

**KICKING**  
**HORSE**

MOUNTAIN RESORT  
*Golden, British Columbia*

## **KICKING HORSE MOUNTAIN RESORT**

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Landscape Design Rationale & Guidelines



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**Kicking Horse Mountain Resort Landscape  
Design Rationale and Guidelines**

**The Vision  
Statement**

The Kicking Horse Resort Vision Statement provides the fundamental principles and vision for the resort. It serves as a starting point for the ongoing design and development.

The vision statement is defined as describing ' ideas and possibilities that will continue to be explored as the vision for Kicking Horse evolves'. The document was intended to serve as a guide for planning, and design of Kicking Horse Mountain Resort.

The vision statement describes Kicking Horse Village as a resort on a forested benchland, 1,700 feet above the floor of the valley.

**Historical Reference  
& Natural Features**

The Vision Statement refers to history; 'the village embodies the pioneer spirit of the surveyors, engineers, railroaders, prospectors and traders'.

*'Kicking Horse Mountain Resort'* is named after the renowned river and the high-alpine pass that were key to the opening of the Canadian West, and as such, the name evokes a sense of discovery, exploration and history.'

The village and plaza will draw upon the rugged nature of the Rockies and will utilize natural features including water, rock outcroppings, large boulders and natural planting.

**Site Description  
& Architectural  
Character**

The architectural character is described as authentic to the Canadian Rockies inspired by stone and timber National Park lodges. The style is best described as 'rustic elegance'.

The interpretation of the Vision Statement is that the village and plaza is to be unique in ski resorts and it is to draw upon the past and the rugged nature of the local rockies around. Historical reference, local materials is the basis for developing guidelines & design.

Architectural design guidelines for Kicking Horse Mountain Resort have been prepared by Oberto Oberti Architecture.

The user of the future village and plaza will realize where he is in context; the plaza and elements are of Golden and area and not airlifted in from elsewhere.

**Design Guidelines**  
**Purpose**

Kicking Horse Mountain Resort lies in a spectacular setting amongst the Rocky Mountains and at the confluence of two rivers. Three mountain ranges surrounding the town, the Purcells, the Selkirks and the Rockies.

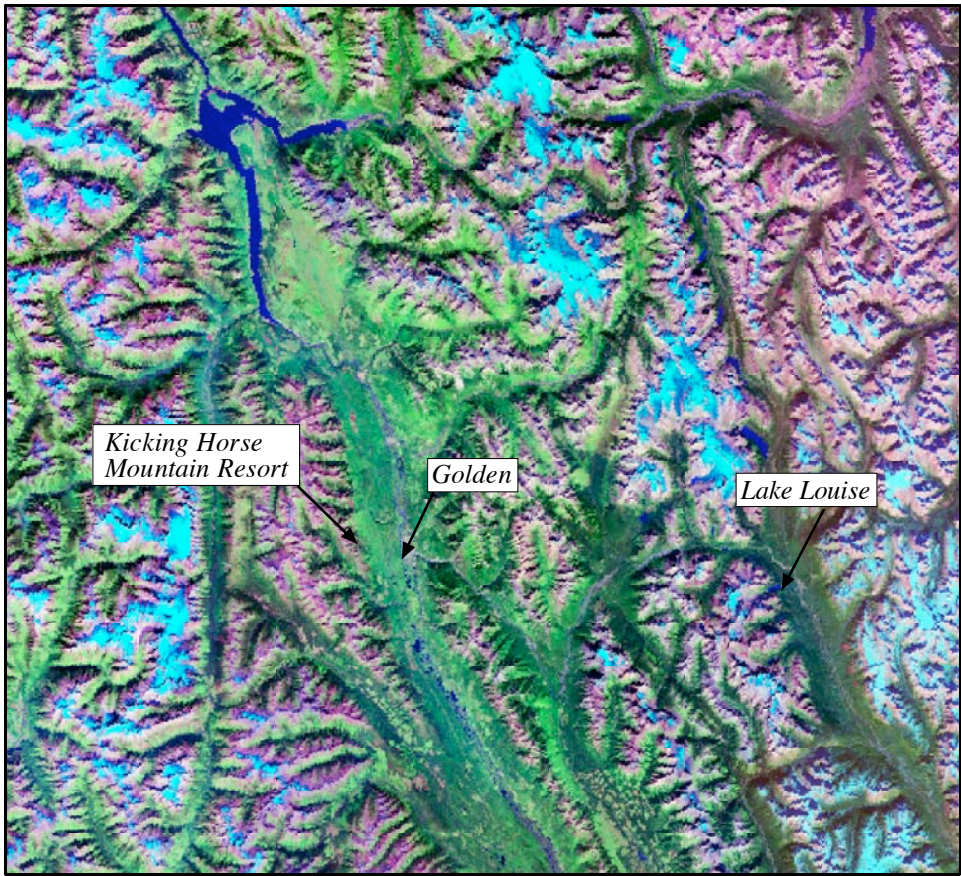
People come to Kicking Horse Mountain Resort to experience this natural setting and activities available.

The purpose of the design guidelines is to guide construction and development at the resort to fit comfortably with the natural mountain setting. The guidelines look to and draw from the past and the resort vision statement.

The guidelines discuss intent and direction and follows through to materials and detail.

Rather than try to be all inclusive, the guidelines are site specific, adhering to the needs and context of the site or portion of site being considered.

It is the intent that the guidelines remain a fully digital, dynamic document continually bring in new ideas, recording as built information and providing an ongoing document of current and intended status. The guidelines will be fully integrated with site development plans.



**Kicking Horse  
Mountain Resort  
Setting**

*The West Bench*

The Kicking Horse Mountain Resort base area plaza site is on the 'West Bench', 500 metres above the valley floor, 13 kilometres from the Town of Golden.

The proposed Village at Kicking Horse sits on a bench with slope above and below edged by the access road. The plaza is oriented toward the mountains and sun arcing across the mountain giving sun light to the plaza through the day. Views to the Dogtooth Range above are dramatic.



*Site Terrain Model*

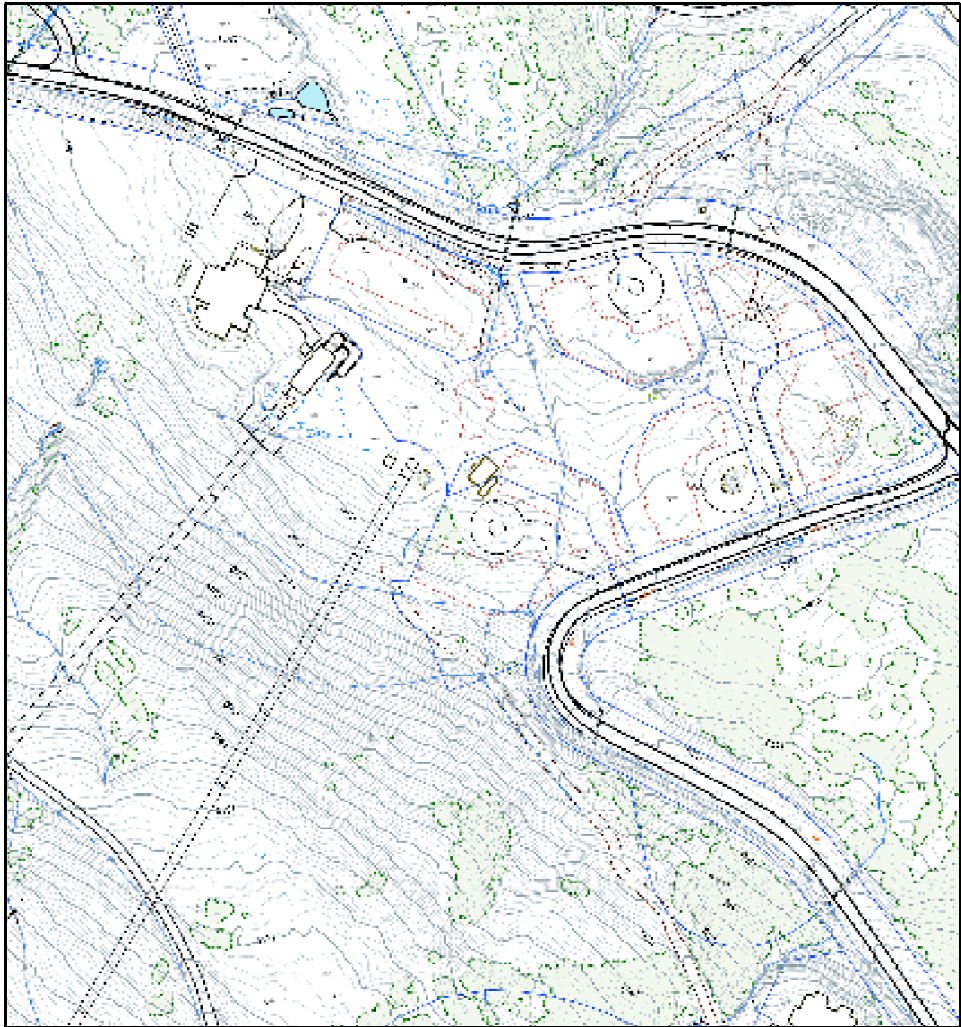
This 3D model terrain model is used to accurately illustrate the setting, the existing and proposed terrain and as tool for design development, siting and analyzing shade and sun areas.

This model also illustrates the wide open sun orientation of the plaza to the mountain.

The edge between the plaza and base of mountain/ski terrain where skiers, boarders and pedestrians mingle requires special attention.



Site Mapping -  
Existing Conditions



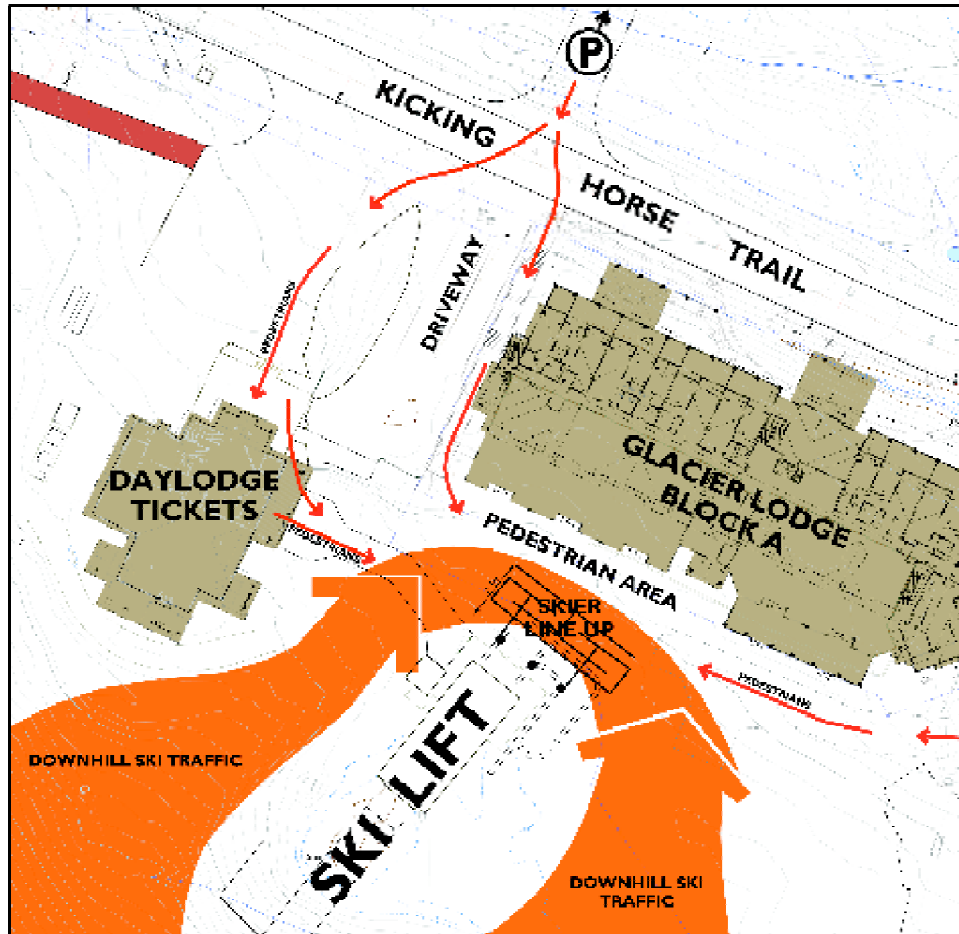
Portion of Aerial Mapping Database

Existing Conditions  
Aerial Mapping

The existing facilities provide a starting point for further detail design development. Recent detailed air photo mapping illustrates existing and as built conditions accurately providing good base map information for planning. Significant as built items are:

- The Daylodge
- Existing Lifts
- Roads & Services
- Drainage routes
- Topography

The detailed digital mapping database has enabled master planning, trail and circulation, quantity calculations and upgraded marketing plans.



