FERNIE ALPINE RESORT VILLAGE MASTER PLAN

October, 1998



Illustration by: Calum Srigley

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I. INTRODUCTION

I.1 Project Overview

In June, 1997, the Skiing Louise Group Ltd. purchased Fernie Alpine Resort Ltd. In addition to Fernie, the Skiing Louise Group owns and operates Lake Louise, Nakiska, Fortress Mountain and Wintergreen ski resorts in Alberta, Kimberley Ski Resort in BC, and Stoneham Ski Resort in Quebec.

Shortly after the purchase of the resort, Brent Harley and Associates Inc. (BHA) were retained to develop a Village Master Plan for Fernie. Working closely with the Skiing Louise Group and Fernie Alpine Resort, the following report describes the findings and conclusions. The resultant product is intended to describe both in a written and graphic form, the plans for the ongoing and future development of Fernie Alpine Resort.

I.2 Goals and Objectives

As defined by the Client, the primary goal of this project is *to generate a Resort Village Master Plan for Fernie Alpine Resort that will act as a guide to the ongoing development of the resort, while catering to the year-round tourist target market for Fernie, BC*. In support of this, the resultant Village Master Plan specifically addresses the following objectives:

- Create a plan that will identify and capitalize on special and unique development opportunities, distinguishing Fernie as being different from other resorts in Western Canada and the Pacific Northwest.
- Create a plan to help establish Fernie as the resort of choice for a well defined, active, recreation oriented lifestyle, situated in a dramatic mountain setting.
- Ensure that the resultant plan, once implemented, will offer the guests a well balanced resort experience, taking into account the calculated development requirements necessary to cater to Fernie's low density/powder skiing oriented skier marketplace.
- Take into account the short and long term potential at Fernie with the possible development of Timber Bowl and Snake Ridge; determining the ultimate impact that such additional terrain might have on the buildout and operations of the resort.
- Create plans that build on the best elements of earlier concepts for the mountain and base area and village.
- Maximize the ski to/ski from residential development opportunities radiating out from the resort core, with the highest density closest to the mountain.

- Sensitively integrate any proposed development into the site, preserving natural features and minimizing any environmental disruptions.
- Consider the adjacent private lands in the creation of the plans, identifying potential opportunities for the inclusion of those lands into the overall Village Master Plan.

I.3 Planning Methodology

The Fernie Village Master Plan evolved from a comprehensive planning process that looked at all of the base lands surrounding the existing resort development including the private lands to the north and the south of the resort property.

A review of the 1993 Resort Area Master Plan suggests that a maximum of 7,290 skiers per day can be staged out of the existing base area. Complementing this, an inventory and analysis of the base area lands were completed in terms of the development goals and objectives, to gain an understanding of the village and base area development potential at Fernie. These results were then subjected to an indepth evaluation of the study area's capability to physically and environmentally support the appropriate amount of base area development. The subsequent delineation of development constraints led to the creation of a variety of development concepts for Fernie Alpine Resort that included: 18 hole golf course alternatives; fairway residential; ski to/ski from residential development; alternative ski lift locations; nordic trails; parking; and village core expansion. Through a review process including public meetings, the concepts were refined into a Preferred Concept and ultimately into the Village Master Plan.

II. THE EXISTING RESORT

II.1 Location and Access

Fernie Alpine Resort is situated on the southeastern slopes of the Lizard Range of the southern Canadian Rockies in British Columbia, Canada, 5 kilometres southwest of the City of Fernie, within the Regional District of East Kootenay (see Fig. 1). This region has a rich and ongoing coal mining tradition, spectacular mountain scenery and extensive recreation opportunities.

Located on the Crowsnest Highway (Hwy. 3), the City of Fernie is approximately 50 km west of the British Columbia/Alberta border and 60 km north of the Canada./U.S. border. The nearest international airport is Calgary International Airport, approximately three hours east of Fernie. There are two regional airports: Cranbrook, BC, one hour west of Fernie; and Kalispell, Montana, two hours south of Fernie. Driving distances in the region are indicated in Table 1.

CITY	DISTANCE
Cranbrook, BC	96 km
Kimberley, BC	121 km
Nelson, BC	317 km
Calgary, Alberta	316 km
Edmonton, Alberta	611 km
Kalispell, Montana	186 km
Spokane, Washington	402 km

TABLE 1Driving Distances to Fernie



FIGURE 1 Area Location Map

II.2 History

The ski area development at Fernie was started by the incorporation of Fernie Ski Development Ltd. on November 20, 1961. This company was formed by local skiers who raised the initial capital from private sources to finance the construction of a T-bar and Day Lodge. The area commenced operations in the 1962/63 skiing season, and utilization has steadily increased to 166,000 visitors during the 1997/98 season.

In June, 1997, the Skiing Louise Group Ltd. purchased Fernie Alpine Resort Ltd. In addition to Fernie, the Skiing Louise Group owns and operates Lake Louise, Nakiska, Fortress Mountain and Wintergreen ski resorts in Alberta, Kimberley Alpine Resort in BC, and Stoneham Ski Resort in Quebec.

Shortly after the purchase of the resort, Brent Harley and Associates Inc. (BHA) were retained to develop a Resort Village Master Plan for Fernie. The vision is to create a Village that evokes a sense of the great landmark mountain lodges and hotels of the west that will collectively act as the focal point and image of Fernie Alpine Resort.

The Skiing Louise Group has a strong commitment to providing exceptional resort recreational facilities, operations and management at Fernie to enhance the "Fernie Resort Experience" for destination skiers and year round visitors alike. In the summer of 1998, they invested \$4.5 million into Fernie Alpine Resort in the form of two new lifts, one detachable quad and one fixed grip speed quad and a variety of new ski trails. Over the next five years, they will invest over \$6 million on the mountain facilities at Fernie that will include two more chairlifts, ski trail expansion and a new day lodge.

Complementing the planned mountain development will be Fernie Resort Village. Over the course of the next several years, the existing base area facilities will be replaced with the new Village. As planned, it is made up of nine Development Parcels, carefully designed to cater to the needs and expectations of the resort guests and residents and will include a well balanced variety of hotels, condotels, resort commercial and retail, convenience commercial, convention facilities, restaurants, bars, resort services and office space.

The development parcels will be ready for construction by mid to late 1999. The intent is to attract developers who will individually take on each of these sites. They will have to adhere to strict architectural programming and design guidelines, developing within prescribed volumetric space. Operationally, the owners of each Development Parcel will have to join and participate in the Fernie Alpine Resort Association. The belief is that the resultant collection of unique interpretations of the development controls will result in a very special stage to celebrate and passionately participate in all that Fernie Alpine Resort has to offer.

II.3 The Resorts of the Rockies Connection

Fernie Alpine Resort complements the Skiing Louise Group's family of resorts: Lake Louise, Nakiska, Fortress Mountain and Wintergreen ski resorts in Alberta; Kimberley Alpine Resort in BC, and; Stoneham Ski Resort in Quebec (see Figure 2). With seven resorts, the Skiing Louise Group is able to market many different resort and skiing experiences to a large tourist market. Some of the partnership advantages include:

- Increased efficiency in resort operations through umbrella marketing, finance and reservations systems.
- Participation in a shared marketing budget of \$1.3 million.
- Established network of national and international tour wholesalers.
- Access to a larger skier market; skier visits to the Skiing Louise Group ski areas totalled 885,100 skier visits during the 1997/98 season.
- Participation in the transferrable Skiing Louise Group day pass.
- Potential creation of a "Resorts of the Rockies" ski pass.

Currently, there is a high demand within Alberta for mountain recreation properties. However, this opportunity is largely non existent in Alberta due to the fact that most of the ski areas are located within the National Parks. As Fernie is only about a three hour drive from Calgary, it is considered to be ideally situated to capture this market.

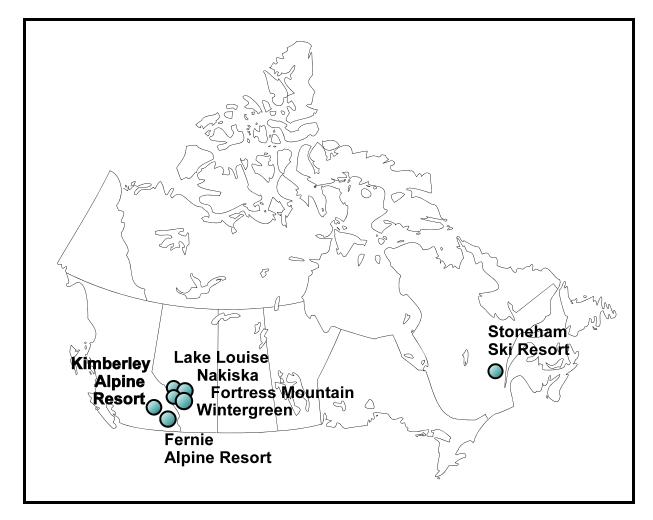


FIGURE 2 Resorts of the Rockies

II.4 Facilities Inventory

II.4.1 Alpine Skiing

The alpine skiing is the primary attraction at Fernie Alpine Resort. As of the winter of 1998/99, the skiing facilities at Fernie will consist of nine ski lifts accessing a variety of ski trails, for a Comfortable Carrying Capacity (CCC) of approximately 5,910 skiers (see Figure 3). The CCC is a measure of the optimum number of skiers/snowboarders who can utilize the resort at any one time, being guaranteed a pleasant recreational experience without causing a decline in the quality of the environment.

The operating season for the alpine skiing runs from the end of November to mid-April each year. During this period, regular operating days are seven days a week, accounting for a total of approximately 140 operating days per season. Since opening in 1962, annual skier visits have steadily increased to166,000 skier visits during the 1997/98 season.

