S.e Canada, Inc. 1200 Aipha Lake Soad Suite 201 Whistler, DC VON 181 CANADA 604.932.7002 FAX.938.1161



USA

LITTLETON, MH

FRISCO, CO

SELLEVUE, WA

CANADA

WHISTLER, BC

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SILVER STAR MOUNTAIN BASE AREA MASTER PLAN

February 1995

Prepared For: Silver Star Mountain Resort Box 2, Silver Star Mountain V0E 1G0 (604) 542-0224 S.e Canada, Inc.

604.932.7002

1200 Aigha Lake Road

FAX.938.1161

Suite 201

Whistler, BC VON 181

CANADA

February 10, 1995

Mr. John Gow

Silver Star Mountain Resort

Box 2

s.e canada

USA

LITTLETON, NH

WHISTLER, BC

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TORYO

FRISCO, CO BELLEVUE, WA Silver Star Mountain, B.C.

V0E 1G0

Dear John:

We are pleased to present your Base Area Master Plan for Silver Star.

The enclosed document describes the planning process we have completed with your assistance. I believe that the resultant product reflects an understanding of the site in response to your development goals and objectives.

The base area plans are intended to balance with and complement the proposed development of the mountain. I would be pleased to discuss any aspects of our work in an effort to ensure that this product meets your needs and assists you in the ongoing success of Silver Star.

Finally, I wish to thank you for the opportunity to assist in this exciting project.

Best regards, S.e Canada

Brent Harley, B.E.S., B.L.A., M.B.A.

President

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This Base Area Master Plan would not have been possible without the close cooperation and involvement of the management and staff of Silver Star Mountain Resort.

Silver Star Mountain Resort Inc.

John Gow President

Mike Randell Mountain Manager

Heather Chapple Design Coordinator

Mike Duggan Vice President

This Master Plan was prepared by:

S.e Canada The Resort Planners 201, 1200 Alpha Lake Road Whistler, B.C. V0N 1B1 (604) 932 7002

A Division of Brent Harley & Associates Inc.

Steve Whittall: Planning and Landscape Architecture

Melissa Laidlaw: Planning and Production

Bernard Messeguer: Computer Graphics

Brent Harley: Planning and Project Coordination

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In August, 1994, S.e Canada (S.e) was retained by Mr. John Gow of Silver Star Mountain Resort Inc. (the Client) to complete a Base Area Master Plan designed to complement their 1994 Mountain Master Plan.

The study was based on site visits by the S.e design team, input from the management and staff of Silver Star, and an in depth review of the existing and proposed mountain development plans.

An inventory and analysis of the existing base area facilities was completed. Based on the size and location of the proposed development for the mountain, the requirements for building space use, parking facilities, and overnight accommodation were determined. From this, the strengths and weaknesses of the current facilities became apparent and courses of action to accommodate the proposed expansions were developed.

Generally, all of the existing base area facilities at Silver Star (the Village, the parking, and the residential areas) are well placed to cater to the current needs and desires of the resort visitors in a year round capacity. In order to accommodate the ongoing growth of the resort, all effort will have to be made to expand the capacity of those facilities, while maintaining and improving the existing functional qualities, ambiance, and character of the resort.

Based on a Comfortable Carrying Capacity (CCC) of 5,000 skiers per day, the existing skier related facilities in the Village (45,500 sq. ft.) offer approximately 60% of the gross area necessary (70,500 sq. ft.) to stage and service the resort in a balanced fashion. However, as Silver Star averages about 3,500 skiers per day (based on the top 25 days of visitation during the 1993/94 ski season), the existing built space actually represents about 80% of the "ideal" area required (50,000 sq. ft.) for those days. As the mountain expands, by the end of the third phase of proposed development the CCC will have reached 9,000 skiers per day. Assuming that the market will continue to grow and reflect these numbers, the base area and on-mountain skier related facilities will have to be expanded accordingly to approximately 125,000 sq. ft.

In a similar fashion, a review of the existing parking facilities, combined with parking capacities in the residential areas, found that the current 1,620 car capacity of the resort is sufficient to accommodate 5,000 skiers per day. For those average days when 3,500 skiers visit Silver Star, this parking capacity represents about



140% of the amount required. As with the built space, in order to take into account the proposed mountain expansion, more parking will have to be established. By the time the 9,000 skiers per day level is reached, the parking requirements will have expanded to approximately 2,700 cars. This assumes that about 15% of the skiers will be arriving by bus. The Village plans will maximize the amount of parking within an acceptable walking distance to the skiing. Our preliminary findings show that the bulk of those parking requirements can be accommodated within this area. In addition, a combination of a shuttle system from remote parking lots, valet parking, and possibly stacked or underground parking facilities will have to be developed to accommodate the resort's needs for "at capacity" days.

In terms of residential development, we have classified Silver Star as a regional destination resort. Taking into account the distance Silver Star is from a major population base (Vancouver) combined with the close proximity to Vernon within the regional context of the Okanagan Valley, we have determined that it is reasonable to expect the capacity of the overnight accommodation, in terms of bed units (BUs), to approximate 80% of the mountain's CCC. As such, with the current CCC of 5,000 skiers per day, the resort should be able to support about 4,000 BUs. The number of existing private and public BUs is 2,332, or about 58% of build-out. By the end of Phase 3, the proposed number of BUs will equate to approximately 7,100, or 80% of a CCC of 9,000. All of the existing and proposed residential developments outlined in this report offer residents ski to/ski from access to the mountain facilities.

A series of land use development concepts, including preliminary Village plans, were generated to take into account the amount of development determined as being necessary to support the successful operation of the resort on a phase by phase basis. These were presented to the Client for input and feedback. After several refinements, a consensus was reached for the land use plan, the result of which are reflected in Figure 7 in the document. The area designated for the Village expansion is more than sufficient to accommodate the perceived resort development requirements. Detailed planning of the Village is ongoing.

Throughout the planning process, all effort was made to anticipate the needs and expectations of the visitors to Silver Star. In addition, the plans reflect the goals of both the Client and S.e to create a high quality resort experience that respects the natural environment and setting of the resort development.



I. INTRODUCTION

S.e Canada (S.e) was retained by Mr. John Gow of Silver Star Mountain Resort Inc. to complete a Base Area Master Plan Concept that will complement their 1994 Mountain Master Plan.

S.e initiated this project in August, 1994. The study was based on site visits by the S.e design team, input from the management and staff of Silver Star, and an in depth review of the existing and proposed mountain development plans.

The following report fully describes all aspects of the Base Area Master Plan. Section II outlines all design criteria that must be considered throughout the Base Area Planning Process and provides an explanation of how the various mountain and base area facilities must be balanced to create a successful resort. Section III describes the character, and all of the facilities, attractions, and accommodations of the existing resort at Silver Star. Included is a detailed inventory of the existing facilities, space use, accommodation, and parking. An analysis and critique of the existing resort is described in Section IV. Section V outlines the physical development potential of the study area. These findings are then applied to Silver Star's specific goals and objectives as influenced by the Mountain Master Plan found in Section VI, Development Components. A variety of development alternatives are explored in Section VII. All aspects of the Base Area Master Plan are described in Section VIII. Finally, the phased implementation of the Silver Star's base area expansion, as tied to the development of the Mountain, are delineated in Section IX.

II. DESIGN CRITERIA

II.1 Base Area Design

Particular consideration must be given to the relationship of a base area to the mountain facilities. Skiers should be able to gravitate naturally from the village and residential base areas to the mountain facilities, allowing convenient access to any of the ski lift systems originating in the mountain staging areas.

The base area facilities of a resort act as the focal point for social and recreational activities; these facilities reinforce and complement the mountain facilities (the primary attraction during the ski season). Recognizing this, the base area facilities provide the fundamental image of the resort, acting as a baseline for the visitor's experience. The resort experience begins the moment the resort is within sight. The organization of the base area facilities and the design of the "critical mass" determine the sense of arrival. The ease of approach, drop-off, and parking followed by the subsequent ease of discovery of the various services and activities determine the guest's initial impressions that, once established, dictate the general mood of the visit. The facilities must be structured in a logical fashion for the base area to function conveniently through the duration of a visit, while providing for the desired character and aesthetics of the resort.

The orientation of structures should be placed to take advantage of the natural attributes of the site, (framing specific vistas and views, positioning building heights and roof lines for solar access and complementing all natural features) while respecting the environment and mitigating any negative impact. Service functions must be allocated to any areas of low visibility and poor development potential so as to not affect the quality of the experience being offered. Finally, the departure from the resort must be given careful consideration as this is the last impression of the resort experience. The organization of the departure, or lack of it, in terms of convenience and ease will impact the guest's overall evaluation of the resort.

The following are the key base area design objectives critical to the success of the resort:

 The total capacity of the base area village facilities must be in balance with the Comfortable Carrying Capacity of the mountain's ski lift and ski trail systems.



- The base area facilities must take into account all residential and overnight accommodation capacities.
- The base area developments must address skier/pedestrian/vehicle movement, parking, and circulation patterns. Where possible, conflicting interfaces must be eliminated.
- The base area facilities must accommodate the needs of winter use visitors in a direct relationship with the skiing, while being flexible enough to be easily converted to off-season use, thus avoiding the establishment of facilities that will stand idle throughout the summer.
- An identifiable "critical mass" should be considered as a means of establishing multiple characters or images. Directly related to this is the establishment of a village/base core as the primary or main focus point to the resort.
- A variety of potential, complementary, and off-season uses for base area development must be considered. This can include golf, equestrian facilities, tennis, cross-country skiing, mountain biking, walking, hiking, bike paths, etc.
- Skier drop-off and pick-up zones for both cars and buses must be incorporated into the design of each base area.
- Parking lot capacities must be in balance with the day use capacities of the mountain facilities while taking into account the destination and residential parking capacities. Ideally, all parking should be within comfortable skier walking distances.
- Large vertical transitions should be minimized.
- Environmentally sensitive areas must be avoided and mitigating action taken where necessary.
- The issues of visual attractiveness, site specific circulation, ease of accessibility, site grading, solar access, facility programming, hierarchy of use, etc., must be considered on a preliminary level during the master planning process.

 Linked by the mountain access systems, particular consideration should be given to the relationship of the village/base area with the mountain facilities.