*Required skier movement areas*

#### **Skier Movement**

*Lift mazing*

*Pedestrian access*

With the existing Daylodge, lifts, ski runs and road access, critical circulation and known requirements of skier movement, mountain operations can be laid out and serve as a guide for the plaza design.

Skier circulation requires and lining up requires sufficient width for grooming. The bulk of skiers descend between the Daylodge and gondola base requiring this busy area to be kept generally clear.

Effective plaza design, layout & materials takes into consideration the skier/boarder and pedestrian movement, safety, adequate space and drainage.

**Plaza - The Major Design Materials:**

Three significant materials which will form the character of the plaza are described here prior to general 'design principles'.

**The materials are:**

**Water -**

diversion of an existing water stream through the plaza

**Rock -**

use local, natural rock from the area.

**Rock Paving & Unit Pavers -**

type, size, texture, colour of paving of the plaza.



*Existing Stream To Be Diverted Through The Plaza*

**Water**

A water feature in the plaza is considered to be an icon and focus of the plaza. The water is brought flowing down the mountain into the plaza to reflect a mountain experience.

*Water - Like it Belongs*

The flow of water through the plaza is a major component of the plaza design. The water flow through is not contrived, but takes an existing waterflow diverted to the middle plaza area. The flow through picks up on, reflects the character and behavior of the water flowing downhill off the mountain above.



*Example of Diverted Natural Creek - Whistler*

The single most important factor in the water course is that it looks like it belongs there. The water already coming down the mountain would naturally cut through the plaza - and pause just as the neighbouring wetlands. The plaza can emulate the nearby large Columbia River wetlands at a smaller scale.

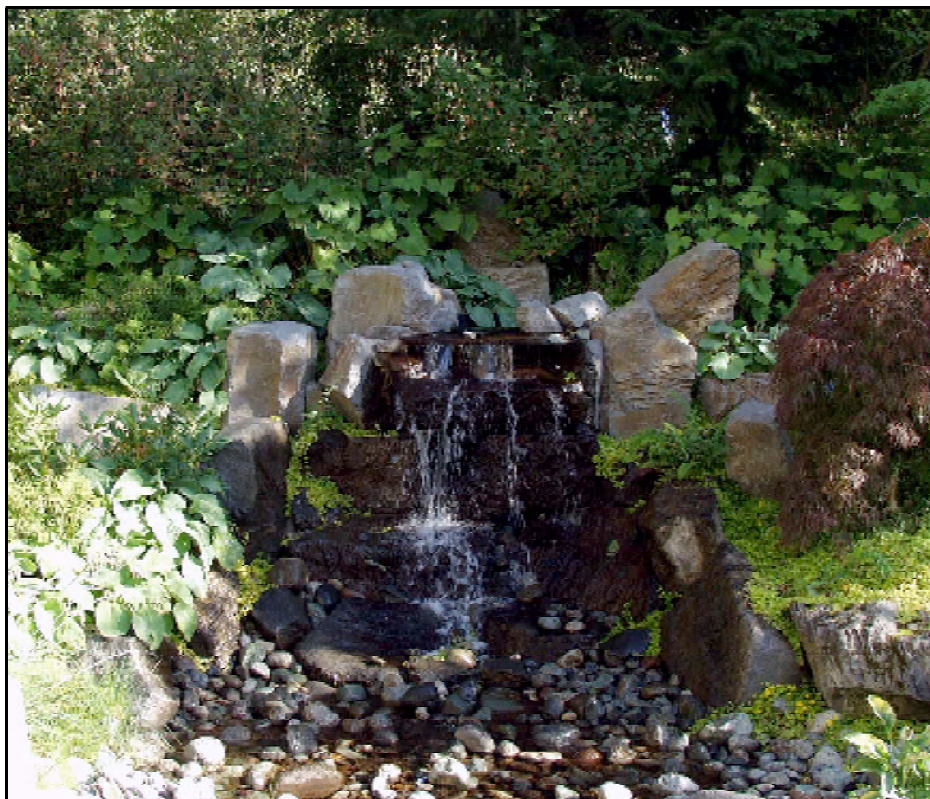




*Example of Still Pond - Wetland Edge*

The examples of constructed waterways utilize a waterproof membrane with sand and rocks placed with soil pockets. Native wetland and riparian planting is used.

The waterfall feature below is recirculating water at a resort hotel set into a slope to look as though it belongs there.



*Waterfall feature*

## Rock

Rock used in the plaza will be a reflection of the rock the plaza is surrounded in. The use of and the variety of local rock available will be one of the major features to differentiate the character of Kicking Horse from other ski resorts. With the three mountain ranges surrounding the town: Purcells, Selkirks and Rockies, each valley seems to hold a different type of rock with almost limitless landscape uses. Rock that is available in the Golden area is extremely variable.

No imported rock or culture stone will be permitted in the plaza. for planter wall or other landscape purposes.

## Rose Quartzite

A very hard, angular, heavy stone, often pinkish to brown. It may be used as boulders, in dry laid retaining walls, rock gardens, edging and feature stones. Widely available and chosen as the Kicking Horse theme stone as it is abundant and close by on the mountain.



*Matherite & Rose Quartzite patio*

## Matherite

Matherite is a rare slate-like limestone found in the Blaeberry Valley. It is a very flat, uniform slate, useful in dry laid paving, informal pathways, veneers, dry laid retaining walls, stair building and patios. It is beige to brown on its large surfaces and black when fractured. A favoured stone to work with.



*Matherite drystack planter wall detail*



*Matherite patio paving with raised rose quartzite*



*Matherite drystack planter wall*



**Silica Rock**

Also a very hard, angular stone that is bright white, sometimes with rust coloured veins. Good for use as boulders, ballasting, rock gardens or feature stones not suitable for paving. It comes in a variety of sizes from large boulders to silica sand.

**Serrate Granite**

The source of this granite is serrate mountain located NW of Radium, (South of Golden). It is a beautiful white stone flecked with pinks, blacks and blues appropriate for ponds, dry laid retaining walls, exterior veneers, rock gardens and feature stones.



*Serrate granite boulder*

**River Rock**

The valley turns up a lot of beautiful, well-formed river rock in remarkable colours from blues, greens and grays to oranges, pinks and purples. It is available in a wide variety of sizes, such as pea gravel, natural pebbles, less than four inches, less than 10 inches, and larger than ten inches. It is suitable for exterior veneers, drainage, ponds, stone mulch, ballasting, rock gardens, false retaining walls, (semi-retaining) & even low traffic cobble stone paths.



*River rock walkway*

**Black Ashlar**

Black ashlar is a new stone being mined in Golden area. It is comparable to the rundle stone used as veneers and as a landscape rock, which is excavated near Canmore.

**Natural Slates,  
Shale, Fractured  
Rock**

These types of stone are very useful as natural looking stone mulches, informal pathways and stepping-stones. Usually they are grey to black, and often found as a by-product of road building. These stone products may become more commercially available in the future.

**Slate**

There are many varieties of slate available in Golden. Golden slate varies in colour from plum colours to greens to greys and blacks. These slates are useful in exterior veneers, dry laid paving, informal pathways, dry laid retaining walls, stair building, feature stones and ponds.



*Stairs - assorted slate*

**Tufa**

Tufa is a very interesting stone made of the fossilized remains of coral beds. It is widely available in our area and great for many applications. Because of the air spaces in the stone, Tufa holds water and nutrients and can maintain plant life virtually on its own. Also Tufa is extremely light, enabling ease of use. It is most often pale beige in colour and may be used for building alpine garden as Tufa mimics the natural environment of many alpine plants.



*Tufa*

**Existing Site Rock**

As with anything, the best source to use is the one that is already there. Often an area will turn up unique or similar stones and it is definitely encouraged to use the existing stones on site in applications suitable to that type of rock.

## Drystack Rock

### Dry-laid Stonework 101

Dry-laid stonework is an art form of stone setting, which does not require mortar or concrete. This gives the set stone a very natural look in keeping with the objectives and vision statement of Kicking Horse Mountain Resort. The town of Golden already has some dry laid stone features so it would also give some continuation with the town.

### Avoid Concrete Walls & Deep Frost Levels

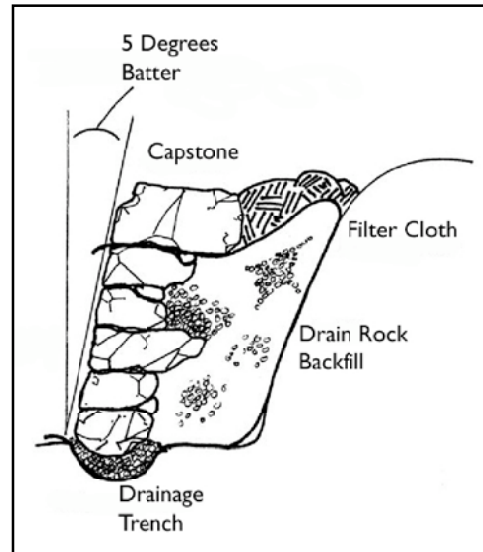
Where possible, dry-laid stonework and boulders are preferred to concrete walls required a 1.2m frost level foundation.

### Engineered Wall Height

*\*Note - walls in excess of 1.2m require engineering*

### Drainage

Drainage is the most important factor when setting dry-laid stone. Placing good drainage under paving and walls alleviates most of the frost heaving damage that occurs during a freeze-thaw cycle in the spring and fall. There should be at least 20cm of drain rock; pea gravel is preferable, under dry-laid pathways or dry-laid paving. Any dry-laid retaining walls should be built on a drainage trench filled with drain rock. The size of this trench may vary with the size of stone used and the height of the finished wall.



*Drystack wall detail*

### Backfill

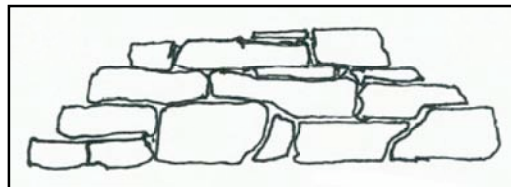
Dry-laid retaining walls should be backfilled with drain rock as the wall is being built. This provides excellent drainage and a strong backing for the wall. If walls are short, less than two feet, walls can be backfilled with soil if the intention is to install plantings in the wall. This is a false retaining wall or a semi retaining wall.

### Batter

Dry-laid retaining walls should be leaning slightly toward the back. A desirable batter is 5 degrees.

### Running Joints

A good dry-laid retaining wall does not have any running joints. Running joints make a wall less sturdy and not as aesthetic.



*Drystack wall no running joints*

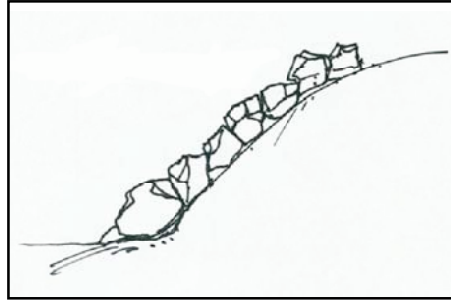
### Capstones

By using the largest stones on the top course of the wall you add weight and pressure to the retaining wall, giving it more strength. It also is very aesthetic and larger stones are harder to move so the wall is safer and has more durability in public places.