The 1993 Resort Area Master Plan indicates expansion of the alpine skiing at Fernie to ultimately include a total 318.5 hectares of ski terrain and twelve ski lifts including one detachable quad, one fixed grip quadruple chairlift, two triple chairlifts, four double chairlifts, two T-Bars, one handle tow and one platter lift. With this expansion, the Comfortable Carrying Capacity (CCC) of the resort will be approximately 7,290 skiers at buildout.

The estimation of the CCC of a ski area is the single most important planning criterion for the resort. Based on the proper identification of the mountain's true capacity, all other related skier service facilities can be planned, such as lodge seating and space requirements, rest room facilities, parking, and other skier services.

FIGURE 3 Fernie Alpine Resort 1998/99 Trail Map

Map was unavailable at time of printing.

II.4.2 Other Winter Attractions

In addition to the alpine skiing, other winter attractions at Fernie Alpine Resort include:

- 1. 15 kilometres of track set and skate groomed nordic trails;
- 2. Horse drawn sleigh rides from the Village;
- 3. Snowmobiling, and;
- 4. Cat skiing at nearby Island Lake Resort.

II.4.3 Summer Facilities and Attractions

Currently, the summer attractions at Fernie Alpine Resort are limited to:

- 1. Lift accessed sightseeing and alpine hiking;
- 2. Mountain biking;
- 3. Horseback riding, and;
- 4. Golf at the nearby Fernie Golf and Country Club.

II.5 The Existing Base Area

The existing base area of Fernie Alpine Resort is made up of the Village and several adjacent residential subdivisions.

II.5.1 Base Area Facility Space Use Inventory

Table 2 provides an inventory of all the existing skier service buildings at Fernie. Currently, there are over 4,533 square metres (48,800 sq. ft.) of developed facility space at the resort. As listed in Table 2, approximately 54% of this space has been classified as ski area specific space, the space that provides the expected and required services for a ski resort to function properly during the day of skiing. These services include all built space (restaurants, retail, equipment rentals, day care, rest rooms, ski patrol, lockers, resort information, administration, etc.) catering to day use skiers and destination guests alike.

Table 2 also shows that approximately 46% of the space can be classified as destination oriented resort development. This is space designed to cater to the needs of destination or non-skiing guests for use before and after skiing (ie. hotel space), and/or space providing unique facilities (ie. swimming pool, fitness rooms, etc.) that act as attractions in their own right.

TAB	LE 2	
Base	Area Space Use An	alysis

		S	Skier Serv	Destina	ation Space				
Service/Function	Daylodge	Tamarak	Pizza Pit	Bear's Den	Top Patrol Hut	Skier Service Subtotal	Griz Inn	Destination Subtotal	Total Space (m2)
Restaurant	463.0	0.0	50.0	28.0	0.0	541.0	960.0	960.0	1,501.0
Kitchen/Scramble	144.0	0.0	20.0	13.0	0.0	177.0	320.0	320.0	497.0
Bar/Lounge	193.0	0.0	0.0	0.0	0.0	193.0	720.0	720.0	913.0
Rest Rooms	60.0	49.1	13.0	15.0	0.0	137.1	107.0	107.0	244.1
Ski School	0.0	0.0	74.0	0.0	0.0	74.0	0.0	0.0	74.0
Equip Rental/Repair	0.0	212.9	0.0	0.0	0.0	212.9	0.0	0.0	212.9
Retail Sales	0.0	134.8	0.0	0.0	0.0	134.8	0.0	0.0	134.8
Ski Patrol/First Aid	71.0	0.0	0.0	0.0	71.0	142.0	0.0	0.0	142.0
Public Lockers	133.0	35.3	0.0	0.0	0.0	168.3	0.0	0.0	168.3
Day Care/Nursery	0.0	0.0	144.0	0.0	0.0	144.0	0.0	0.0	144.0
Ticket Sales	0.0	34.4	0.0	0.0	0.0	34.4	0.0	0.0	34.4
Administration	0.0	108.3	0.0	0.0	0.0	108.3	0.0	0.0	108.3
Employee Lockers	10.0	0.0	18.0	0.0	0.0	28.0	0.0	0.0	28.0
Storage/Mechanical	101.0	22.1	10.0	0.0	0.0	133.1	0.0	0.0	133.1
Circ./Wall/Waste	123.0	29.7	45.0	0.0	0.0	197.7	0.0	0.0	197.7
Total Space (m2)	1,298.0	626.6	374.0	56.0	71.0	2,425.6	2,107.0	2,107.0	4,532.6
Percent of Total						54%		46%	

II.5.2 Overnight Accommodation Inventory

The existing private residential development and public overnight accommodation facilities at Fernie Alpine Resort have evolved over time to coincide with the development of the skiing facilities. As on-hill capacity increases, so must the resort's ability to accommodate both overnight and day use visitors.

Table 3 summarizes the existing overnight accommodation facilities at the resort. The resort has 2,888 bed units in place of which 1,042 (36%) are private and 1,846 (64%) are public bed units. There are currently no employee housing units at the resort.

TABLE 3Existing Overnight Accommodation Summary

Service/Function	Griz	Wolf's	Timberline	Highline	Polar Peak	
	Inn	Den		Estates	Lodge	Total
Hotel Rooms (Built)	8	42	0	0	0	50
Hotel Rooms (Committed)	0	0	0	100	0	100
Hotel Bed Units	16	126	0	200	0	342
Hotel Public Bed Units	16	126	0	200	0	342
Condotel (Built)	37	0	0	0	0	37
Condotel (Committed)	0	0	0	65	0	65
Condotel Bed Units	122	0	0	260	0	382
Condotel Public Bed Units	122	0	0	260	0	382
Multifamily (Built)	0	0	58	0	20	78
Multifamily (Committed)	0	0	87	131	20	238
Multifamily Bed Units	0	0	562	608	240	1,410
MFU Public Bed Units	0	0	562	418	0	980
Single Family Units (Built)	0	0	50	0	0	50
SFU (Committed)	0	0	2	42	0	44
SFU Bed Units	0	0	312	252	0	564
SFU Public Bed Units	0	0	132	0	0	132
Duplex (Built)	0	0	0	0	0	0
Duplex (Committed)	0	0	0	30	0	30
Duplex Bed Units	0	0	0	180	0	180
Duplex Public Bed Units	0	0	0	0	0	0
Bed & Breakfast Units (Built)	0	0	1	0	0	1
B & B (Committed)	0	0	0	0	0	0
B & B Bed Units	0	0	10	0	0	10
B & B Public Bed Units	0	0	10	0	0	10
Employee Housing Units	0	0	0	0	0	0
Employee Housing Bed Units	0	0	0	0	0	0
Total Bed Units	138	126	884	1,500	240	2,888
Total Public Bed Units	138	126	704	878	0	1,846
% Public Bed Units	100%	100%	80%	59%	0%	64%

III. INVENTORY AND ANALYSIS

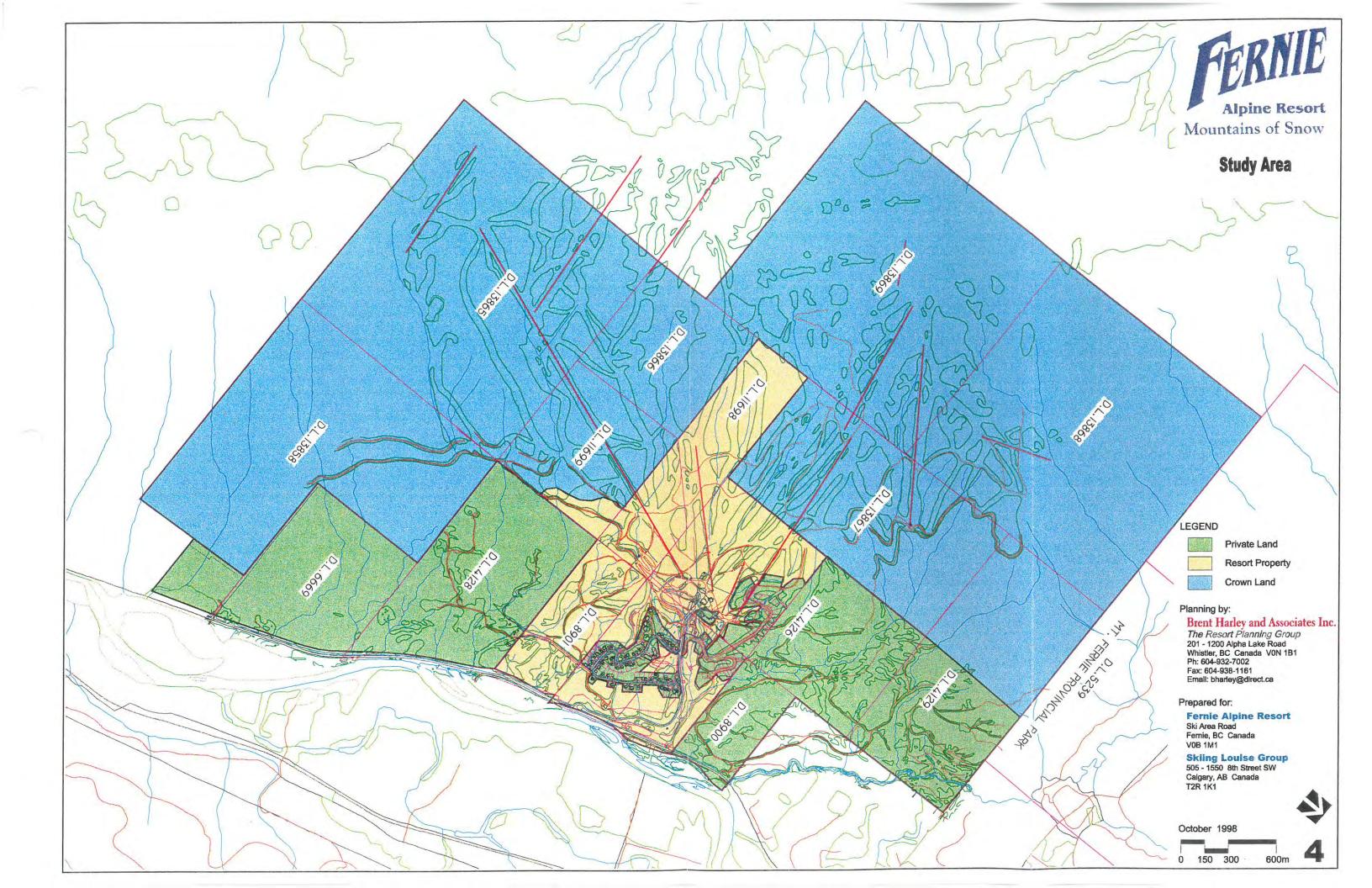
III.1 Introduction

The findings of the Inventory and Analysis form the basis for understanding the village and base area development potential at Fernie. This requires synthesis of the existing resort facilities analysis in conjunction with an indepth evaluation of the study area's capability to physically and environmentally support the appropriate amount of base area development, in terms of the development goals and objectives. The results of this evaluation are used to determine the development opportunities and constraints, and subsequently lead to the creation of Village Concepts for Fernie Alpine Resort.

