemented separately for the Resort in strict accordance with local, State and Federal guidelines. The primary goals of the SWPPP will be: i) to limit the areas of disturbance of the existing vegetation to only those areas required to install the proposed improvements; ii) to retain sediment on site to the extent practicable through the selection, installation and maintenance of storm water control measures in accordance with good engineering practices; and, iii) to prevent construction litter, debris and chemicals from becoming a pollutant source of storm water discharges. The SWPPP will also be designed to

protect Park City's water sources and their designated water source protection areas.

For purposes of this Construction Mitigation Plan, and inasmuch as most of the issues and concerns addressed are identical, portions of the SWPPP will be incorporated into the individual sections of the Plan as they apply.

II. EXISTING CONDITIONS

Existing Access

Access to the approximately 1,655-acre Annexation Area is via either Guardsman Pass Road or Daly Avenue. Guardsman Pass Road through the site is a narrow and steep minimally maintained road with a surface of either deteriorating asphalt or gravel. Guardsman Pass Road is not maintained or plowed in the winter and is closed to vehicles after the first significant snowfall of the season at a gate located approximately one-quarter mile south of the Guardsman Connection. Daly Avenue provides gated access to the mouth of Empire Canyon below Development Pod A.

Existing Uses

The Annexation Area has historically been a popular recreational site used by area residents and visitors alike. Winter uses include both lift-served resort skiing as well as backcountry skiing, snowshoeing and snowmobiling. Summer uses include mountain biking, hiking and equestrian uses.

Within the Annexation Area portion of Deer Valley Resort, there are six existing ski lifts and approximately 36 ski runs, many of which have been cut through forest stands, graded, and revegetated. Four additional lifts are currently planned for the Annexation Area. One of these will serve the ski in/ski out needs of Development Pod A, one will access existing terrain between the Red Cloud and Northside Lifts (Ski Pod D) and the other two will access new intermediate and advanced ski terrain in Empire Canyon (future Ski Pods X and Z).

A snowmobile concession, located just east of the Guardsman Connection at the horse stable has been discontinued.

Numerous trails currently exist within the Annexation Area, which include improved roadways, jeep trails, single-track trails, and undeveloped game trails. Many of the undeveloped trails are used on a limited basis by local hikers and equestrians. Other trails receive more frequent use and are recognized as serving a broader spectrum of the public. The "Trails Master Plan for Flagstaff Mountain Resort" provides a detailed description of the existing trail system.

Mining Operations

Although active mining operations ceased in 1982, more than a century of intensive mining activities within the Annexation Area have left a number of mining-related features ranging from bits of debris and subtle landscape alterations to massive mine waste rock overburden sites and standing structures. As mentioned above, the Historic Preservation Plan provides specific information regarding the current status of mining related structures and features within the Annexation Area.

Existing Utilities

Utilities as outlined in the Utility Master Plan have been installed in Marsac Avenue. Water, Electrical and telephone are connected to the service providers. The second sewer outfall down Marsac Avenue is partially complete and will be finished in the summer of 2004.

Existing Emergency Services

Existing and proposed Emergency Services are detailed in the Emergency Response Plan for the project.

III. SCOPE OF INFRASTRUCTURE CONSTRUCTION WORK

Improvements to Marsac Avenue and Mine Road section of State Route 224

As required by the Development Agreement, the Resort will make certain improvements to Marsac Avenue beginning at the Deer Valley Drive "Roundabout," continuing south on Marsac Avenue and the Mine Road to the Guardsman Connection. Included as part of these improvements will be the construction of a runaway truck ramp which was completed in 2001. The balance of the improvements to this section of road include rebuilding the travel surface, adding curb and gutter, and the addition of a short uphill passing lane which is schedule to be completed by the end of 2004.

Realigned Guardsman Pass Road

Guardsman Pass Road from the Guardsman Connection through Development Pods A and B-1 to Development Pod B-2 has been realigned and accepted by the State.

Private Road

A private road, constructed to the same cross-section described above for the re-aligned portion of Guardsman Pass Road, will be built to serve Development Pod D and the proposed Bonanza Mountain Resort located in Wasatch County on a year-round basis (refer to Exhibit "G" attached). Access to this private road will be limited to the residents of Flagstaff Mountain Resort and Bonanza Mountain Resort along with their respective visitors, guests, employees and service personnel (refer to the Private Road Access Limitation Procedures for Flagstaff Mountain Resort). A private street may be dedicated to the City with City Council approval. An emergency secondary access road will be built from Pod D to Pod A.

Development Pod Infrastructure

Roads within the Development Pods will be constructed to cross-sections similar to those described for the re-aligned Guardsman Pass Road (refer to Exhibit "B" attached). These roads will include all of the required utilities, which, for the most part, will be installed within the road platform. Parking will not be allowed on either side of these roads.

Bridges and tunnels will be constructed to provide grade separation of vehicles and recreational users (hikers, bikers & skiers). These structures will be designed to incorporate so-called "dry crossings" to provide access during construction as well as emergency vehicular access around these structures in the event of a structural failure.

Utilities

Water:

The Flagstaff Mountain Resort Conceptual Water Master Plan provides for the storage and distribution of water for both domestic and fire fighting uses. Water will be provided to the Resort by the Park City Municipal Corporation in accordance with i) an *AGREEMENT FOR A JOINT WELL DEVELOPMENT PROGRAM,* dated January 14, 2000 and ii) a *MEMORANDUM OF UNDERSTANDING BETWEEN PARK CITY MUNICIPAL CORPORATION AND UNITED PARK CITY MINES COMPANY CLARIFYING AND IMPLEMENTING THE WATER SERVICE AND WATER SOURCE DEVELOPMENT PROVISIONS OF THE DEVELOPMENT AGREEMENT dated June 24, 1999,* dated January 14, 2000, and iii) numerous other water agreements between the parties, and iv) any future agreements.

Water will be delivered to the 1,000,000 gallon storage tank (Water Tank #1) that UPK constructed on the east side of Guardsman Road, just above the Empire Day Lodge. The primary source of water for Tank #1 is planned to be the Spiro Water Treatment Plant via the 13th Street Pump Station and the Woodside Tank. After necessary upgrades to the existing system are completed, water will be pumped from the Woodside Tank up Empire Canyon to the Pod B-2 Tank via a 10" ductile iron water line.

The secondary source that presently supplies Tank #1 is the existing Bald Eagle Tank at the Deer Valley Resort. Water gravity flows to Tank #1 from the Bald Eagle Tank through the water line that feeds the Empire Day Lodge at Pod B-2 via a 10" ductile iron water line that runs along the Banner Ski Trail and across the Northside Ski Runs. Tank #1 is located at an operating elevation of approximately 8,450 feet above sea level and provides approximately 540,000 gallons of fire storage for Pods A, B-1 and B-2. This storage capacity has been calculated to provide the necessary 3,000 gallons per minute for the three-hour duration in accordance with the requirements of the Park City Building Department.

Tank #1 will provide water via a pump station and a 10" ductile iron water line to a second tank (Tank #2) of approximately 500,000 gallons to be located along the ridgeline in the area above red Cloud. Tank #2 will be located at an operating elevation of approximately 9,150 feet above sea level and will provide approximately 300,000 gallons of fire storage for red Cloud and for UPK's property in the Bonanza Flats area of Wasatch County. This storage capacity has been calculated to provide 2,500 gallons per minute for the two-hour duration. The fire flow assumptions for this tank have been reduced since the buildings served will be much smaller than those programmed for Pods A, B-1 and B-2. Water will be distributed from thes tanks via a series of water mains, with fire hydrants installed along the roads and throughout the development Pods as required by Park City and the District. In addition to the required fire hydrants, fire department connections and standpipe systems, fire hose storage cabinets and their appurtenances will be provided in strategic locations throughout Empire Pass to ensure appropriate resources are available in the event of a fire.

Sewer:

Flagstaff Mountain Resort will enter into the necessary Line Extension Agreements with the Snyderville Basin Water Reclamation District in order to secure adequate sanitary sewer service for the Resort.

Flagstaff Mountain Resort will construct a wastewater collection system throughout the Resort area.

Beginning at Development Pod D at the top of Flagstaff Mountain, wastewater will be collected and transported downhill via two separate sewers. The first will follow the alignment of the proposed private road that connects Development Pods D and B-2 and will collect wastewater from those single-family lots located on the west side of Flagstaff Mountain. This sewer will then collect wastewater from Development Pods B-2 and B-1 and convey it to the sewer line constructed in Empire Canyon during 2001. This is the sewer line that extends from the Empire Day Lodge to upper Daly Avenue.

The second sewer will collect wastewater from the balance of the single-family lots within Development Pod D and convey it along the Northside ski runs to Development Pod A.

A system of sewers within Development Pod A will collect the wastewater conveyed from Development Pod D, along with the wastewater generated in Development Pod A and convey it to Prospect Ridge.

From Prospect Ridge, a sewer will convey the wastewater down to one of two connections to the existing sanitary sewer system.

One is the existing sewer that was extended up Marsac Avenue by the City to a point just above the new Deer Valley Drive "roundabout" in Ontario Canyon. This line has the capacity to accept all of the wastewater generated by the Resort and will be the primary receiver of the Resort's wastewater.

The other outfall is the connection that will be made to the existing sewer at the top of Daly Avenue in Empire Canyon. The capacity of this line is restricted due to existing conditions within Main Street, so this line can only accommodate a portion of the overall requirements of the Resort.

Electric Power:

The source of electric power for the Resort will be the existing Judge Tunnel switch and the recently realigned Olmsted line. Power will be distributed from this point throughout the Resort via an underground distribution system located within either the proposed street rights-of-way or utility easements.

Telecommunications:

Allwest Communications will provide fiber optic lines for internet, cable and phone.

Natural Gas:

Questar Natural Gas Company has extended a transmission line to a regulator station in the pod B1 area. Distribution line have been installed in the realign Marsac Ave

For additional information relating to the proposed construction associated with the development of Flagstaff Mountain Resort, please refer to the following Resort master plan documents:

- The Construction and Development Phasing Plan
- The Utilities Master Plan
- The Drainage Master Plan
- The Private Road Access Limitation Procedures
- The Emergency Response Plan

IV. CONSTRUCTION IMPACTS AND MITIGATION MEASURES

Construction Phasing

Detailed anticipated timeline of construction activities are described in the "Construction and Development Phasing Plan for Flagstaff Mountain Resort". A Construction Mitigation Plan is required at the time of Conditional Use Permit application.

Traffic Impacts

The primary impacts to traffic on the roadways adjacent to the Annexation Area relate to construction personnel commutes and deliveries of construction materials and supplies.

As stated above, the primary access to the Annexation Area will be via Marsac Avenue and the Mine Road. The vast majority of construction personnel and material handling traffic to and from the Annexation Area will travel along this route. To a much lesser extent, there will be some minimal construction related traffic along Main Street and Daly Avenue associated with the limited construction activity located in the lower portions of Empire Canyon.

Roadways potentially impacted by construction traffic will include the following:

- SR 224 from Kimball Junction to Deer Valley Drive
- SR 248 from Quinn's Junction at Highway 40 to SR 224 (Park Avenue)
- Bonanza Drive
- Park Avenue to Deer Valley Drive
- Deer Valley Drive to Marsac Avenue
- Marsac Avenue from the roundabout to Hillside Avenue
- The Mine Road from Hillside Avenue to the Guardsman Connection
- Daly Avenue and Main Street

Potential construction traffic impacts include:

- Increased traffic associated with construction personnel arriving and leaving the Annexation Area
- Deliveries of construction materials, primarily loaded trucks moving slowly uphill
- Temporary traffic restrictions associated with the required improvement of Marsac Avenue and the Mine Road

A variety of traffic related mitigation methods will be implemented to minimize the above referenced traffic impacts.

Since the majority of the construction activities will take place during the late spring, summer and early fall construction season, and during long periods of daylight, the majority of the construction personnel will be arriving and departing the Annexation Area at traditionally non-peak time periods. This will help to mitigate traffic congestion during the normal morning and afternoon peak travel times. Although there is no formal system proposed, construction personnel will be strongly encouraged to car pool to and from the Annexation Area to reduce traffic impacts.

The Resort will develop and implement a detailed program to mitigate traffic impacts related to the delivery of materials and supplies to the Resort and the haul-off of excess and waste materials from the Annexation Area.

This program will include, but not be limited to, the following components:

Delivery Schedules

In general deliveries will be restricted to follow the schedule setout in this section which is designed to minimize conflicts with tourist and holiday traffic. Deliveries that cannot accommodate this schedule will be the subject of a specific delivery plan that will be submitted and approved by the Building Department.