II.2 Relationship to Ski Lifts

Ski lift locations and their associated queuing area requirements become the initial design parameter in the location of base area structures. The lift locations and size of queuing areas are the end result of a careful analysis of the ability of the mountain to accommodate a specific balance of skiers, both in an uphill and downhill capacity, matched to the perceived market blend of skier skill classes. The circulation of skiers to and from the mountain in conjunction with the lift queues and ski courses invariably defines the area that must be respected and maintained. These areas are referred to as the lift loading zones. In combination with a site analysis of the base area lands taking into account the specific factors of slopes, view, aspect, soils, hydrology, vegetation, solar access, manmade features, etc., the location of ski lifts and queuing areas will often define the base area focal point. This focal point dictates the best location for the resort's staging and support facilities.

II.3 Skier Walking Distance

Skier walking distance relates to the distance skiers are willing to walk from parking lots and/or overnight accommodation to initiate their skiing. Radiating out from the base area focal point or from a ski to/ski from ski trail, skiers will generally walk approximately 400 meters before they begin to reject the experience and think twice about doing it again the next time. This distance is further reduced for the amount of vertical slope and all obstacles (streams, water bodies, rock outcrops and manmade features) that will be encountered on route. The area defined by this acceptable skier walking distance is the most valuable land in terms of the development and operation of a ski resort; all effort should be made to establish parking lots and all skier staging activities within this area. If these essential facilities are located beyond this area, then problems with circulation and operational efficiency rise dramatically. This in turn increases costs, ultimately resulting in reduced profits and a less than satisfying resort experience for the visitor.



II.4 Parking

Parking lot capacities are determined based on a calculation of 2.8 passengers per car and 40 passengers per bus. The amount of parking must be in balance with the day use capacities of the mountain facilities, while taking into account the amount of destination and residential parking. Ideally, all parking lots should be located within the area defined by the acceptable skier walking distance.

The amount of day use parking developed at the resort can be reduced based on the amount and occupancy rates of ski to/ski from accommodation established with self contained provisions for parking. Visitors using accommodation beyond the acceptable skier walking distance are more likely to drive to the base area then they are to walk to and from the ski trails. As such, they must be considered as day use visitors; they will use the parking and base facilities in a fashion similar to day use guests.

II.5 Relationship to the Mountain Carrying Capacity

To establish a well balanced resort, the Comfortable Carrying Capacity (CCC) of the mountain must dictate the size and amount of the various facilities to be developed in the village/base area. This includes the amount of built space necessary to provide for skier service functions (restaurants, tickets, rest rooms, administration, retail outlets, ski rental and repair facilities, ski patrol, day care, ski school, public lockers, employee facilities, etc.) as well as the amount of parking space provided for cars and buses. The CCC also impacts on the amount of real estate development the resort can be expected to support. Once the CCC has been calculated, site specific considerations are taken into account to determine the resort's facility requirements. These considerations may include:

- The amount of public and private overnight accommodation on site: this
 impacts on the amount of pre and post skiing facilities that must be
 provided to offer a complete resort experience.
- The amount of duplication of facilities required as a result of multiple base areas.
- The amount of ski to/ski from private and public overnight accommodations located in close proximity to the base area: this impacts on the type and amount of support facilities and parking to be provided.

The amount of on-mountain facilities, based on skier circulation patterns and preferred use of the mountain throughout the day.

II.6 Base Area Portals

The comfortable capacity of a single base area portal to stage skiers onto the mountain is limited to between 5,500 and 6,000 skiers. This is due to the physical space requirements for base area buildings and parking, combined with:

- The fact that the majority of the skiers arrive and begin skiing within the first 1.5 to 2 hours of the day (the initial staging period).
- The time required for skiers to circulate through the base area facilities and into the ski lift queues.
- The uphill capacities of the out-of-base ski lifts.
- The probability of skiers returning to the out-of-base lifts within the initial staging period of the day.
- The downhill capacity of the ski trails returning to the base area.

II.7 Overnight Accommodation

The amount and type of overnight accommodations, measured in bed units (BUs), is largely dependent upon what the tourist user market will support in conjunction with the CCC of the skiing facilities. In addition, the number of BUs established at a regional/destination resort such as Silver Star must take into account development within the surrounding region.

The skiing facilities component of a successful ski resort must be economically viable on its own without having to depend on the potential real estate component in the base lands for support. However, with careful planning, the development of real estate (BUs) can significantly add to the success of the overall resort in terms of direct economic value and the indirect value of a built-in market for the ongoing operation of the resort. That is, the visitors utilizing the base area accommodations, both public and private, act as a captured market supporting the operation of the resort.



There are some general patterns that provide a basis from which the number of BUs necessary to support the ongoing success of a ski resort may be established. In an analysis of the ski industry, S.e has determined that the number of BUs for a regional/destination resort should be about 0.8 BUs per unit of the CCC of the skiing facilities.

It must be noted that this is a very generalized conclusion, and the actual number and type of overnight accommodations developed at Silver Star must be based on a complete analysis, including existing and potential real estate development, physical potential of the site, absorption rates, and perceived market demand. Further, the numbers of BUs must adhere to the accepted provincial standards of ski area development in British Columbia.

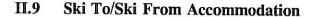
II.8 Public Versus Private Overnight Accommodations

The demand for public overnight accommodations versus private overnight accommodations impacts on the types of development to be established at a resort. Public accommodations can be defined as BUs available for anybody to rent on a short-term basis. These include hotels, hostels, condominiums, pensions and group club cabins. Private accommodations can be defined as BUs owned privately for use at the discretion of the owner. These include single family units and multi-family units.

Determining how much of each type of accommodation to develop is a challenging exercise, and should be based on a careful analysis of the resort marketplace and demand for primary and second home real estate. To maximize occupancy and operational predictions and to create a lively resort ambience, the objective is to establish "warm beds". A "warm bed" is defined as an accommodation that has a high percentage of use, as compared to a "cold bed" which can be typified as an accommodation that sits idle for much of the year. Public accommodations are typically considered warm beds.

As a preliminary design point, many resorts are striving to achieve a 60:40 private to public bed ratio. Again, actual numbers of units and BUs to be established must be based on specific market information.





Ski to/ski from overnight accommodation is real estate development that is located within an acceptable skier walking distance to ski trails which access and egress the mountain's skiing facilities. The most desirable ski to/ski from developments are immediately adjacent to the ski trails. Real estate development beyond an acceptable skier walking distance cannot be considered a ski to/ski from opportunity. Regardless of whether overnight accommodation is oriented to public or private use, if it is positioned such that it offers true ski to/ski from opportunities, a variety of significant design and planning issues come into play. These include the following:

- The amount of day use parking developed at the resort can be reduced based on the amount and occupancy rates of the ski to/ski from accommodation established with self contained provisions for parking.
- Visitors using accommodation beyond the comfortable skier walking distance are more likely to drive to the base area then they are to walk to and from the ski trails. As such, they must be considered as day use visitors; they will use parking and facilities in a fashion similar to day use guests.
- The most valuable type of real estate development at ski resorts has proven to be ski to/ski from developments.

II.10 Balance of Facilities

The master planning process emphasizes the importance of balancing resort facility development: the size of the skier service functions must be matched to the CCC of the mountain. The development of the ski resort should be designed and coordinated to maintain a balance between skier demand, ski area capacity (lifts and ski trails), and the supporting equipment and facilities (grooming machines, day lodge services and facilities, overnight lodging, real estate, utility infrastructure, access and parking).

Complementary year-round facilities and recreational opportunities such as nordic skiing, ice skating, hiking, mountain biking, roller blading, tennis, swimming, golf, etc., should also be integrated into the resort plan in order to enhance the overall attractiveness of the resort environs.



III. THE EXISTING RESORT

III.1 Introduction

Silver Star Resort is comprised of it's alpine skiing facilities (lifts and trails) as staged from Silver Star Village. Within and immediately adjacent to the Village are a variety of year round recreation facilities offering nordic skiing, skating, high altitude training, swimming, horse back riding, roller blading, snowmobiling, hiking, mountain biking, etc. The Village is made up of several hotels, restaurants, retail outlets and a conference centre. Surrounding the Village are the residential developments made up of a variety of small hotels, single family houses and some multi-family developments, all with ski to/ski from capabilities.

III.2 Resort Character

Silver Star has developed a unique and special character. The Victorian facades and architectural style found in the Village and throughout the residential subdivisions creates a memorable impression. With Silver Star Provincial Park and the Controlled Recreation Area acting as a backdrop, the resort offers an increasing variety of year round recreational opportunities and facilities, restaurants, and shops, all within a relaxing atmosphere and ambience.

The style of the Village and residential developments compete with the natural setting of the mountain top environment. And yet, the strict, self imposed environmental controls and design guidelines have resulted in a high quality product that will ultimately rival the U.S. based resorts (Telluride and Park City) that Silver Star initially set to emulate.

III.3 Access

Silver Star Mountain Resort is located 22 kilometers northeast of Vernon (Fig. 1). It is easily accessed from Vancouver via the Coquihalla Connector and Highway 97 to Vernon. From Calgary, access is via the Trans Canada Highway to Sicamous and south to Vernon.

By air, there are regularly scheduled flights to the Kelowna Airport from points across Canada. Connector flights are available in Vancouver or Calgary for international or U.S. arrivals. A limousine service or rental cars are available to transport visitors to Vernon and Silver Star.



The highway from the City of Vernon to Silver Star Mountain is adequate for existing peak demands. As the resort and associated highway traffic grow, along with an increasing population in the BX Valley, improvements will be necessary.

Silver Star Road, from the intersection with Pleasant Valley Road at the outskirts of Vernon, is a paved, two lane road. Some sections have been engineered and upgraded to meet Ministry of Highways standards, while substantial portions have evolved from the original route. Those portions will require upgrading in the future.

The route climbs approximately 1,200 meters in its 22 kilometre length. As there are relatively few safe passing opportunities, traffic flows at the range of the slowest vehicle, or unsafe passing situations occur. The few existing pull-outs are used by a minority of the commercial vehicles that routinely use the road. They require a vehicle to leave the carriageway and stop; thus, they are ignored by most drivers.

Silver Star Road is the property and responsibility of the Ministry of Highways, and not the subject of this Master Plan, however, plans for its upgrading should be prepared and implemented as demand dictates. These upgrading plans should include the addition of several passing lanes for uphill traffic.

Once the Master Plan has been agreed to by The Ministry of Environment, Crown Lands, discussions should be undertaken with the Ministry of Highways so that they are apprised of planned development, its timing, and the anticipated demand increase expected upon the Highway access.