III.2 Study Area

The Fernie Alpine Resort Study Area is illustrated in Figure 4. The existing village and base area development has occurred within D.L. 11698. The lands to the immediate north and south of the existing development at Fernie are privately owned.

District Lots 8900, 4126 and 4129 are currently designated as Forest Land Reserve. Administered by the Forest Lands Commission, the purpose of the FLR is to control the conversion of BC's forest land to uses incompatible with forestry. Before this property could be developed it would have to be reclassified. An application would have to be submitted to the Forest Land Commission for removal of these parcels from the FLR.



III.3 Land Use

III.3.1 East Kootenay Land Use Plan

Fernie Alpine Resort is located within the Integrated Management Zone, identified by the East Kootenay Land Use Plan in March, 1995, by the Government of British Columbia. Within this land use plan is an outline of opportunities for increasing tourism and recreational activities in the region, including heli-skiing/hiking operations and snowcat skiing. Many resource uses are permitted in the Integrated Management Zone, including recreation, forestry and mining. However, all development shall be managed in order to preserve important wildlife habitat, viewscapes and watersheds.

III.3.2 Elk Valley Land Use Strategy

The Elk Valley Land Use Strategy was established in 1986 to provide a policy framework for protecting the environment in light of the development of land and resources under its jurisdiction.

All development at Fernie Alpine Resort is subject to approval by the Regional District of East Kootenay's OCP Process in accordance with the Elk Valley Land Use Strategy, indicated in the following policy specific to expansion at the Resort:

Recreation Policy 31 (7) - "Fernie Snow Valley Ski Resort [*Fernie Alpine Resort*] is encouraged to expand and up-grade its facilities and shall be supported in its efforts provided all proposals are in accordance with a Master Plan acceptable to the Regional Board".

III.4 Environmental Conditions

In February, 1998, an environmental review identifying potential environmental issues related to the expansion of Fernie Alpine Resort was prepared by Conor Pacific Environmental Technologies Inc. Existing, approved and proposed facilities and activities at Fernie Alpine Resort were reviewed at a scoping level in relation to land use regulations and biophysical resources. The information provided below can be reviewed in full within their document Environmental Scoping Report for Fernie Alpine Resort.

III.4.1 Viewscapes

Because Fernie Alpine Resort is located along a major highway in what is becoming a major tourist destination area, future development planning may have to include provisions outlining how the visual integrity of the landscape is being protected. These provisions, including architectural design and vegetation management, should be included in architectural guidelines similar to those developed for the Highline Estates subdivision.

III.4.2 Vegetation

Biogeoclimatic Zone

The Interior Cedar - Hemlock biogeoclimatic zone occurs along the lower mountain slopes and at the base of the alpine skiing development, and would be directly affected by proposed expansion plans at the resort. Western red cedar and western hemlock dominate mature climax forests; lodgepole pine, trembling aspen and paper birch are common seral species occurring after wildfire. Wetlands are infrequent because of the steeply sloping mountainous terrain associated with this zone.

Rare and Endangered Species

Any new development must submit a site specific ground survey report in relation to rare and endangered vegetation species.

The Conservation Data Center has identified 112 taxa of rare plants in the Cranbrook Forest District (FD #51) which *may* be present in the Fernie Alpine Resort area. Proper conservation or re-location of these species must be assured prior to construction.

III.4.3 Fisheries and Aquatic Resources

Waterbodies in the vicinity of Fernie Alpine Resort are somewhat restricted. Several ephemeral creeks run down the slopes of the Lizard Range and drain into the Elk River which runs parallel to Highway 3.

The proposed expansion at the resort will involve land clearing and land disturbance activities which could possibly cause soil erosion, stream siltation, and impacts to aquatic environments, particularly fish spawning areas. This issue is important because of the popularity and economic importance of the cutthroat trout fishery in the Elk River. The Elk River also contains stocks of bull trout which are a Blue Listed species in B.C., considered to be sensitive to human encroachment. Soil erosion and stream siltation are predictable with new development construction, and standard erosion control and restoration practices during and after construction must be utilized to prevent impacts to fish populations in the Elk River.

III.4.5 Wildlife

Sixteen species of furbearers are located in the Fernie Alpine Resort area and they are the most susceptible wildlife to expansion. Any development adversely effecting trap lines or trap areas must be reported to the Ministry of Environment, Lands and Parks, who act as a go-between for registered trappers and manage harvest yields.

Currently there are five species of ungulates common to the resort area. These are: Elk, Mule

Deer, White-tailed Deer, Moose and Mountain Goat. While none of these species have been identified as 'at risk', conservation of habitat and food sources is highly encouraged in an effort to maintain this desirable and important resource.

Currently there are four species of carnivores common to the Resort area. These are: Grizzly Bear, Black Bear, Cougar and Wolf. Only the Grizzly Bear is listed as a sensitive species which is vulnerable to human encroachment. Minimum interaction and conservation of habitat and food sources is highly encouraged in an effort to maintain one of the highest densities of bears in North America.

There are five species of grouse and ptarmigan in the region: ruffed grouse, blue grouse, spruce grouse, sharp-tailed grouse and white-tailed ptarmigan. In the region, special management efforts are required for remnant populations of sharp-tailed grouse.

A number of endangered species potentially occur in the vicinity of the resort. Approval of future development applications may require surveys to determine the presence of endangered species in development areas and to identify critical habitats used by them. If endangered species are identified within the development site, specific management plans may need to be developed to mitigate the effects of development.

III.4.6 Air Quality

Fernie Alpine Resort is located in a relatively pristine area with few major industrial air emission sources. In general, air quality in the region is good. However, if the resort plans to have wood burning stoves and fireplaces, smoke from these facilities can reduce air quality, particularly in winter.

III.5 Geo-technical Assessment

A preliminary geo-technical assessment of the Fernie Alpine Resort development area was completed by Geo-Engineering (M.S.T.) Ltd. in April, 1998. Their study indicated that the development area is considered suitable for both residential and commercial developments, with some limitations. The information provided below can be reviewed in full within their document Fernie Alpine Resort Proposed Expansion Report on Initial Terrain Assessment.

III.5.1 Drainage and Groundwater

Most of the development area is classified as a groundwater flow transition area with localized discharge zones. A significant discharge area (springs and seepage zones) exist in a depression southeast of the existing ski area base.

In general, surface drainage appears to be good, with the exception of the above noted groundwater discharge area and localized terrain segments along drainage courses.

III.5.2 Natural Hazards and Stability Assessment

An overview study identified avalanches and landslides as natural hazards occurring in the general area.

Avalanches are common on the uppermost segments of the mountain ridges above the ski area and avalanches descend through numerous chutes down into Lizard and Currie Bowls. The proposed subdivision area and the avalanche area is separated by terrain which controls the descent of any avalanches and protects the lower parts of the mountains.

Several types of landslides occur in the general area. In the historical context, the ski area has been in operation since 1961 and during the past 34 years there has not been one hazardous event which would have had an adverse impact on the studied property. Since there are no precedent setting events in the general area, and the estimated relative probability of developing a landslide of even a very modest magnitude is considerably less than 10 percent in 50 years, the formal risk assessment in not warranted.

III.5.3 Slope Stability Assessment

The following preliminary slope classifications are recommended (see Figure 5):

- 1. Land parcels with slopes not exceeding a gradient of 27% are likely developable without significant restrictions.
- 2. Land parcels with slopes ranging from 27% to 35% gradient can likely be developed providing that site grading, foundations and, if applicable, retaining structures, are approved by a qualified engineer.
- 3. Land parcels exceeding the 35 % (20 degrees) gradient are not recommended for siting of permanent structures unless underlain by shallow bedrock. This condition has to be verified by a geotechnical engineer.