### **Ballasting**

Walls where the stones are supported by the backfill or ground and not the stones underneath are ballasted walls, not dry-laid retaining walls. This is useful on hillsides that need a clean up, erosion control, and a need to be lower maintenance.



*Drystack wall detail*

### **Boulder Placement**

Use of boulders to contain and enhance planting, can be very successful and cost effective if care is taken in boulder selection and assuring they are carefully placed with a view to aesthetics. Boulders on the ground must be half buried and should be placed carefully



*Boulders placed with paving. Settlement can occur & planting is protected*



*Placed boulders with stairs and native planting*



*Successful boulders & planting along a sidewalk & parking edge*



*Rundle rock as planter edge (Banff)*

Rock Stack  
Retaining

Well placed rock with planting can provide a cost effective, natural-looking retaining method. These samples illustrate the use of planting to soften the look of rock stack retaining walls.



Native Kinnickinnick planting on a roadside retaining wall

Quote From:  
'Building The  
National Parks'  
Historic Landscape  
Design & Construction

*'But let us take care of the large rugged rock, and commence our picturesque operations upon it. We will begin by collecting from some rocky hill or valley in the neighborhood of the estate, a sufficient quantity of rugged rocks, and, in size from a few pounds to half a ton or more, if necessary, preferring always such as already coated with mosses and lichens. These we will assemble around the base of a large rock, in an irregular somewhat pyramidal group, bedding them sometimes partially, sometimes almost entirely in soil heaped in irregular piles around the rock. The rocks must be arranged in a natural manner, avoiding all regularity and appearance of formal art, but placing them sometimes in groups of half a dozen together, overhanging each other, and sometimes half bedded in the soil and a little distance apart.'* Downing - 'Theory and Practice', 401

*'The rockwork once formed, choice trailing, creeping, and alpine plants, such as delight naturally in similar situations, may be planted in the soil which fills the interstices between the rocks; when these grow to fill their proper places, partly concealing and adorning the rocks with their neat green foliage and pretty blossoms, the effect of the whole, if properly done, will be like some exquisite portion of a rocky bank in wild scenery, and will be found to give an air at once striking and picturesque to the little scene where it is situated.'*

Downing - 'Theory and Practice', 402

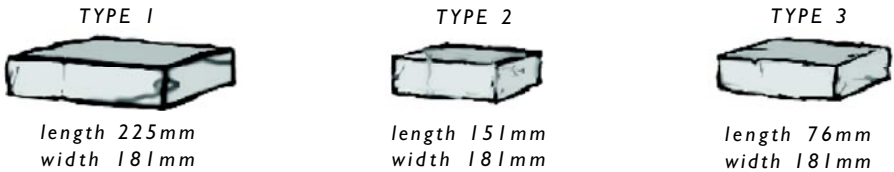


Native Penstemon planting on a golf course retaining wall

**Pavers**  
*Through The Plaza*

The concrete unit pavers which Kicking Horse Mountain Resort has sourced and uses is Abbotsford Concrete ‘Old Country Stone’. Typical colour will be natural grey.

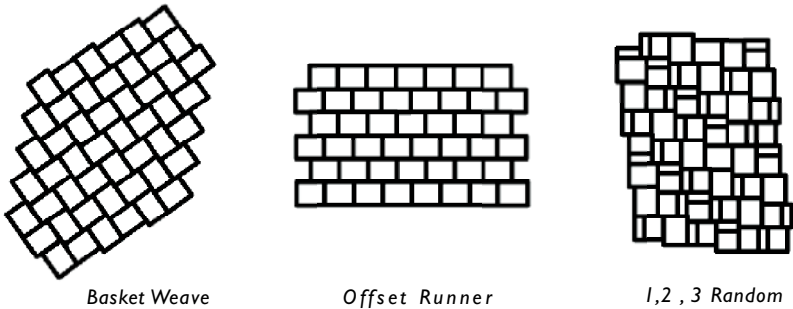
*Paver Size Examples*



*Paver Colour Examples*



*Paver Pattern Examples*



The ‘Old Country Stone’ paver is chosen for its hand hewn character resulting from a tumbling process. The different sizes, colours and patterns will allow for variety in the paving.

*Paver Specific Examples*



*Use of Local  
Flagstone*

Use of flagstone paving as highlights is encouraged. Dry-set, large flat local rock will add interest to paving in the plaza.

Stamped concrete is not permitted because it is difficult to repair.

**Planting**

*Planting Style*

Planting at Kicking Horse is to be naturalistic to blend with the natural surroundings. The existing native vegetation at the site is primarily a coniferous forest slope with wetland areas of transitional bogs and fens. There are accents of colour from wild flowers and seasonal changes.

The recommended planting style and list takes into consideration the biogeoclimatic zone and description of the area, the species of plants on the site, and the availability of the plants in the Golden area. Sourcing plants in the Golden area is a priority for Kicking Horse.

*Biogeoclimatic Zone*

*Description*

Golden, and the Kicking Horse Mountain Resort is within the Interior Cedar - Hemlock zone which occurs at lower to middle elevations of southeastern British Columbia. The subsone variant is the 'Golden Moist Warm Interior Cedar - Hemlock Variant'.



*Forest character - view from the gondola*

The biogeoclimatic zone description and representative species is relevant in choosing plants appropriate for the site.

Although mean annual precipitation is significantly lower than the Coastal Western Hemlock zone, the greater snow melt in the Interior Cedar-Hemlock (ICH) zone contributes heavily to the hydrologic regime, thereby minimizing summer soil moisture deficits.

This factor is relevant to landscaping at Kicking Horse, because areas where natural surface subsurface drainage is interrupted, watering or irrigation must compensate to maintain suitable planting.

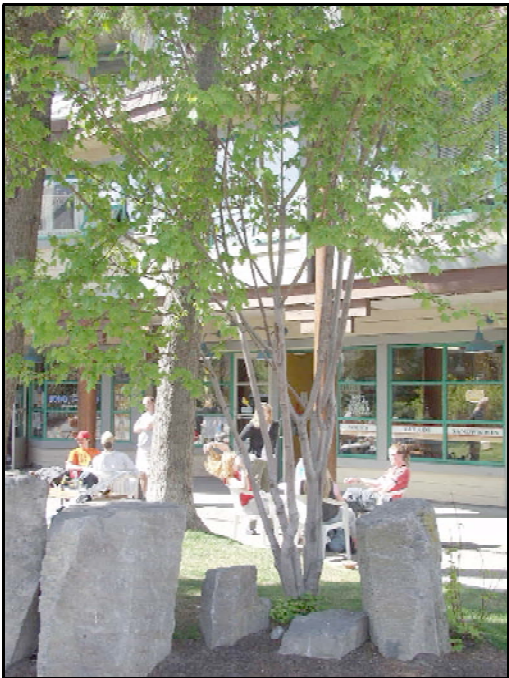
The coastal forest and ICH share many ecological features. The ICH is the most productive forest zone in the interior of British Columbia. This explains the logging history and remnants of logging activity on the 'West Bench' where Kicking Horse is.



**Diversity of Tree  
Species**

The significance of this information to Kicking Horse is that the landscaping can be lush and rich and should reflect the forest around it. The landscaping scheme will not utilize planting or styles typical to drier, more arid areas.

The climax species of the ICH are Hemlock and Cedar. Other seral or non zonal tree species occurring are Douglas Fir, Lodgepole Pine, Hybrid White Spruce, Western White Pine, Paper Birch, Aspen,

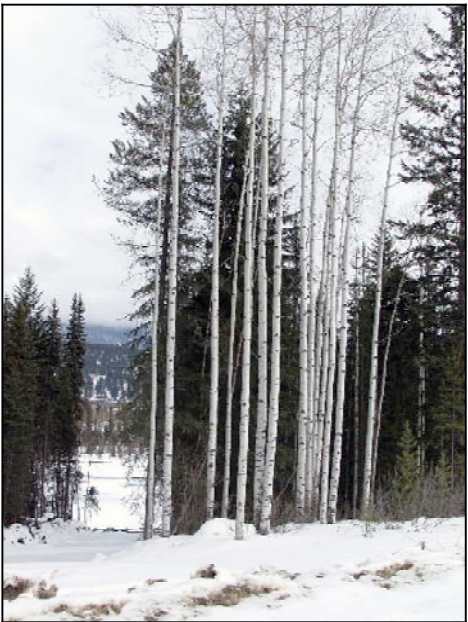


*Native Douglas Maple used in landscaping*

The ICH has the greatest tree species diversity of all the zones in British Columbia. This provides significant opportunity to Kicking Horse Mountain to adopt interesting native landscaping.

Noticeable in the Golden area and at the Kicking Horse site is the prevalence of deciduous Paper Birch and Aspen providing contrast to the predominant coniferous forest. Another attractive shrub / tree is the Douglas Maple.

Kicking Horse Mountain Resort is adopting a policy and standard to use native tree and shrub species and blend with the surrounding landscape. To increase variety and colour at the ground level native like planting and perennial flowers for colour accents will be utilized.



*Contrast of Aspen with conifers near Kicking Horse*

**Native Planting Policy**

Since Kicking Horse Mountain Resort is located in a natural ecologically rich setting, it is the resort's intent to adopt a native planting and ecologically compatible sustainable landscape.

Native Plant List

As KHMR is in the middle of very diverse ecosystems, several lists of species native to the area are provided. The first list is native plant material appropriate for the area of KHMR. Following is a short list of native water plants and finally a list of non-native plants, which are still beneficial. This includes alpine plants that are not necessarily native but will do well in rock walls and gardens.

*\* See Appendix I for a list of birds most common in the area, which influences the plant list. These birds are directly affected by the choices in plant material and the cultural practices used to maintain them. In this way, a wildlife habitat will be created for visitors to KHMR to enjoy up close. Following this in the documents appendix is a list of beneficial insects, which share and help care for these plant species.*



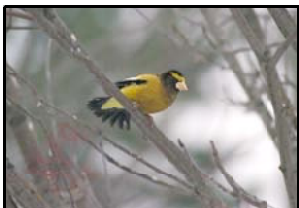
The vision is to be walking through the plaza at KHMR, once the development is in its completion stages, and feel that we are in an extension of the forest. We will be able to see a variety of blooms, berries, foliage, and forms of plants on display with birds, butterflies and dragonflies darting in and out of the gardens.



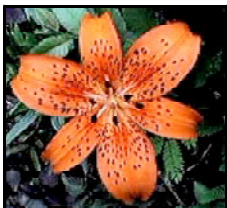
Hummingbird



Amelanchier  
Alnifolia



Evening Grosbeak



Tiger Lilly

Maintaining Wildlife  
Habitat

Using native plants will encourage the balance of all the other species in the area. Planting non-natives can be like putting out a tropical buffet, which will attract larger animals that can do a lot of damage. This also creates food sources for the native species of birds, which is not in their ordinary diet and is not reliable, thus upsetting the balance. Non-native plants are harder to maintain, often needing chemical fertilizers, pesticides or insecticides, which then are entered into the ecosystem affecting many species throughout the valley. Many native plants are hard to find except from specialty nurseries so hybrids may sometimes be the only solution. Hybrids are native plants cross-pollinated with other plants to bring out more desirable features, like larger flowers. When it is necessary to choose native hybridized plants, make sure of the plant size and form and it's hardiness. Weak unhealthy growth from unsuitable plant material invites insect pests and disease.



Red Black Capped Chickadee

Creating wildlife habitat at KHMR will increase the experience of visiting and enjoying our valley. The visitors will have a unique opportunity to witness KHMR's partnership with the nature that surrounds it.