Deliveries to the site are of varying types and uses. General construction material will originate from SLC and will be at predictable times and frequency. These deliveries will be scheduled to not coincide with peek winter tourist traffic patterns and will avoid holidays. In the winter peak ski season (Christmas through Presidents Day) these deliveries will be scheduled to arrive during week days after 9:30 AM and before 3:30 PM and will be direct to the construction site. Saturday deliveries are possible but will be the exception and will be further restricted to after 10:00 AM and before 3:00 PM. Sunday and holiday deliveries will be prohibited. In the balance of the year the delivery schedule will also avoid holidays and Sunday, but will generally be permitted over the normal construction hours. Summer traffic conflicts can occur on non holiday times when festivals are scheduled outside of weekends and holidays. The Master Owners Association will verify with the City the festival schedule to the project identifying areas of concern. The developer will coordinate with the City to minimize conflicts with these dates and times.

Just-in-time deliveries consist of materials fabricated off site such as structural steel, pre-cast concrete and trusses. These materials are shipped by common

carrier and are offloaded from the truck and placed directly on the building during normal working hours. While their arrival in town is random and not schedulable like routine deliveries from SLC, they are few in number and will have limited impact.

Concrete deliveries are the most demanding from a schedule point of view. Small pours can be scheduled to respect the off peak delivery schedule set out for routine deliveries. However large pours will occur year-around and may need to be scheduled for the full day. These deliveries schedules will be submitted to the Building Department for approval as previously noted.

Directions and Travel Routes

Compliance with the Traffic Mitigation Plan will require monitoring to insure that delivery trucks are routed down Royal Street. Consequently a Checkpoint station will be established that will monitor for compliance with this requirement. Deliveries and traffic routes will be monitored and recorded by the Master Homeowners Association (MHA) who has the ability to levy fines on contractors and owners who fail to comply with the approved project plans. See MHA mitigation plan for details of requirements and coordination of CMPs throughout the project.

A Delivery Route Map providing suppliers with directions to the Resort from I-80 and US 40 including detailed information related to travel conditions and construction detours along the route(s) through Summit County and Park City. This map will be updated on a frequent basis to ensure deliveries do not get lost and cause undue impacts on other parts of Park City. The maps will require that downhill truck traffic use Royal Street.

- Deliveries will be required to be scheduled in advance to ensure that: i) they arrive during non-peak Park City travel periods; ii) equipment is available to quickly off-load the shipment; and, iii) a storage area is available. With the approval of Park City, deliveries may be scheduled outside of normal working hours to minimize traffic impacts.

- Deliveries will be timed to coincide with the installation of the materials to ensure that the Resort's storage areas do not become overcrowded.

- Deliveries will be prohibited during area special events including, but not limited to, the Fourth of July celebration, the Arts Festival and the Miner's Day celebration.

- Appropriate directional signage will be installed to clearly direct deliveries to their appropriate destination.

With regard to the improvements associated with the reconstruction of Marsac Avenue and the Mine Road, the Resort will work with Park City to develop an approved construction phasing and implementation plan. This plan will include various elements including, but not limited to, a phasing plan and schedule, a detour plan, a construction signage plan, and a public information program all similar to the one implemented on the construction of the sewer in lower Marsac Avenue.

Hours of Operation

Although for the most part construction associated with the Resort is isolated and a significant distance from existing neighboring residential areas, since the construction is taking place uphill from and in confined canyons adjacent to these residential areas that may transmit sound over a great distance, hours of construction is a concern.

In accordance with the Park City Construction Mitigation Guidelines, construction operations will be limited to the hours of 7:00 AM to 9:00 PM Monday through Saturday and 9:00 AM – 6:00 PM on Sunday. These restrictions will be strictly enforced whenever noise and disruption from construction operations may create a public concern. In more remote areas of the Annexation Area that will not affect neighboring residential areas, extended hours of operation may be requested, subject to the approval of the Park City Community Development Department.

Construction Personnel Vehicle Parking

Due to the considerable size of the Resort, the high number of anticipated construction personnel, the need to keep Marsac Ave open to the public, the restrictive nature of the terrain and the vegetation which must be protected, construction personnel vehicle parking is a concern.

The Resort will designate, construct, maintain and manage specific construction personnel vehicle-parking areas located throughout the Annexation Area. Parking is prohibited on Marsac Ave. The Ontario Mine site is the primary area for this work. Land uses for the Ontario Bench may be subject to a Conditional Use Permit. This site is of an appropriate size and is well situated to accommodate the large numbers of construction personnel that will be working in the lower portions of the Resort in and around Development Pod A. The site is already improved with storm drainage related facilities and asphalt paving. The removal of the mill buildings has increased the area available for staging at this location.

There will be a number of smaller "site specific" construction vehicle parking areas established throughout the Annexation Area. These sites will be located only in areas slated for future construction to ensure that no new vegetation is disturbed. These sites will again be graded and treated to control storm water run-off, mud and dust.

Construction Staging and Material Storage Areas

Similar to the above referenced construction personnel vehicle parking, due to the size of the Resort, the need to keep Guardsman Pass Road open to the public, the potential for changing weather conditions, the restrictive nature of the terrain and the vegetation which must be protected, construction staging and material storage is a significant concern.

The Resort will again designate, construct, maintain and manage specific construction staging and storage areas located throughout the Annexation Area. The same two sites referenced above will play significant roles to mitigating these impacts.

The existing Ontario No. 3 Mine Building Complex will act as the primary staging and material storage site for the Resort. The existing buildings located on this site will provide opportunities to house construction field offices, The exterior portions of the site are of an appropriate size and are well situated to accommodate the long-term storage of large quantities of construction materials required by the Resort.

Excavated materials generated from the project will be processed and reused or disposed of within the annexation area. Materials will be processed by sorting the material into structural fill and top soil. The bulk of this processing will occur pursuant to a City approved Construction Mitigation Plan which reduces the overall number of haul trips necessary to transport the excavation waste material to its final approved location and minimizes impacts on existing neighborhoods and future residents within the project area. Final locations for waste material storage shall be designated in area which eliminate or substantially reduce haul trips down Marsac Ave below Pod A. Processed materials which are suitable for reuse as engineered fill, aggregate, or landscaping materials will be returned to the site as needed. This reuse will reduce offsite truck trips.

Structural fill and top soil that are surplus to the project will be subject to grading permit approval by the City. All fill and fill sites will be subject to appropriate geotechnical engineering and testing and be the subject of a grading

permit as required by the IBC. Placement of this material will be covered under separate permit and is the responsibility of United Park City Mines Co (UPK).

The Daly West waste rock pile will act as the primary storage area of on-site generated materials such as trees and vegetation. This site will also be designated as a secondary construction staging area and material storage site since it is well situated to service the mid-portions of the Resort in and around Development Pods B-1 and B-2. However, all work in and around the Daly West must be coordinated with the Mine Soil and Physical Hazards Mitigation Plan. Until the mitigation of Mine Soils is complete on this site, the area available for construction staging will be limited.

In an effort to re-use all suitable materials generated during the construction of the Resort, it is anticipated that several recycling operations will take place at the Daly West staging area. The first will be a wood chipping operation to process organic materials such as trees, slash, ground vegetation and scrap lumber into mulch. This material will be available for use in a variety of ways including mud & dust control, ground stabilization and revegetation & landscaping ground cover

There will be a number of smaller "site specific" construction storage areas established throughout the Annexation Area. These sites will be located in areas slated for future construction to ensure that no new vegetation is disturbed.

In addition to having appropriate areas to stage construction activities and store construction materials, it is very important to manage these areas effectively. This management will begin at the entry to the Annexation Area.

As was stated earlier, a Resort entry "check-point" will be established in the area across from the existing stable facility at the Guardsman Connection. Resort personnel will monitor, direct and control all deliveries made to, and transported within, the Annexation Area. Materials requiring long-term storage will be directed to the Ontario #3 Mine Building Complex, while materials needed in the near-term will be directed to either the Daly West area or directly to the site of the construction.

Appropriate good housekeeping practices are also vitally important in the efficient and orderly storage of construction related materials. The Resort will exercise good housekeeping practices in compliance with all applicable Federal, State and local laws, regulations and ordinances to prevent exposure of stored materials to storm water.

The Resort will take special care in the handling and storage of potentially hazardous materials. Examples of hazardous materials include:

- Pesticides, insecticides and herbicides
- Petroleum products including oils, fuels, diesel oil, lubricating oils and grease
- Nutrients including soil additives and fertilizers
- Construction chemicals including paints, acids for cleaning masonry surfaces, cleaning solvents, asphalt products, concrete curing compounds

The storage and use of these materials will conform to the manufacturer's recommendations and good housekeeping practices including:

- Providing locked, weather resistant storage areas
- Lining storage areas with plastic sheeting to contain any leaks
- Storing containers in a cool, dry location
- Keeping container lids tightly closed
- Monitoring all containers and storage facilities on a regular basis
- Maintaining an inventory of all products stored on-site

Any excess materials will be disposed of in compliance with all Federal, State and local laws, regulations and ordinances.

The Resort will construct security fences with gates around its stockpile and staging areas as required and will employ security personnel and services as necessary to protect these areas during off-hours.

Temporary Utilities

The Resort has installed the basic utility infrastructure for sewer, power, natural gas, electricity and phone in Marsac Avenue. Construction utilities will extend from these services.

Health & Safety Plan

In accordance with Federal OSHA standards as well as requirements of State and City ordinances, the Resort will develop and implement an approved Health and Safety Plan that will govern all construction activities associated with the Resort.

Waste & Trash Management and Recycling of Materials

As is the case with all construction projects, large quantities of waste, trash and construction by-products will be generated by the Resort. These materials must be stored, handled and disposed of properly so as not to cause adverse impacts to the surrounding area and the environment.

The Resort will develop and implement a trash management and recycling program to maintain clean construction sites, maximize material recycling, minimize disposal truck traffic impacts and minimize impacts to the local landfills. This program will control the storage and disposal of waste & trash and re-utilize recyclable materials, both organic and manufactured.

Trash collection stations will be established at all primary and secondary staging areas. The Resort will provide a sufficient number of dumpsters, designed specifically for the purpose of the storage of solid waste, and schedule timely haulage services to legal landfill disposal areas to ensure that the dumpsters do not become overfull. Haulage of partial loads will be prohibited in order to minimize truck trips. As was stated in the traffic impacts section, specific haul routes will be coordinated to minimize traffic impacts.

Recycling containers will be located near the dumpsters to facilitate separation of reusable and recyclable materials from the trash. Non-organic recyclable materials will be re-utilized on site as much as possible. The Resort will arrange for the removal of all recyclable materials that cannot be reused on-site. As was stated earlier, organic materials, such as scrap lumber, trees, slash and ground vegetation, are planned to be chipped on-site into mulch for use on-site.

Sanitary Waste Disposal

As is the case with any construction project with large numbers of construction personnel, sanitary waste disposal facilities are critical.

The Resort will provide adequate portable toilets for use by the construction personnel. These temporary toilets will be provided and maintained by a licensed provider who will dispose of all waste in compliance with all applicable State and local laws, regulations and ordinances.

Sanitary facilities will be located a sufficient distance from any storm drainage systems to prevent contamination in the event of a spill. Any spill will be cleaned up immediately.

Grading and Excavation Impacts

Impacts from grading and excavation generally fall into to three categories. The first is the generation of fugitive dust and/or mud. The second relates to traffic impacts of hauling excess materials off-site. Finally, the third relates to erosion of exposed surfaces and storm water management.

Fugitive Dust and/or Mud:

Disturbance of the natural vegetation layer and earthwork/excavation activities results in the exposure of the natural soil to the elements. During dry periods, wind, trucks and equipment traveling across these disturbed areas create fugitive dust. This fugitive dust has the potential to negatively affect air quality. During wet periods, the dust turns into mud and, if left unchecked, can impact existing watercourses and can be tracked off-site onto public roadways.

To the extent possible, disturbed areas will be kept to a minimum. Earthwork activities will be scheduled so that the area to be disturbed and left unprotected from erosion will be as small as possible and exposed for the shortest time feasible.

Areas targeted for grading and excavation operations will be delineated by the use of silt fencing on the downhill side of slopes and limits of disturbance fencing in other locations. This fencing will generally be located within five feet of the limits of cuts and fill operations. These delineated limits of disturbance will be strictly enforced to minimize the areas of disturbance.

Temporary stabilization procedures including the establishment of temporary and/or permanent vegetation, mulching, geotextile fabrics, etc. will take place as required to prevent soil erosion. These measures will be installed as soon as practical after construction activities have been temporarily or permanently ceased.

Cut and fill slopes, utility corridors and other areas of disturbance will be covered with topsoil and revegetated as soon as practical to prevent erosion. Mulch and gravel generated from the previously referenced on-site recycling program will be used to control dust and stabilized wet areas.