III.6 Archeological Assessment

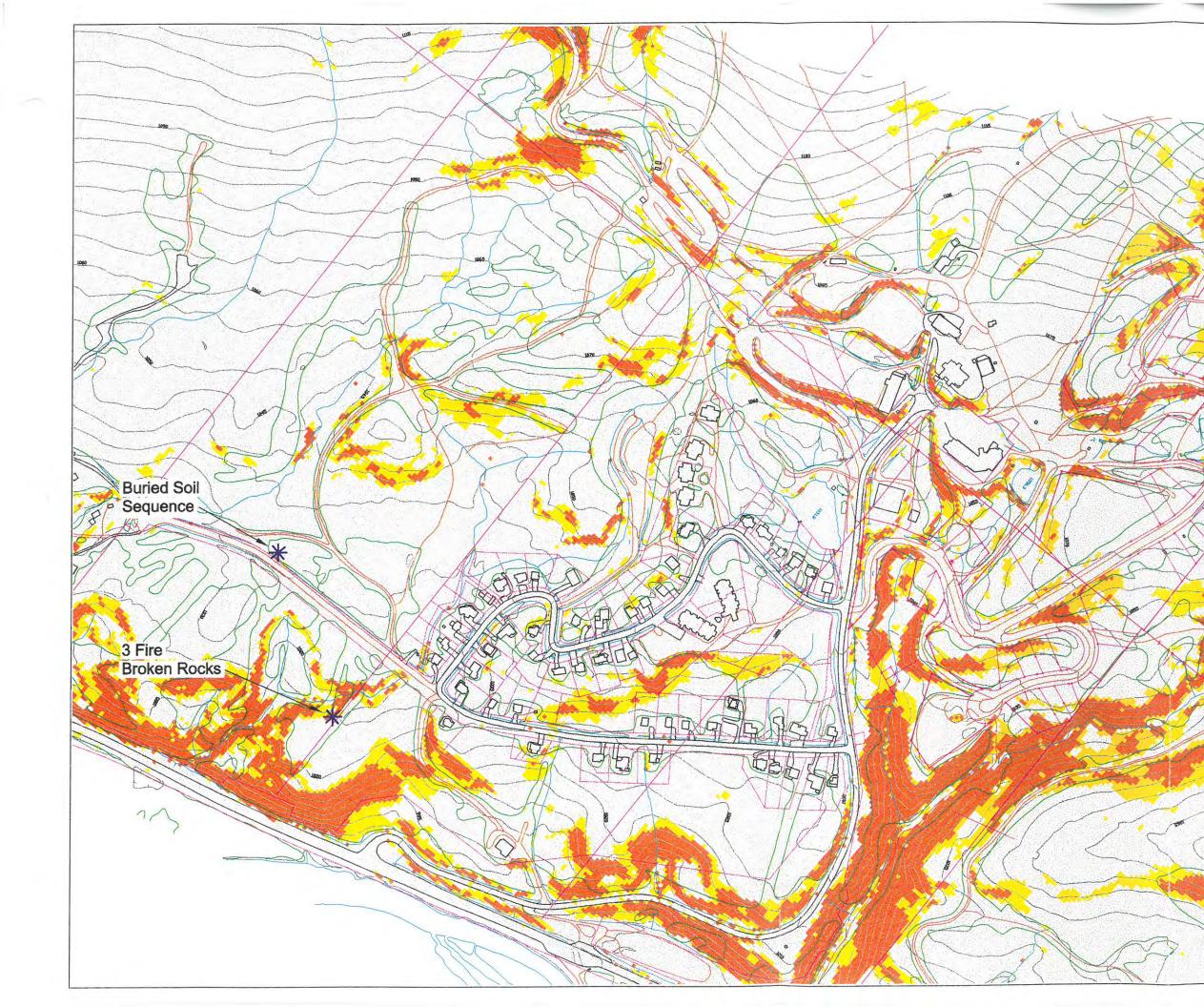
From the report of Wayne Choquette (1998), no significant archaeological materials were discovered in D.L. 8901, however, a soil/sediment sequence of archaeological interest does exist on the western bank of Alpine Way (see Figure 5). If a portion of this cutbank cannot be retained intact, time must be made available (no longer than 2 months on site, with 3 months advance notice) for interested scholars to study and document this area before it is destructed.

Three fire broken rocks were identified along the southern border of D.L. 8900 (see Figure 5). It is recommended that before further development can proceed in this area, a more extensive investigation should occur to determine if additional artifacts are present and if found, proper conservation techniques must be followed.

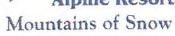
III.7 Development Constraints

The findings of the Inventory and Analysis were used to generate a Development Constraints Plan highlighting the positive and negative aspects to development within the Fernie Alpine Resort Study Area (see Figure 5).

The development constraints assisted in guiding the subsequent generation of planning options.



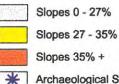




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Development Constraints Plan

LEGEND



* Archaeological Sites

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Prepared for:

Fernie Alpine Resort Ski Area Road Fernie, BC Canada V0B 1M1

Skiing Louise Group 505 - 1550 8th Street SW Calgary, AB Canada T2R 1K1

October 1998 Contour Interval 5m

75

0



150m

IV. VILLAGE MASTER PLAN

IV.1 Introduction

Recognizing that the skiing is the primary attraction to Fernie, the base lands have been planned to fully complement the needs and expectations of resident and visiting skiers.

A review of the 1993 Resort Area Master Plan suggests that a maximum of 7,290 skiers per day can be staged out of the existing base area. Complementing this, the Village Master Plan (Fig. 6) was carefully designed such that all facilities and overnight accommodations are in balance with the Comfortable Carrying Capacity of the mountain. All buildings, facilities, structures and residential development were carefully placed to:

- Offer a positive resort experience acting as an interface with the natural surroundings;
- Form comfortable and usable spaces;
- Capture views of the surrounding mountains;
- Take advantage of solar aspect throughout the year.

IV.2 The Village Vision Statement

The Fernie Alpine Resort Vision aims to build on the area's reputation of a backcountry ambience where visitors and residents alike passionately pursue a joy of being in the Rocky Mountains. All aspects of the resort's ongoing refinements will cater to this sentiment and ambience. Reflecting this, the Village has been planned to establish a fun, dynamic and yet relaxing atmosphere that celebrates it natural surroundings. As such, the Vision Statement for Fernie Alpine Village is:

To create a resort village that evokes a sense of the great landmark mountain lodges and hotels of western North America (ie. the Prince of Wales Hotel, the Post Hotel, the Timberline Lodge, Glacier Parks Lodge, etc.), carefully placed to enable the Fernie Alpine guests to physically and aesthetically interact with the rugged beauty of the Lizard Range of the Canadian Rockies.

To that end, the Village has been designed to be pedestrian oriented, carefully laid out to cater to the resort visitors' and residents' every need. It will promote an authentic ambience of familiarity and friendly interaction. The Village will act as a stage, oriented to complement and access the natural attributes of the site. The buildings will accent and frame the surrounding mountains. Their placement and height will maximize solar access during the day and throughout the year. The intent is to create a memorable facility that can cater to the high quality resort experience that is Fernie Alpine Resort.



IV.3 Transportation, Trails and Parking

The circulation patterns of the skiers, pedestrians, and vehicles, especially as impacted by the access and egress periods at the beginning and end of the day, have been anticipated and provided for in the layout of all of the village facilities to provide an efficient and logical circulation network (see Figure 6a).

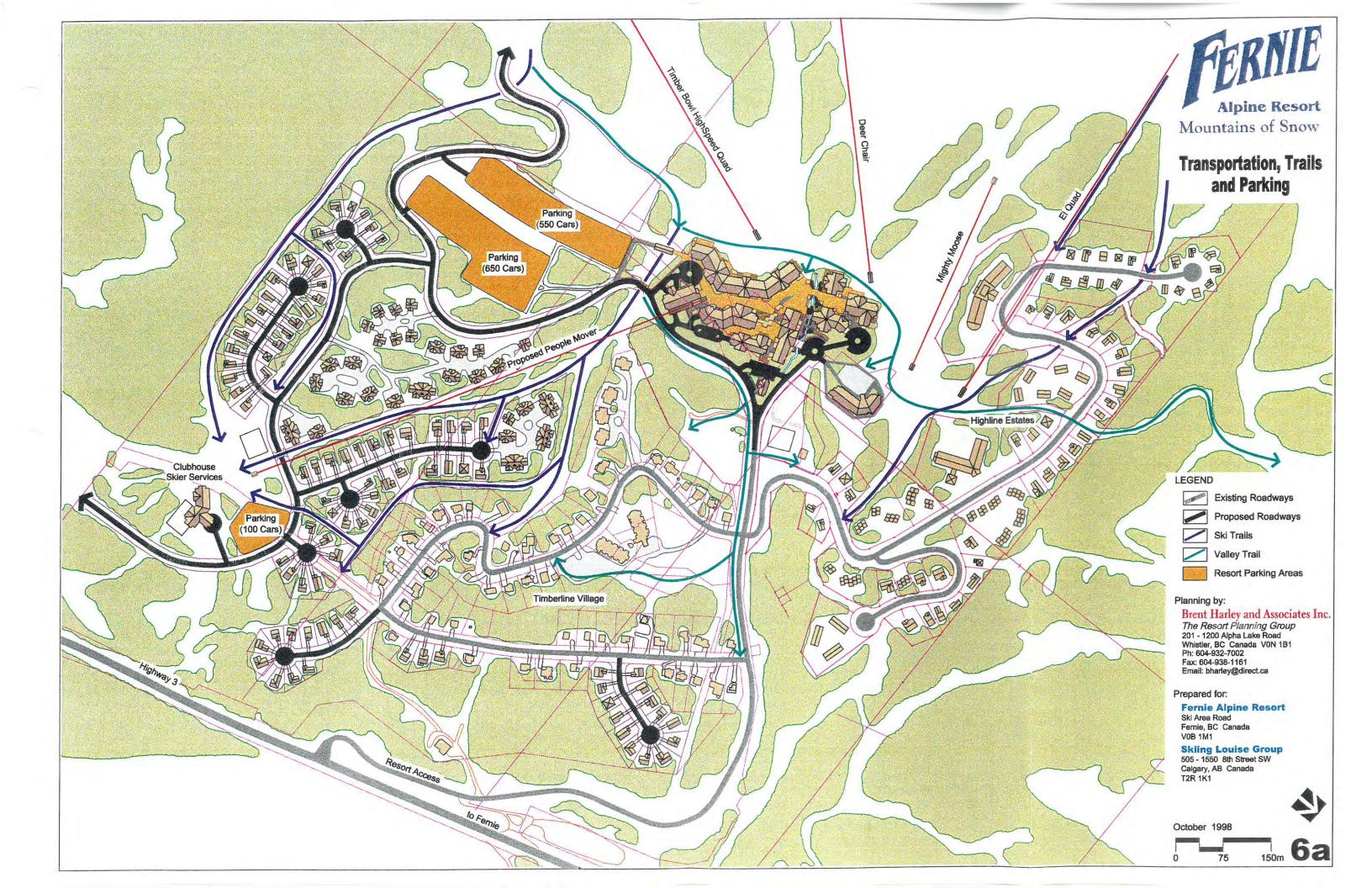
Fernie Alpine Resort is accessed via Ski Area Road. After passing the entrances to Timberline Village and Highline Estates, visitors arriving by automobile arrive at Central Reservations at the entrance to the Village Core. From here, visitors are directed either to the right towards the day lodge and various hotels, or to the left towards additional hotels, day use parking lots, the community centre/tennis club, and a proposed residential subdivision.