SILVER STAR MOUNTAIN

AREA LOCATION MAP

prepared by-



201-1200 Alpha Lake Road Whistler, BC VON 1B1. 604-932-7002

prepared for-

SILVER STAR MOUNTAIN RESORT Box 2, Silver Star Mountain, VOE 1GO. 804-542-0224



III.4 Facilities Inventory

III.4.1 Alpine Skiing

The alpine skiing at Silver Star, as described in the 1994 Ski Area Master Plan, currently includes the following facilities and considerations impacting on the base area development:

- 7 Ski Lifts
 - 2 Detachable Quads
 - 1 Fixed Grip Quad
 - 2 Fixed Grip Double Chairs
 - 2 Tee Bars
- 64 Ski Trails
 - 255 Ha Skiable Terrain
 - 16% Beginner
 - 50% Intermediate
 - 34% Expert
- The existing Comfortable Carrying Capacity (CCC) is 5,000 skiers at one time, assuming a 10 to 15 minute lift line.
- Day use skiers and hotel guests stage out of the Village area using the Town Tee Bar and the Summit Chair, or ski down to the base of the Vance Creek Express Chair to access the mountain.
- Residents of the Knoll access the mountain either through the Village or via the ski trail, Roller Coaster, down to the base of the Vance Creek Express Chair. A small percentage of these skiers will utilize the Silver Queen Chair terrain.
- Residents of the Cabins and Mid-T areas access the mountain either through the Village or via the Mid-T Tee Bar.
- The development of the Paradise Camp restaurant at the mid-station of the Putnam Creek Express will have a significant impact on the base area facility requirements in the Village. With the continued growth of skier capacity within the Putnam Creek ski pod, combined with the installation

of the Holy Smokes Chair, the Valhalla Express Chair, and the Trinity Express Chair, as much as 45% of the mountain's total capacity will be located well beyond easy access distance to the Village. As such, mid-day use on the mountain at mid-station of the Putnam Creek Express, potentially augmented by facilities at the top of the Valhalla Express or Trinity Express, will play a critical role in the creation of the type of visitor experience offered at Silver Star.

III.4.2 Nordic Skiing

The existing nordic facilities at Silver Star, combined with the 54 km Sovereign Lakes trail network, is recognized as some of the best cross country skiing in British Columbia. The 28 kilometre trail system around the Knoll offers guests and all Silver Star residents ski to/ski from nordic skiing opportunities. Approximately 4 kilometers of the trails are lighted for night skiing.

Located in the Village and directly associated with the nordic facilities is the National Altitude Training Centre, providing skiers with training rooms, a weight room, cardio equipment, change rooms, showers, lockers, a ski wax room, a resource library, video analysis centre, doctor's office, fitness testing lab, scheduled fitness classes and an activity room/ auditorium. This facility has acted as a base for cross country skiing training camps, race clinics, and as a race centre.

An integral part of the Silver Star cross country skiing facilities is the biathlon course and range (used by Miriam Bedard for training prior to her gold medal performance at Lillehammer in 1994).

These nordic facilities enhance the overall attraction of the resort. All effort should be made in the future expansion of the base area facilities to complement the integration of the nordic trails throughout the development.

III.4.3 Other Winter Attractions

In addition to the primary attraction of alpine and nordic skiing, other winter attractions include:

 The Silver Star skating pond, equipped with a music system and night lighting.



- Guided snowmobile tours.
- Snowplay activities including snowshoeing and toboganning.

III.4.4 Summer Facilities

Silver Star has been methodically expanding and improving its summer mountain facility attractions. These include the following:

- A paved trail system around the Knoll, through the Village, and across the front of the mountain for roller blading, walking, biking, etc.
- A gravel trail system for mountain biking and hiking.
- Guided horseback trail rides based out the Village.
- The Silver Star Pond stocked for fishing and with a beach for swimming.
- Soccer and softball fields for local league play, tournament play, and instructional camps.
- A paved roller blade descent trail (to be opened in the summer of 1995)
 offering bladers the ability to descend from the top of the Summit Chair
 to the Village.

III.4.5 Year Round Facilities

There are a variety of year round attractions or complementary facilities found at Silver Star. These include:

- The Chilcoot Conference Centre, which provides facilities to stage conferences, seminars and conventions.
- The National Altitude Training Centre designed for weight training, fitness testing, seminars, presentations, training camps, nordic skiing and mountain biking race headquarters, etc.
- The Village swimming pool.



 The proposed skating arena for public skating, league hockey, summer hockey camps, figure skating, etc.

III.5 The Existing Base Area

The base area of Silver Star is made up of the Village and several adjacent residential subdivisions closely tied to a variety of ever improving year round recreation facilities.

In their November 1994 issue, Ski Canada magazine rated Silver Star Mountain as the number one On-mountain Village in Western Canada (this coincides with Silver Star's number one rating for the best cruising ski terrain).

III.5.1 Base Area Space Use Inventory

The following Tables provide an inventory of all the existing base area facilities at Silver Star. Table 1 lists all of the buildings at the resort, broken into specific service functions. Currently, there is over 141,500 sq. ft. (13,150 sq. m.) of developed space at Silver Star. Of this, approximately 70% 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. the Convention Centre, High Altitude Training Centre, swimming pool, etc.) that act as attractions in their own right.

The remaining built 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 lists only those buildings that offer ski area specific space.

Silver Star: Base Area Analysis Table 1: Space Use Inventory

Service/Function	Chilcon	V														
	_	Valice CK	Town	B. James	Aquatic	Training	Putmam	Lord Ab.	Silver	The	Kickwillid	Mountain	Ski	Ticket	Paradise	Total
	Conf. Ctr.	Hotel	Hall	Ski Shop	Centre	Centre	St. Hotel	Apt. Hote	Lode Inn	Pinnacles	Inn	Operation	School	Office	Camp	Sq. Feet
Ski Area Related Space																
Restaurant	0	3,300	4,800	0	0	0	2,000	0	1,055	0	0	0	0	0	625	11,780
Kitchen/Scramble	520	2,400	1,650	0	0	0	400	0	1,206	0	0	0	0	0	250	6,426
Bar/Lounge	0	4,200	0	0	0	0	300	0	517	0	0	0	0	0	0	5,017
Women's Rest Rooms	400	400	456	0	200	200	250	0	196	100	0	0	0	0	65	2,267
Men's Rest Room	350	350	444	0	200	200	250	0	121	80	0	0	0	0	65	2,060
Ski School	0	0	0	1,600	0	0	0	0	0	0	0	0	480	0	0	2,080
Equip Rental/Repair	0	0	0	2,175	0	0	0	0	0	0	0	0	0	0	0	2,175
Retail Sales	0	0	0	1,600	0	0	0	006	0	0	0	0	0	0	0	2,500
Ski Patrol/First Aid	0	0	0	0	0	0	0	0	0	0	0	096	0	0	0	096
Public Lockers	0	0	0	2,195	150	0	0	0	0	0	0	0	0	0	0	2,345
Day Care/Nursery	0	0	1,500	0	0	0	0	0	0	0	0	0	0	0	0	1,500
Ticket Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	400	0	400
Administration	0	0	2,200	0	0 0	0	0	0	0	0	0	009	0	0	0	2,800
Employee Lockers	0	0	300	0	0	0	0	0	0	0	0	300	0	150	0	750
Storage Space	385	0	0	0	0	400	0	0	0	0	0	0	0	0	245	1,030
Mechanical/Furnace	555	400	0	0	0	800	400	0	0	0	0	0	0	0	0	2,155
Circ./Wall/Waste	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	500
<u>1</u>	2,210	11,550 1	1,350	7,570	550	1,600	3,600	006	3,095	180	0	1,860	480	550	1,250	46,745
Destination Space		-	100	14	1 EA	3.3	100		1614.	10				64	-	# 1985
Accommodation 1	14,400	13,200	0	0	0	0	7,300	12,000	6,990	18,000	4,500	0	0	0	0	76,390
Common Areas/Lobby	595	400	0	0	200	200	009	450	377	2,000	0	0	0	0	0	4,792
Administration	0	400	0	1600	0	200	0	150	0	0	0	0	0	0	0	2,350
Convention/Seminar	2,500	480	0	0	0	2,770	0	0	775	650	0	0	0	0	0	7,175
Fitness Room	0	0	0	0	0	800	0	0	0	0	0	0	0	0	0	800
Indoor Pool	0	0	0	0	2,000	0	0	0	0	0	0	0	0	0	0	2,000
Indoor Jacuzzi	0	0	0	0	200	0	0	0	215	0	0	0	0	0	0	415
Steamroom/Sauna	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	200
Massage Rooms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Change Rooms	0	300	0	0	300	0	0	0	0	0	С	0	0	0	0	009
Storage Space	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mechanical/Furnace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Circ./Wall/Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Destination Spac 1	7.465	14.780	С	1.600	2.700	3.970	8.100	12,600	8.357	20.650	4.500	0	0	0	0	94.722

141,467

550

480

5,570 11,700 13,500 11,452 20,830

19,675 | 26,330 | 11,350 | 9,170 |

Total Resort Bldg Area (Sq Ft)

Silver Star: Base Area Analysis Table 2: Ski Area Specific Space Use Inventory

Service/Function	Vance Cree	Town	Brian Jame	Brian Jame Putnam Str	Silver	Mountain	Mountain Ski School	Ticket	Paradise	Total
	Hotel	Hall	Ski Shop	Hotel	Lode Inn	Operations	House	Office	Camp	Sq. Feet
Restaurant	3.300	4.800	0	2,000	1,055	0	0	0	625	11,780
Kitchen/Scramble	2.400	1.650	0	400	1,206	0	0	0 0	250	5,906
Bar/Lounge	4.200	0	0	300	517	0	0	0	0	5,017
Women's Rest Rooms	400	456	0	250	196	0	0	0	65	1,367
Men's Rest Room	350	444	0	250	121	0	0	0	65	1,230
Ski School	0	0	1,600	0	0	0	480	0	0	2,080
Fanin Rental/Renair	0	C	2.175	0	0	0	0	0	0 11	2,175
Retail Sales	0	0	1.600	0	0	0	0	0 0	0	1,600
Ski Patrol/First Aid	0	0	0	0	0	096	0	0	0	096
Public Lockers	0	0	2,195	0	0 , 1	0	0	19B 0	0 0	2,195
Day Care/Nursery	0	1.500	0	0	0	0	0	0 1	0	1,500
Ticket Sales	0	0	0	0	0	0	0	400	0 300 1	400
Administration	0	2.200	0	0	0	009	0	0	0	2,800
Employee Lockers	0	300	0	0	0	300	0	150	0 1 (750
Storage Space (Estimate)	00	0 0	0	0	0	0	0	0	245	954
Mechanical/Furnace (Estimate)	400	0	0	400	0 0	0 0	0	0 0	0	398
Circ./Wall/Waste (Estimate)	200	0	0	0	0	0	0 0	0	0	4,334
Total Ski Related Space	11,550	11,350	7,570	3,600	3,095	1,860	480	550	1,250	45,446
# Restaurant Seatino	425	425	0	110	120	10	0	0	09	1.140
# Outdoor Seating	110	50	0	30	25	0	0 0	0	09	275



III.5.2 Parking

The Existing Base Area Plan (Figure 2A) and Table 3 delineate the locations, use, and capacities of the existing parking at Silver Star. In total, approximately 1,230 parking stalls are available for day use visitors. Using Silver Star's 1994 car counts in which an average of 3.0 skiers per car were realized, this equates to a capacity of 3,690 visitors.