Fugitive dust will be controlled with appropriate application of water as a palliative. One or more water trucks will be employed throughout the workday to water down haul roads and disturbed areas.

Most of the work associated with the Resort will occur on-site and out of existing public rights-of-way. However truck traffic traveling to and from the Resort has the potential of tracking dust onto public roadways.

Each project will establish a truck wash program. For most sites vehicle wash down areas will be at the entrance to all job sites off of Marsac Avenue. Single family projects will establish portable wash facilities as part of their individual plans. This wash down area will consist of temporary asphalt paving or clean, well-graded gravel with a water hose station and a catch basin to receive the wash water. All construction vehicles leaving the job sites will be inspected by

Resort personnel, hosed down as required and have their loads covered or wetted if applicable.

Street Cleaning:

The truck wash at the entrance to the job site will eliminate most sediment transport from the job site to the City's storm water conveyance; however, the potential exists for incidental or accidental transport to Marsac Avenue. Consequently, the drop inlets downhill of the project will be equipped with silt traps of filter fabric or hay bales. These silt traps will be inspected on a weekly basis and prior to any forecast for precipitation and cleaned as needed. Streets will be swept as need depending on the effectiveness of the truck wash program. Streets will also be inspected and cleaned as needed prior to any forecasted precipitation.

Traffic Impacts:

The majority of all materials generated from on-site grading, excavation and other earthwork operations will be retained within the Annexation Area. This material will be used for such things as topsoil cover material, landscape berms and/or structural fills. This policy will reduce traffic impacts on City roads.

Storm Water Management:

The project construction is covered under a SWPPP issued by the State that is held in the name of the master developer, United Park City Mines Co. (UPK). This plan corresponds with the requirements of that permit. UPK will be responsible along with the MHA for enforcing that permit within the project.

The primary goals of the SWPPP are; i) to limit the areas of disturbance of existing vegetation to only those areas required to install the proposed improvements; ii) to retain sediment on site to the extent practical through the selection, installation and maintenance of control measures in accordance with good engineering practices; and iii) to prevent construction litter, debris and chemicals from becoming a pollutant source for storm water discharges.

In general, the Resort will institute the following good housekeeping practices:

- Protecting existing vegetation to remain from disturbance
- Minimizing slope lengths and steepness
- Preventing pollutant contact with precipitation and runoff
- Keeping pollutants off exposed surfaces
- Keeping materials out of storm drainage systems

- Reducing storm runoff velocities
- Minimizing generation of waste materials and dispose of all waste materials properly
- Storing all materials properly, including adequate covering
- Preventing leaks and spills, cleaning up any spills immediately
- Preventing concrete and cement mortars from entering storm drainages
- Applying fertilizers, pesticides and herbicides in accordance with the manufacturer's instructions
- Minimizing tracking of sediment off-site

All proposed staging and materials storage areas will incorporate storm run-off controls. Storm water collection, transmission and disposal facilities will be constructed to route storm water runoff around these areas. The storm water flows from these facilities will be discharged, where possible, through areas of natural vegetation so that filtering can occur. In areas where natural vegetation is not available, siltation basins will be constructed. Upon completion of the Resort, or when a staging area is no longer being used, these storm water run-off control facilities will be removed, re-graded and re-vegetated.

The Resort will install a variety of storm water run-off prevention measures whenever natural vegetation is disturbed including, but not limited to, straw bales, silt fences, silt basins, rock check dams, etc. to prevent silt and other construction related materials from entering the storm drain systems and/or water courses.

UPK and MHA personnel will routinely inspect the above-described erosion and sediment control facilities on a regular basis. These facilities will be maintained, repaired and supplemented as required to ensure effective operating conditions. Sediment will be cleared from the control facilities when the depth of the accumulated sediment reaches a maximum of 1/3 of the height of the structure.

Upon completion of construction, all temporary facilities will be removed from the site and revegetated after the disturbed areas have stabilized.

Noise Prevention

As stated earlier, although, for the most part, construction associated with the Resort is isolated and a significant distance from existing neighboring residential areas, since the construction is taking place uphill from and in confined canyons adjacent to residential areas, noise impacts could be a concern. Obviously, work associated with the reconstruction of Marsac Avenue and the Mine Road could generate noise that may impact residential areas along this alignment.

All construction operations will be conducted in compliance with Park City's hours of operations and noise restriction guidelines and ordinances.

In the event that any essential operation generates noise that consistently exceeds the 65-decibel limit set by Park City, Project representatives will meet with City Engineering Department and Building Department officials to determine the best method for mitigating the impact.

Engineering and Building Department officials will be notified of any proposed strong percussive noises, such as blasting activities, three days prior to the event taking place. Blasting contractors will be required to obtain necessary permits prior to blasting.

Temporary Lighting

Since for the most part, construction associated with the Resort is isolated and will take place a significant distance from existing neighboring residential areas, impacts from lights associated with after-dark construction related activities or staging and storage areas is not anticipated to be a significant concern.

It is not anticipated that normal construction activities will occur after dark. It is, however, possible that certain special operations, such as utility tie-ins that can only be performed during "off hours," may necessitate work being completed after dark. The Resort will take great care to provide adequate lighting for the safety of the construction personnel while attempting to ensure that said lighting does not impact neighboring residents. An approved temporary lighting plan will be developed and submitted to the City for their approval at the City's discretion prior to commencement of any construction operations requiring exterior, temporary lighting.

Resort Identification and Notification Information

In accordance with Park City Construction Mitigation guidelines, Resort identification signs will be constructed and posted at the entries to the Annexation Area. These signs will include, at a minimum, the following Resort information:

- Name, address and telephone number of the developer
- Name, address and telephone number of person responsible for the Resort
- Name and telephone number of the party or parties to contact in case of an emergency

In addition to the general Resort identification signs described above, and as stated previously, the Resort will develop construction signage plans as required to adequately inform the public of hazards related to construction activities, detours, etc. These signage plans will address construction activities associated with both roadways and trails.

Public Notification and Communication:

In light of the fact that the Annexation Area consists of approximately 1,650 acres used by a large segment of the population for recreational activities, keeping the public informed of the schedule and progress of the construction will be very important.

Meetings with neighboring property owners in particular and the public in general will be encouraged to keep everyone apprised of the current conditions.

The Resort will continually assess all operations that may adversely impact or inconvenience residents and/or businesses in the area of the Resort or motorists, hikers, bikers and/or equestrians traveling throughout the Annexation Area so that proper notification and communication of impacts can be made in advance. These impacts may include road closures and detours, trail closures and detours, and night operations, etc. This notification process will be maintained throughout the entire construction process. All said notifications will be coordinated with representatives of Park City and communicated to the public via the local newspaper, radio stations and mass mailings.

Although every effort will be made to minimize the disruption of the existing trail system, some trails will be temporarily closed or detoured, re-routed or permanently eliminated due to infrastructure construction. Detours and/or new permanent trails will be completed in a timely manner to minimize the impact of Resort construction activities on the trail users.

Other Issues

Since dogs on active construction sites can be both a distraction and a hazard to construction personnel as well as a threat to the well being of the animal itself, dogs will be forbidden on construction sites at any time in accordance with Park City ordinances.

V. CONSTRUCTION PHASING

- Phasing of the Resort will consist of an orderly and systematic construction and development plan, as approved by the Planning Commission in December of 2001. This plan extends access and utility services to the Annexation Area in a timely fashion to

facilitate the sale of a wide range of real estate product without undue impacts to Park City, its residents or the environment.

VI. CONSTRUCTION MITIGATION PLAN MANAGEMENT

FMP, the development entity overseeing the construction and development of the Resort, will have the overall responsibility for the implementation and enforcement of the requirements of this Construction Mitigation Plan.

Prior to commencement of any third party development project, and in accordance with the requirements of Park City's Master Planned Development approval process, the third party developer of said project will be required to submit a detailed, site-specific construction mitigation plan to Park City Planning and Building Departments for their review and approval. A copy of these plans will also be submitted to the Resort's Master Homeowners Association for their review and approval.

The Resort's Developer and/or Master Homeowners Association will have overall responsibility to Park City Municipal Corporation to ensure the implementation and enforcement of the requirements of these individual construction mitigation plans as part of the approved Resort Covenants, Conditions and Restrictions (CC&R's) and Design Guidelines.

CONSTRUCTION MITIGATION PLAN

OFF-SITE ROAD IMPROVEMENT PLAN EXHIBIT "A"

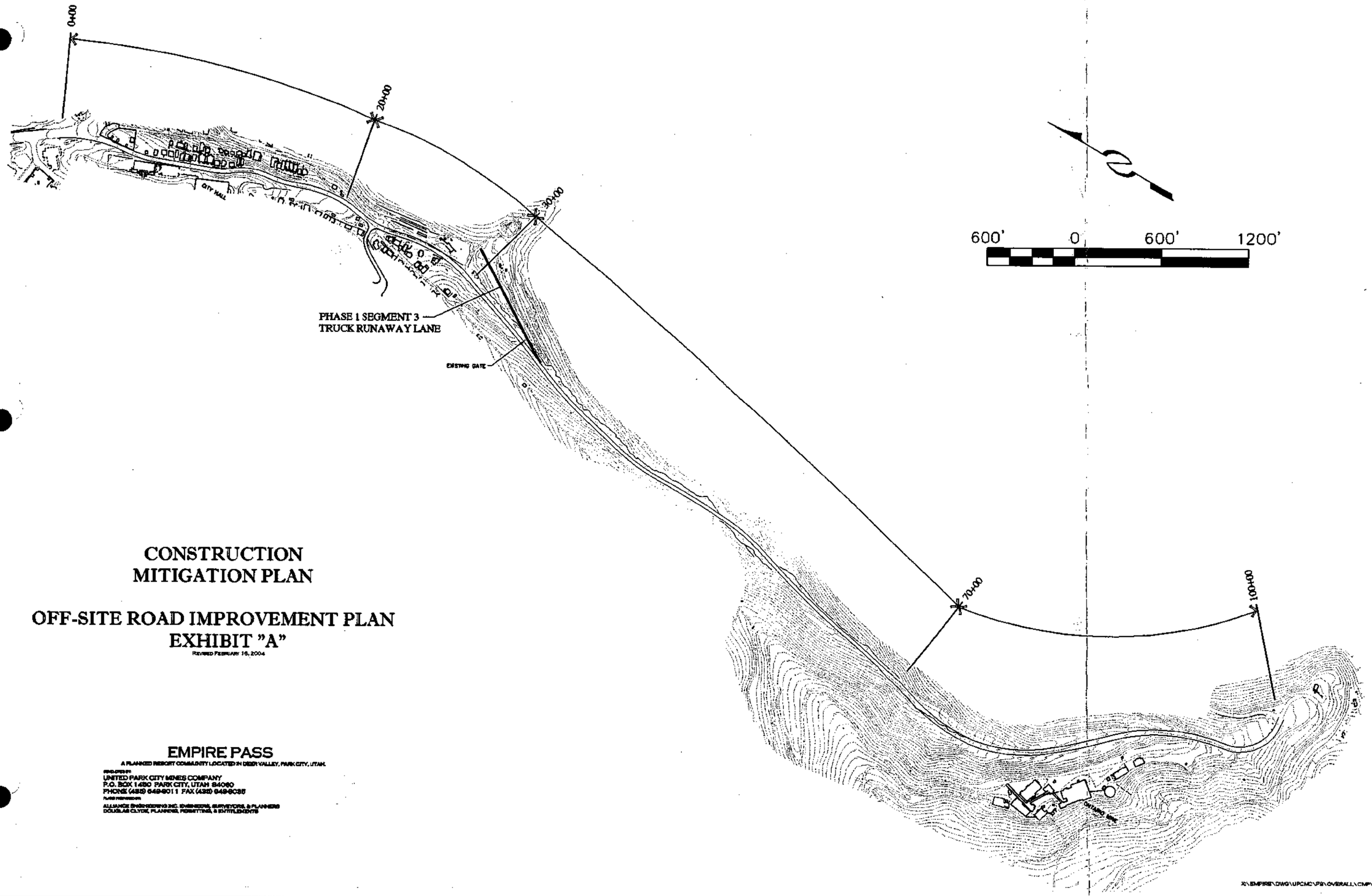
REVISED FEBRUARY 16, 2004

EMPIRE PASS

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPER
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-9011 FAX (435) 649-9639