**Planting  
Specification**

Planted areas should be mulched to discourage weeds, maintain soil temperature and moisture. Where permanent plantings of shrubs and trees require landscape fabric, a bark nugget of fir and/or hemlock should be used. If fire hazard is an issue, e.g. adjacent dry dense forest/brush, then stone mulches would be appropriate. In plantings of perennials and annuals, where the soil is exposed the soil should be covered up to four inches with composted bark mulch. This gives a much cleaner, more natural look, nourishes the soil, aids in erosion control, while it discourages weeds, and maintains the soil temperature and moisture.

**Irrigation**

Planted areas should be supplied with automatic irrigation, either micro irrigation on the surface, or traditional underground irrigation. Surrounded by buildings and paving, plantings won't get the amount of water they require without irrigation, and newly planted areas need more water than natural plants that have adapted in the same place since germination. Automatic irrigation is up to 75% more efficient in water usage and it is an investment now, saving on maintenance dollars later. Also, gardeners maintaining the plantings won't be traipsing around with hundreds of feet of hose. All Irrigation is to be installed to irrigation industry Assoc. of B.C. standards. (described in IIABC Standards for Landscape Irrigation Systems.)

Plantings should be maintained as ecologically as possible, avoiding the use of insecticides, pesticides and minimizing the use of chemical fertilizers to container plantings only. By choosing the right plants for the right places in the right soil, we invite the solutions to the problems before the problems can occur.



*Mountain Alder*



*Red Tailed Hawk*



*Nootka Rose*



*Great Horned  
Owl*

**Recommended  
Species Information**

| <b>Common Name</b>              | <b>Scientific Name</b> | <b>Mature Size</b> | <b>Adapted</b> | <b>Moisture</b>     | <b>Attracts</b>                                                                 |
|---------------------------------|------------------------|--------------------|----------------|---------------------|---------------------------------------------------------------------------------|
| <b>Trees</b>                    |                        |                    |                |                     |                                                                                 |
| Grand Fir                       | Abies grandis          | 30m                | Sun/Shade      | needs some moisture |                                                                                 |
| Subalpine Fir                   | Abies lasiocarpa       | 35m                | Sun/Shade      | needs some moisture |                                                                                 |
| Paper Birch                     | Betula Papyrifera      | Upto 40m           | Full Sun       | needs some moisture | cavity nesting birds,<br>larval food for butterflies                            |
| Western Larch                   | Larix occidentalis     | 40m                | Full Shade     | needs some moisture |                                                                                 |
| Engelmann spruce                | Picea engelmannii      | 35m                | Sun/Shade      | needs some moisture | seeds eaten by crossbills                                                       |
| White Spruce                    | Picea glauca           | 35m                | Sun/Shade      | needs some moisture | seeds eaten by finches                                                          |
| Lodgepole pine                  | Pinus contorta         | 20m                | Full Sun       | needs some moisture | larval food for Pine White Butterfly                                            |
| Black cottonwood                | Populus balsam spp.    | 40m                | Full Sun       | moist to wet soils  | cavities used by bats, owls, Lewis's<br>woodpecker; larval food for butterflies |
| Trembling aspen                 | Populus tremuloides    | 30m                | Full Sun       | needs some moisture | nesting woodpeckers, larval food for<br>butterflies                             |
| Douglas-fir                     | Pseudotsuga menziesii  | 35m                | Full Sun       | moist to wet soils  | food and shelter for wide variety of wildlife                                   |
| <b>Shrubs &amp; Small Trees</b> |                        |                    |                |                     |                                                                                 |
| Douglas Maple                   | Acer glabrum           | 1-7m               | Sun/Shade      | needs some moisture | nesting sites for birds                                                         |
| Sitka alder                     | Alnus crispa           | -5m                | Sun/Shade      | needs some moisture | birds eat buds and seeds                                                        |
| Mountain alder                  | Alnus tenuifolia       | 2-10m              | Full Shade     | moist to wet soils  | seeds eaten by redpolls, provides nesting                                       |
| Saskatoon                       | Amelanchier alnifolia  | 1-5m               | Full Sun       | drier sites         | berries eaten by many birds                                                     |
| Scrub birch                     | Betula glandulosa      | 30-200cm           | Full Shade     | moist to wet soils  | seeds eaten by pine siskins and redpolls                                        |
| Redstem ceanothus               | Ceanothus sanguineus   | -3m                | Full Sun       | drier sites         | larval food for California Tortoiseshell                                        |
| Snowbrush                       | Ceanothus velutinus    | 50-200cm           | Full Sun       | drier sites         | important browse for deer                                                       |
| Red osier dogwood               | Cornus stolonifera     | 1-4 m              | Sun/Shade      | needs some moisture | many bird species feed on fruit                                                 |
| Red hawthorn                    | Crataegus columbiana   | 3-5m               | Full Sun       | needs some moisture | nesting & roosting, berries eaten by many birds                                 |
| Silverberry/Wolf-willow         | Elaeagnus commutata    | 1-4m               | Full Sun       | needs some moisture | berries provide food for many birds                                             |
| Common Juniper                  | Juniperus communis     | 50-100cm           | Full Sun       | drier sites         | berries eaten by Townsend's Solitaires                                          |
| Rocky Mountain Juniper          | Juniperus scopulorum   | 5-10m              | Full Sun       | drier sites         | berries provide food for many birds                                             |
| Black twinberry                 | Lonicera involucrata   | 1-2m               | Sun/Shade      | moist to wet soils  | berries eaten by birds, larval food of the rare<br>Gillett's Checkerspot        |
| Utah Honeysuckle                | Lonicera utahensis     | 0.5-2m             | Sun/Shade      | moist to wet soils  | flowers provide nectar for hummingbirds                                         |
| False azalea                    | Mensiesia ferruginea   | -2m                | Full Shade     | needs some moisture |                                                                                 |
| Mock-orange                     | Philadelphus lewisii   | -3m                | Full Sun       | needs some moisture |                                                                                 |
| Mallow ninebark                 | Physocarpus malvaceus  | -2m                | Sun/Shade      | drier sites         | Provides roosting sites & cover for songbirds                                   |
| Shrubby cinquefoil              | Potentilla fruticosa   | 30-130cm           | Full Sun       | needs some moisture |                                                                                 |
| Pin cherry                      | Prunus pensylvanica    | 1-5m               | Sun/Shade      | needs some moisture | food source for many birds                                                      |
| Choke cherry                    | Prunus virginiana      | 1-4m               | Full Sun       | drier sites         | berries eaten by many birds                                                     |
| Skunk currant                   | Ribes glandulosum      | 50-100cm           | Sun/Shade      | needs some moisture | provides nectar for hummingbirds                                                |
| Northern black currant          | Ribes hudsonianum      | 0.5-200m           | Sun/Shade      | moist to wet soils  | berries eaten by birds and mammals                                              |
| Black gooseberry                | Ribes lacustre         | 1-2m               | Sun/Shade      | needs some moisture | berries eaten by birds                                                          |
| Prickly rose                    | Rosa acicularis        | 50-150cm           | Sun/Shade      | needs some moisture | hips eaten by mammals                                                           |
| Nootka rose                     | Rosa nutkana           | 1-3m               | Full Sun       | needs some moisture | hips eaten by mammals                                                           |
| Prairie rose                    | Rosa woodsii           | 1-2m               | Full Sun       | drier sites         | hips eaten by mammals                                                           |
| Red raspberry                   | Rubus idaeus           | 50-150cm           | Sun/Shade      | needs some moisture | berries relished by many songbirds                                              |
| Thimbleberry                    | Rubus parviflorus      | 50-200cm           | Full Sun       | needs some moisture | berries eaten by birds                                                          |
| Coyote willow                   | Salix exigua           | 1-3m               | Full Sun       | moist to wet soils  | Larval food for Dreamy Duskywing                                                |
| Sitka willow                    | Salix sitchensis       | 1-8m               | Sun/Shade      | moist to wet soils  | Larval food for Dreamy Duskywing                                                |
| Buffaloberry/Soapberry          | Shepherdia canadensis  | 1-2m               | Sun/Shade      | needs some moisture | Larval food for California Silkmoth                                             |
| Western Mountain Ash            | Sorbus scopulina       | 1-5m               | Sun/Shade      | needs some moisture | Berries consumed by waxwings and robins                                         |
| Sitka Mountain Ash              | Sorbus sitchensis      | 1-4m               | Sun/Shade      | needs some moisture | Berries consumed by waxwings and robins                                         |
| Pyramid spirea                  | Spirea pyramidata      | 50-150cm           | Sun/Shade      | moist to wet soils  | Larval food for Spring Azure                                                    |