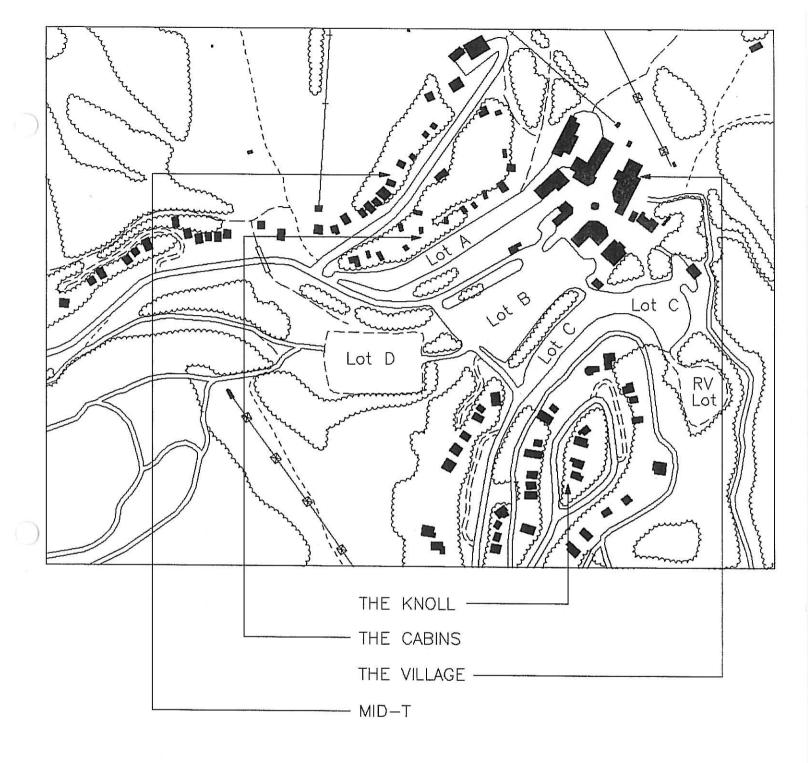
In addition, there are 400 stalls dedicated to overnight guests. Using the same 3.0 skiers per car ratio, a total capacity of 1,200 visitors can be accommodated in the residential parking areas. As such, at 100% occupancy, the parking capacity of Silver Star is 4,890 visitors.

Visitors arriving by bus (estimated at 5% of visitors or about 260 guests) brings the total parking capacity to approximately 5,150.

Silver Star: Base Area Analysis

Table 3: Inventory of Existing Parking

		Car	Guest
Location	Category	Capacity	Capacity
Lot A	Day Use/Overnight	220	660
Lot B	Day Use	340	1,020
Lot C (Main)	Day Use/Overnight	200	600
Lot C (West)	Day Use	140	420
Lot D	Day Use	330	990
Hotels	Overnight	150	450
Residential/Existing		250	750
Sub-Total		1,630	4,890
Buses			260
Total			5,150



SILVER STAR MOUNTAIN

EXISTING BASE AREA PLAN

prepared by:



201-1200 Alpha Lake Road Whistler, BC VON 1B1. 804-932-7002

prepared for-

SILVER STAR MOUNTAIN RESORT Box 2, Silver Star Mountain, VOE 1GO. 804-542-0224



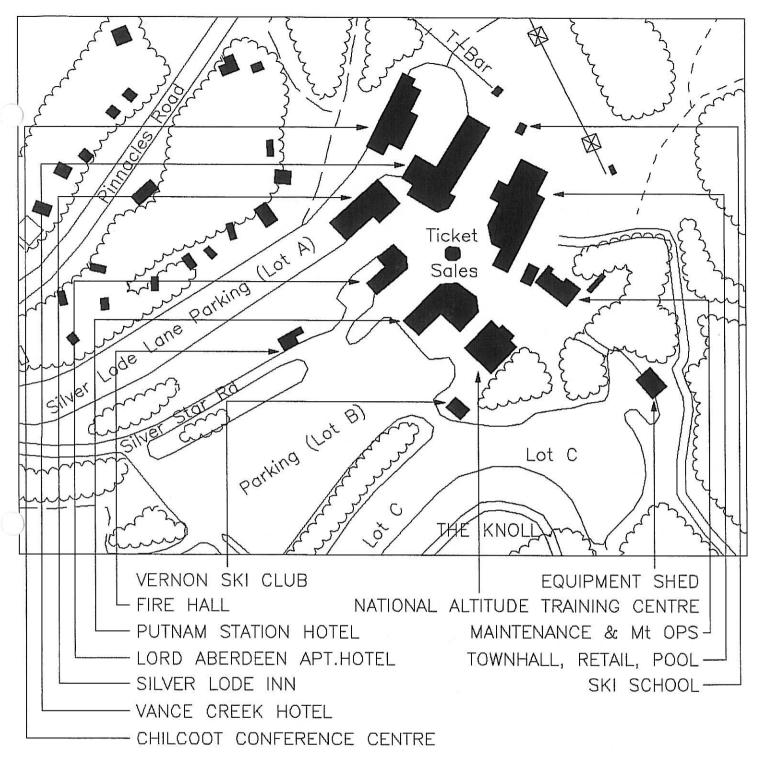






The Existing Village Plan (Figure 2B) delineates the locations of the existing facilities and skier services at Silver Star. The following is a list of the existing buildings and their related functions:

- Chilcoot Conference Centre; 36 hotel rooms, conference rooms, hot tubs.
- Vance Creek Hotel; 39 hotel rooms, 45 kitchenette suites, conference room, hot tubs, Clementine's Dining Room/Lounge, Lucciano's Trattoria, Vance Creek Saloon.
- Silver Lode Inn; 16 hotel rooms, 6 kitchenette suites, meeting rooms, jacuzzi.
- Lord Aberdeen Apartment Hotel; 15 condominium units, post office, laundromat, delicatessen, liquor store.
- Putnam Station Hotel; 22 hotel rooms, 10 kitchenette suites, Craigellachie Dining Room/Lounge, Okanagan Valley Cellar, outdoor hot tub.
- The Pinnacles; 15 condominium units, meeting lounge, outdoor hot tubs.
- Kickwillie Inn; 7 condominium units.
- National Altitude Training Centre; meeting rooms, auditorium, training/workout facilities, sports lab/physio, massage, equipment rooms.
- Town Hall; administration, meeting rooms, cafeteria/kitchen, daycare/nursery.
- Brian James Ski Shop; equipment rentals, retail.
- Aquatic Centre; swimming pool, hot tub, coin laundry.
- Ticket Office.



SILVER STAR MOUNTAIN

EXISTING VILLAGE PLAN

EXISTING SKIERS' SERVICES

JANUARY 1995

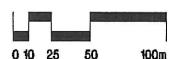
prepared by:



201-1200 Alpha Lake Road Whistler, BC VON 1B1. 804-932-7002

prepared for-

SILVER STAR MOUNTAIN RESORT Box 2, Silver Star Mountain, VOE 1GO. 604-542-0224





2B

III.5.4 Existing Overnight Accommodation

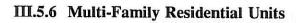
The existing residential development and overnight accommodation facilities at Silver Star Mountain Resort have evolved over time to coincide with a Comfortable Carrying Capacity (CCC) of 5,000 skiers per day. As on-hill capacity increases, so must the resort's ability to accommodate both overnight and day use visitors. The Master Planning exercise provides an opportunity to bring the overall ski resort into balance with industry standards and perceived market demand, and not only increases overnight capacity, but also serves to adjust or fine tune the mix of unit types available.

To date, Silver Star Mountain Resort's residential and overnight accommodation facilities have been developed in the following locations:

- Silver Star Village Centre: full-service suite and apartment-style hotels in association with ski area-related commercial facilities (restaurants, ski lodge and ski shop, pool, and administrative and support services).
- Lands immediately adjacent to the west: a group of cabins constructed in the 1960's referred to as the "Cabin Colony", consisting of 32 cabins and a three unit chalet.
- A residential subdivision of 32 lots along the north side of Silver Star Road, the primary access to the resort.
- A height of land to the south, separated from the village by day-use parking facilities: two residential subdivisions on the "Knoll", consisting of a total of 190 lots.

III.5.5 Hotel Accommodation

Three full-service hotels operate within the Village Centre: the Vance Creek Hotel; Putnam Station; and the Silver Lode Inn. In addition, the Chilcoot Conference Centre provides rooms and suites. In total, 113 hotel rooms and 61 kitchenette suites are available for a total of 348 public bed units. These facilities are located within C.6 and C.7 zoning designations. Appendix 1 outlines the zoning designations within the Silver Star Base Area Master Plan study.



In addition to the hotels listed above, a further 244 public bed units are provided in multi-family units and apartment-style hotels located within the Village Centre. Public multi-family units are provided at the Chilcoot Conference Centre, the Lord Aberdeen Apartment Hotel, The Pinnacles, The Kickwillie Inn, and Willy's. These facilities are also located within C.6 and C.7 zoning designations.

Day use skiers, hotel guests, and visitors accommodated in public multi-family units and apartment-style hotels stage out of the Village area using the Town Tee Bar and the Summit Chair to access the mountain. Skiers staging from the Village Centre may also ski down to the base of the Vance Creek Express Chair, and, in the future, to the Silver Woods Express.

Three private multi-family development sites have been completed or committed for development, and are described below. Upon completion, these sites will provide a total of 54 multi-family units, or 216 public bed units. Residential Apartment and Multi-Family (R.3) zoning restrictions apply.