PLAN PREPARED BY
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE, PLANNING, PERMITTING, & ENTITLEMENTS



CONSTRUCTION MITIGATION PLAN

REVISED: FEBRUARY 16, 2004

EMERGENCY ACCESS PLAN
EXHIBIT "B-1" - WINTER

EMPIRE PASS

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-9035

PLANS PREPARED BY:
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE, PLANNING, PERMITTING, & ENTITLEMENTS

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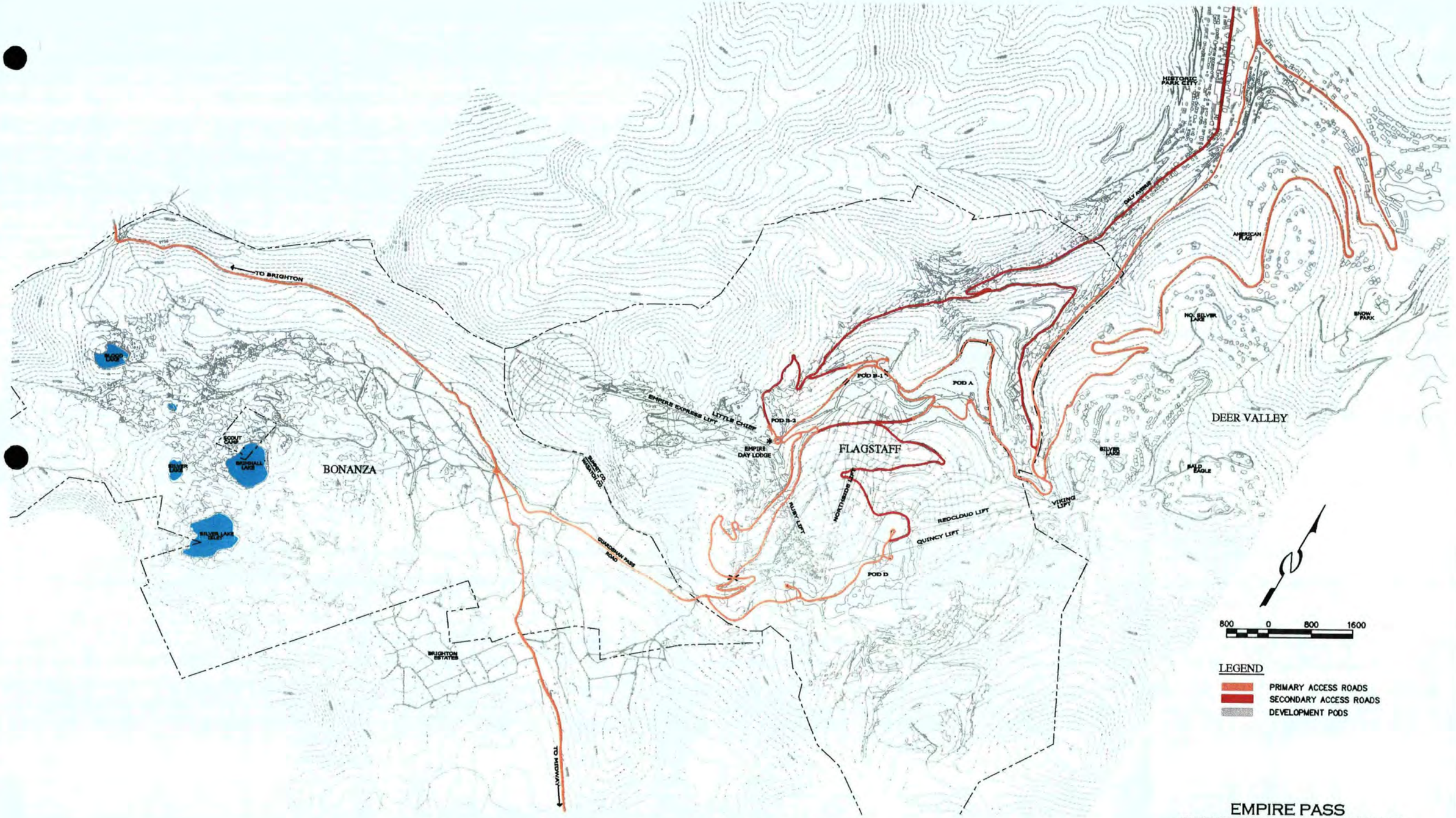

CONSTRUCTION MITIGATION PLAN

REVISED: FEBRUARY 16, 2004

EMERGENCY ACCESS PLAN
EXHIBIT "B-2" - SUMMER

EMPIRE PASS

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE, PLANNING, PERMITTING, & ENTITLEMENTS

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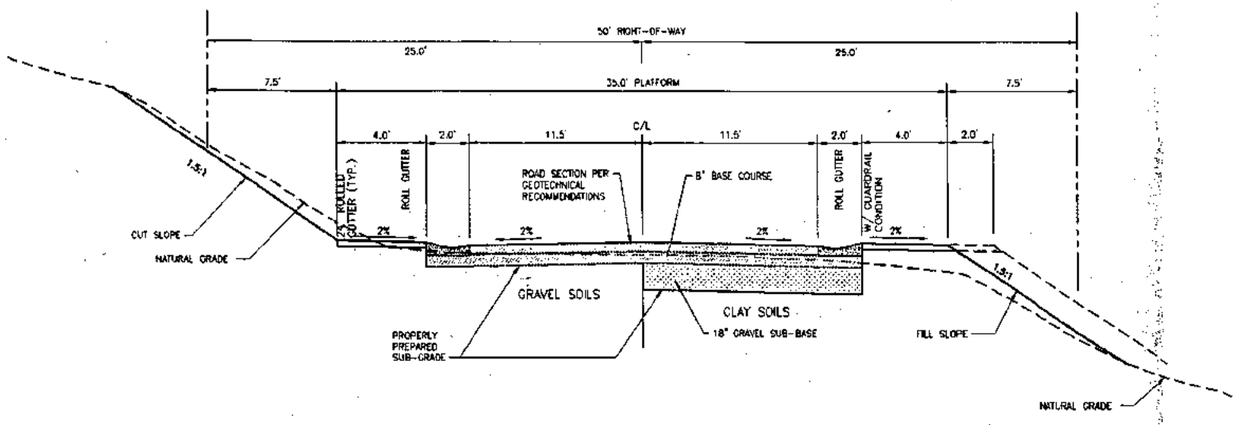

ACCESS ROAD OUTSIDE DEVELOPMENT SITES

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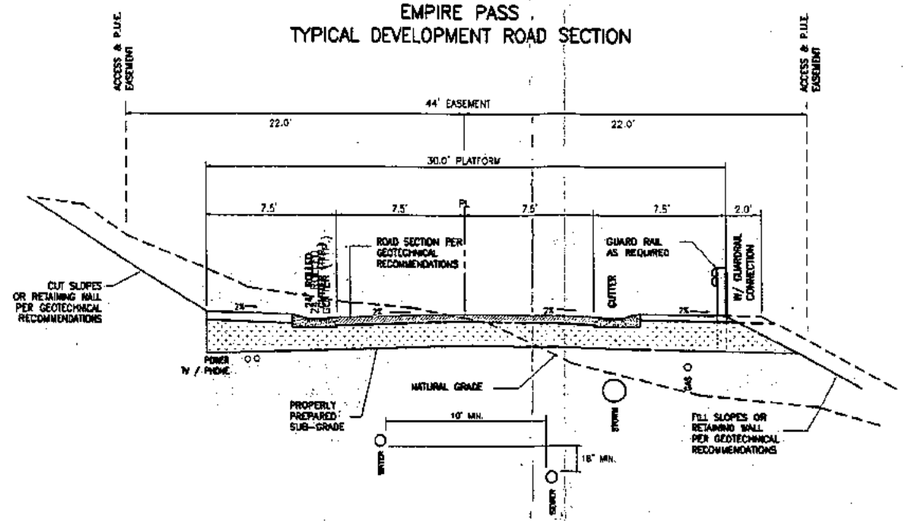
EMPIRE PASS
TYPICAL DEVELOPMENT ROAD SECTION



PRIVATE ROAD 2 WITHIN DEVELOPMENT SITES

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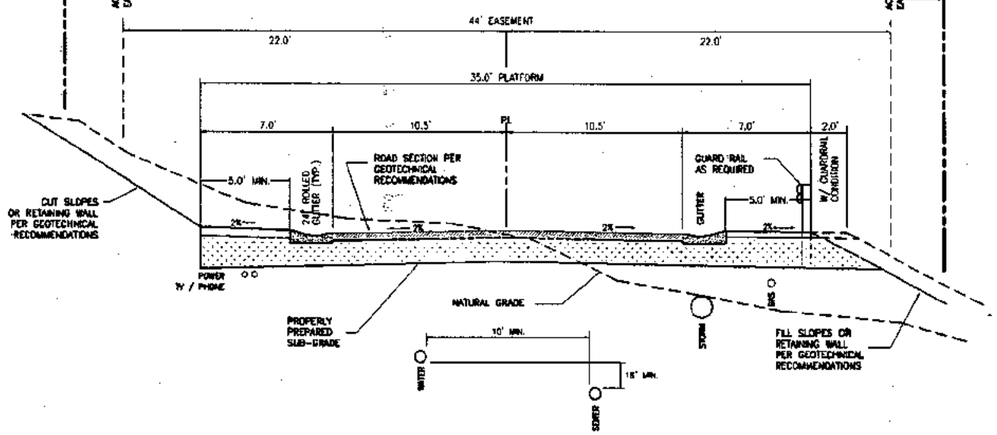
TYPICAL DEVELOPMENT ROAD SECTION
50' R.O.W. POD D



PRIVATE ROAD 1 WITHIN DEVELOPMENT SITES

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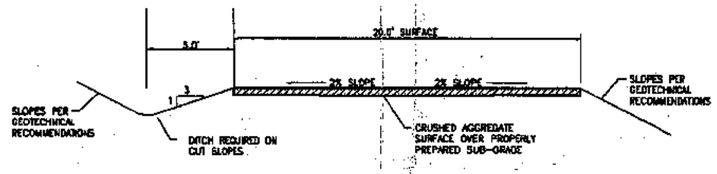

EMERGENCY ACCESS ROAD

CONSTRUCTION MITIGATION PLAN

REVISED FEBRUARY 16, 2004

ROAD CROSS SECTIONS
EXHIBIT "C"

EMPIRE PASS

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH

DEVELOPED BY:
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 6498035

PLANS PREPARED BY:
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE PLANNING, PERMITTING, & ENTITLEMENTS

REVISED JANUARY 23, 2004

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UPCMC OFFICES

EMERGENCY ACCESS

PRIMARY ACCESS

STATE ROAD U-224

GUARDSMAN CONNECTION

STEIN ERICKSON LODGE

MARSAC AVE.

CONSTRUCTION ENTRY CHECK POINT

HORSE STABLES

PRIMARY ACCESS

BANNER SKI TRAIL

50' 0 50' 100'

CONSTRUCTION MITIGATION PLAN

CONSTRUCTION ENTRY / EXIT CHECKPOINT EXHIBIT "D"

REVISED FEBRUARY 16, 2004

EMPIRE PASS

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPER:
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE, PLANNING, PERMITTING, & ENTITLEMENTS