Recommended  
Species Information

| Common Name             | Scientific Name         | Mature Size | Adapted    | Moisture            | Attracts                                                                          |
|-------------------------|-------------------------|-------------|------------|---------------------|-----------------------------------------------------------------------------------|
| <b>Shrubs cont.</b>     |                         |             |            |                     |                                                                                   |
| Coyote willow           | Salix exigua            | 1-3m        | Full Sun   | moist to wet soils  | Larval food for Dreamy Duskywing                                                  |
| Sitka willow            | Salix sitchensis        | 1-8m        | Sun/Shade  | moist to wet soils  | Larval food for Dreamy Duskywing                                                  |
| Buffaloberry/Soapberry  | Shepherdia canadensis   | 1-2m        | Sun/Shade  | needs some moisture | Larval food for California Silkmoth                                               |
| Western Mountain Ash    | Sorbus scopulina        | 1-5m        | Sun/Shade  | needs some moisture | Berries consumed by waxwings and robins                                           |
| Sitka Mountain Ash      | Sorbus sitchensis       | 1-4m        | Sun/Shade  | needs some moisture | Berries consumed by waxwings and robins                                           |
| Pyramid spirea          | Spirea pyramidata       | 50-150cm    | Sun/Shade  | moist to wet soils  | Larval food for Spring Azure                                                      |
| Common snowberry        | Symphoricarpos albus    | 50-150cm    | Sun/Shade  | needs some moisture | Birds eat the berries                                                             |
| Western yew             | Taxus brevifolia        | 2-15m       | Full Shade | needs some moisture | Berry-like cones eaten by many birds                                              |
| Black huckleberry       | Vaccinium membranaceum  | 50-150cm    | Sun/Shade  | needs some moisture | Berries eaten by many birds and important food source for black and grizzly bears |
| Velvet-leaved blueberry | Vaccinium myrtilloides  | 10-40cm     | Full Sun   | drier sites         | Berries eaten by many birds and important food source for black and grizzly bears |
| Oval-leaved blueberry   | Vaccinium ovalifolium   | 1-2m        | Sun/Shade  | moist to wet soils  | Berries eaten by many birds and important food source for black and grizzly bears |
| High bush-cranberry     | Vibe mum edule          | 0.5-2.5m    | Sun/Shade  | moist to wet soils  | Eaten by mammals                                                                  |
| <b>Ground Covers</b>    |                         |             |            |                     |                                                                                   |
| Kinnikinnick            | Arctostaphylos uva-ursi | 10-20cm     | Full Sun   | drier sites         | Berries eaten by grouse and waxwings                                              |
| Bunchberry              | Comus canadensis        | 5-20cm      | Sun/Shade  | needs some moisture | Berries and leaves eaten by Ruffed Grouse                                         |
| Wild strawberry         | Fragaria virginiana     | 5-10cm      | Sun/Shade  | needs some moisture | Berries eaten by many species of wildlife                                         |
| Twinflower              | Linnaea borealis        | 5cm         | Sun/Shade  | needs some moisture |                                                                                   |
| Shrubby penstemon       | Penstemon fruticosus    | 20-40cm     | Full Sun   | drier sites         |                                                                                   |
| Five-leaved bramble     | Rubus pedatus           | 10-30cm     | Sun/Shade  | moist to wet soils  | Berries eaten by small mammals and birds                                          |
| Trailing raspberry      | Rubus pubescens         | 10-30cm     | Sun/Shade  | needs some moisture | Berries eaten by small mammals and birds                                          |
| Western white trillium  | Trillium ovatum         | 30-45cm     | Sun/Shade  | moist to wet soils  |                                                                                   |
| <b>Vines</b>            |                         |             |            |                     |                                                                                   |
| White clematis          | Clematis ligusticifolia | Up to 20m   | Sun/Shade  | needs some moisture | Seed plumes used in birds nests                                                   |
| Blue clematis           | Clematis occidentalis   | Up to 5m    | Sun/Shade  | needs some moisture | Seed plumes used in birds nests                                                   |
| Orange honeysuckle      | Lonicera ciliosa        | Up to 6m    | Sun/Shade  | needs some moisture | Flowers provide nectar for hummingbirds & butterflies                             |
| <b>Perennials</b>       |                         |             |            |                     |                                                                                   |
| Yarrow                  | Achillea millefolium    | 10-75cm     | Full Sun   | drier sites         | Very important for beneficial insects                                             |
| Nodding onion           | Allium ceruum           | Upto 50cm   | FullSun    | drier sites         | Nectar source for hummingbirds and butterflies                                    |
| Pearly everlasting      | Anaphalis margaritacea  | 20-90cm     | Full Sun   | drier sites         |                                                                                   |
| Red columbine           | Aquilegia formosa       | 70-100cm    | Sun/Shade  | needs some moisture | Nectar source for hummingbirds and butterflies                                    |
| Pasture sage            | Artemesia frigida       | 10-40cm     | Full Sun   | drier sites         |                                                                                   |
| Goat's Beard            | Aruncus dioicus         | 1-2m        | Sun/Shade  | moist to wet soils  |                                                                                   |
| Wild ginger             | Asarum caudatum         | 10-20cm     | Full Shade | moist to wet soils  |                                                                                   |
| Showy milkweed          | Asclepias speciosa      | 40-120cm    | Full Sun   | needs some moisture | Larval food for Monarch butterfly                                                 |
| Lindley's Aster         | Aster ciliolatus        | 20-100cm    | Sun/Shade  | needs some moisture | Larval food for Northern Pearl Crescent                                           |
| Showy Aster             | Aster conspicuus        | 30-100cm    | Sun/Shade  | needs some moisture | Larval food for Northern Pearl Crescent                                           |
| Arrow-leaved balsamroot | Balsamorhiza sagattata  | 20-80cm     | Full Sun   | drier sites         |                                                                                   |
| Common red Paintbrush   | Castilleja miniata      | 30-60cm     | Full Sun   | needs some moisture | Nectar source for hummingbirds, larval food for Anica Checkerspot                 |
| Queen's cup             | Clintonia uniflora      | 10-15cm     | Full Shade | needs some moisture | Berries eaten by Ruffed Grouse                                                    |
| Upland larkspur         | Delphinium nuttallianum | 15-40cm     | Full Sun   | drier sites         | Nectar source for butterflies                                                     |
| Fireweed                | Epilobium angustifolium | 1-3m        | Full Sun   | needs some moisture | Nectar source for hummingbirds, larval food for White-lined sphinx                |
| Snow buckwheat          | Eriogonum niveum        | 10-40cm     | Full Sun   | drier sites         |                                                                                   |
| Brown-eyed susan        | Gallardia aristata      | 20-70cm     | Full Sun   | drier sites         | Nectar source for butterflies                                                     |
| Old man's whiskers      | Geum triflorum          | 20-40cm     | Full Sun   | drier sites         |                                                                                   |

Recommended  
Species Information

| Common Name                       | Scientific Name       | Mature Size | Adapted    | Moisture            | Attracts                                                            |
|-----------------------------------|-----------------------|-------------|------------|---------------------|---------------------------------------------------------------------|
| <b>Perennials cont.</b>           |                       |             |            |                     |                                                                     |
| Rattlesnake plantain              | Goodyera oblongifolia | 20-40cm     | Full Shade | needs some moisture |                                                                     |
| Golden aster                      | heterotheca villosa   | 10-50cm     | Full Sun   | drier sites         |                                                                     |
| Cow-parsnip                       | Heracleum lanatum     | 1-3m        | Sun/Shade  | needs some moisture | Larval food for Anise Swallowtail                                   |
| Round-leaved alumroot             | Heuchera cylindrica   | 15-90cm     | Full Sun   | drier sites         | Nectar source for hummingbirds                                      |
| Tiger Lily                        | Lilium columbianum    | 50-90cm     | Sun/Shade  | needs some moisture |                                                                     |
| Silky Lupine                      | Lupinus sericeus      | 20-60cm     | Full Sun   | drier sites         | Larval food for many butterflies                                    |
| Wild lily-of-the-valley canadense | Maianthemum           | 5-25cm      | Full Shade | needs some moisture |                                                                     |
| Silverleaf phacelia               | Phacelia hastata      | 20-50cm     | Full Sun   | drier sites         |                                                                     |
| Showy jacob's-ladder pulcherrimum | Polemonium            | 5-35cm      | Full Sun   | drier sites         |                                                                     |
| Prairy coneflower                 | Ratibida columnifera  | 30-80cm     | Full Sun   | drier sites         |                                                                     |
| False solomon's-seal              | Smilacina racemosa    | 30-100cm    | Sun/Shade  | needs some moisture | Berries eaten by Ruffed Grouse                                      |
| Star-flowered false solomon       | 'Smilacina stellata'  | 20-60cm     | Sun/Shade  | needs some moisture |                                                                     |
| Canada goldenrod                  | Solidago canadensis   | 30-150cm    | FullSun    | needs some moisture | Nectar source for butterflies                                       |
| Canada violet                     | Viola canadensis      | 10-40cm     | Sun/Shade  | drier sites         |                                                                     |
| Stream violet                     | Viola glabella        | 5-30cm      | Sun/Shade  | moist to wet soils  | Larval food for fritillaries                                        |
| <b>Grasses</b>                    |                       |             |            |                     |                                                                     |
| Bluebunch wheatgrass              | Elymus spicatus       | 60-100cm    | Full Sun   | drier sites         |                                                                     |
| Blue grama                        | Bouteloua gracilis    | 20-50cm     | Full Sun   | drier sites         | Larval food for butterflies                                         |
| Idaho fescue                      | Festuca idahoensis    | 30-90cm     | Full Sun   | needs some moisture | Larval food for butterflies                                         |
| June grass                        | Koeleria macrantha    | 20-50cm     | Full Sun   | drier sites         |                                                                     |
| Giant wildrye                     | Leymus cinereus       | 1-2m        | Full Sun   | needs some moisture |                                                                     |
| Needle-&-thread grass             | Stipa comata          | 30-60cm     | Full Sun   | drier sites         | Larval food for butterflies                                         |
| <b>Ferns</b>                      |                       |             |            |                     |                                                                     |
| Lady fern                         | Athyrium filix-femin  | 60-100cm    | Sun/Shade  | moist to wet soils  |                                                                     |
| Deer fern                         | Blechnum spicant      | 20-80cm     | Full Shade | moist to wet soils  |                                                                     |
| Spiny wood fern                   | Dryopteris expansa    | 80-100cm    | Sun/Shade  | moist to wet soils  |                                                                     |
| Rocky Mountain woodsia            | Woodsia scopulina     | 40cm        | Sun/Shade  | drier sites         |                                                                     |
| <b>Non-Native Plants</b>          |                       |             |            |                     |                                                                     |
| <b>Trees</b>                      |                       |             |            |                     |                                                                     |
| Colorado spruce                   | Picea pungens         | 30m         | Full Sun   | needs some moisture | Roost sites for birds, seeds eaten by crossbills                    |
| Cherry                            | Prunus spp.           | 4-6m        | Sun/Shade  | needs some moisture | Fruits favored by birds                                             |
| Mountain Ash                      | Sorbus spp.           | 4-10m       | Sun/Shade  | needs some moisture | Fruits eaten by waxwings & thrushes                                 |
| Yew                               | Taxus spp.            | 5-10m       | Full Shade | moist to wet soils  | Waxwings & Townsend's Solitaires eat 'berries'                      |
| <b>Shrubs</b>                     |                       |             |            |                     |                                                                     |
| Butterfly-bush                    | Buddleia davidii      | 1-2m        | Full Sun   | needs some moisture | Flowers attract hummingbirds and butterflies                        |
| Cotoneaster                       | Cotoneaster spp.      | 1-3m        | Sun/Shade  | needs some moisture | Berries eaten by birds                                              |
| Honeysuckle                       | Lonicera tatarica     | 2-3m        | Sun/Shade  | needs some moisture | Hummingbirds & insects attracted to flowers                         |
| Golden currant                    | Ribes aureum          | 1-2m        | Full Sun   | needs some moisture | Berries eaten by birds, flowers can provide nectar for hummingbirds |
| Thorny buffalo-berry              | Shepherdia argentea   | 1-5m        | Full Sun   | needs some moisture | Berries eaten by birds                                              |
| Lilac                             | Syringa spp.          | 2-4m        | Full Sun   | needs some moisture | Good nectar source for butterflies                                  |

Recommended  
Species Information

| Common Name              | Scientific Name             | Mature Size | Adapted   | Moisture            | Attracts                                          |
|--------------------------|-----------------------------|-------------|-----------|---------------------|---------------------------------------------------|
| <b>Non-Native Plants</b> |                             |             |           |                     |                                                   |
| <b>Vines</b>             |                             |             |           |                     |                                                   |
| American bittersweet     | Celastrus scandens          |             | Full Sun  | moist to wet soils  | Berries eaten by birds                            |
| Honeysuckle              | Lonicera spp.               |             | Sun/Shade | needs some moisture | Flowers attract hummingbirds and moths            |
| Virginia creeper         | Parthenocissus quinquefolia |             | Sun/Shade | needs some moisture | Fruits eaten by birds, provides cover             |
| Grape                    | Vitis spp.                  |             | Full Sun  | needs some moisture | Provides food, cover & nest sites for small birds |
| <b>Perennials</b>        |                             |             |           |                     |                                                   |
| Milkweed                 | Asclepias tuberosa          |             | Full Sun  | drier sites         | Butterfly nectar source                           |
| Fuschia                  | Fuschia spp.                |             | Sun/Shade | moist to wet soils  | Attracts hummingbirds                             |
| Purple coneflower        | Echinacea purpurea          |             | Full Sun  | drier sites         | Attracts bees and butterflies                     |
| Liatris                  | liatris spp.                |             | Full Sun  | drier sites         | Attracts bees                                     |
| Penstemon                | Penstemon spp.              |             | Full Sun  | drier sites         | Flowers attract hummingbirds                      |
| <b>Water Plants</b>      |                             |             |           |                     |                                                   |
| Cattails                 | Typhaspp.                   |             |           |                     |                                                   |
| Mountain marsh-marigold  | Caltha leptosepala          |             |           |                     |                                                   |
| Yellow pond-lily         | Nuphar lutea                |             |           |                     |                                                   |
| White water-lily         | Nymphaea odorato            |             |           |                     |                                                   |
| <b>Alpine Plants</b>     |                             |             |           |                     |                                                   |
| Silver alpine yarrow     | Achillea clavennex          |             |           |                     |                                                   |
| Wooly yarrow             | Achillea tomentosa          |             |           |                     |                                                   |
| Pasqueflower             | Pulsatilla                  |             |           |                     |                                                   |
| Common pussytoes         | Antennaria dioica           |             |           |                     |                                                   |
| Colorado columbine       | Aquilegia caerulea          |             |           |                     |                                                   |
| American columbine       | Aquilegia canadensis        |             |           |                     |                                                   |
| Alpine wallcress         | Arabis alpinus              |             |           |                     |                                                   |
| Wallcress                | Arabis albida               |             |           |                     |                                                   |
| Rock aster               | Aster alpinus               |             |           |                     |                                                   |
| Grass pinks              | Dianthus plumarius          |             |           |                     |                                                   |
| Maiden pinks             | Dianthus deltoides          |             |           |                     |                                                   |
| Caucasian Leopardsbane   | Doronicum caucasicum        |             |           |                     |                                                   |
| Gentians                 | Gentiana spp.               |             |           |                     |                                                   |
| Wild geranium            | Geranium maculatum          |             |           |                     |                                                   |
| Alpine flax              | Linum alpinus               |             |           |                     |                                                   |
| Alpine penstemon         | Penstemon alpinus           |             |           |                     |                                                   |
| Blue penstemon           | Penstemon glaber            |             |           |                     |                                                   |
| Cinquefoil               | Potentilla alba             |             |           |                     |                                                   |
| Cinquefoil pyrenees      | Potentilla pyrenaica        |             |           |                     |                                                   |
| Cinquefoil nitida        | Potentilla nitida           |             |           |                     |                                                   |
| Saxifrage                | Saxifraga spp.              |             |           |                     |                                                   |
| Stonecrop                | Sedum spp.                  |             |           |                     |                                                   |
| Sea campion              | Silene maritima             |             |           |                     |                                                   |
| Moss campion             | Silene acaulis frances      |             |           |                     |                                                   |
| Cliff Speedwell          | Veronica rupestris          |             |           |                     |                                                   |
| Tufted pansy             | Viola co muta               |             |           |                     |                                                   |



