KEYSTONE ARCHITECTURAL STANDARDS AND PROCEDURES

FOR

LANDSCAPING AND REVEGATATION

KEYSTONE RESORT LANDSCAPE/REVEGETATION GUIDE
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INTRODUCTION

Keystone Resort is located at an elevation varying from 9090 to 9450 feet above sea level. This high alpine environment creates unique challenges for those wishing to restore the vegetation around their new home or create "formal" landscape plantings such as those in the Village.

This guide provides useful information necessary for the preparation of a landscape/revegetation plan as well as the installation and maintenance of landscaping at Keystone.In addition, all new construction projects at Keystone must have a landscape/revegetation plan consistent with this guide prior to Detailed Review by the Keystone/Keystone Ranch Architectural Review Board.

The primary emphasis of this document is restoration (revegetation) of the natural environment. With certain exceptions, "formal" landscaping on a large scale is discouraged. Formal landscaping should be confined to small areas at the entry of single family homes and large public spaces.

LANDSCAPE/REVEGETATION PLAN REQUIREMENTS

The landscape/revegetation plan should consist of three sheets: an Existing Conditions map; a Construction Impact plan; and, Proposed Landscape/Revegetation plan. All three sheets should conform to the following standards:

- a sheet size of 24"x 36" (larger projects may require a larger sheet size).

- north arrow and scale. A scale of 1"= 20' is recommended for single family home plans. The scale may vary for other projects.

- topographic contours at two foot intervals.

The individual plans should contain the following detailed information applicable to each plan. If it can be done legibly, these plans may be incorporated into a single sheet.

Existing Conditions Plan

A. Location of the following:
1. all evergreen trees six feet high and greater on and adjacent to the property.
2. all aspen trees with a trunk caliper of 1-1/2" and greater on and adjacent to the property.
3. significant native shrubs on and adjacent to the property.
4. property lines and easements.

5. all utilities.
6. roads and/or driveways.
7. significant features of the site such as views, water courses, large rocks, etc.
8. a portion of adjacent structures. If an adjacent lot has not yet been developed show a portion of the lot.

With the exception of adjacent structure information, this plan contains all of the information normally requested by an architect in a topographic survey of the property.

Construction Impact Plan

This plan serves two purposes. First, it focuses the owner's, architect's and contractor's collective attention on minimizing site disturbance during construction. Secondly, this plan maximizes the opportunity to protect as much of the indigenous vegetation as possible. This plan should contain the following information:

1. the limits of construction and grading activity.
2. materials storage area.
3. construction parking area.
4. the location of the chemical toilet.
5. excavation material stockpile(s).

These areas must be completely enclosed with snow fence or a similar barrier. All construction activity should occur within the confines of the fencing.

6. all trees on site that will be retained. If there are trees within the construction activity area that are to be retained these trees must be protected with snow fence. The snow fence must be placed outside of the drip line of the branches. This prevents construction vehicles from compacting the soil around the roots of the tree. If the tree is not protected in this manner, the compacted soil will eventually kill the tree.

This, again, is a drawing that is already required and not a request for new or duplicate information.

Landscape/Revegetation Plan

This plan should contain the following information:

1. all vegetation to be retained on site.
2. all areas to be revegetated. Notes should be provided that describe the method

of revegetation, seed mixture and type of mulching to be used.

3. a plant list and legend that identifies all plant materials by common and botanical name. The size of plant materials must also be identified. Shrubs should be described by container size and trees by height or trunk caliper.
4. new drainage swales created by regrading of the site.
5. proposed site elements such as walkway lighting, retaining walls, berming, stone or concrete walks, etc.

DESIGN CONSIDERATIONS

Keystone strongly encourages that site design focus on restoration of the natural environment. Structures should be integrated with the natural features of the site. The growing season at Keystone's elevation averages less than 100 days per year and only 29 of those are frost free. This means the revegetation process will take a few years. Minimizing disturbed areas will hasten the healing process. Rapid revegetation also assists in erosion control.

Irrigation is another major consideration of site design. Keystone discourages irrigated lawns in single family home design. In Keystone Ranch irrigated and manicured lawns are prohibited. Keystone does encourage the use of indigenous plant materials that after two or three years of watering (to allow the plant to establish itself) will gain all the moisture they need from rain and snow.