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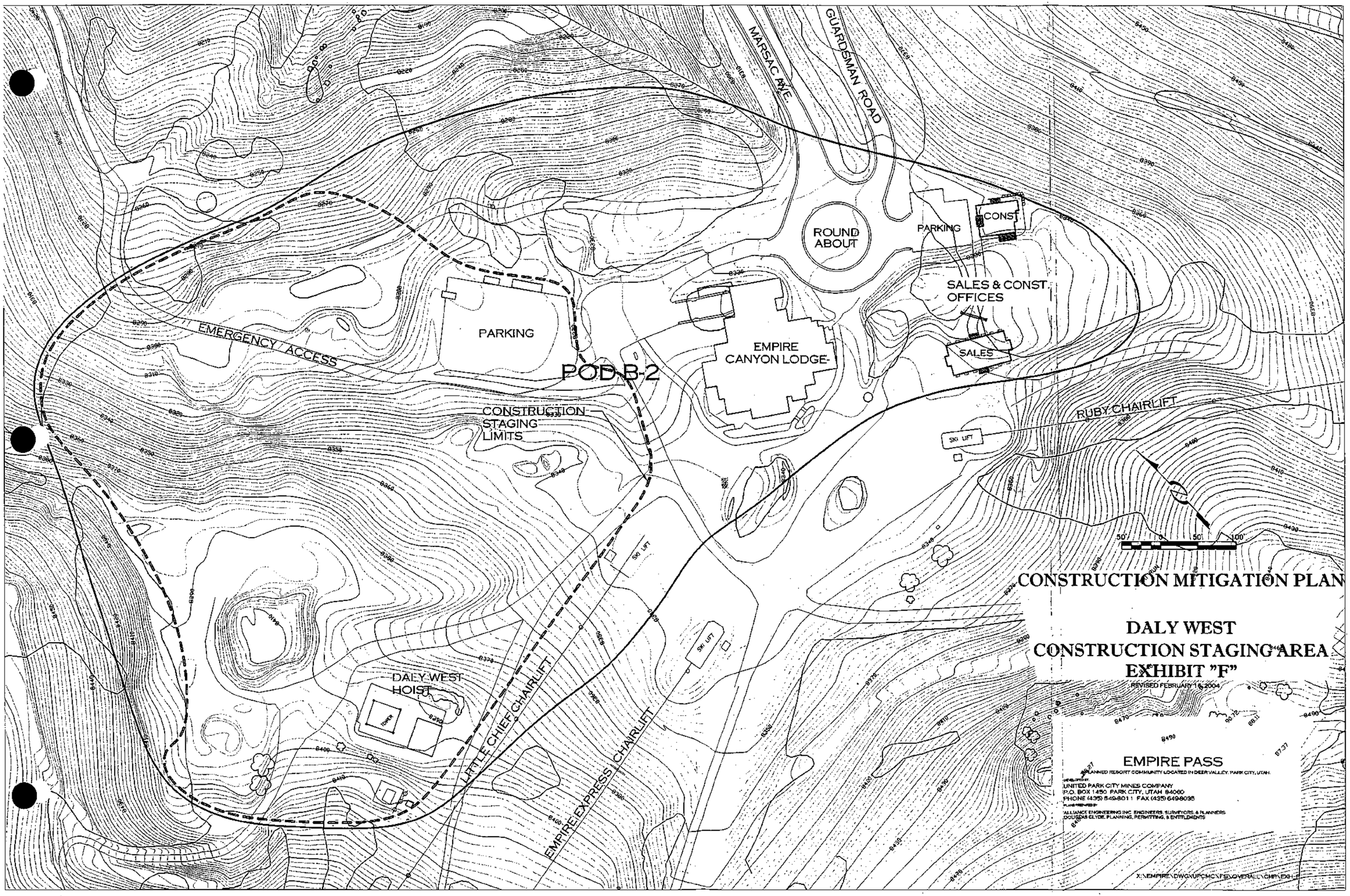

MARSAC AVE.
GUARDSMAN ROAD
ROUND ABOUT
PARKING
CONST
SALES & CONST. OFFICES
SALES
EMPIRE CANYON LODGE
PARKING
EMERGENCY ACCESS
POD B-2
CONSTRUCTION STAGING LIMITS
RUBY CHAIRLIFT
SKI LIFT
DALY WEST HOIST
TOWER
LITTLE CHIEF CHAIRLIFT
EMPIRE EXPRESS CHAIRLIFT
50' 0 50' 100'
CONSTRUCTION MITIGATION PLAN
DALY WEST
CONSTRUCTION STAGING AREA
EXHIBIT "F"
REVISED FEBRUARY 16 2004
EMPIRE PASS
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.
DEVELOPED BY:
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035
PLANS PREPARED BY:
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE, PLANNING, PERMITTING, & ENTITLEMENTS
X:\EMPIRE\DWG\UPCMC\FS\OVERALL\CMP\EXH-F

STATE ROAD U-224

PRIMARY ACCESS

PRIMARY ACCESS GUARDSMAN CONNECTION

EMERGENCY ACCESS

UPCMC OFFICES

ONTARIO #3 MINE SHAFT & HOIST

BUILDING REMOVED

TANK REMOVED

PRIMARY ACCESS

PRIMARY ACCESS

POD A

50' 0 50' 100'

CONSTRUCTION MITIGATION PLAN

ONTARIO #3 MINE BUILDING COMPLEX CONSTRUCTION STAGING AREA EXHIBIT "E"

REVISED FEBRUARY 16, 2004

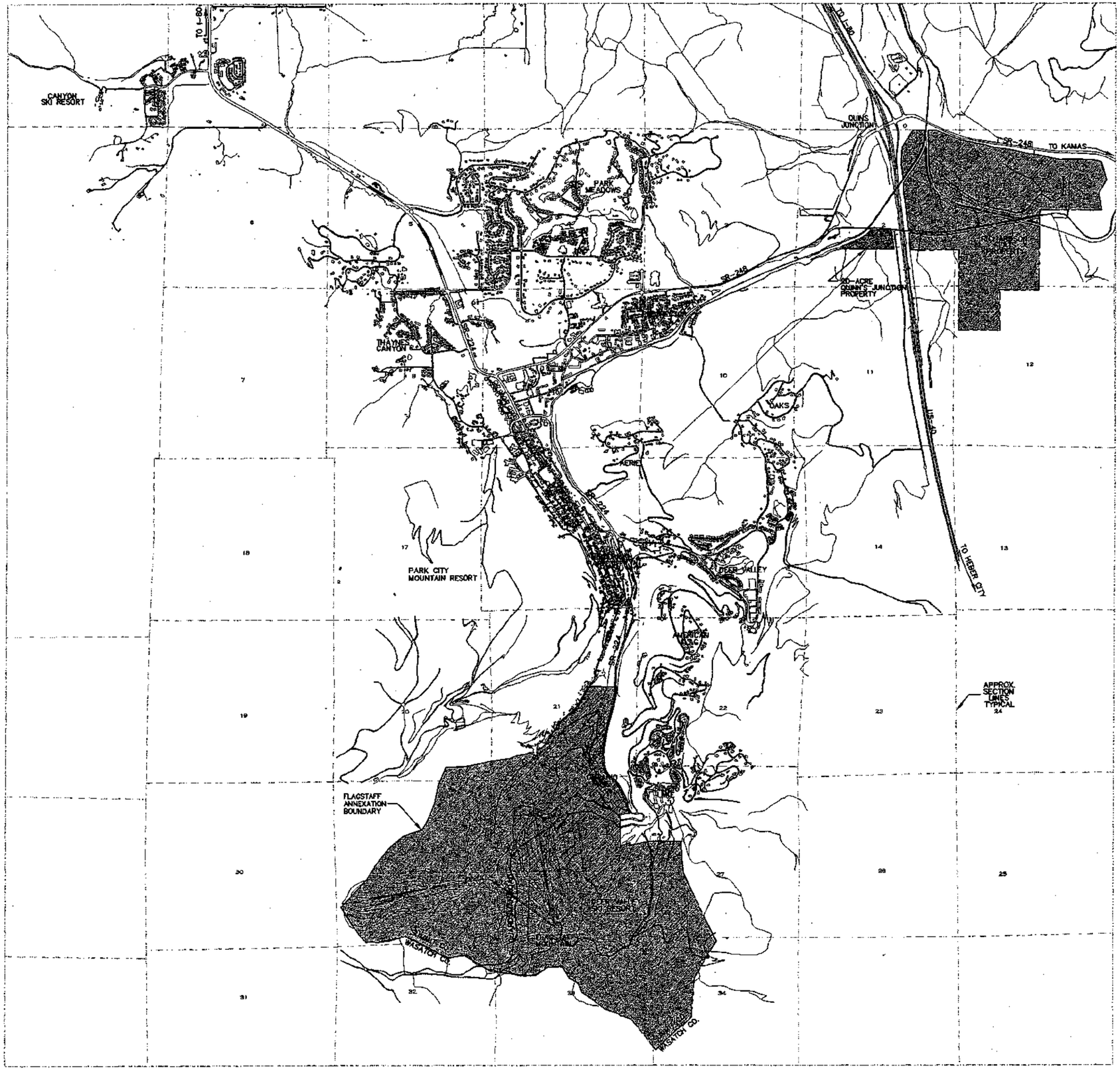
EMPIRE PASS

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
UNITED PARK CITY MINES COMPANY
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
DOUGLAS CLYDE, PLANNING, PERMITTING, & ENTITLEMENTS

X:\EMPIRE\DWG\UPCMC\PS\OVERALL\CMP\EXH_E



1600 0 1600 3200 FEET

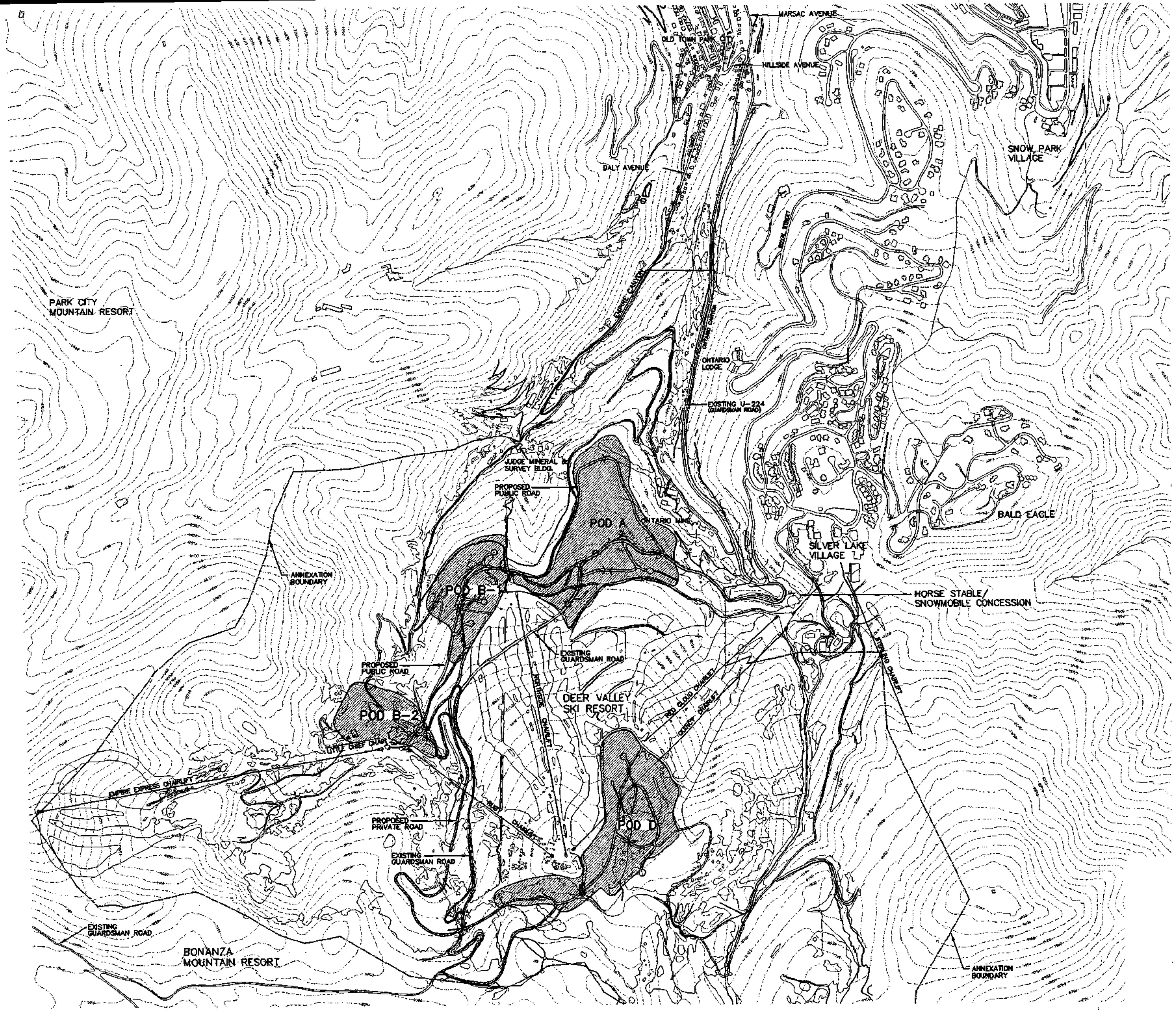
CONSTRUCTION MITIGATION PLAN

REGIONAL MAP
EXHIBIT "A"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 6498011 FAX (435) 6498035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LEE JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE



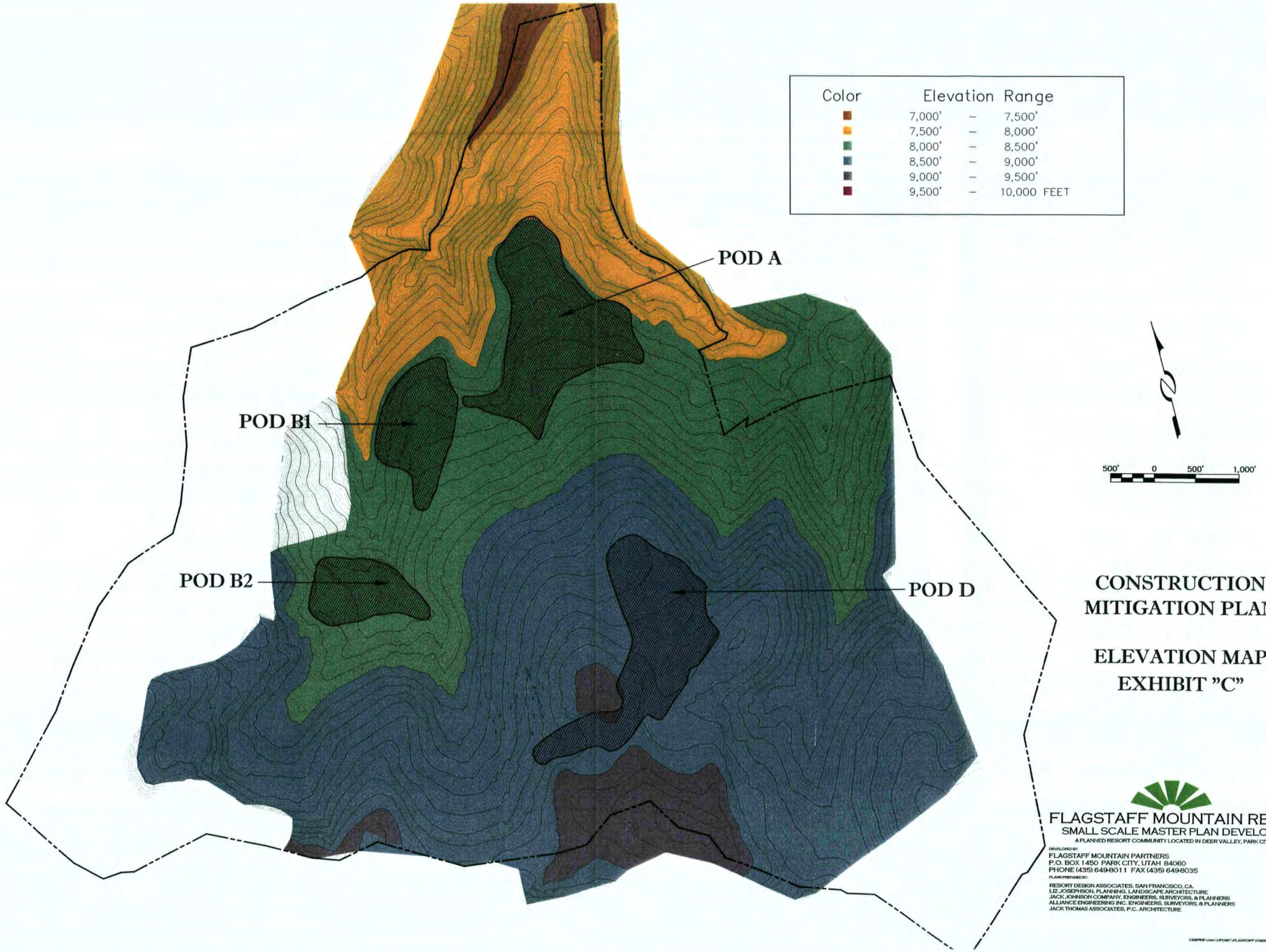
CONSTRUCTION MITIGATION PLAN

SITE PLAN
EXHIBIT "B"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE



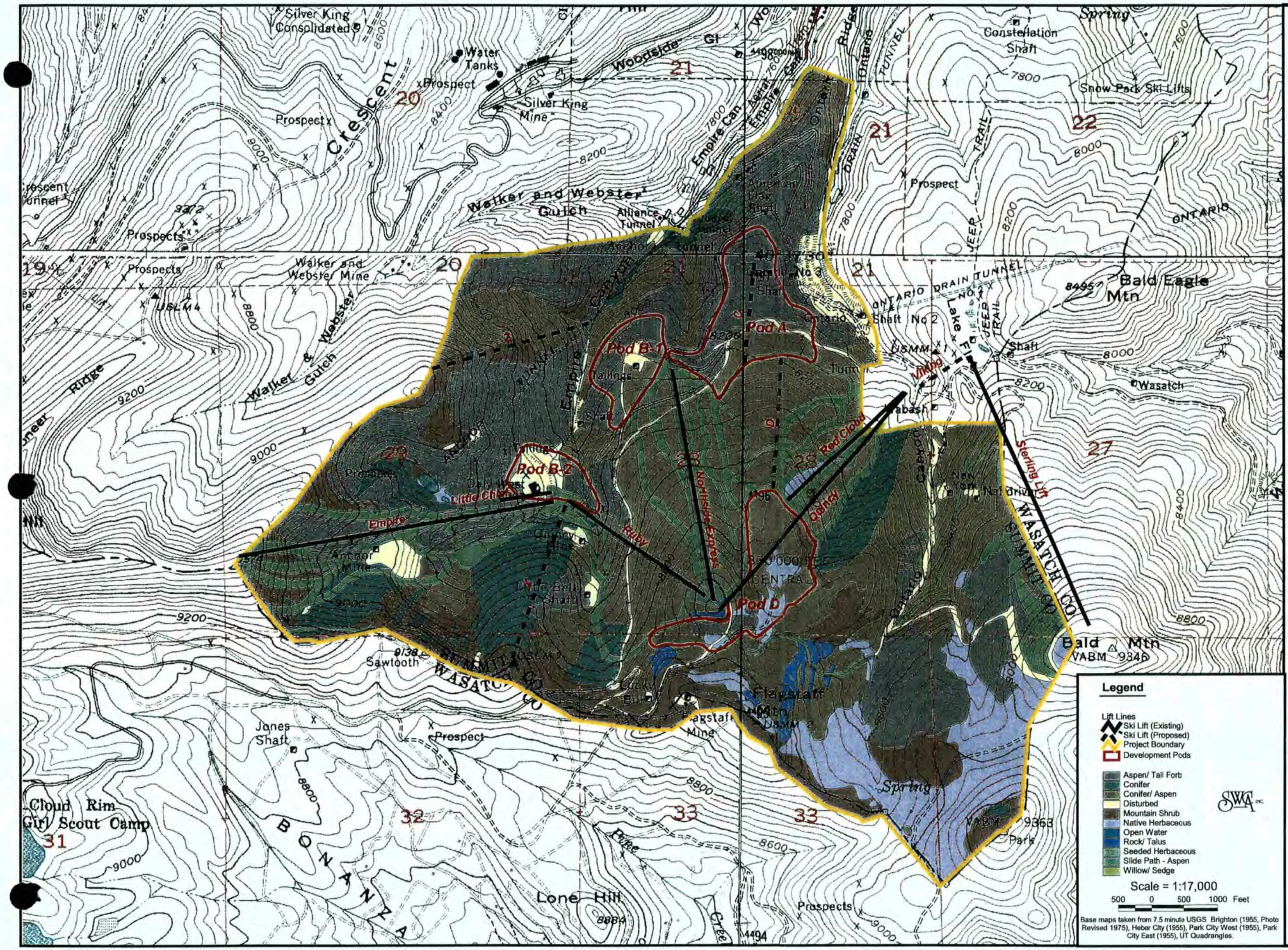
CONSTRUCTION MITIGATION PLAN

ELEVATION MAP EXHIBIT "C"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

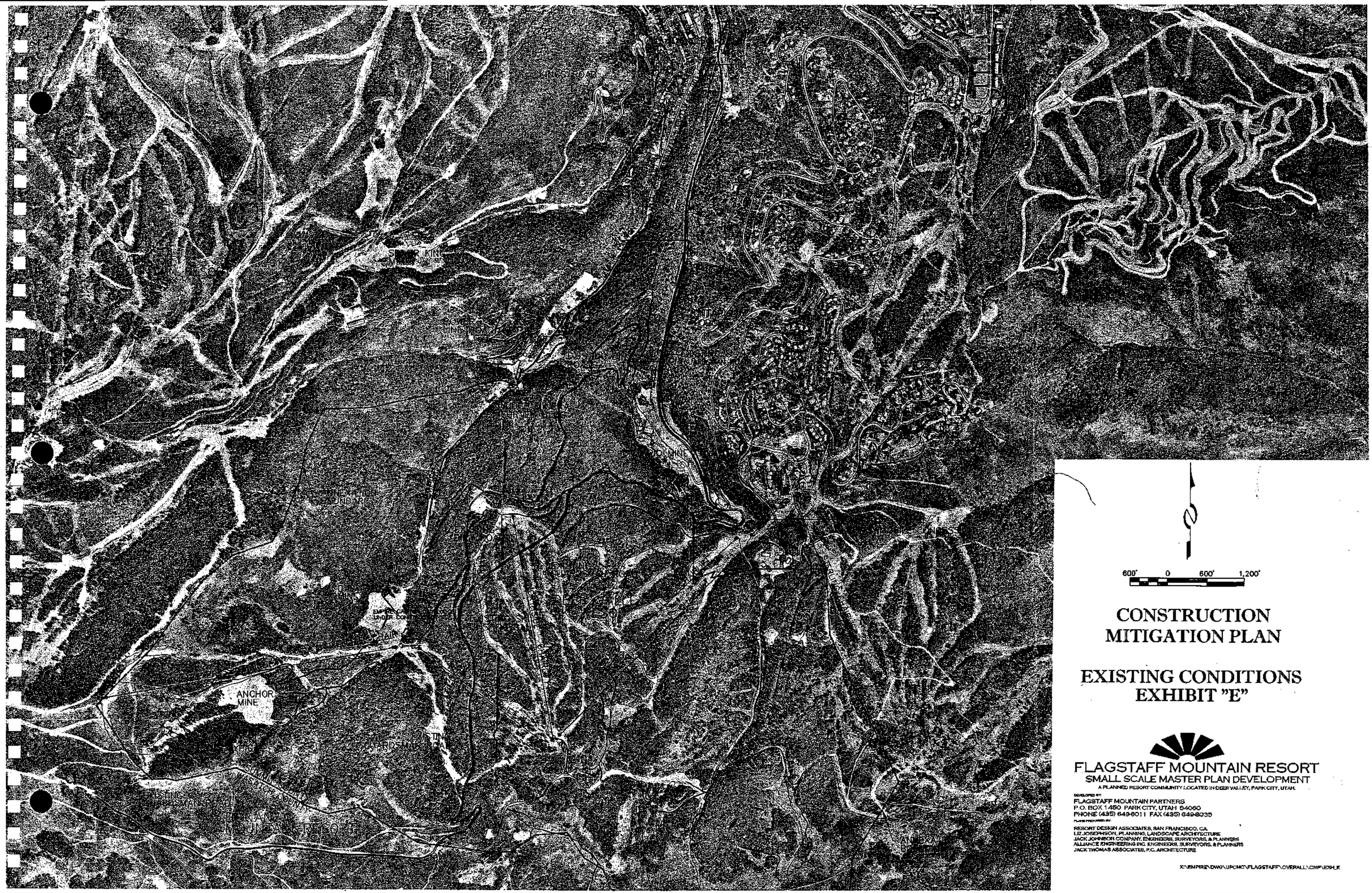


CONSTRUCTION MITIGATION PLAN
VEGETATION MAP
EXHIBIT "D"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE



CONSTRUCTION MITIGATION PLAN

EXISTING CONDITIONS EXHIBIT "E"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