*Cornus Canadensis*



*Trembling Aspen*

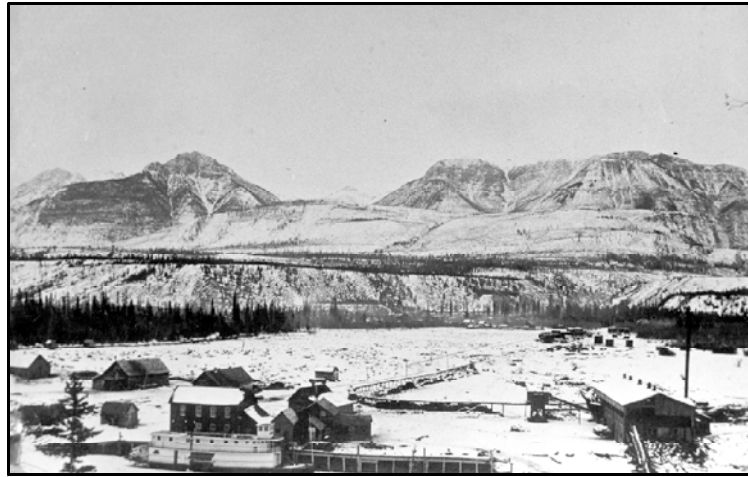


*Lupine*

**Historical**  
**Antecedent**  
*Authenticity*

Looking to the origins, original character and history of a place is the most significant guide to design and creating a place with meaning and authenticity.

The Kicking Horse Mountain Resort Vision Statement says: *'The Village embodies the pioneer spirit for the surveyors, engineers, railroaders, prospectors and traders who began packing in to the Columbia Valley in the late 1880s.'*



*Early Golden with a riverboat in the foreground*

*'Kicking Horse Mountain Resort is a celebration of the 'real Canadian Rockies' and the spirit of rugged individualism for generations of pioneers and immigrant-settlers who were drawn to the mountains.'*

*Describing proposed architectural style... 'the style can best be described as 'rustic elegant' - it exudes a warmth, comfort practicality and resistance to the elements that is both enduring and endearing. Although clearly of these mountains, the architects of Kicking Horse have succeeded in developing a vernacular unique to this resort. It is a design language that clearly distinguishes it from other resorts.'*

Golden has a rich history; residents of the area have pride in the heritage of the area reflected by the efforts and accomplishments of the Golden and District Historical Society which operates a museum and archives, has published 'Golden Moments' and 'Early Logging Methods In The Golden Area', and maintains a significant collection of records and photographs. ([www.rockies.net/~museum/index.html](http://www.rockies.net/~museum/index.html))

Developing an effective design expression, abstract or subtle, of the area's origins and style will provide an authenticity to the resort which residents will take pride in and will be of interest to visitors who will be pleased to find a richness not seen in other resorts. In short, we need to be *unique* to the area.



Access Difficulty

Trestle Construction

Derived from research and material obtained through the Golden and District Historical Society, selected imagery focuses on the following areas:

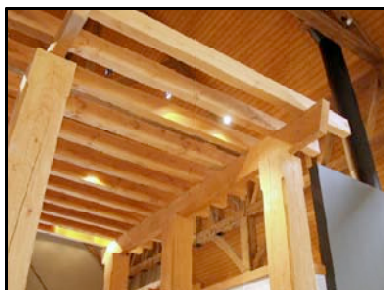
Access: the difficulty of getting around; early road and rail construction: trestles - drawing upon the construction of, elegance of trestles so prevalent on the bridges, railways, railings.



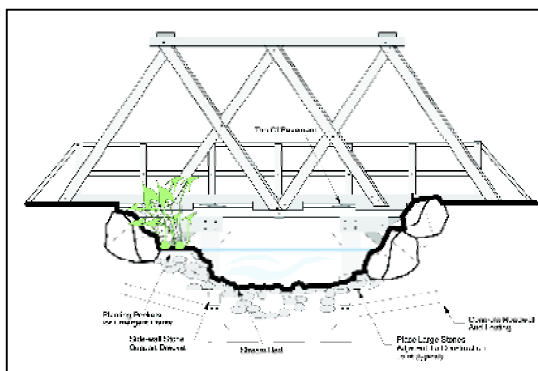
Early road construction - wood guardrail



Close-up of trestle construction



Large timber style - Daylodge  
& Eagle's Eye

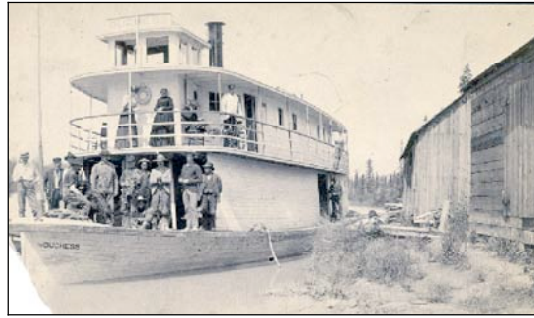


Proposed plaza bridge construction style

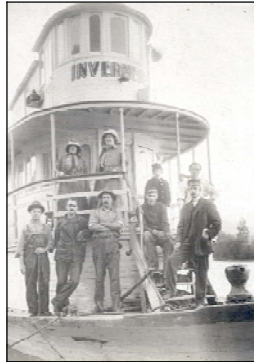
Water - Columbia  
River Transportation

Early Riverboats

Water; the Columbia River and numerous creeks played a big role in Golden's development.



*Riverboat picnics & outings*



*Riverboat picnics & outings*

Riverboats were the form of transportation - and picnics prior the railroad and road connections. The upper Columbia River steamboat era lasted only 28 years between 1886 and 1914. The transportation route was up to Columbia Lake, across Canal Flats and down the Kootenay to Jennings, Montana.

At the time, there was no rail or road connection at the time to Banff or Calgary.

Columbia River -  
Logging, River Drives



*River drive - moving logs to mills*



*Water flume*

The Columbia River was important to the early logging industry as the means to move timber on 'river drives' to mills set up along the river:

Water / a water feature is chosen as an icon not only due to the prevalence of streams on the mountain, but also to reflect the role in the history of the area.

## Logging

Logging has been the major economic activity of the past (and current time) originating in the need for timber for the early CP railway construction. Early logging made use of horses (relating to name & logo of Kicking Horse) and railways into the forest.



*Rail logging*

A logging railway route is located close to the Kicking Horse resort - 1100 metres east. This route is now part of an overall forest recreation system coordinated with recreation trails of Kicking Horse Mountain Resort.



How to find expression of the heritage of the area at Kicking Horse? Is there a common element that can express water, logging, pioneer spirit, craftsmanship and history of Golden. With water, the river being powerful influences on Golden and all wood was taken to the river, then wood retrieved from the river can be that common element and symbolize the past. It is bringing the river to Kicking Horse.

## River Wood - Retrieve Wood From Columbia River

Wood drawn from the Columbia River that would have been touched by pioneer hand is brought up and worked with by local craftsmen and taken to Kicking Horse.

River wood would be selected to have weathered look and interesting features to be used in landscape construction in the plaza: benches, railing, bridge work, decking and other furniture. This wood reflects sustainability, reuse of a resource.



*Chair made from wood taken from the river*



*Hunters & Trappers  
People & Lifestyles*

The 'Rocky Mountain National Park' architecture. The trapper's cabins, Swiss Guides refuges style. In National Park 'Parkitecture' there is a rich heritage of landscape architecture expression.

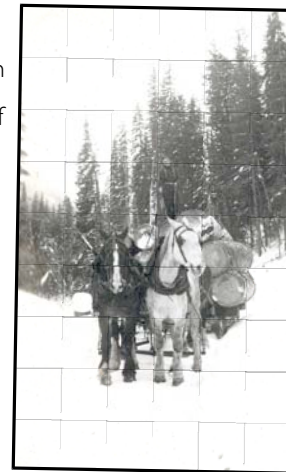


*Trappers at camp*

*Historic Skiing  
People & Lifestyles*

There is a long history in the area, a heritage of hearty mountain people who were involved in wilderness activities as a way of life and for enjoyment.

Exploring this beautiful area never seems to go out of style. Golden's history is full of hunting, trapping, fishing, mountain guiding, hiking, horseback riding, early touring and skiing.



While today many of these activities remain a draw to the area, we see new outdoor sports emerging. Skiing and snowboarding, mountain biking, heliski touring, snowmobiling, back country hiking, horseback riding, hang gliding, river rafting.

In 1916 the first pair of skis was handmade by Ole Oberg. They are in the Golden Museum.



### First Ski Hill

Goldens' first ski hill was located behind the Swiss village in the 1920's. The Swiss guides taught many people to ski there on handmade wooden skis with no edges and leather toe straps for bindings and a jack pine pole between the legs for steering.



The snow lasted quite long as the hill faced west. Half of Golden learning to ski on that hill behind the Swiss Village which was all cleared by hand.

In 1939 The Schiesser family introduces skiing as a pleasure sport in the Moberly. During the Second World War skiing became part of the recreation at the Moberly School. Sunday Skiing became a community activity forming the Moberly Ski Club.



The Selkirk Runners, Goldens first ski club organized an exhibition at the "Vachon Place" for slalom and down hill races at the end of 1930. In 1956 Moberly Ski Club amalgamated with the Golden Skiers.

in the late 50's & 60's the hay field at Morris's farm becomes "The Golden Ski Hill". A small motor on a toboggan powered the first tow and later they used a car to accommodate the amount of skiers. Morris's farm is just west of the Swiss Village.