Based on the buildout CCC of 7,290 skiers per day plus the presence on busy days of an estimated additional 583 guests, parking must be available for approximately 7,873 visitors. Assuming that about 90% of the visitors will arrive by car and based on an average of 3 people per car, the parking areas should have a capacity to accommodate approximately 2,362 cars. The remaining 10% would be expected to arrive by bus. Assuming 40 visitors per bus, approximately 20 buses would have to be accommodated on a busy day.

Day use parking has been provided to accommodate 1,300 cars and 20 buses. A pedestrian walkway connects the day use parking with the skiing facilities and Village Core. All parking requirements associated with the Village Core commercial development and public accommodation are located in underground parking facilities, accounting for up to 830 underground parking stalls. The remaining parking requirements are attached on site to each private, ski to/ski from, residential development.

A strong focus was placed on linking all aspects of the development from a pedestrian standpoint to provide a high degree of integration between the resort's users and encourage the use of non-vehicular movement wherever possible within the resort. The following elements were incorporated into the design of the village in order to create a healthy, pedestrian oriented resort.

- A paved trail system connecting the various residential parcels to the Village Core and resort amenities.
- Various ski trails returning to the residential subdivisions to enable ski to/ski from overnight accommodation.
- A people mover connecting the Village Core and the alpine skiing with the community centre/tennis club; clubhouse/skier services and; various residential accommodation.

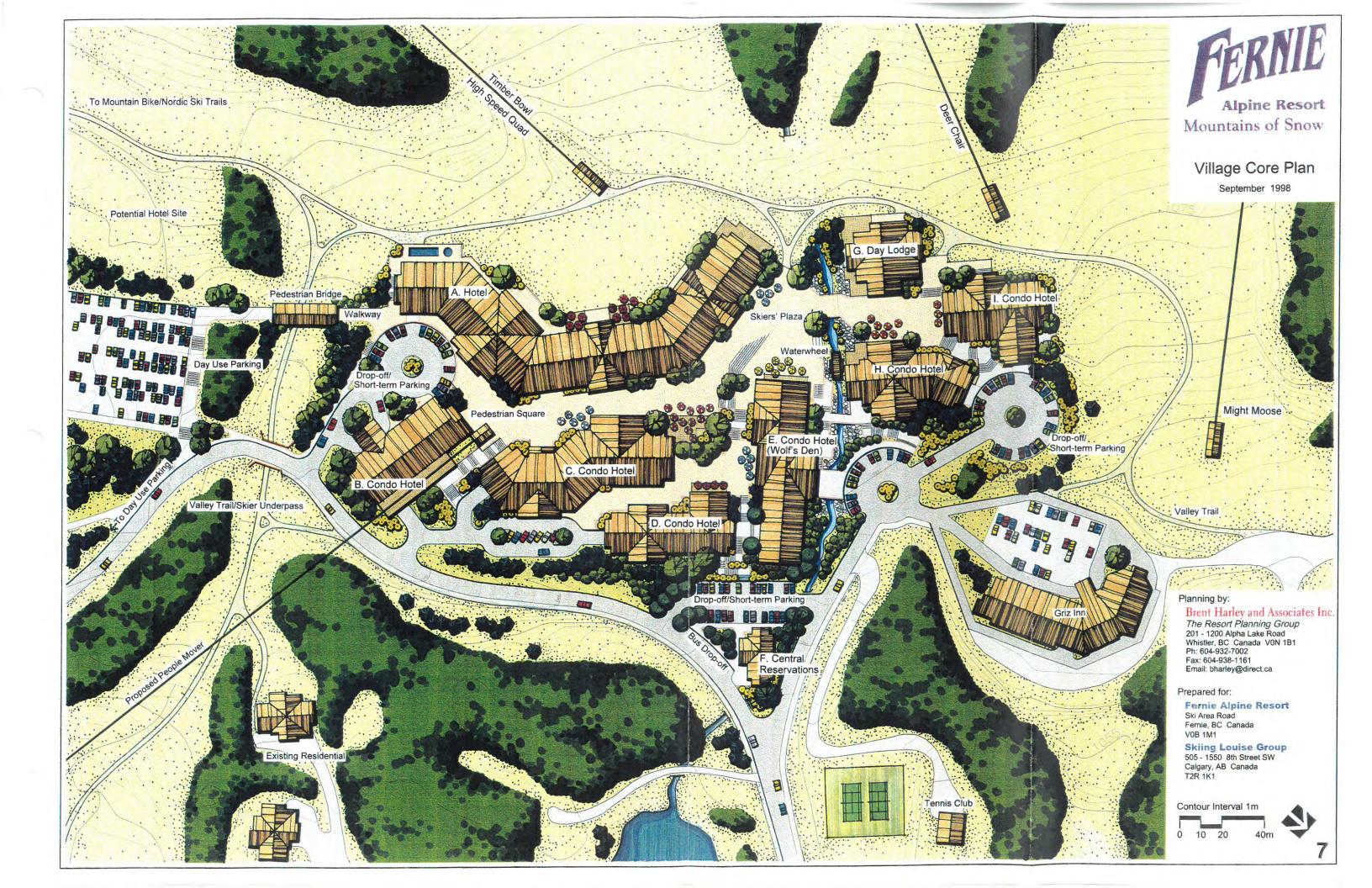


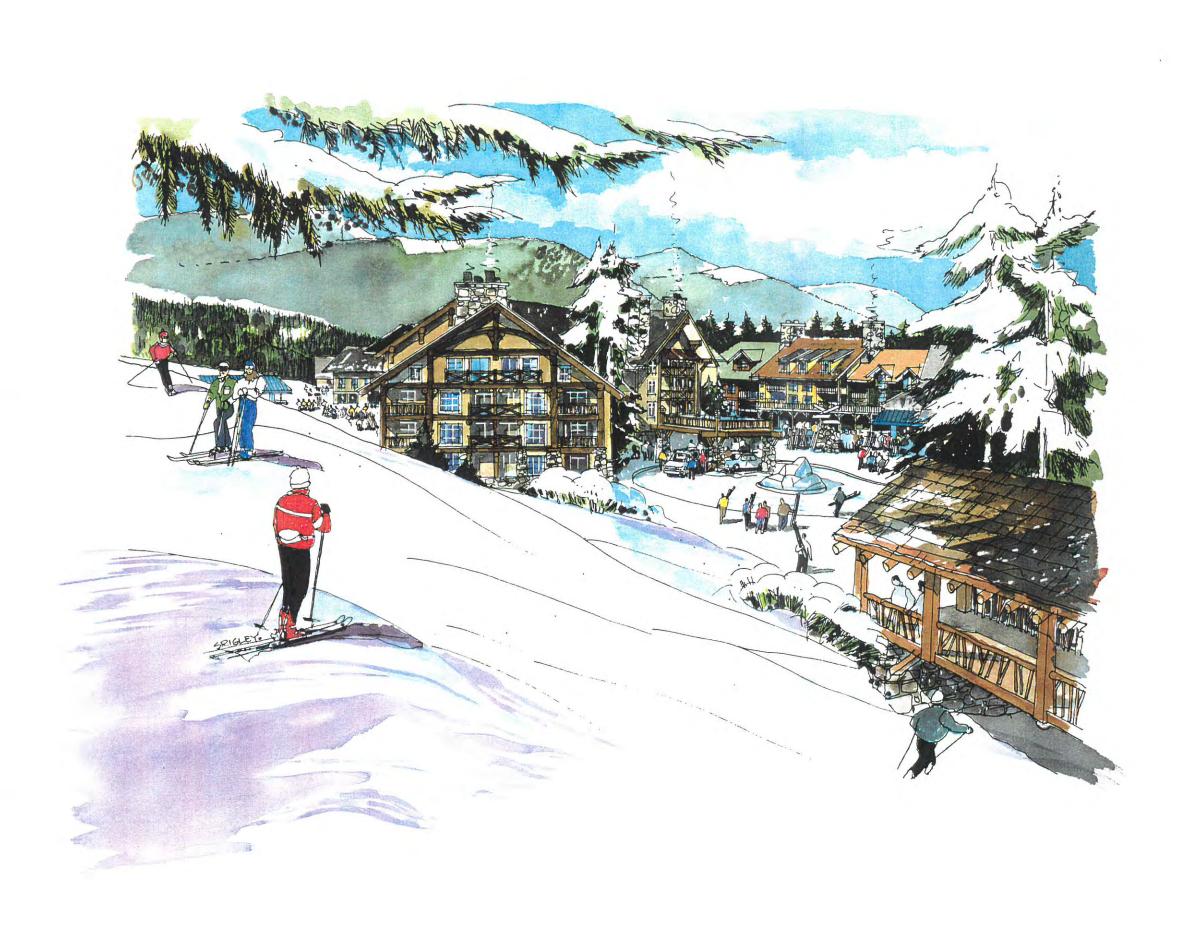
IV.4 Village Core

The Village Core is the primary focal point and activity centre to the resort. As illustrated in the Village Core Plan (Fig. 7), the pedestrian oriented Village enables visitors to leave their car behind as they enter the Village from a variety of access points.