Appropriate landscape design should:

- retain existing plant materials and site features where possible.
- utilize indigenous plant materials for landscape/revegetation.
- help soften the hard edges of buildings, parking areas and other man-made elements.
- provide screening or buffering of adjacent structures.
- enhance the appearance of the site and the structures on the site.

Elements of Landscape Design

The successful completion of a landscape/revegetation should result in a site that does not appear "landscaped". The site should appear as if the new structure was placed on the site without disturbing the surrounding vegetation.

Another element to consider in landscape design is a recognition of the new microclimates created by the new structure. The plants that once grew on the northern portion of the property may not survive in the shade and shadow created by the north side of a building. Plants placed under roof sheds should be tolerant to the additional moisture created by run-off from the roof.

As a general rule, formal landscaping features such as color beds and hedges are discouraged. However, color beds and other formal landscape treatments are acceptable for entry features. Entry plantings should be restricted to 400 square feet or less. Entry plantings are acceptable in the Keystone Ranch provided they are contained wholly within the building envelope and do not encroach into Common Area as defined by the Keystone Ranch Covenants.

Special Considerations

Snow Removal. Plants, except grasses, should never be placed adjacent to driveways and walkways where snow stacking will occur. The compacted snow that results from driveway plowing will ultimately kill most shrubs. Plants should never be placed adjacent to walkways where some form of ice melting agent will be used. Most ice melting agents contain sodium, calcium or magnesium salts that are toxic to plants.

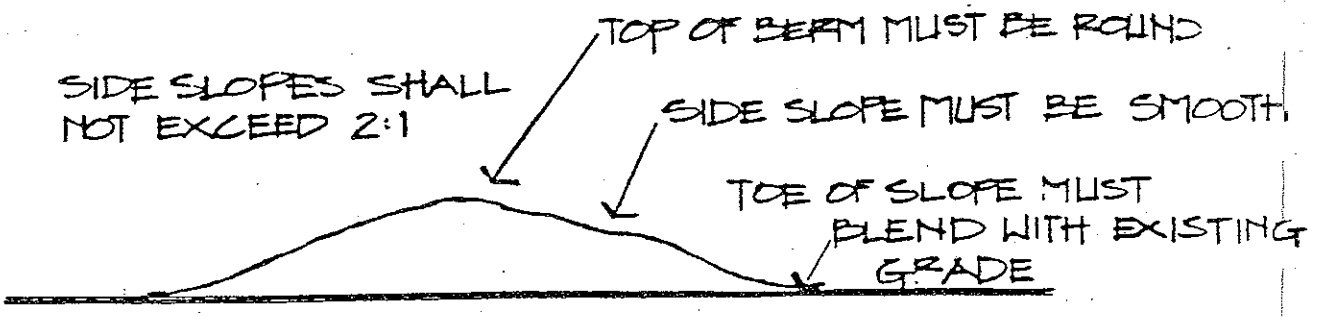
Berming. Berming may be an appropriate design element for some landscape/revegetation applications. Berms must appear to be a natural land form. A pile of dirt is not an acceptable berm. Berms should be compacted and a maximum side slope of 2:1. See Figure 1 for recommended techniques.

Screening. Sometimes it may be appropriate to place a tree screen between a new structure and an adjacent home's deck or windows. In that instance you need to not only be sensitive to the screening needs but to the appearance form the adjacent property. The "picket fence" approach to tree planting is inappropriate. Trees should be grouped to provide a "natural" appearance, provide an adequate screen and maximize the aesthetics from both properties.

Rock. It is not uncommon to uncover very large rocks during foundation excavation. In some instances a large rock can be used very effectively to add visual interest to the landscape. The end product should appear to be a natural part of the landscape and not something left on the site.

Plant Materials. In some areas of Keystone Resort it may not be appropriate to replace pine trees with pine trees and aspen trees with aspen trees. Some areas of the resort have been infested with dwarf mistletoe and other areas are affected by a disease that attacks aspen trees. Dwarf mistletoe is a predatory plant that attacks pine trees. In those areas where dwarf mistletoe is present it best to landscape with trees that are not susceptible to its infestation. Such trees include Spruce, Fir, Limber Pine and Bristlecone Pine.

If you have any questions about mistletoe or aspen diseases, please contact the Keystone landscaping staff or local landscape professionals.