Grandview

The Grandview development is to be located adjacent to Phase II of the Knoll residential development near the upper terminal of the Silver Queen Chair. Thirty multi-family units have been committed for development, providing 120 bed units. A development site density of approximately 23.1 units per hectare is to be realized.

The units will be within acceptable skier walking distance to the Silver Queen ski pod and to the alpine ski connector route to the Village Centre and associated lifts. Ski to/ski from opportunities will be greatly improved with the completion of the Silver Woods Express and expanded ski terrain.

Silver Queen Mews

The Silver Queen Mews development has been constructed as an R.3 pocket within Phase II of the Knoll single-family residential development. Access is provided from Monashee Road. Twelve multi-family units (48 bed units) have been constructed at an approximate density of 26.6 units per hectare (Note: This

represents a combined density calculation with the proposed Mount Royal development described below).

Units of both the Silver Queen Mews and Mount Royal developments are within acceptable skier walking distance to the Silver Queen ski pod, and to the alpine ski connector route to the Village Centre and associated lifts. The proposed Silver Woods ski pod will increase ski to/ski from opportunity.

Mount Royal

The Mount Royal development is to be constructed in association with the Silver Queen Mews on an adjoining parcel of land. Twelve multi-family units (48 bed units) have been committed for development.

III.5.7 Single Family Residential Development

The three developments described below provide single family residential accommodation. Within R.7 developments, two family units are permitted, as are bachelor or rental suites.

The Knoll Residential Area

Two residential subdivisions consisting of 190 R.7 lots have been laid out on the Knoll, a height of land to the south of the Village Centre. The development site provides ski to/ski from opportunities consisting of direct access to the Silver Queen ski pod, access along an alpine ski connector to the Village and associated lifts, and access to the mountain via Roller Coaster down to the base of the Vance Creek Express Chair. Ski to/ski from opportunities will be improved with the completion of the Silver Woods Express and expanded ski terrain.

Upon completion, the development will attain an approximate average density of 9.3 units per hectare. Residences on the Knoll have been and will continue to be developed in accordance with design guidelines which dictate facade treatment, a specific range of colours available for use, and design details to ensure a compatible style and cohesive feel throughout the development.



The Cabins

A group of cabins constructed in the 1960's provides residential accommodation adjacent to the Village Centre. Referred to as the "Cabin Colony", this development consists of 32 cabins and a three unit chalet. All units were constructed prior to restrictions imposed by Silver Star design guidelines. Except for the one R.3 development site, Residential Seasonal Single Family (R.6) zoning restrictions apply. The overall development assumes an approximate average density of 10.7 units per hectare.

All units are within acceptable skier walking distance to the Village lifts and the Mid-T Tee Bar.

Mid-T Residential Area

The Mid-T development can also be characterized as an older residential development, constructed prior to design guideline implementation. Thirty single family units have been built, with an additional two units committed for development. Residential Resort One and Two Family Zone (R.7) zoning restrictions apply. An average density of 14.5 units per hectare will be realized upon completion.

Situated along the north side of Silver Star Road, the Mid-T residential area provides ski to/ski from opportunities in association with the Mid-T Tee Bar, and the Silver Queen Chair across Silver Star Road.

III.5.8 Accommodation Summary

Residential and overnight accommodation units provided within the Silver Star Mountain Resort are summarized below. A more detailed breakdown is available in Table 4.

Hotel Accommodation

- 113 hotel rooms
- 61 kitchenette suites
- 348 public bed units

Multi-Family Units

- 115 units built and/or committed
- 460 bed units
- 53% public (244 public bed units)



Single Family Units

- 254 units built and/or committed
- 1524 bed units
- 20% public (300 public bed units)

Total:

- 2,332 bed units
- 38% public (892 public bed units)

Silver Star: Base Area Analysis Table 4: Overnight Accommodation Capacity

Service/Function	Chilcool	Chilcool Vance C Putnam	Putnam	Ld. Abd	Silver	The	Kickwil		Slvr Ou	Grand-	Mt.	Knoll	χ		
	Conf. C	Hotel	Hotel	Apt. Ho	Lode In	Pinnacle	Inn	Willys	Mews	view	Royal	Ph 1&2	Cabins	Mid-T	Totals
Hotel Rooms	36	39	22	0	16	0	0	0	0	0	0	0	0	0	113
Kitchenette Suites	0	45	10	0	9	0	0	0	0	0	0	0	0	0	61
Hotel Bed Units	72	168	2	0	44	0	0	0	0	0	0	0	0	0	348
Hotel Public Bed Units	72	168	2	0	44	0	0	0	0	0	0	0	0	0	348
Parking Requirements	18	42	16	0	. 11	0	0	0	0	0	0	0	0	0	87
Existing Hotel Parking	18	42	16	0	11	0	0	0	0	0	0	0	110	0	87
Add. Parking Required	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multifamily (Built)	18	0	0	. 15	0	15	7	9	12	0	0	0	0	0	73
Multifamily (Committed)	0	0	0	0	0	0	0	0	0	30	12	0	0	0	42
Multifamily Bed Units	72	0	0	09	0	09	28	24	48	120	48	0	0	0	460
MFU Public Bed Units	72	0	0	09	0	09	28	24	0	0	0	0	2 EX 0	0	244
Parking Requirements	27	0	0	22.5	0	15	7	9	18	45	18	0	0	0	159
Existing MFU Parking	36	0	0	27	0	15	7	9	18	45	18	0	0	0	172
Add. Parking Required	6-	0	0	-4.5	0	0	0	0	0	0	0	0	0	0	(14)
Single Family Units (Built)	0	0	0	0	0	0	0	0	0	0	0	92	32	30	154
Single Family Units (Committed)	0	0	0	0	0	0	0	0	0	0	0	86	0	2	100
SFU Bed Units	0	0	0	0	0	0	0	0	0	0	0	1,140	192	192	1,524
SFU Public Bed Units	0	0	0	0	0	0	0	0	0	0	0	179	62	58	300
Parking Requirements	0	0	0	0	0	0	0	0	0	0	0	380	2	2	508
Existing SFU Parking	0	0	0	0	0	0	0	0	0	0	0	570	96	96	762
Add. Parking Required	0	0	0	0	0	0	0	0	0	0	0	-190	-32	-32	(254)
Total Bed Units	144	168	29	09	44	09	28	24	48	120	48	1,140	192	192	2,332
Total Public Bed Units											12		13		892
% Public Bed Units										Anna Anna anna anna anna anna anna anna					38%
Parking Requirements	45	42	16	22.5	11	15	7	9	18	45	18	380	22	2	754
Existing Parking	54	42	16	27	11	15	7	9	18	45	18	570	96	96	1,021

IV. RESORT ANALYSIS

The analysis of the base area facilities at Silver Star is largely hinged on the ability of the existing facilities to complement the resort's capacity to support alpine skiing (the primary attraction and highest density recreation land use of the resort) in a balanced and well integrated fashion. The issues of analysis include an in depth review of the built space use, parking, and accommodation (public and private) as it relates to the type of resort experience being offered. The resultant conclusions will identify the strengths and weaknesses of Silver Star, thus acting as a guide in the creation of the next phase of development.

IV.1 Ski Area Specific, Space Use Analysis

In order to create an enjoyable experience for Silver Star's skiers and destination visitors, all services and facilities must be in balance with the Comfortable Carrying Capacity (CCC) of the mountain. 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, and necessary for a ski resort to offer a fully rounded experience for its guests. As illustrated in Table 2, approximately 45,500 sq. ft. (4,200 sq. m.) of the space currently in place at Silver Star can be considered as specific to skier visitor needs.

Based on the existing CCC of 5,000 skiers per day (as defined by the Silver Star Mountain Master Plan), the space use requirements have been calculated and delineated in Table 5A. In the same table, these numbers are compared to the existing built space. It should be noted that the calculated areas are intended to act as a guide in determining the "ideal" amount of built space that is necessary to create a balance with the skiing capacity of the mountain. These numbers are based on measurements that S.e has made of successful resorts of a similar size and market orientation as Silver Star. They are intended for planning purposes and should not be considered as absolute; rather, they are a baseline from which to develop Silver Star into a well functioning, balanced, unique, and special resort.

As illustrated in Table 5A, if 5,000 skiers arrive on any given day the existing facilities represent about 64% of the base area facilities necessary to be in balance with the skiing facilities on the mountain. It should be noted that the bar/lounge and employee lounge space skews the percentage upwards. Table 5B shows that if the amount of area for those facilities in excess of the "industry standard" (ie. the bar/lounge and the employee lounge) are normalized to 100%, then a more

realistic picture is created, showing that the base area facilities represent about 60% of the necessary built space to be in balance with the comfortable carrying capacity of the alpine skiing. Further, it also shows that there are significant shortfalls apparent in the amount of space provided for rest rooms, equipment rentals and repair, retail sales, and day care. Some of the lack of space for the rest rooms can be justified by the easy access to the ski to/ski from overnight accommodations on the mountain.

Discussions with staff at Silver Star suggest that the apparent shortcomings in base area facilities are not as serious as the percentages may suggest. This rotates around the fact that, to date, the number of times that actual visitation has surpassed the 5,000 mark has been relatively infrequent. A review of the skier visitation for the 1993/94 ski season showed that the five busiest days at Silver Star averaged out to 5,054 skiers. During those days many of the base area facilities, as indicated in Tables 5A and 5B, would have been stretched to their limits. However, an average of the top 25 days was 3,585 skiers. Based on the premise that "you don't build the church for Easter Sunday", we have used the top 25 day average as a more realistic level of determining the current space use requirements (Table 6A). At this level, the existing base area facilities appear to offer closer to 90% of the necessary space. Table 6B normalizes the excess area (kitchen /scramble, bar /lounge, ski school, public lockers, ticket sales, administration, and employee lounge) to 100%. As a result, the existing space more accurately represents about 78% of the amount of space that might be expected on those days.

Again, their appears to be a significant lack of space for rest rooms, equipment rentals and repair, retail outlets, and day care space. The latter are particularly critical in providing a complete resort experience for the destination guest. These shortcomings should be rectified as expansion of the Village and Paradise Camp are taken on in the next phases of development.