The Village Core layout has been arranged to offer the visitor all of the necessary facilities and amenities in a logical fashion and progression. Commercial development has been designed to employ a mixed-use building typeology with commercial space located on the lower floors and public accommodations above the commercial.

All buildings have been oriented to take advantage of the natural attributes of the site, framing the surrounding mountain views and establishing building heights and roof lines to maximize solar access during the day and throughout the year (see Figures 8 and 9). The size and scale of structures have been designed to establish and maintain a comfortable human scale. The intent is to reinforce a high quality resort experience and provide every opportunity to effect and maintain the desired animation and people oriented character that will define the ambience of Fernie Alpine Resort.

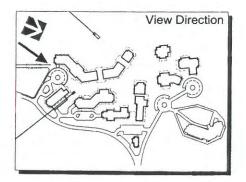




FERNIE **Alpine Resort** Mountains of Snow

Artist's Rendering of Proposed Village

Winter View August 1998



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Prepared for:

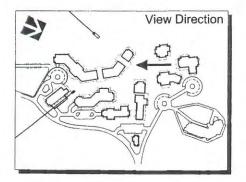
Fernie Alpine Resort Ski Area Road Fernie, BC Canada V0B 1M1

Skiing Louise Group 505 - 1550 8th Street SW Calgary, AB Canada T2R 1K1



TERNIE **Alpine Resort** Mountains of Snow

Artist's Rendering of Proposed Village Summer View August 1998



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Prepared for:

Fernie Alpine Resort Ski Area Road Fernie, BC Canada V0B 1M1

Skiing Louise Group 505 - 1550 8th Street SW Calgary, AB Canada T2R 1K1

IV.4.1 Development Parcels

The Village Core includes nine development parcels. Each parcel has been delineated, within which the building footprint as well as the programmed internal and external uses of the development have been defined. The placement of specific facilities such as restaurants, retail outlets, tickets, ski patrol, day care, etc., have all been carefully determined to choreograph the use of the Village; to optimize the quality of resort experience that will be offered, and; to maximize the economic potential of Fernie Alpine Resort (please refer to the Fernie Alpine Resort Development Plan).

Table 4 summarizes each development parcel.

TABLE 4Development Parcel Summary

	Commercial	Auxiliary Space	Accommodation	Total Building	# of Units/	Bed	UG Parki	ing (Cars)
Parcel	Space (m2)	(m2)	Space (m2)	Space (m2)		Units	Max.	Min.
А	2,320	0	10,720	13,040	165	330	300	210
В	800	0	3,420	4,220	53	105	90	63
С	2,680	0	3,170	5,850	49	98	130	91
D	770	0	2,570	3,340	40	79	80	56
Е	900	0	2,820	3,720	43	87	70	49
F	0	0	410	410	0	0	30	21
G	0	1,850	0	1,850	0	0	0	0
Н	810	0	2,730	3,540	42	84	70	49
Ι	0	950	2,125	3,075	33	65	60	42
Totals	8,280	2,800	27,965	39,045	424	848	830	581

*The maximum and minimum number of rooms/units is based on the assumption of 65 sq. metres of gross space

All design and construction within each development parcel must adhere to the standards of the Fernie Alpine Resort Development Plan and Village Core Design Guidelines.

IV.4.2 Space Use

The amount of skier service space was determined in terms of the Comfortable Carrying Capacity of the skiing. At buildout, the Village Core will include approximately 8,280 square metres of skier service space. Specifically related to the operation and management of the ski area, this space includes restaurant seating, kitchen, bar/lounge, public washrooms, retail sales, administration, ticket sales, public lockers, equipments rental and repair, ski school, guest services, daycare, employee facilities, first aid, ski patrol, and storage/mechanical. In addition, 2,800 square metres of resort destination guest space in the form of conference, restaurants and a variety of recreation facilities is proposed. Through detailed architectural programming, the skier service and resort space has been placed to effect the animated use of the Village Core (please refer to the Fernie Alpine Resort Development Plan).

IV.4.3 Skier's Plaza

The Skier's Plaza is a planned cross-roads and meeting place centrally located in the Village (Figure 7 and 9). Virtually all guests to Fernie must pass through this space during their visit. A variety of restaurant/bar patios have been placed to take advantage of the plaza's excellent solar exposure and people watching opportunities. Running along one edge of the plaza is a creek that will provide a primary landscape amenity to the space. Preliminary plans for the creek call for a stacked rock wall edge treatment accented with plant material. The existing water wheel, currently located in the creek, will be refurbished and maintained as a character piece. It is anticipated that a variety of public art pieces will be established at several locations in the plaza and along the creek.

IV.5 Overnight Accommodation

At buildout, it is proposed that Fernie Alpine Resort will have 4,618 bed units as described in Table 5. This is an increase of 1,730 bed units from the existing and committed bed units at the resort.

TABLE 5
Overnight Accommodation Summary

	Existing and Committed ¹			Proposed Expansion ²			Total Buildout		
Туре	Units	Bed Units	%	Units	Bed Units	%	Units	Bed Units	%
Public Accommodation									
Hotel	150	342		165	330		315	672	
Condotel	102	382		217	434		319	816	
Multifamily	238	980		0	0		238	980	
Single Family	22	132		0	0		22	132	
B&B	1	10		0	0		1	10	
Total Public	513	1,846	64%	382	764	44%	895	2,610	57%
Private Accommodation									
Condo/Townhouse	78	430		108	432		186	862	
Single Family	72	432		89	534		161	966	
Duplex	30	180		0	0		30	180	
Total Private	180	1,042	36%	197	966	56%	377	2,008	43%
Totals	693	2,888		579	1,730		1,272	4,618	

1. Additional undedicated development from the 1993 Master Plan equals 414 bed units

2. In addition to the existing bed units within the Wolf's Den.

IV.5.1 Public Overnight Accommodation

Most of the public overnight accommodation has been provided within the Village Core. All of these units have ski to/ski from capabilities. To maintain a variety of public accommodation types, additional ski to/ski from public accommodation is available within the adjacent subdivisions. In total, there will be approximately 2,610 public bed units at buildout. This equates to 315 hotel rooms, 319 condotel rooms, 238 multifamily units, 22 single family houses and 1 bed and breakfast.

All public accommodation units will be developed with rental pool covenants, allowing owners to purchase the units subject to restricted use.

All design, construction and implementation of public residential accommodation must adhere to the standards of the Fernie Alpine Resort Residential Design Guidelines.

IV.5.2 Private Residential Accommodation

The newly planned private residential subdivision adjacent to the existing Timberline Subdivision is made up of single family and multi-family developments. In total, there are 108 multi-family units and 89 single family lots, all with direct ski to / ski from capabilities.

All design, construction and implementation of private residential accommodation must adhere to the standards of the Fernie Alpine Resort Residential Design Guidelines.

IV.5.3 Staff Housing

The objective of the staff housing at Fernie Alpine Resort is to provide a range of options for the increased number of resort staff, so that they may secure affordable and healthy long or short term housing.

Staff housing will be created by encouraging the creation of on-suite apartments in single family residential housing, in addition to allowing commercial operators to provide staff accommodation in association with commercial buildings for their employees and management.

All design, construction and implementation of staff housing must adhere to the standards of the Fernie Alpine Resort Residential Design Guidelines.

IV.6 Design Guidelines

Village Core Design Guidelines and Residential Design Guidelines have been formulated to ensure consistency of construction quality and finishes. These guidelines will be incorporated in registered building schemes for each of the development parcels and will be applied to the design of all buildings, spaces and structures within the resort.

IV.7 Recreation Facilities and Amenities

Fernie Alpine Resort will develop the alpine skiing facilities to ultimately include a total of 318.5 hectares of ski terrain and twelve ski lifts including one detachable quad, one fixed grip quadruple chairlift, two triple chairlifts, four double chairlifts, two T-Bars, one handle tow and one platter lift. In addition, a people mover is proposed that will enable ski to/ski from accessibility for the residential subdivisions. In the summer, some of the lifts will be utilized to deliver guests to the top of the mountain for hiking, mountain biking, sightseeing, and mountain top dining.

The existing nordic ski trail system will be expanded into a series of loops that will connect the Village with lands to the north and south. When complete it is anticipated that these trails will be groomed and lighted for night skiing. These same trails will be utilized for hiking, mountain biking, and roller blading.

A community centre/tennis club has been located in close proximity to the base of the people mover, thus enabling direct user access from the Village.

Several eighteen hole golf course routing plans have been explored. The final location is dependent upon potential adjacent land purchases. One golf course development opportunity currently being considered would see the golf club house at the bottom of the people mover, enabling guests staying in the Village Core to access the golf course without having to use their cars or a shuttle.