RECOMMENDED:

* CREATE A NATURAL LAND FORM
* USE SOIL THAT WILL SUPPORT PLANTS
* SCALE SHOULD BE APPROPRIATE FOR THE LOCATION

NOT RECOMMENDED:

* DO NOT CREATE BERMS WITH SHARP PEAKS
* DO NOT CREATE BERMS WITH STEEP SIDE SLOPES

FIGURE 1

SPECIAL SUBAREA REQUIREMENTS

Certain areas of the resort have more flexible landscaping requirements than other areas. The following information should be reviewed prior to developing a specific revegetation/landscape plan.

Soda Ridge Road

This subarea includes the following subdivisions:

Last Chance
Moon Valley 1 & 2
Saw Whiskers I, II & III
Wild Irishman I & II

These subdivisions have the most liberal landscape requirements in the resort. There are no specific prohibitions on the use of formal landscape treatments. However, restoration of the natural landscape is strongly encouraged. Irrigation systems should be incorporated into any landscape plan that uses more formal landscape treatments. Irrigation systems that conserve water (e.g. drip irrigation) are recommended over traditional spray systems.

Riverwalk

The Riverwalk subdivision encourages restoration of the "natural condition" except in those areas that are "an extension of the living area." Landscaping should consist of native grasses, flowers and small plantings. High water consumptive plants and sod are discouraged. In addition, any homesite that causes disturbance to the hillside along the river must be revegetated immediately. This steep slope has the potential for severe erosion problems if proper revegetation and slope stabilization techniques are not used.

Keystone East Ranch

Extensive use of native wildflowers and trees is strongly encouraged at the East Ranch. A number of homes at the East Ranch have very similar architectural features and extensive landscape treatments provide some needed variation. The homes along Forget Me Not Lane provide some very good examples of the landscaping techniques that should be utilized at the East Ranch. The use of water conservative irrigation systems is encouraged to maintain the landscape. Yard maintenance such as mowing is discouraged.

Keystone Ranch

Keystone Ranch requires restoration of the natural landscape on Common Area as defined in the covenants. Formal landscape treatments must be confined to the owner's lot. It is strongly

recommended that formal landscaping be used only as an "entry feature". Yard maintenance such as irrigation and mowing must be confined to the building envelope. Maintenance of Common Area is not permitted. The use of native plant materials that require little or no maintenance after establishment is encouraged. Any landscaping, not in conformance with these Guidelines, existing prior to July 5, 1992 and the attedant yard maintenance, such as irrigation and mowing, even on Common Area, for which notice of violation had not been given shall be exempted from the provisions of this paragraph.

Keystone West Ranch

The West Ranch requires, within reason, restoration of the natural vegetation that occurred on the site prior to construction of the home. Formal landscaping, except at the entry of the home, is prohibited. The use of native grass seed is recommended for revegetation of lots and Common Area. Sod is not an acceptable revegetation material. The use of temporary irrigation systems are encouraged to establish newly planted vegetation. Lawn maintenance such as mowing is prohibited.

RECOMMENDED PLANT LIST

The following is a list of plant materials that have been successfully used by the Keystone Landscaping Department. Keystone has several microclimates and some plants may not work well in all areas of the resort. If you have questions on specific plants, please contact the Keystone Landscaping Department or a local nursery.

SHRUBS

Buffaloberry, Canadian	*Shepherdia canadensis*
Buffaloberry, Silver	*Sherphedia argentea*
Chokecherry, Western	*Prunus virginiana var. melanocarpa*
Chokecherry, Shubert	*Prunus virginiana 'Shubert'*
Cinquefoil, Shrubby	*Potentilla fruticosa var. floribunda*
Cotoneaster, Peking	*Cotoneaster acutifolia*
Currant, Alpine	*Ribes alpinium*
Currant, Golden	*Ribes aureum*
Currant, Wax (Squaw)	*Ribes cereum*
Elder, Cutleaf	*Sambucus canadensis lacianata*
Elder, Golden	*Sambucus canadensis aureum*
Elder, Red Berried	*Sambucus pubens*
Gooseberry, Pixwell	*Ribes pixwell*
Gooseberry, White	*Ribes inerme*
Honeysuckle, Zabels	*Lonicera kor. 'Zabel'*
Ninebark	*Physocarpus malvaceus*
Peashrub, Siberian	*Caragana arborescens*
Potentilla, Golddrop	*Potentilla parvifolia*
Potentilla, Jackman	*Potentilla fruiticosa 'Jackman'*
Potentilla, Katherine Dyke	*Potentilla fruiticosa 'Katherine Dyke'*
Rabbitbrush	*Chrysothamus nauseosus*
Raspberry, Wild Red	*Rubus strigosus*