Silver Star: Base Area Analysis Table 5A:

Table 5A: Existing Space Use Requirements Based on Calculated CCC CCC = 5,000 Guests = 400 Total = 5,400

Garriagerer - Juneyo	Existing	Space	Difference	Percentage
Service/Function	Space(Sq.Ft)	Required	From Ideal	Of Ideal
Restaurant	11,780	17,658	(5,878)	67%
Kitchen/Scramble	5,906	7,063	(1,157)	84%
Bar/Lounge	5,017	1,890	3,127	265%
Women's Rest Rooms	1,367	5,508	(4,141)	25%
Men's Rest Rooms	1,230	3,672	(2,442)	33%
Ski School	2,080	2,750	(670)	76%
Equip Rental/Repair	2,175	4,650	(2,475)	47%
Retail Sales	1,600	4,050	(2,450)	40%
Ski Patrol/First Aid	960	1,800	(840)	53%
Public Lockers	2,195	2,970	(775)	74%
Day Care/Nursery	1,500	5,750	(4,250)	26%
Ticket Sales	400	500	(100)	80%
Administration	2,800	3,000	(200)	93%
Employee Lounge	750	500	250	150%
Storage Space	954	1,482	(528)	64%
Mechanical/Furnace	398	618	(220)	64%
Circ./Wall/Waste	4,334	6,732	(2,398)	64%
Total Ski Related Space	45,446	70,593	(25,147)	64%
Total Car Parking	1,630	1,620	10	101%
Total Bus Parking	7	15	(8)	48%

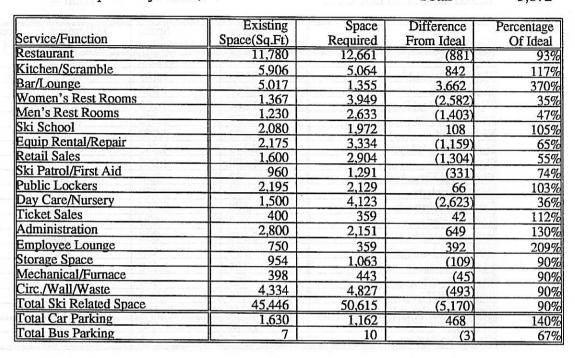
Silver Star: Base Area Analysis

Table 5B: Existing Space Use Requirements Based on CCC Normalized CCC = 5,000 Guests = 400 Total = 5,400

The second secon	Existing	Space	Difference	Percentage
Service/Function	Space(Sq.Ft)	Required	From Ideal	Of Ideal
Restaurant	11,780	17,658	(5,878)	67%
Kitchen/Scramble	5,906	7,063	(1,157)	84%
Bar/Lounge	1,890	1,890	0	100%
Women's Rest Rooms	1,367	5,508	(4,141)	25%
Men's Rest Rooms	1,230	3,672	(2,442)	33%
Ski School	2,080	2,750	(670)	76%
Equip Rental/Repair	2,175	4,650	(2,475)	47%
Retail Sales	1,600	4,050	(2,450)	40%
Ski Patrol/First Aid	960	1,800	(840)	53%
Public Lockers	2,195	2,970	(775)	74%
Day Care/Nursery	1,500	5,750	(4,250)	26%
Ticket Sales	400	500	(100)	80%
Administration	2,800	3,000	(200)	93%
Employee Lounge	500	500	0	100%
Storage Space	954	1,482	(528)	64%
Mechanical/Furnace	398	618	(220)	64%
Circ./Wall/Waste	4,334	6,732	(2,398)	64%
Total Ski Related Space	42,069	70,593	(28,524)	60%
Total Car Parking	1,630	1,620	10	101%
Total Bus Parking	7	15	(8)	48%

Silver Star: Base Area Analysis Table 6A:

Actual Space Use Requirements Based on Top 25 Days 1993/94 CCC = 3,585 Guests = 287 Total = 3,872



Silver Star: Base Area Analysis

Table 6B:CCC =3,585Actual Space Use RequirementsGuests =287Bases on Top 25 Days 1993/94 NormalizedTotal =3,872

Charles Inches Commence of the	Existing	Space	Difference	Percentage
Service/Function	Space(Sq.Ft)	Required	From Ideal	Of Ideal
Restaurant	11,780	12,661	(881)	93%
Kitchen/Scramble	5,064	5,064	(0)	100%
Bar/Lounge	1,355	1,355	(0)	100%
Women's Rest Rooms	1,367	3,949	(2,582)	35%
Men's Rest Rooms	1,230	2,633	(1,403)	47%
Ski School	1,972	1,972	0	100%
Equip Rental/Repair	2,175	3,334	(1.159)	65%
Retail Sales	1,600	2,904	(1,304)	55%
Ski Patrol/First Aid	960	1,291	(331)	74%
Public Lockers	2,129	2,129	(0)	100%
Day Care/Nursery	1,500	4,123	(2,623)	36%
Ticket Sales	359	359	1 1	100%
Administration	2,151	2,151	0	100%
Employee Lounge	359	359		100%
Storage Space	954	1,063	(109)	90%
Mechanical/Furnace	398	443	(45)	90%
Circ./Wall/Waste	4,334	4,827	(493)	90%
Total Ski Related Space	39,687	50,615	(10,929)	78%
Total Car Parking	1,630	1,162	468	140%
Total Bus Parking	7	10	(3)	67%



IV.2 Parking Analysis

Management staff at Silver Star report that parking to date has not been a problem. As the 5,000 alpine skiing capacity level was surpassed only 5 times in 1993/94 and the total calculated parking capacity equates to approximately 5,150 (see Table 3), this seems to be a reasonable statement.

However, as development occurs, all effort will be necessary to ensure that parking capacities are enlarged to coincide with increased capacities on the mountain and in the base area/village.

IV.3 Accommodation Analysis

IV.3.1 Bed Units

A total of 2,332 bed units are currently provided within the Silver Star Mountain Resort (see Table 4), in a range of accommodation types which include lodges, hotels, condominiums, and single family dwellings. This figure is based on the Official Community Plan (OCP) standards which attribute two (2) bed units per hotel room, four (4) bed units per condominium, and six (6) bed units per single family dwelling.

The existing accommodation base is intended to service a current on-hill capacity of 5,000 skiers at one time. However, the existing 2,332 bed unit figure represents only 47% of the CCC. Based on a review of Silver Star's offering, combined with the resort's proximity to Vernon and access to major markets, it is the opinion of S.e Canada that Silver Star is a regional/destination resort that could support a bed unit count that approximates 80% of the Mountain Comfortable Carrying Capacity. This equates to 4,000 bed units, suggesting that Silver Star should be able to support another 1,668 bed units without additional capacity for skiers being developed on the mountain.

IV.3.2 Public Versus Private Accommodation

The viability and vitality of a resort is somewhat dependant upon the ability to establish and maintain "warm beds", wherein the bed is occupied a high percentage of the time. Publicly available beds typically have a higher occupancy rate than privately held second homes and, as such, prove to be very desirable from a resort operation and captured market point of view. At present, Silver Star has a private to public bed ratio of approximately 60:40. This is a desirable mix.



Public accommodation is concentrated within the Village Center hotels, which provide over 450 bed units for overnight guests. A further 300 beds are available in residential homes and suites managed through the commercial rental pool. In addition, many rental units are available privately in over 100 private residences throughout the resort.

IV.4 Resort Critique

The following commentary is based on the impression created as a result of several site visits to Silver Star during the 1994/95 ski season.

IV.4.1 The Visitor's First Impression

Impressions are created by the physical layout of the facilities combined with the quality of operations. The first impression of a resort will often set the tone or mood of the visit. The first impression is a function of the sense of arrival, the parking experience, the pedestrian/vehicular relationship, and the distance the guest has to walk to the primary focal point.

The sense of arrival at Silver Star is a positive experience. The entrance to the Resort is well defined by the skier overpass; a sense of arrival is acquired as visitors pass under the skier bridge and enter the Resort environment. Subsequent movement into the parking lots is a fairly straight forward exercise, with obvious destinations and few decision points. On a busy day, the layout of the parking lots as directed by the parking attendants is efficient, maximizing the capacity of the parking lots, while offering a straightforward and painless experience for the visitors. The one exception to the parking experience is the skier drop-off; the best route and actual location is somewhat ambiguous.

In terms of pedestrian/vehicular conflict, the first guests to arrive in the morning generally park closest to the Village. As such, the only conflict between pedestrians and vehicles would occur at the drop-off area in front of the Village, but due to the relatively few drop-offs, this problem is minimal. On busy days however, skiers that arrive last must park in Lot D, forcing them to walk further than what is typically considered an acceptable skier walking distance, and to cross Silver Star Road, a potential point of pedestrian/vehicular conflict, especially at the end of the day. Silver Star has rectified these problems with the use of a shuttle.

With the exception of Parking Lot D, all parking is within an acceptable skier walking distance of the Village. It should be noted that even Parking Lot D can be considered acceptable for season pass holders who can access the skiing via the Silver Queen Chair and do not need to go directly into the Village.

IV.4.2 Pedestrian Entrance to the Village

Moving from the parking lots toward the Village is an exercise of obvious destination; from all points of parking it is readily apparent which direction you should be going. However, the actual entrance to the Village is not well defined. Although apparent, the primary ingress to the Village from Parking Lots B and D is rather loose and lacks a strong statement of entrance.

From Parking Lot A, the uninitiated visitor might be tempted to walk down the steep slope to get to the Village. This ingress and egress experience is informal and very poorly defined.

From Parking Lots C (Main and West), and from the RV Lot, the entrance to the Village is obscured and hard to find.

IV.4.3 Location and Organization of Facilities

Generally, the resort facilities are well located and organized, offering an enjoyable experience to day use and destination visitors. The major concerns that do exist are more ambience oriented, rather than organization oriented. Specifically, the current placement of the maintenance and mountain operations facilities in relation to the Village negatively impacts on the entrance and exit experiences. Secondly, the back-of-house activities of the Vance Creek Hotel conflict with the front entrance to that hotel and with the drop-off and entrance experience of the Chilcoot Conference Center.

The maintenance/operations situation is a problem that will be resolved with the establishment of the new maintenance facilities planned for an area with direct access from Silver Star Road, adjacent to the base of the Silver Queen Chair, and hidden from view.

The service access at the back of the Vance Creek Hotel is a more difficult problem that will require a reorganization of the space, combined with changes to the architecture, and the installation of formalized landscape screens.

IV.4.4 Village Relationship with Recreational Facilities

The Village is well placed as a central focus and staging point for all of the resort facilities on a year round basis; every activity and service is easily accessed and utilized from within the Village.

IV.4.5 Residential Relationship with Recreational Facilities

All existing residential development, both private and public, can be classified as ski to/ski from capable. In the worst case scenario visitors would have to walk a short distance to either initiate or end their skiing; this is a unique and special situation for a resort the size and scale of Silver Star. In addition to direct access to the alpine skiing, all of the overnight accommodation is located in close proximity to most or all of the other recreational facilities.