The Village Core will act as the stage for a variety of events and activities. These will depend upon the resort's operational programming, but may include:

- special events
- rallies
- races
- training camps
- concerts
- skate boarding
- festivals
- trapeze
- alpine slide
- climbing wall
- competitions

IV.8 Zoning

The Zoning Plan (Fig. 10) illustrates the proposed zoning for Fernie Alpine Resort. The proposed zoning is as follows:

Lands with Existing Zoning

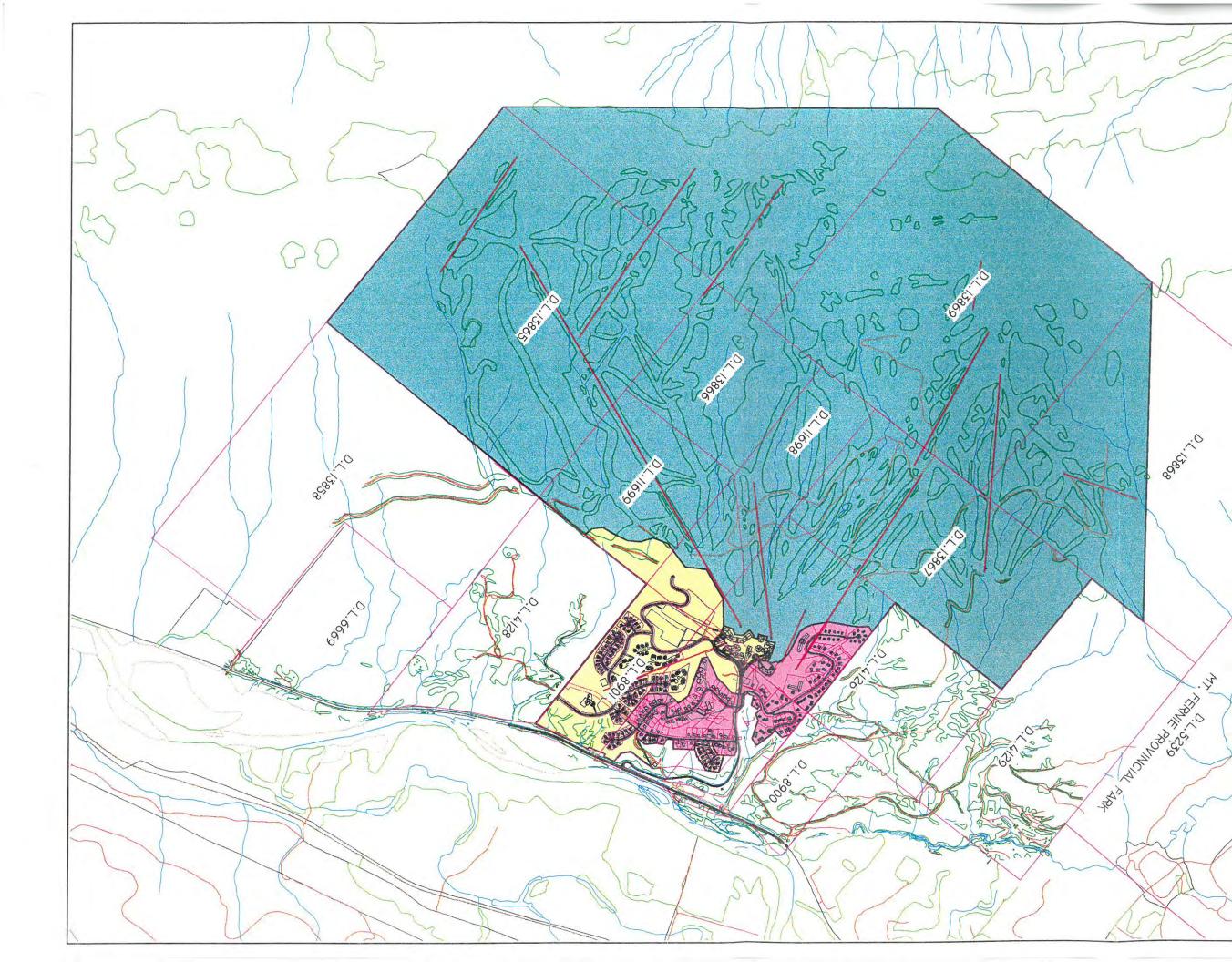
This includes all existing zoned lands within Highline Estates and Timberline Village.

Resort Development Zone

The Resort Development Zone includes all proposed development areas at the resort including the Village Core and new residential subdivisions.

Resort Recreation Zone

The Resort Recreation Zone encompasses the mountain facilities.



Mountains of Snow **Zoning Plan**

FERNIE

Alpine Resort

LEGEND

·4.

- **Resort Development Zone** Lands with Existing Zoning
- **Resort Recreational Zone**

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Prepared for:

October 1998

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Fernie Alpine Resort Ski Area Road Fernie, BC Canada V0B 1M1

Skiing Louise Group 505 - 1550 8th Street SW Calgary, AB Canada T2R 1K1

600m 10

IV.9 Servicing and Infrastructure

In August, 1998, Urban Systems Ltd. completed a preliminary concept review of water distribution and sanitary sewage collection for the proposed expansion of Fernie Alpine Resort.

IV.9.1 Sanitary Sewage Collection

Due to the general grade of the resort area from west to east, sanitary sewage collection will generally follow the natural slope of the land.

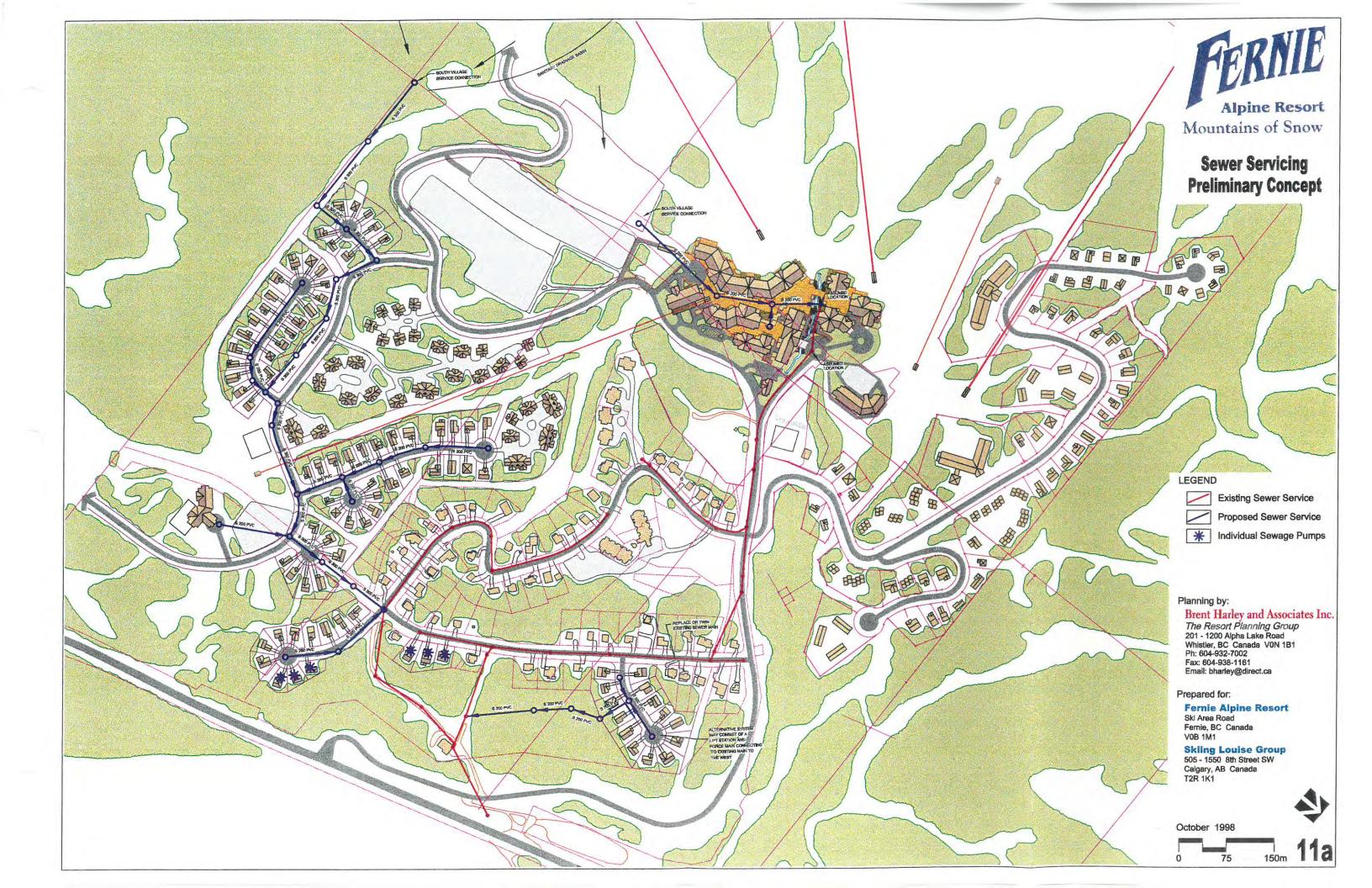
The Sewer Servicing Preliminary Concept is indicated in Figure 11a. As indicated, there are a few areas at the lower end of the development that may require lift pumps to convey sewage to the gravity collection system.

There is a section of pipe within the existing system that may require up-sizing or twinning in order to facilitate the proposed development. A 140 metre section of 200 mm diameter sewer main running along the north portion of lower Timberline Crescent will be under capacity by approximately 25% at buildout of the proposed development. The section of pipe that connects to the sewage treatment plant (STP) is also undersized although surcharging of the adjacent manhole to a depth of 0.10 metres above the top of the existing pipe will force the design flow through to the STP.

The following table summarizes the required upgrades to the existing STP.

Sewage Treatment Plant Component	Upgrade
Flow Equalization Tank	Flow Equalization Tank and Pump. Tank volume will be approximately 460 m3 (100,000 igal)
Rotating Biological Contactors	A new Rotating Biological Contactor will be required.
Secondary Clarifiers	An additional 4.57 m (15 ft.) diameter clarifier will be required. A building addition and piping reconfiguration will be required.
Sludge Tank	An addition to the sludge tank should be considered in detailed design.