X:\EMPIRE\DWG\UPCMC\FLAGSTAFF\OVERALL\CMP\EXH_E

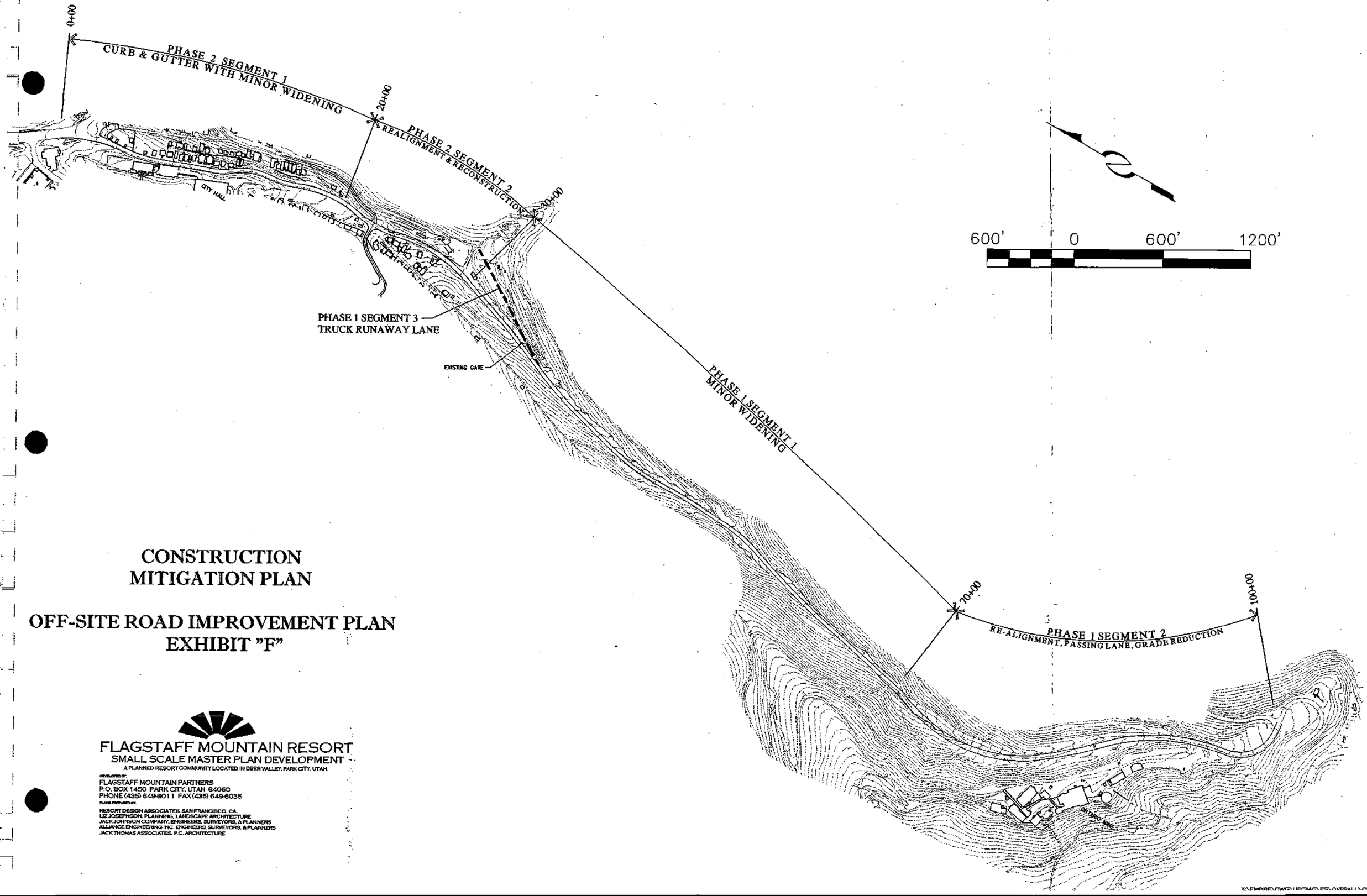
CONSTRUCTION MITIGATION PLAN

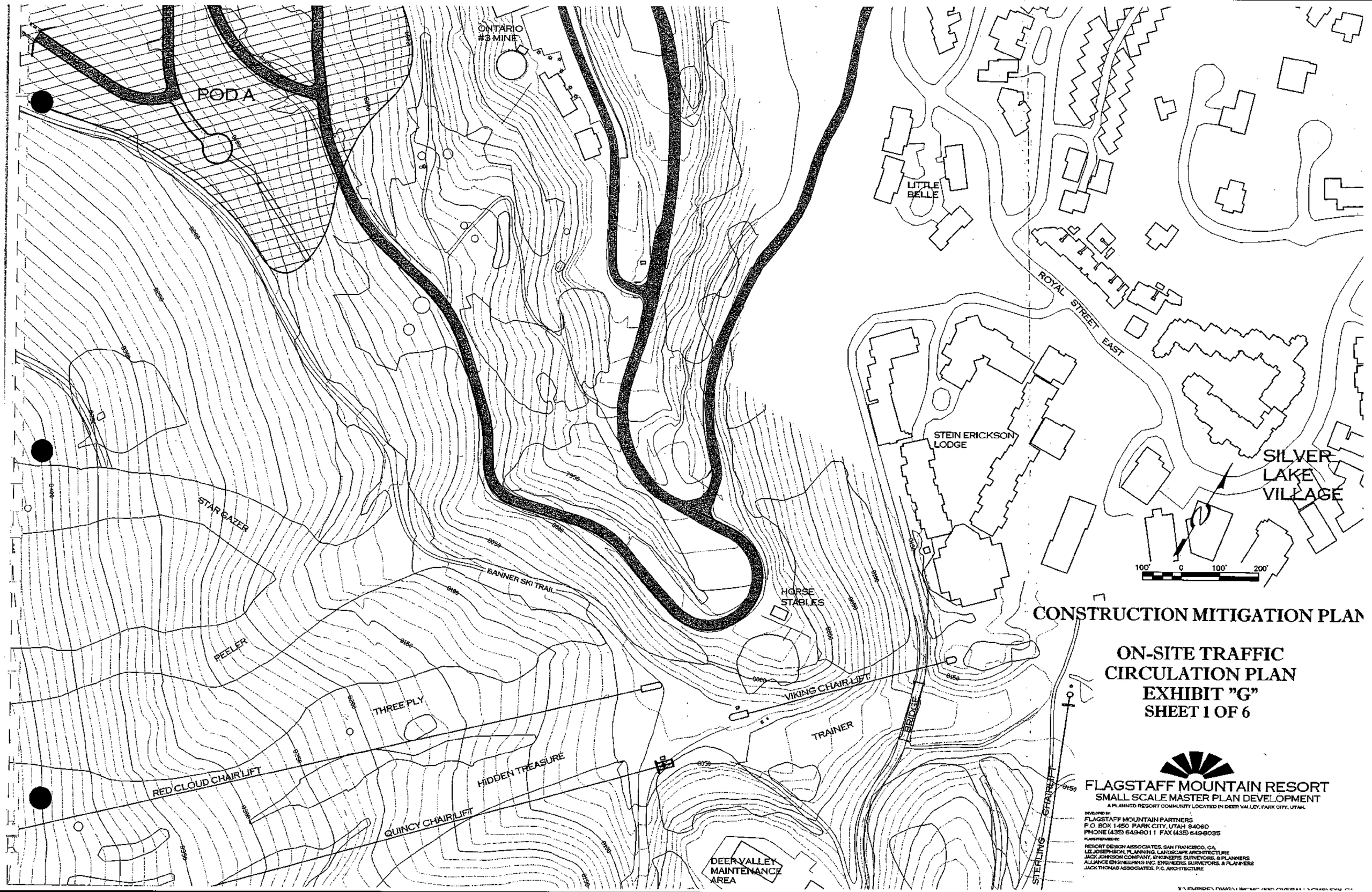
OFF-SITE ROAD IMPROVEMENT PLAN EXHIBIT "F"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC., ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE





CONSTRUCTION MITIGATION PLAN

ON-SITE TRAFFIC CIRCULATION PLAN
EXHIBIT "G"
SHEET 1 OF 6

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-9011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

POD B1

POD A

ONTARIO
MINE #3

NORTHSIDE LIFT

MTN. DAISY

BANNER

LOST BOULDER

SIDEWINDER

BLUE BELL

100' 0 100' 2

CONSTRUCTION MITIGATION PLAN

ON-SITE TRAFFIC CIRCULATION PLAN
EXHIBIT "G"
SHEET 2 OF 6

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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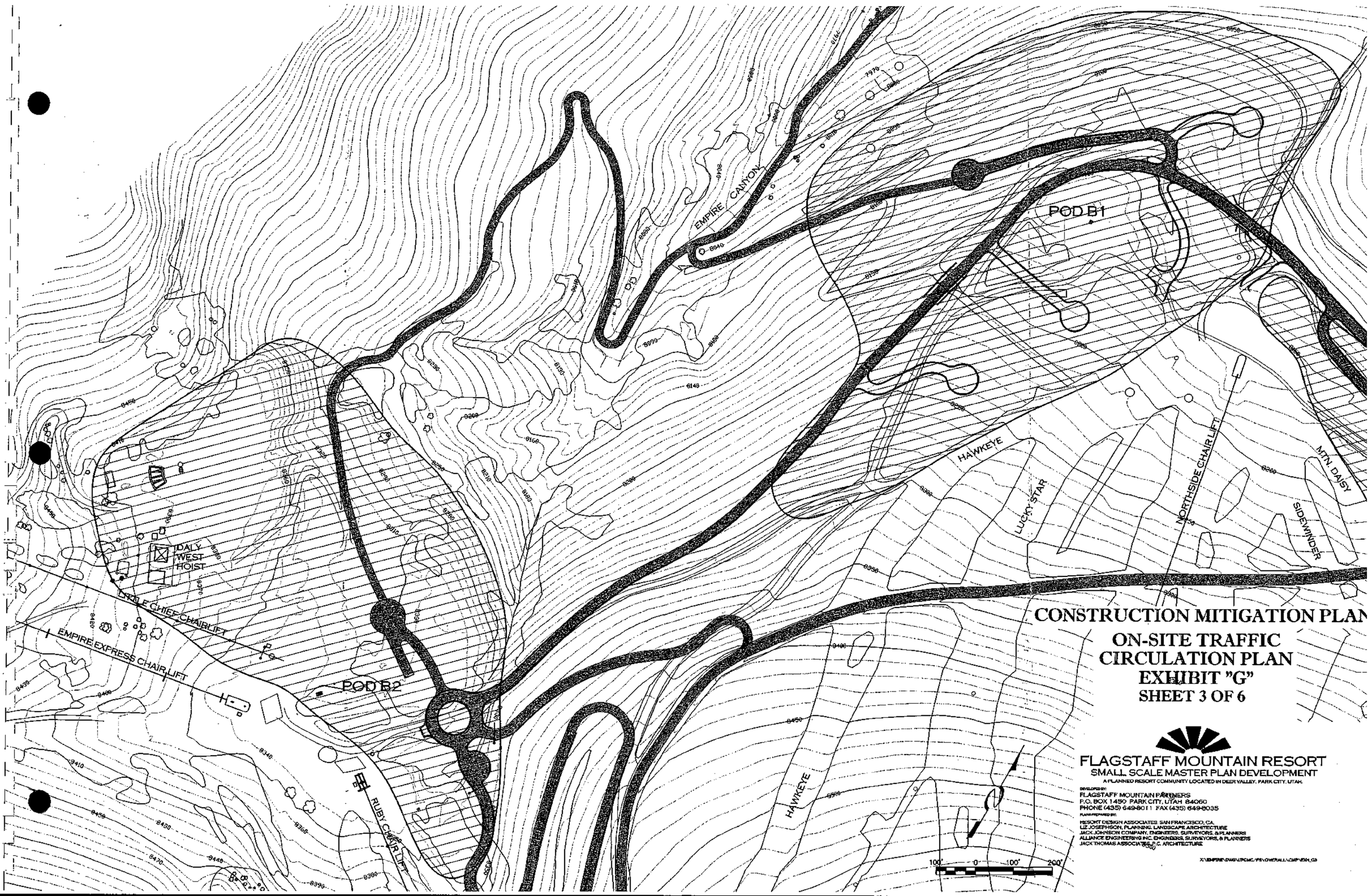

CONSTRUCTION MITIGATION PLAN

ON-SITE TRAFFIC CIRCULATION PLAN
EXHIBIT "G"
SHEET 3 OF 6

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

X:\EMPIRE\DWG\UTCMC-PS\OVERALL\COMP\EX04_G3

POD B2

LUCKY JACK

RUBY CHAIR LIFT

NORTHSIDE CHAIR LIFT

LOST BOULDER

LUCKY STAR

SIDEWIDER

BLUE BELL

POD D

100' 0 100' 200'

CONSTRUCTION MITIGATION PLAN

ON-SITE TRAFFIC CIRCULATION PLAN

EXHIBIT "G"

SHEET 4 OF 6

FLAGSTAFF MOUNTAIN RESORT

SMALL SCALE MASTER PLAN DEVELOPMENT

A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC., ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

TREE LINE
TYPICAL

EXISTING
DIRT ROADS
TYPICAL

SECONDARY ACCESS

BANDANA

POD D

RUBY CHAIR LIFT

NORTHSIDE CHAIR LIFT

SIDEWINDER

QUINCY CHA

100' 0 100' 200'