IV.4.6 Village Ambience, Character and Function

The winter ambience of Silver Star can be described as charming. The snow-covered pedestrian streets framed by the old western/victorian architecture offers an image and character that complements the setting.

As a criticism, the width of the pedestrian street between Putnam Station Hotel and the Lord Aberdeen Hotel is, in our opinion, too wide. As a result, the entrance experience into the Village is somewhat loose and undefined. Equally, the same space, defined by the above mentioned hotels and the Ticket Kiosk, "bleeds" back into the parking lot, leaving the visitor with no compelling desire to remain or congregate in this space. These problems can be improved with a combined architectural/landscape solution.

As described in an earlier section, the Village functions very well as a focal point and staging point to the alpine and nordic skiing. For non-skiing visitors wearing street shoes, the main snow-covered street is less successful, especially when accessing the Silver Lode Inn from the Ticket Kiosk. This can be addressed in the creation of stairs leading up to the Silver Lode Inn.

In the summer, the Village ambience and character is quite different than in the winter. Without the snow to smooth out some of the vertical differences between the buildings and without the presence of the ski racks, the spaces between the buildings are noticeably large, and in our opinion, too wide to create a truly comfortable, user friendly space. This has been rectified to some degree with the



installation of a moveable stage and carousel. Formalized changes to the architecture and landscape would dramatically improve the feeling of the Village in the summer.

Other points negatively impacting on the existing character of the Village have been discussed in Section IV.4.5. Specifically, the presence of the maintenance facilities and the back-of-house activities of the Vance Creek Hotel should be addressed.

V. DEVELOPMENT POTENTIAL

V.1 Introduction

The inflexible nature of mountainous topography makes it particularly critical to identify the optimum potential of the terrain to support resort development prior to imposing design on the land. Once this analysis is complete, the resultant information provides the planner and developer a thorough understanding of the physical potential of a study area in order to achieve the development goals and objectives.

To this end, S.e has performed a comprehensive Site Area Inventory and Analysis of the physical and environmental characteristics of the study area. The existing conditions were reviewed through map studies of Silver Star and site visits during the fall of 1994 and winter or 1995. All information was then analyzed with the utilization of a variety of specialized evaluation tools that S.e has developed, including detailed computer analysis. Specifically, we have completed an Existing Village Plan, a Base Area Slope Analysis, an Elevation Analysis, and an Aspect Analysis.

The conclusions of these analyses are summarized on the Opportunities and Constraints Plan.

V.2 The Study Area

The Study Area for the Base Area Master Plan consists of the existing Silver Star Ski Resort, portions of the Controlled Recreation Area within Crown Land (tenure area), and portions of the adjacent Silver Star Provincial Park, as illustrated in Figure 1. It takes into account and includes portions of areas designated for the proposed expansion and improvements to the mountain facilities and attractions.

V.3 Study Area Terrain Inventory and Analysis

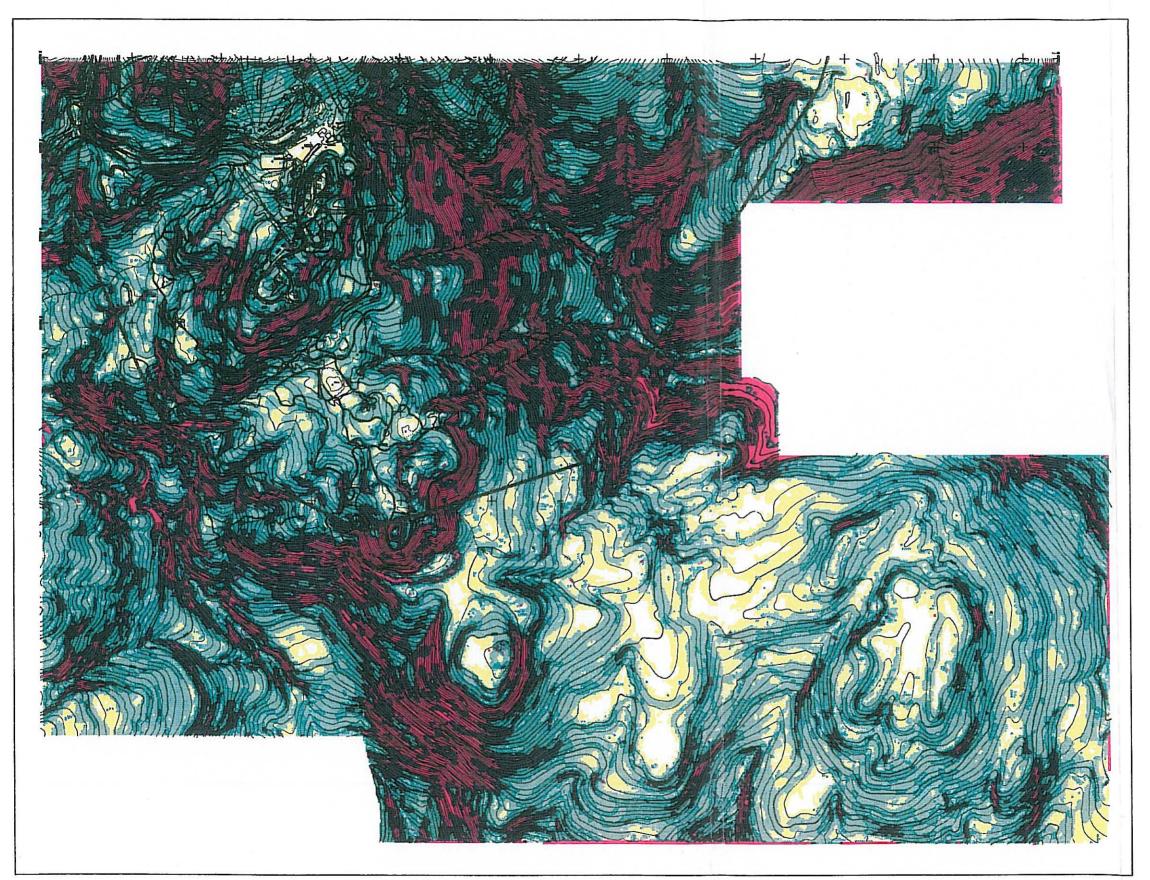
A land use analysis of the Study Area terrain was completed to determine development potential. This includes a Base Area Slope Analysis, an Elevation Analysis, and an Aspect Analysis. The key elements and character defined by these analyses were then summarized on the Opportunities and Constraints Plan, along with a series of known and proposed land use considerations.



V.3.1 Base Area Slope Analysis

The Base Area Slope Analysis for the Silver Star study area (Figure 3) is designed to identify the range of slope gradients suitable for potential land use development. The topographic information has been colour coded into slope gradient categories. as follows:

- White: Slope gradients between 0% 5%. Ideal for base area village, residential, and golf course development.
- Yellow: Slope gradients between 5% 10%. Maximum for base area village development. Acceptable for golf course and residential development.
- Light Green: Slope gradients between 10% 20%. Acceptable for golf course and residential development.
- Mid Green: Slope gradients between 20% 30%. Maximum contoured design for golf course development. Acceptable for residential development.
- Blue: Slope gradients between 30% 40%. Maximum for low density residential development with careful design.
- Pink: Slope gradients greater than 40%. Generally too steep for development.



BASE AREA MASTER PLAN

SLOPE ANALYSIS

January 1995

LEGEND

40° ·



30°- 40



20°- 30°



10°- 20°



5° - 10°



0° - 5°

prepared by-

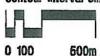


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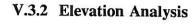
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contour interval 5m

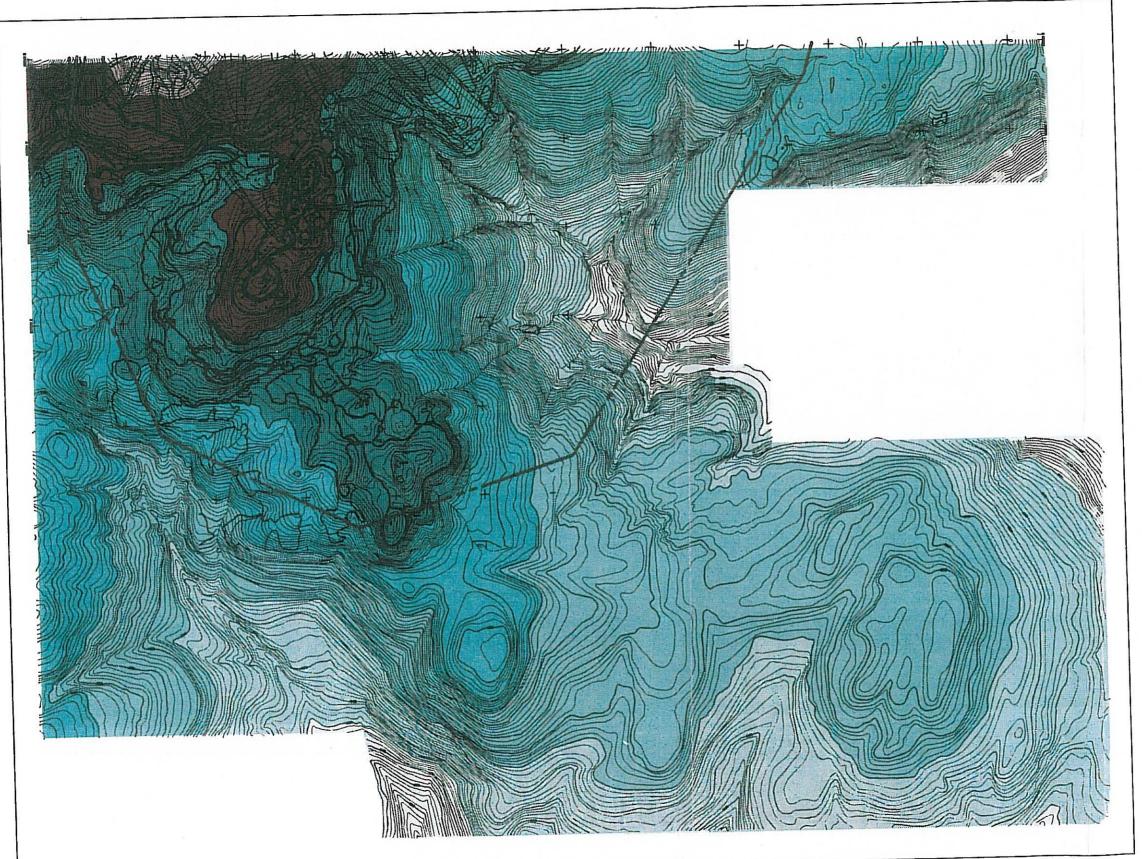




3



The Elevation Analysis (Figure 4) illustrates the height and "flow" of land. The Study Area ranges from a height of approximately 1,000 metres above sea level at the lower elevations of the site, and rises to above 1,600 metres at the existing base area. This analysis graphically illustrates the basic topographic relief of the study area lands.