Rose, Woods	*Rosa woodsii*
Sage, Mountain	*Artemesia frigida*
Sage, Silver	*Artemesia cana*
Serviceberry	*Amelanchier alnifolia*
Snowberry, Mountain	*Symphoricarpus oreophilus*
Spirea, Rock	*Holodiscus dumosus*
Thimbleberry, Rocky Mountain	*Rubus deliciosus*
Willow, Blue Fountain	*Salix purpurea pendula*
Willow, Bluestem	*Salix irrorata*
Willow, Dwarf Arctic	*Salix purpurea nana*
Willow, Mountain	*Salix purpurea nana*

PERENNIALS AND GROUNDCOVERS

Aster	*Aster spp.*
Black-eyed Susan	*Rudbeckia hirta*
Bleeding Heart	*Dicentra spp.*
Bluebells	*Mertensia spp.*
Blue Flax	*Linum lewisii*
Columbine	*Aquilegia spp.*
Delphinium	*Delphinium elatum*
Edelweiss	*Leontopodium alpinium*
Fireweed	*Epilobium spp.*
Forget-Me-Not, Alpine	*Eritrichum aretioides*
Foxglove	*Digitalis spp.*
Gaillardia	*Gaillardia aristata*
Gentian	*Gentiana spp.*
Harebells	*Campanula spp.*
Holly (Oregon Grape)	*Mahonia repens*

Iris, Rocky Mountain	*Iris missouriensis*
Johnny Jump-up	*Viola kitaibelianna*
Juniper, Common	*Juniperus communis*
Kinnickinninck (woody)	*Arctostaphylos uva-ursi*
Larkspur	*Delphinium spp*
Lupine	*Lupinus spp.*
Maltese Cross	*Lychinics chalcedonia*
Monkshood	*Aconitum columbianum*
Pasque Flower	*Pulsatilla patens*
Penstemon	*Penstemon spp.*
Phlox	*Phlox spp.*
Pinks	*Dianthus spp.*
Poppy, California	*Escholtzia californica*
Poppy, Icelandic	*Papaver nudicale*
Poppy, Oriental	*Papaver orientalis*
Sedum	*Sedum spp.*
Shasta Daisy	*Chrysanthemum maximum*
Shooting Star	*Dodecatheon spp.*
Siberian Iris	*Iris siberica*
Snow in Summer	*Cerastium tomentosum*
Snow on the Mountain	*Euphorbia marginata*
Sweet William	*Helianthemum nummularium*
Yarrow	*Achillea spp.*

EVERGREEN TREES

Fir, Subalpine	*Abies lasiocarpa*
Pine, Bristlecone	*Pinus aristata*
Pine, Limber	*Pinus flexilis*
Pine, Lodgepole	*Pinus contorta laifolia*
Spruce, Colorado Blue	*Picea pungens glauca*
Spruce, Englemann	*Picea englemannii*

DECIDUOUS TREES

Alder	*Alnus incana*
Alder, Thinleaf	*Alnus tenuifolia*
Aspen	*Populus tremuloides*
Birch, Western Red	*Betula occidentalis fontinalis*
Cottonwood, Narrowleaf	*Populus angustifolia*

GRASSES

All seeding should be done with a proven high altitude grass seed mix and sown at recommended application rate. The seed mix purity rate should be a minimum of 90-95 percent pure live seed (PLS). Certain slope aspects, particularly those which are south facing, may require special planting such as water and mulching to ensure successful plant establishment. Recommended seed mixtures are as follows:

A. Short Mix (4-6 inch)	50% Baron Kentucky Bluegrass 25% Pennfine Perennial Ryegrass 25% Fortress Red Creeping Fescue
B. Long Mix (6+ inch)	15% Redtop grass 15% Fortress Red Creeping Fescue 15% Troy Kentucky Bluegrass 15% Orchard Grass or Clover 10% Timothy 10% Pennfine Retries 10% Smooth Brome Manchar 10% Intermediate Wheatgrass
C. Highway Department Mix	Streambank Wheatgrass Western Wheatgrass Kentucky Bluegrass Smooth Brome Manchar Timothy Red Fescue Meadow Foxtail Slender Wheatgrass White Dutch Clover Alside Clover Mountain Lupine