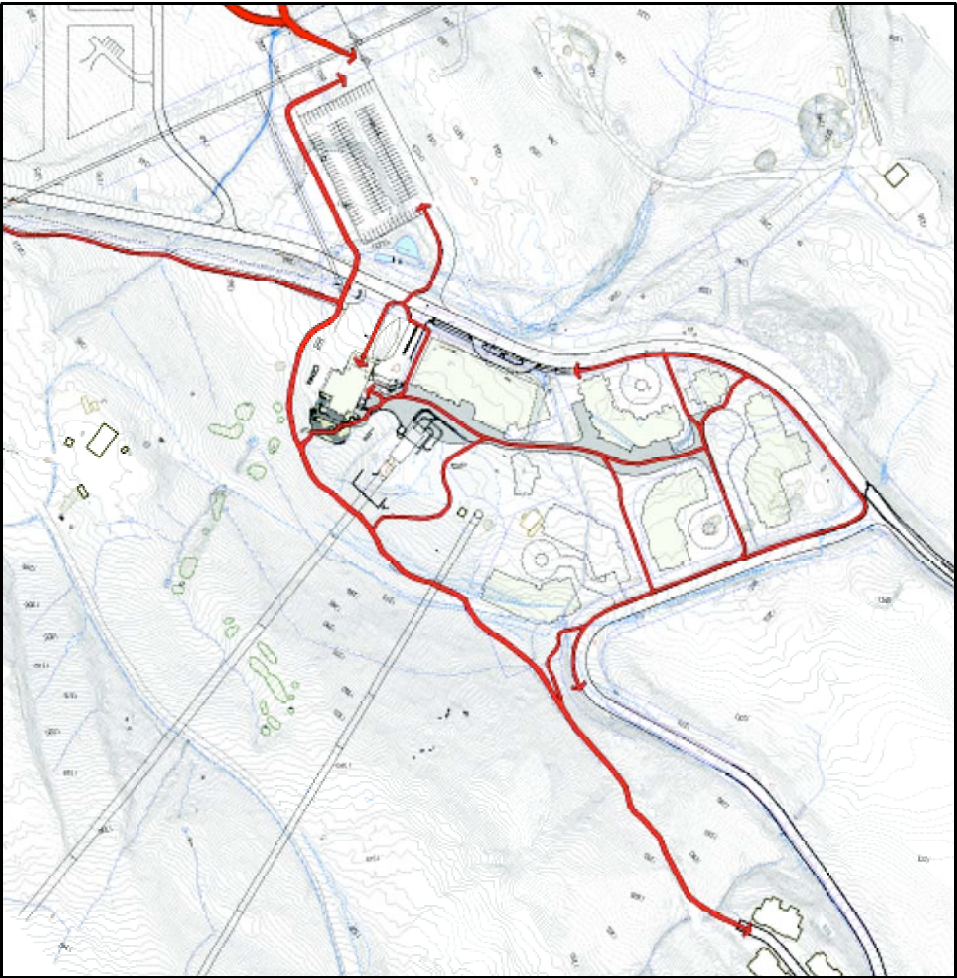
in 1967 planning started for a ski hill on Mount 7 that was built mostly by volunteers and the Golden Ski Club, which ran a towrope until 1979, but the snowpack was unreliable. A new ski society was formed and looked at the Whitetooth area as the terrain and snow pack made the perfect location.

**Plaza Path System**

The pathway system to and through the plaza area of Kicking Horse Mountain Resort is an important feature to the resort. The paths will connect future real estate development, mountain hiking, cross country ski trails and mountain biking trails. The plaza will serve as a destination point for a larger interconnected trail system.

Within the plaza itself, it is important to have a pathway and wayfinding system to lead people and orient them easily to the plaza area.

Trails and pathways are considered an essential part of the resort - all development plans are to illustrate connections to trails and pathways.



*Preliminary plaza pathways*

*Paths & Plaza -  
Design Principles  
(Pattern Language)*

Make the environment easy to understand and navigate, using unique special pockets and simple directional signage. If it is hard to find your way around, one is less likely to explore the smaller corners. Where possible make spots where people can hang out comfortably for hours at a time.

**Plaza Design**  
**Principle:**  
**Activity Pockets**

The life of public squares and plazas forms naturally around the edges. If the edge fails then so will the liveliness of the larger space.

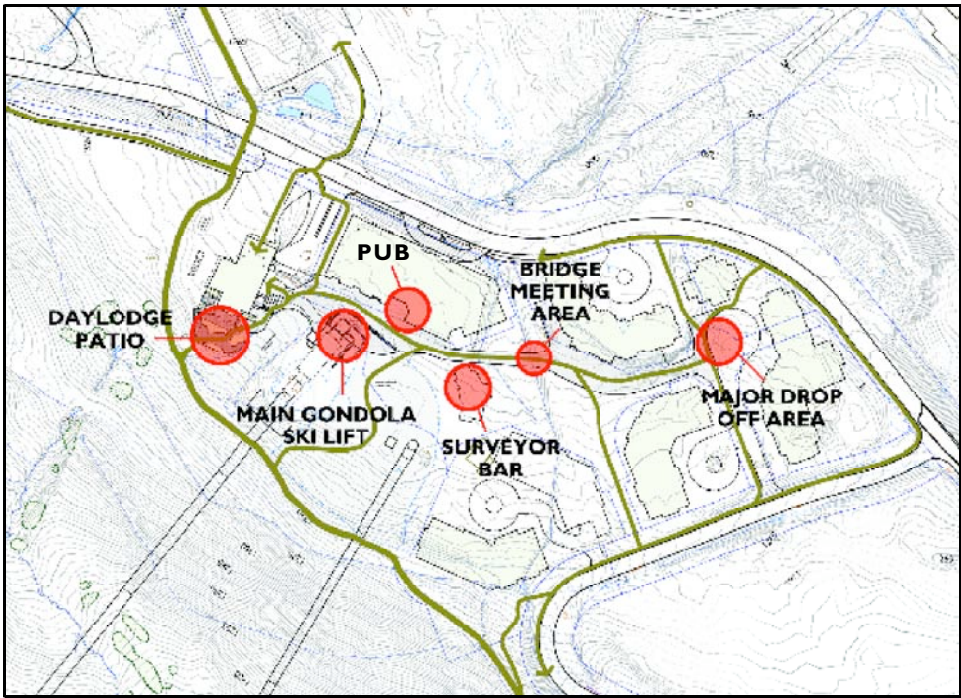
Surround the public gathering areas with pockets of activity and interest. Use the edges by creating several small partly enclosed areas as pockets, containing activities which jut forward into the open space and between paths making it natural for people to pause and get involved.

Keep various pockets of activity close enough to paths to encourage movement of people coming and going.

Add swells and bulges to a pathway, keeping the ends narrower. The path forms an enclosure which becomes a place to slow down and spend some time before continuing on.

Between the natural pathways of traffic that cross the public space is an opportunity for a point of interest: a fountain, a tree, a statue, seating, a bandstand... Know, however that this opportunity rarely sits in the center but rather is off center.

Natural pools and streams are encouraged to run through the plaza. Make pathways to walk along and footbridges to cross them. Water helps add life to a space.



*Points of interest throughout the plaza*



**Story Telling**  
*Meaning & Art*  
*In The Landscape*

Planning and design of the resort plaza will express the rich history and character of the Golden area.

Artistic and storytelling features will be highlighted in the plaza - developed at the detailed design stage.

The objective is to showcase the plaza and resort as a unique place unlike other more generic ski resorts. It is hoped that a resident of Golden will visit the site and feel 'at home' - pleased that there is expression of local character.

In other words, there should be 'cultural expression' that visitors and residents can admire and relate to. We want a landscape that triggers the memory, makes one think about the location and what went on.

The plaza landscape and grading should operate at a higher level than just problem solving.

*Local Artists &*  
*Crafts*

Local artists and craftspersons will be consulted and asked to participate in components of the plaza. There will be a number of opportunities for this in plaza furniture, rock seating, paving patterns etc.



*Basalt rock & cast glass emulating a  
geologic event of lava flowing into ice  
- Whistler village*



*Public art piece - 'Whiskeyjack Balance'*



**Detail Guidelines**  
*Site Furnishing*

The detail & furnishing guidelines are to provide general and specific design information so that all involved in the development of designs and/or in the approval process are able to proceed with a shared basis of information. The concept repeated throughout these guidelines is that Kicking Horse Mountain Resort must be designed so that it is appropriate to the character of Golden, British Columbia region. Kicking Horse Resort must fit the scale of its mountain setting, its roots in a historic design character, yet the design must accomplish the purpose of a ski resort.

Although the Guidelines provide strong direction for elements within the resort, they are not meant to be so inflexible that quality, creative design solutions would not be considered.

The following guidelines set out design principles for the specific item and are followed, where appropriate with a detail drawing for review and to provide direction.

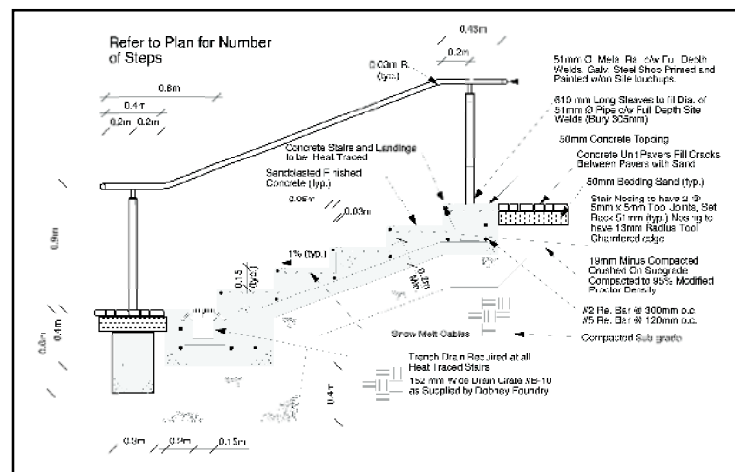
The drawings are not for construction, but to illustrate the design objectives.

Many of the concepts and descriptions following are adapted from the 'Design Guidelines for Whistler Creek' - The Resort Municipality of Whistler

## Stairs and Ramps

Stairs and ramps should be of materials and design appropriate to building styles and scale.

- Stairs and ramps may be of concrete or stone.
- Typical riser height to range from 4.5" to 6", and tread width to range from 12" to 24".
- In major plaza areas these dimensions can vary to allow stepped ramps with a wider tread spacing.
- All stairs and ramp dimensions shall conform to the Building Code.
- Both stairs and ramps shall have appropriate required handrails.
- Stairs were appropriate should be heat-traced. Typically at building entrances.
- Stairs should have wing walls, and should not be open ended.
- Railings may be simple, unobtrusive black pipe, meant to be functional and not stand out. Custom, highly detailed railings of high quality permitted.



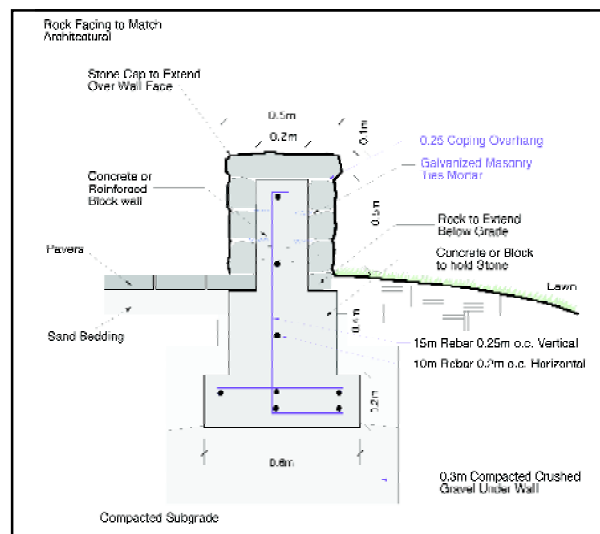
## Benches, Chairs & Tables

- Kicking Horse Mountain Resort encourages custom made, local craftsmanship for benches.
- Place sit walls to coincide with natural seat spots , so that extra benches are not necessary.
- Think of the sun, shade climate and views when adding seating.
- Tables and chairs in outdoor spaces should be moveable for flexibility, ease of maintenance and seasonal variation.
- Finely detailed furnishings of wood and metal are encouraged over those constructed of molded polyurethane.
- Informal seating in the form of low walls, long horizontal steps, and large boulders/rocks should be placed where possible.
- Outdoor tables which can accommodate umbrellas or free standing umbrellas with stands are recommended to allow sun/shade control, umbrellas should have a variety of sizes, colours and details.
- The 'Frances Andrew Series 7 'Village Bench - V7-6ic' is an acceptable catalogue issue bench.