CONSTRUCTION MITIGATION PLAN

ON-SITE TRAFFIC CIRCULATION PLAN
EXHIBIT "G"
SHEET 5 OF 6

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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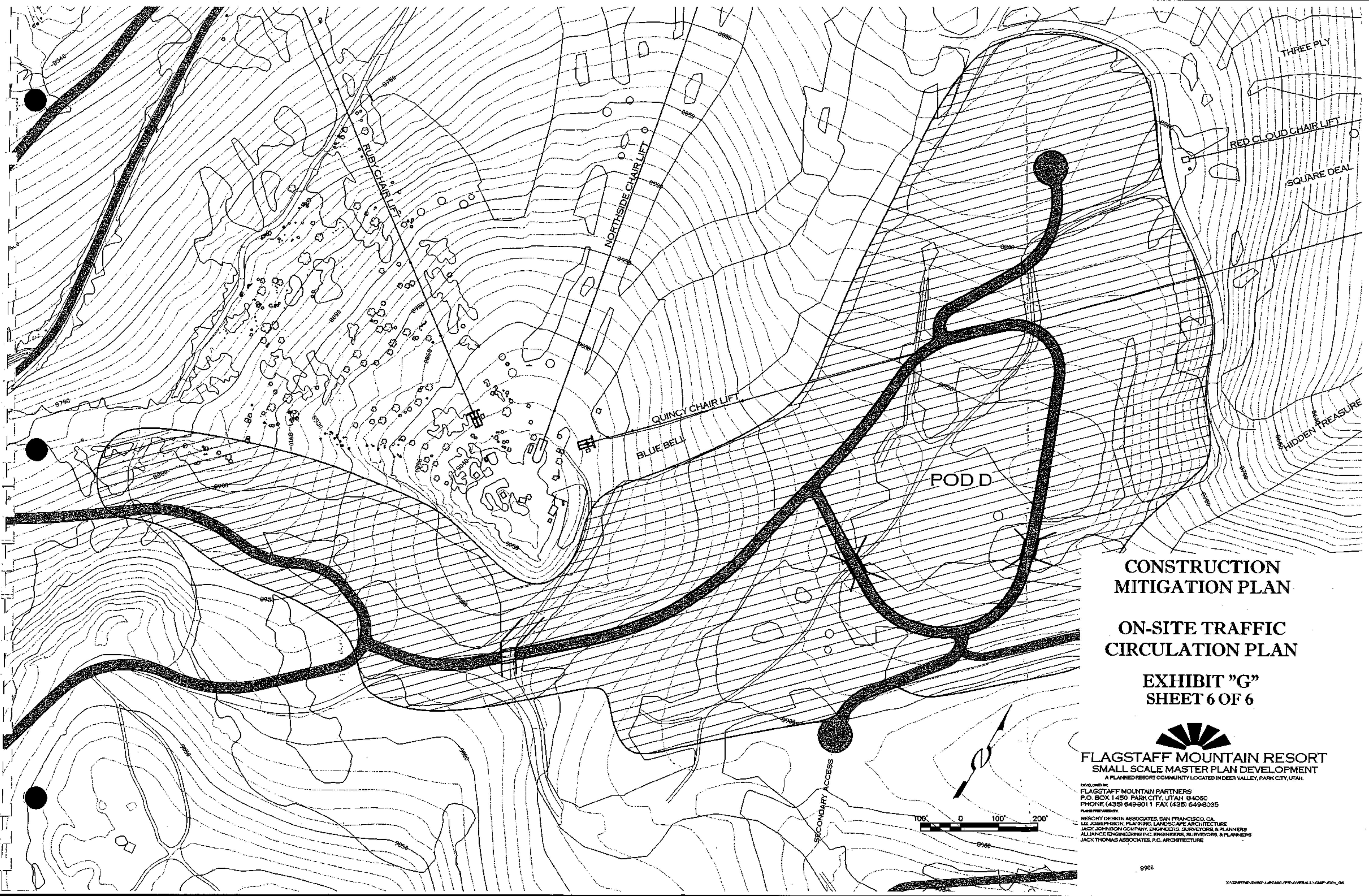


CONSTRUCTION MITIGATION PLAN

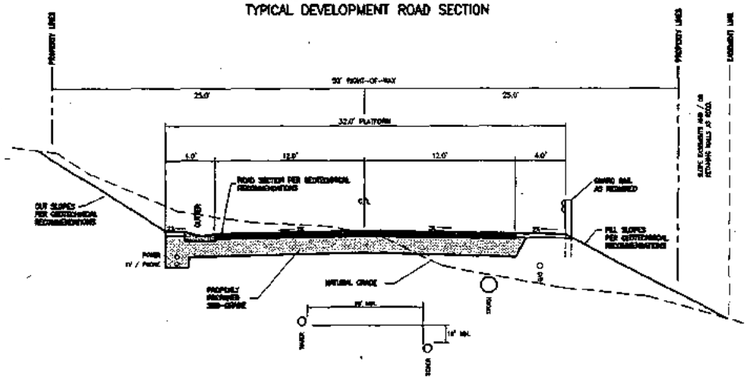
ON-SITE TRAFFIC CIRCULATION PLAN

EXHIBIT "G"
SHEET 6 OF 6

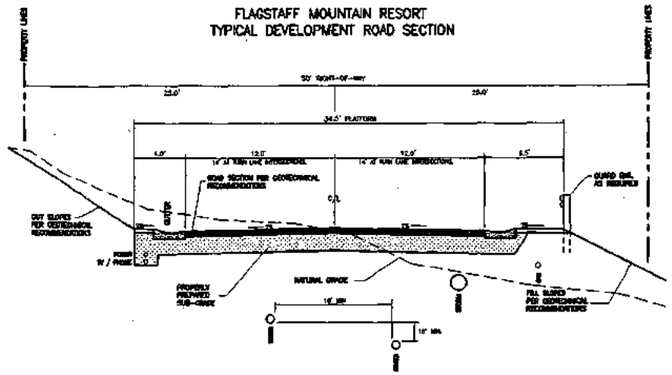
FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

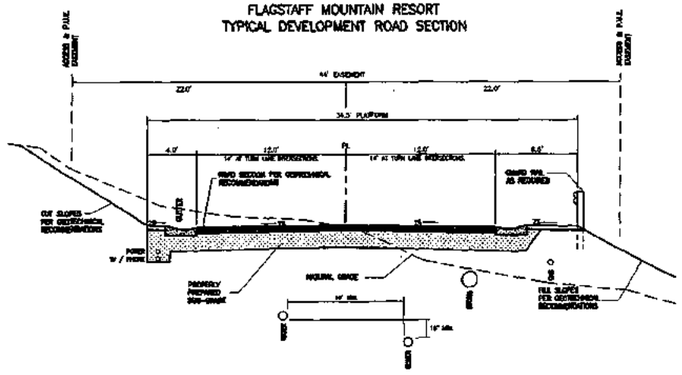
PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE



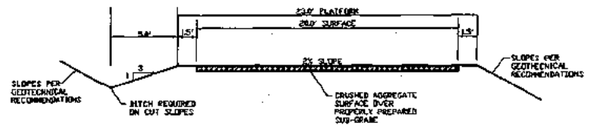
GUARDSMAN ROAD OUTSIDE DEVELOPMENT SITES



GUARDSMAN ROAD WITHIN DEVELOPMENT SITES



TYPICAL DEVELOPMENT ROAD



EMERGENCY ACCESS – PRIVATE ROAD

CONSTRUCTION MITIGATION PLAN

ROAD CROSS SECTIONS
EXHIBIT "H"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

UPCMC OFFICES

SECONDARY ACCESS

STATE ROAD U224

GUARDSMAN CONNECTION

STEIN ERICKSON LODGE

8150

8100

8050

50' 0 50' 100'

CONSTRUCTION ENTRY CHECK POINT

7950

HORSE STABLES

PRIMARY ACCESS

8000

BANNER SKI TRAIL

8050

CONSTRUCTION MITIGATION PLAN

CONSTRUCTION ENTRY / EXIT CHECKPOINT EXHIBIT "I"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

X:\EMPIRE\DWG\UPCMC/FS\OVERALL\CMP\EXH_I

STATE ROAD 224

GUARDSMAN'S CONNECTION

SECONDARY ACCESS

UPCMC OFFICES

ONTARIO #3 MINE SHAFT & HOIST

7900

7950

8000

8000

8050

8050

PRIMARY ACCESS

POD A

50' 0 50' 100'

CONSTRUCTION MITIGATION PLAN

ONTARIO #3 MINE BUILDING COMPLEX CONSTRUCTION STAGING AREA EXHIBIT "J"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LEE JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

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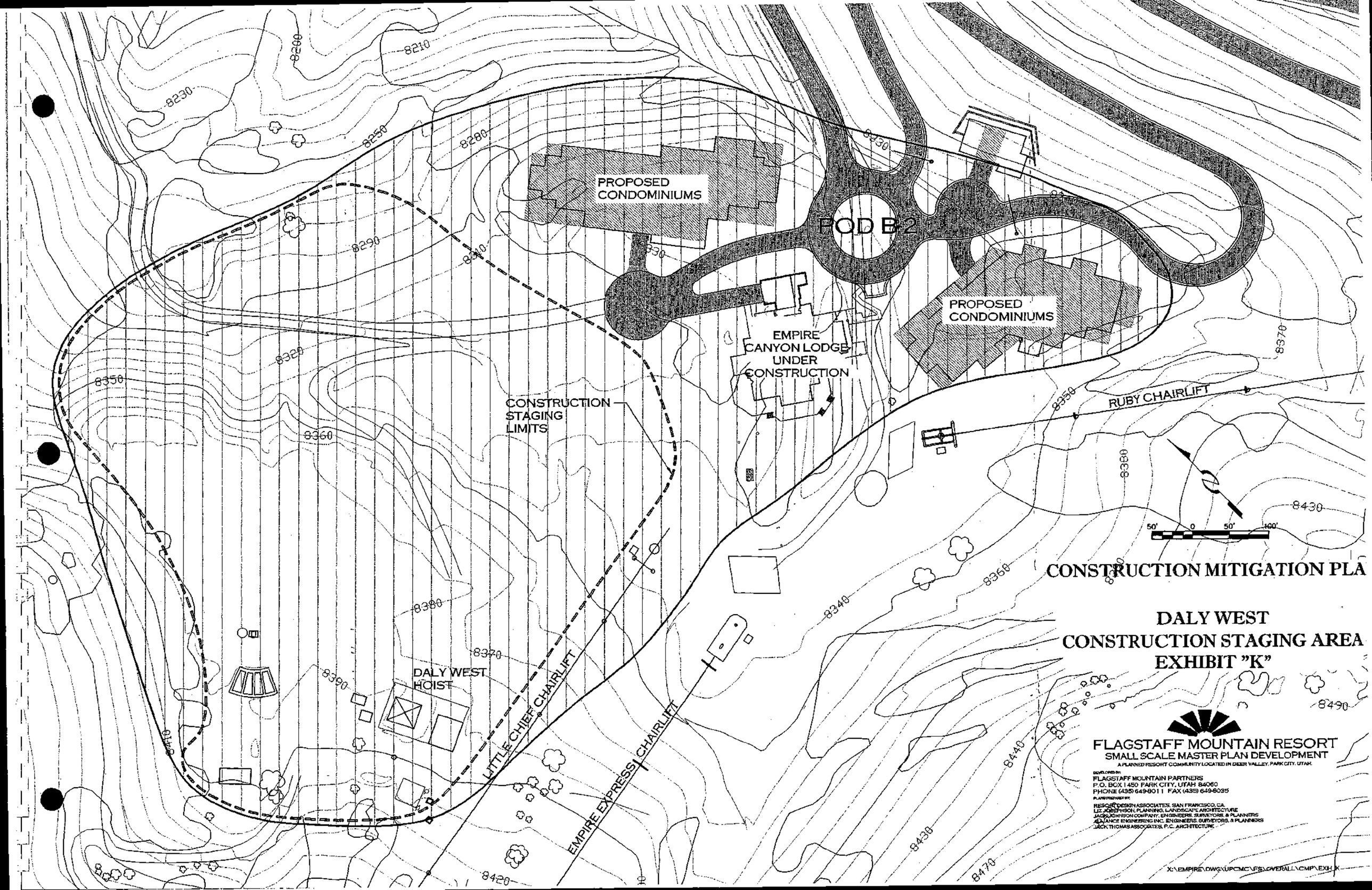

CONSTRUCTION MITIGATION PLA

DALY WEST
CONSTRUCTION STAGING AREA
EXHIBIT "K"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPED BY:
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY:
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACOBSON HESON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE

X:\EMPIRE\DWG\UPCMC\FS\OVERALL\CMP\EXH K

CONSTRUCTION MITIGATION PLAN

CONSTRUCTION PHASING PLAN EXHIBIT "L"

FLAGSTAFF MOUNTAIN RESORT
SMALL SCALE MASTER PLAN DEVELOPMENT
A PLANNED RESORT COMMUNITY LOCATED IN DEER VALLEY, PARK CITY, UTAH.

DEVELOPMENT
FLAGSTAFF MOUNTAIN PARTNERS
P.O. BOX 1450 PARK CITY, UTAH 84060
PHONE (435) 649-8011 FAX (435) 649-8035

PLANS PREPARED BY
RESORT DESIGN ASSOCIATES, SAN FRANCISCO, CA.
LIZ JOSEPHSON, PLANNING, LANDSCAPE ARCHITECTURE
JACK JOHNSON COMPANY, ENGINEERS, SURVEYORS, & PLANNERS
ALLIANCE ENGINEERING INC. ENGINEERS, SURVEYORS, & PLANNERS
JACK THOMAS ASSOCIATES, P.C. ARCHITECTURE