BASE AREA MASTER PLAN

ELEVATION ANALYSIS
January 1995

LEGEND

1,700m +

1,600 - 1,700

1,500 - 1,600

1,400 - 1,500

1,300 - 1,400

1,200 - 1,300

8000

1,100 - 1,200

1,000 - 1,100

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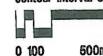


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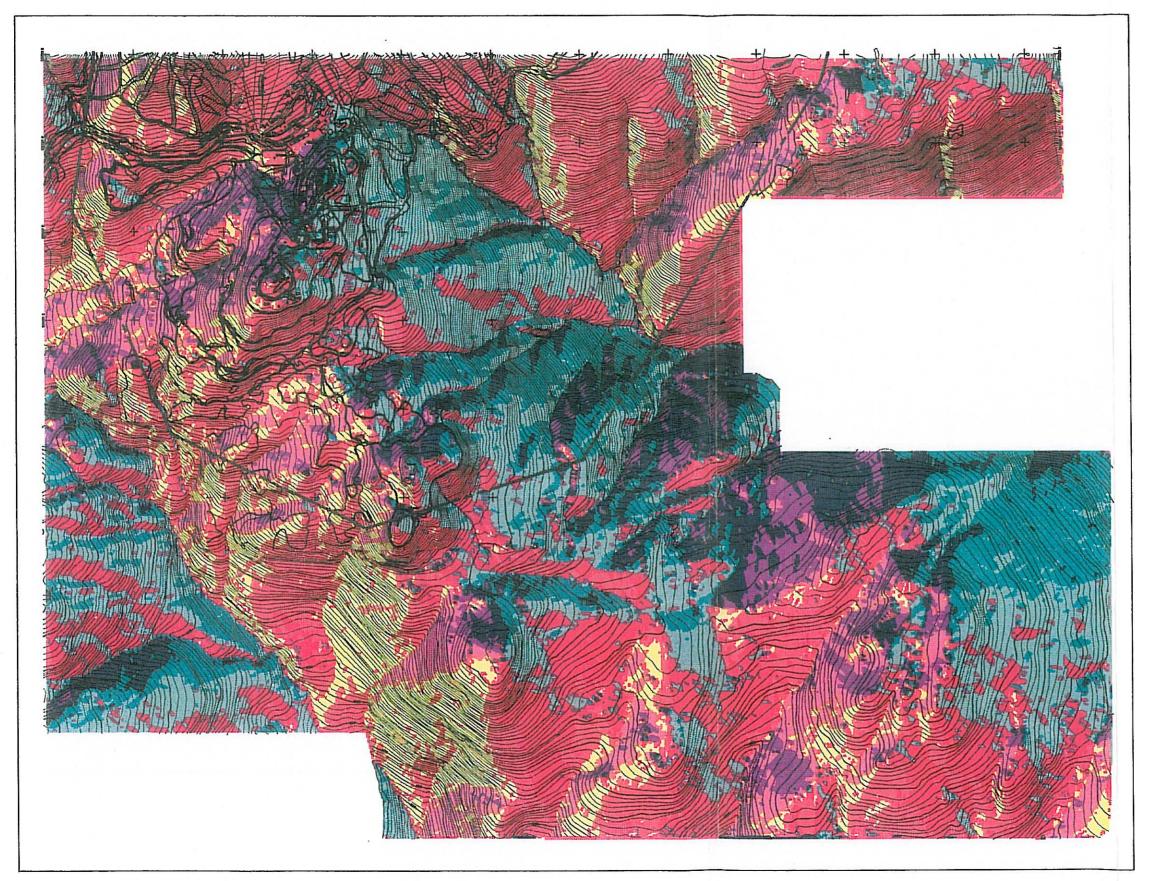






V.3.3 Aspect Analysis

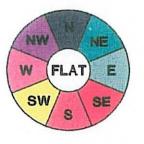
The Aspect Analysis (Figure 5) involves colour coding the topographic features within the Study Area to illustrate their orientation and geographical exposure with respect to the eight points of the compass. Receiving reduced direct sunlight, northern exposures are better for snow retention, . These slopes are best for ski trail development, but are undesirable for base area or residential development. Southern exposures are less desirable for skiing terrain, as they have reduced snow retention capabilities. Conversely, because these slopes receive partial or full sun exposure, they are more desirable for base area or residential development.



BASE AREA MASTER PLAN

ASPECT ANALYSIS
January 1995

LEGEND



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5



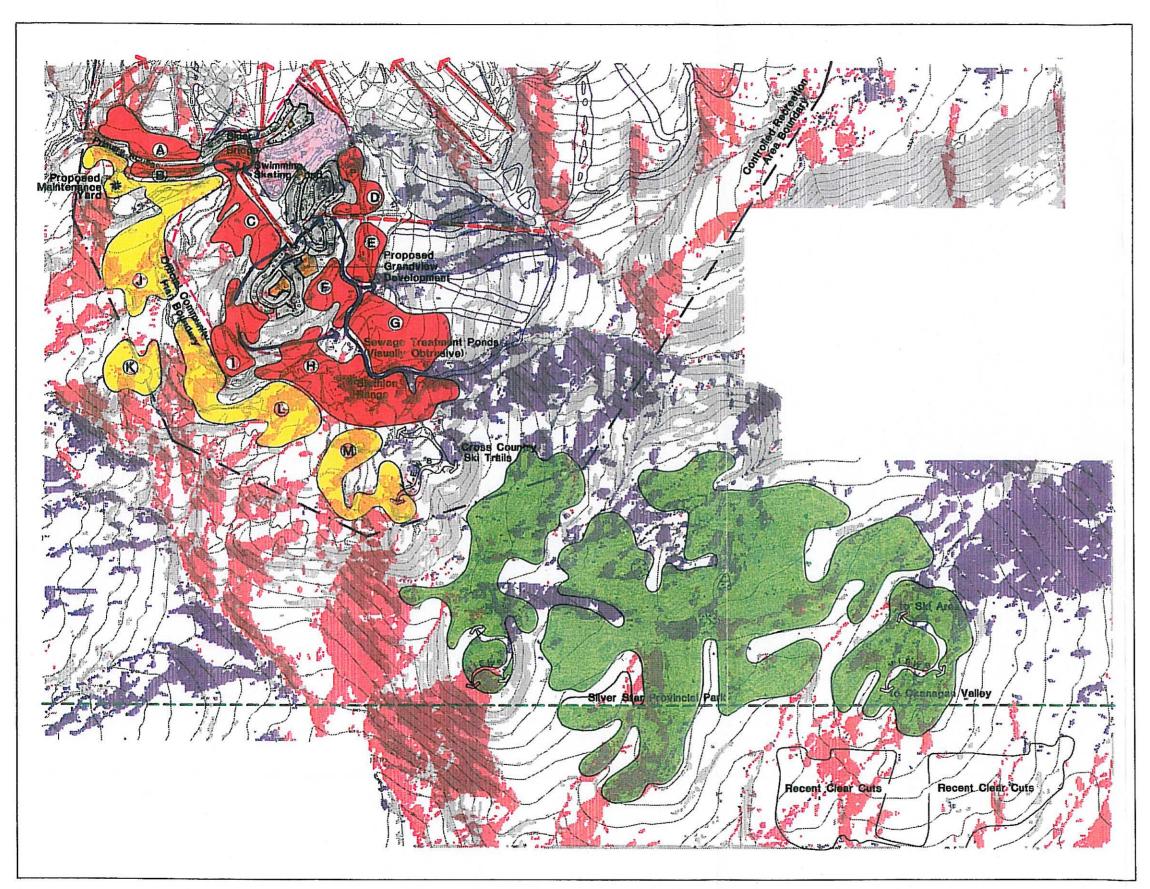
The Opportunities and Constraints Plan (Figure 6) highlights the positive and negative aspects to development within the Silver Star Study Area.

The following physical opportunities and constraints have been delineated and were taken into account during the subsequent generation of planning options within the Silver Star Study Area.

- Slopes over 40% representing lands too steep for base area (residential) development.
- Warm Slopes: South facing lands preferred for base area development because of extended periods of direct solar exposure.
- Cold Slopes: North facing lands receiving less direct sunshine through the winter months and less desirable for base area and residential development.
- Prevailing Winds.
- Wetlands.
- Silver Star Village District. (The Official Community Plan Boundary)
- Controlled Recreation Area Boundary
- Silver Star Provincial Park Boundary
- Residential District (Low Density).
- Commercial Resort: Accommodation District.
- Ski to/ski from real estate development potential.
- Real estate development potential.
- Existing ski lifts and trails.
- Proposed ski lifts and trails (Silver Star Ski Area Master Plan, 1994).



- Alpine Ski Connector Routes
- Potential Base Area Focal Points.
- Skier Walking Distance defining the most valuable base area lands.
- Existing Base Area.
- Slopes less than 10% representing virtually flat areas ideal for base lands development.
- Existing Access to the Silver Star Ski Area.
- Potential Access to the potential expansion base areas.
- Potential Golf Course Lands. In 1991, S.e Canada completed a
 preliminary site evaluation of the lands to the south east of the existing
 base area development. There are several physically viable options for
 development of eighteen hole golf courses. The lower the elevation, the
 better in terms of a reliable season length for golf.



BASE AREA MASTER PLAN

OPPORTUNITIES AND CONSTRAINTS

January 1995

LEGEND

Slopes over 40%





Wetlands

Village District

Existing Residential District

Existing Multi-Family Residential



Ski to/Ski from Real Estate Development Potential Real Estate Development Potential

Existing Lift Alignments



Proposed Lift Alignments

Proposed Ski Courses



Alpine Ski Connector Routes

Potential Golf Course Lands

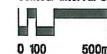
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V.4 Development Potential Conclusions

Based on the Site Analysis, there is significant resort development potential within the Silver Star Study Area. Specifically, there appears to be a great deal of opportunity to expand the existing Village and to develop ski to/ski from real estate that will both complement the existing resort facilities while enabling the creation of new facilities that balance with the expansion of the mountain.