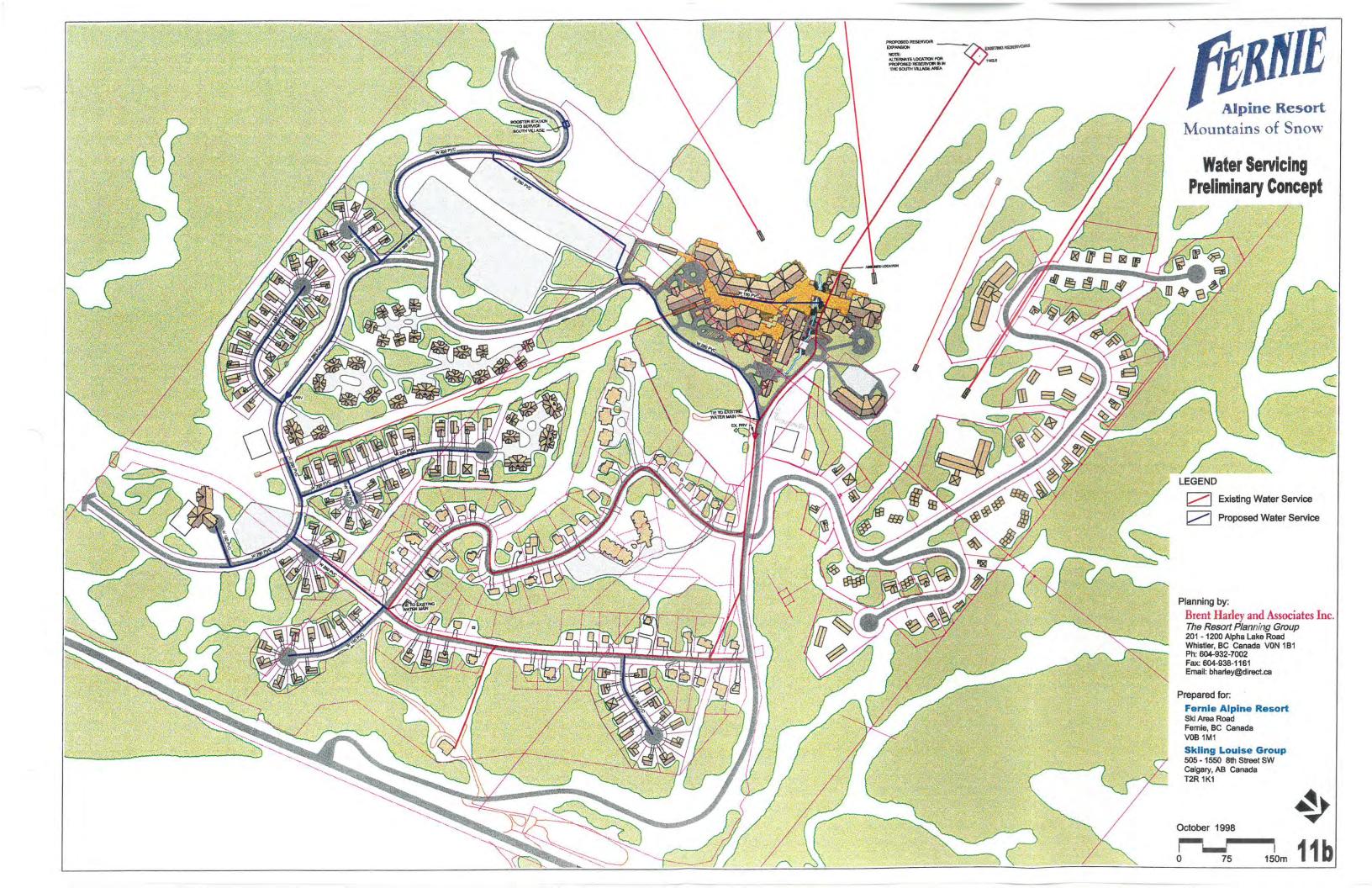
TABLE 6Sewage Treatment Plant Upgrades



IV.9.2 Water Distribution

Water distribution for Fernie Alpine Resort is supplied by well W-5, Boardman Creek, and the Elk River Well. These sources supply the two reservoirs located southwest of the existing ski area base. Water supply calculations for the proposed development indicate that an additional 470 m3 of storage will be required through expansion of the existing reservoirs or construction of a third reservoir at the site. Water supply calculations are based on the assumption that all new development at Fernie Alpine Resort will be constructed using water conservations and low flow plumbing fixtures. These measures have been in place at the resort since the spring of 1998.

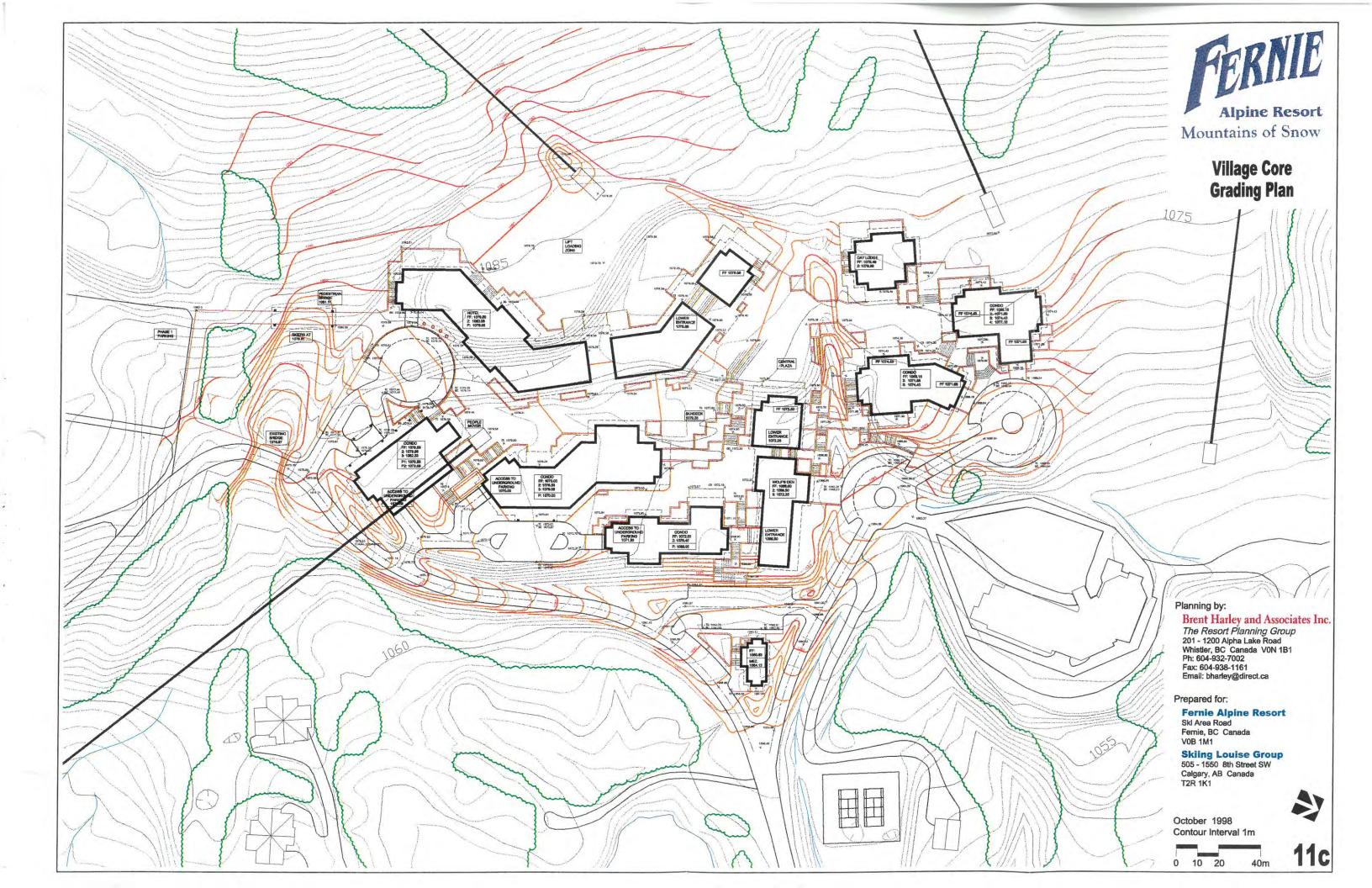
The Water Servicing Preliminary Concept is indicated in Figure 11b.



IV.10 Village Core Grading

The design process leading to the Fernie Alpine Resort Village Master Plan focuses on using the natural configuration of the land to its greatest potential. As such, grading has been minimized to respect the existing topography, vegetation and specific site features. Nonetheless, it must be noted that in order to achieve the desired high quality visitor experience, a certain amount of earthwork and grading will be necessary throughout the village development.

The Village Core Grading Plan (Fig. 11c) illustrates how grading will work in relation to the buildings, lift loading zones, and pedestrian and vehicular access routes within the village core development. The village core has been graded at one metre contour intervals. All spot elevations, lift terminal elevations and floor levels of the village buildings are critical to making the village function effectively.



IV.11 Phasing

The implementation of the Fernie Alpine Resort Village Master Plan will involve three phases of development as illustrated on the Phasing Plan (Fig. 12). It must be noted that the phase numbering does not coincide with years, and each phase of development may take several years to complete based on market demand. All effort should be made to adhere to the proposed sequencing of the development described below.

Phase 1

Phase 1 will focus on the development of the Village Core and infill development within Highline Estates.

Phase 2

The new subdivision areas will be developed in Phase 2.

Phase 3

Phase 3 will involve development to the south of the Village Core to include expansion of the village and future real estate development.