## Village Bench



Functional rock seating in a landscape



Not for construction; for illustration only

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>Services - Utilities</b><br/><b>Manholes, drains</b></p> | <p>Minimize visual impact of above ground utility structures and equipment including transformers, vents, condensers, fans, ect.</p> <ul style="list-style-type: none"> <li>• Locate equipment in areas of low visibility, away from major public walks, pathways and building entrances.</li> <li>• Locate utility structures, whenever possible, in landscape areas where they can be screened by shrub planting.</li> <li>• Where size of structure and location warrant, enclose or screen structure using materials detailing and colour consistent with adjacent buildings.</li> <li>• Landscape plans must be coordinated with proposed utility enclosures.</li> <li>• Location of underground utility lines and corridors should be outside major pedestrian plazas and walkways.</li> <li>• Avoid collection multiple vaults/boxes in single locations within major pedestrian areas.</li> <li>• Where manhole covers occur in prominent or visible locations, use decorative or memorable patterns on the cover. These can be simple or possibly designed and cast specially for Kicking Horse Mountain Resort, speaking to the historical stories/themes of the area.</li> </ul> |  |
| <p><b>Kiosks</b></p>                                           | <p>Provide permanent and temporary means for posting of information, directions notices commercial advertising etc. in a way that is visuall pleasing and consistent with overall theme of Kicking Horse Mountain Resort.</p> <ul style="list-style-type: none"> <li>• Kiosks should be designed to reflect archiectural detail and proportions of building. roofs should reflect the scale and character of the Resort, as well as regional style of Golden British Columbia.</li> <li>• Materials may include stone for base wood siding metal or other materials consistent with adjacent building details.</li> <li>• Where Kiosks or boards are to allow posting of public notices/information, there must be strict management requirements for maintaining order and updating information.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |  |



|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Plant containers &amp; Hanging Baskets</i> | <p>Allow for use of plant materials in situations where in-ground planting is not possible. Plant containers may also be used as elements for defining space, as decorative additions to buildings, etc.</p> <ul style="list-style-type: none"><li>• No concrete or exposed aggregate plant boxes permitted.</li><li>• Plant containers may be free standing, or hanging from structures, lighting standards or wall brackets.</li><li>• They may be constructed from materials such as metal, stone, also consider other possibilities that give that 'rustic look', such as glass fiber reinforced concrete. Keeping in mind it must be durable enough to handle the areas freeze - thaw cycle.</li><li>• Where containers are attached to building exteriors provision should be made for appropriate water proofing and drainage.</li></ul> |
| <i>Public Phone booths</i>                    | <ul style="list-style-type: none"><li>• Provide convenient access to public telephones outdoors in a visually attractive manner:</li><li>• Located in highly visible areas where justified by level of anticipated demand, locations should provide wind protection and not adjacent to noise generating uses or activities.</li><li>• Shelter structure for phones should reflect as much as possible the spirit of the Resort, and regional architectural styles, weather by roof form or detail and colour</li><li>• Where practical group phones together within larger structure integrated to fit within building facade.</li></ul>                                                                                                                                                                                                       |

***Bollards***

- Rather than being seen as purely functional elements, bollards should be treated as potential visual features and have consistency with the Resort character, and with other landscape elements such as lighting.
- Appropriateness of materials determined by location and function of bollard use. Materials can be stone & metal. Colours may be bright depending on desired effect.
- Where emergency vehicle and operations vehicle access is necessary, bollards must be easily removable.
- Bollards are required around hydro transformer boxes.

***Trash Receptacles***

- All trash receptacles shall be bear proof.
- Trash receptacles should have heavy plastic or metal liners, removable for emptying.
- Should be complementary in scale, colour and materials.
- Should be freestanding or mounted on light poles or bollards.
- Locate receptacles conveniently to areas of high pedestrian traffic and use - but not so prominently as to dominate attention or create visual clutter.
- Must have top enclosure with opening in the side, just under the top for trash disposal.
- Recycling receptacles for aluminum cans and bottles should be available in all heavily travelled areas.



*Bear-proof garbage container  
'Hide a Bags' - Distributed by Rollins Machinery*

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>Fencing</b></p>            | <p>Fencing is important element in defining spatial areas and edges, it should be functional, attractive and appropriate.</p> <ul style="list-style-type: none"> <li>• Fencing should be appropriate to its function, neighbourhood, and resort character.</li> <li>• Fencing should reflect adjacent building details.</li> <li>• It is encouraged to use ornamental metal or decorative wood fences when defining small terraces and patios.</li> <li>• Where fencing is required to provide privacy, security or screen unsightly views, the use of horizontal lapped siding, or vertical board and batten is appropriate.</li> </ul>                                                                                                                                                                                                                                                                           |  |
| <p><b>Tree grates</b></p>        | <p>Tree grates are to protect roots or trees that are located in paved areas and accommodate pedestrian movement in an attractive and safe manner:</p> <ul style="list-style-type: none"> <li>• Grate materials may be heavy cast metal or pre-cast concrete in areas of heavy pedestrian traffic. In calmer areas grates may be stone pavers or granite sets set within a header placed on sand with fairly wide joints to allow penetration of air and water.</li> <li>• Low perennial plants may be used around base of tree instead of grates, in areas of low pedestrian use</li> <li>• Grate openings should not exceed 3/16' in width.</li> <li>• Round grates may be easier to blend in areas with complex paving patterns. Square grates work well with square and rectangular paver grids.</li> </ul>                                                                                                    |  |
| <p><b>Ski and Bike racks</b></p> | <p>Provide convenient secure locations for storage of skis, snowboards and bicycles, that is functional, visually unobtrusive and does not impede on pedestrian flow and other activities.</p> <ul style="list-style-type: none"> <li>• Racks should be located close to guest destinations, such as commercial entrances and public gathering areas.</li> <li>• Where possible provide a backdrop for the ski or bike racks with landscape planting.</li> <li>• Should be durable, attractive and effective, typically of metal and of a style, detail and colour which is complementary to its surroundings. Innovative approaches to ski and bike rack construction and material is encouraged.</li> <li>• May offer locking mechanisms which will deter theft.</li> <li>• Racks may be free standing and moveable for snow removal and seasonal storage, or permanently attached to building walls.</li> </ul> |  |

**Lighting**

The following information is largely derived from 'The Landscape Lighting Book' by Janet Lennox Moyer. This is a comprehensive landscape lighting text covering technical data, lighting design and light types

There are three objectives in providing lighting: **safety, security** and **aesthetics**. Lighting design should consider all three objectives from the beginning.

Determine which areas need lighting the most. Landscape areas can be divided into a front, mid and back. The amount of light in each zone either increases or decreases depth in the composition.

*Low-voltage &  
120-volt Lighting*

120 volt lamps have been the most common in landscaping. The PAR38 lamp served as the prime type of lamp for landscape lighting until recently, because it is a glass-enclosed lamp suitable for outdoor use. 120 volt lamps were also used for wider flood distributions and few fixture manufacturers made fixtures for the smaller low-voltage lamps.

Currently, the low voltage MR lamps provide great flood distributions and a wide variety of low-voltage fixtures available from many fixture manufacturers. The smaller size of low-voltage lamps mean they can be more easily hidden in the landscape.

Low voltage lamps are available in lower wattages which provide the desired low light levels. They are also available in a large variety of wattages and beam spreads.

Low voltage lamps typically last longer and need transformers to provide the proper operating voltage.

For new construction projects, it is recommended to have a combination of 120-volt and low-voltage.



Ground Lights

B-K Lighting  
Adjustable Well Star



B-K Lighting  
Lite Star II



Adjustable Height  
Garden & Path  
Lighting

B-K Lighting  
Staff Star Style 'B'



Stair or Wall  
Lights

B-K Lighting  
Core Drill Step Star



Tree Lights

B-K Lighting  
Tree Strap



Proposed Overhead  
Lights

LUMEC INC. Domus Series  
Traditional DMS30

This light shines down without a visible lamp and avoids light pollution. It is simple, black and traditional style. Posts can be multi purpose to hold banners.



## Lighting

- Lighting shall be kept to the minimum necessary so as to preclude light pollution.
- Lighting fixtures typically mounted on poles at 15' to 24' height with efficient lamp types.
- Fixtures should be cutoff type design, to reduce light spill and glare at adjacent buildings and outdoor areas
- Place fixtures and supporting poles in locations which minimize visual impact. Use for example trees as vertical backdrop.
- Illumination levels along roadways should provide minimum required for safety and directional orientation.
- The main intent is to preserve the rustic rural character of the resort and avoid creating an urban one.
- All fixtures must be clear of snow dump areas.
- Fixture locations should be staggered rather than formally arranged.

### Pedestrian streets, paths and plazas (traveled heavily)

- Lighting typically mounted on poles in large trees or on building walls at heights between 3m to 5m only sporadically.
- Think low voltage. Keep illumination levels high enough to facilitate safe pedestrian travel and directional orientation.
- Create higher illumination levels at building entrances, stairs and ramps etc. and in areas of major pedestrian traffic.
- General lighting should not overwhelm other secondary light sources used for example as retail display signs.
- Light fixtures should be decorative, functional and complimentary to architectural styles and elements
- Colour corrected metal halide fluorescent or incandescent light sources are encouraged
- Mercury vapor and high pressure sodium sources are not permitted.
- Low voltage halogen lighting is preferred over others.

### Pedestrian pathways, trails, parks (less traveled)

- Lighting mounted on poles, bollards or in appropriate trees at heights between 1m to 5m.
- Light sources may be halogen, fluorescent, metal halide and incandescent.
- General lighting levels should be subdued, lights primarily serve as directional cues and for safety on stairs, ramps etc.
- Use cutoffs to discourage glare.

**Lighting**

Drop off, parking and service areas.

- Lighting typically mounted on poles or on building walls at heights between 5m to 6m.
- Use Metal halide or other efficient white lamp source
- Keep illumination levels high enough to allow safety for vehicular and pedestrian traffic.
- Fixtures all to be cutoff design to eliminate spill and glare into adjacent areas.
- Locate fixtures within the landscape, instead of on poles which stand alone, (particularly in parking areas)
- Keep all fixtures clear of snow dump areas.

Special purpose and accent lighting.

- Mounted at heights as required, typically on poles building and ground locations.
- Shield for glare and locate in landscape wherever possible and so long as fixture is not a hazard to pedestrians.
- illumination of signs, building elements, landscape features, fountains or other significant elements are lit as appropriate.
- When creating special events lighting, or seasonal displays provide weatherproof outdoor receptacles in public spaces from which power for the lighting and any sound needs may be pulled.
- Work lighting into landscape where possible.
- Retail signage to be lit by external sources rather than internally lit signs.
- Lighting fixtures should be unobtrusive and detailed to blend and complement architectural detailing.

**Signage**

Provide clear, understandable and attractive signs which creates an imageable environment and sense of place.

- signs should reflect the character and tradition of the region, local material use is encouraged
- Signs form and quality should reflect directly to its purpose, context and location.
- Should inform and direct in a clear manner.
- A system of sign types should be created which facilitate specific activities within the resort center.
- Signs should be sized, mounted and placed with care to limit visual intrusion.
- Regulatory signs to be standardized yet be given unique character and identification with the resort by either sign shape, graphic style, colour or materials.
- Directional/identification signs should be large enough to make information legible and facilitate decision making (particularly from a car)
- Where possible visually integrate signs within the landscape context.
- Signs should not be positioned so as to obscure any architectural details.
- Commercial signs should be coordinated with architectural elements as well as relate to the character of the Resort. Kicking Horse Mountain Resort encourages attractive unique signs that will add vitality and life within pedestrian shopping areas.

A separate detailed document for signs is to be developed as an appendix.



|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Appendices</b> | <p>There are 3 appendix documents which accompany the Design Guidelines.</p> <p>They are:</p> <p>Appendix 1, 'Wildlife - Birds &amp; Insects'</p> <p>Appendix 2, 'History of Golden'</p> <p>Appendix 3, 'Golden Arts &amp; Crafts'</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
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