

Knowledge to Go Places

Boulder District 5625 Ute Highway Longmont. Colorado 80503-9130 (303) 823-5774

## LIVING WINDBREAK AND SNOW FENCE PLAN

Prepared for:

Ernie Stiltner 181 Sawmill Rd Jamestown, CO 80455

Phone: (303) 459-0180

Prepared by:

Cory Secher Forester – Boulder District Phone: (303) 823-5774

Email: csecher@lamar.colostate.edu

#### **OBJECTIVES:**

1. Slow the wind speed in and around home site.

2. Reduce snow drifts in 3 selected areas on driveway leading to home site.

3. Disperse snow evenly over leach field.

4. Create screening between the Town of Ward and home site.

5. Create wildlife habitat and forage.

## Components of Windbreak and Living Snow Fences:

- 1. There will be one, two row, high density linear windbreak.
- There will be two, two row, high density linear snow catches.
- 3. There will be one, two row, low density linear snow dispersal row.

## Two Row High Density Linear Windbreak: (~250 feet)

The windbreak will be made up of Douglas-fir (*Pseudotsuga menziesii*) and/or ponderosa pine (*Pinus ponderosa*). Either alternating the two tree species along a linear row or for higher density windbreak only use the Douglas-fir as a single species windbreak. Both tree species will reach a height of approximately 16 feet within 20 years.

Trees will be planted at 10 foot in intervals and rows will be spaced 10 feet apart. The second row should be planted to alternate the first row to maximize the density and windbreak effectiveness.

## Two Row High Density Linear Snow Catches: (~50 feet and 100 feet)

These snow catches will be made up of alternating rocky mountain juniper (*Juniperus scopulorum*) and eastern red cedar (*Juniperus virginiana*). These two species should reach a height of 10 feet in 20 years. To maximize the "snow catch" and "piling" of snow these linear rows will be a minimum of 50 feet from areas we are trying to protect from drifts, with a maximum distance of 60 feet.

Trees will be planted at 6-8 foot intervals and the rows will be spaced 10 feet apart. Again, the second row should be planted to alternate/stager the first row to maximize the density and overall effectiveness of the snow catch. (Refer to example 1)

## Two Row Low Density Linear Snow Dispersal Row: (~100 feet long)

This snow dispersal row will consist only of Native/American plum (*Prunus americana*). This species, which is indigenous to the area, should reach a height of 6-8 feet and will create a thicket for grouse and other wildlife. To maximize the dispersal of snow this row should be no more than 50 feet away from area of concern, in this case the leach field.

These shrubs will be planted at 6-8 foot intervals with a 10 foot distance between rows. Once again, the two rows should be planted in a staggering/alternating fashion. (Refer to example 1)

#### Materials needed:

- 1. Fabric mulch minimum of 4 foot wide and about 500 feet long (2 rolls).
- 2. <u>Fabric staples</u> enough to place one pin on each side of fabric every 10 feet (~100 staples).
- 3. Polymer  $mix \sim 1/4$  cup hydrated polymer in with every seedling planted.
- 4. <u>Fertilizer tablets</u> place 1 tablet next to each seedling 3 inches to the side, and then insert about 3 inches deep into the soil (200 tablets).
- 5. <u>Wood shingles</u> you may want to place 1-2 shingles around seedling trees to protect them from the harsh environment until they are established.
- 6. <u>Tree guards</u> will need around each <u>plum</u> seedling to protect from browse; two bamboo stakes come with each guard for stabilization (~50).

## Seedlings Needed for Windbreak and Snow Fences:

- 1. <u>Douglas-fir / ponderosa pine</u> need approximately 60 to ensure enough for replacement plantings in the future.
- 2. eastern red cedar need about 30 at a spacing of 6 feet between plantings.
- 3. rocky mountain juniper need about 30 at a spacing of 6 feet between plantings.
- 4. <u>native/american plum</u> need about 50 at a spacing of 6 feet between plantings.
  - Plant all leftover seedlings somewhere out of the way as replacement trees and transplant as needed within rows when/if mortality occurs).

### **Planting Instructions:**

Prepare the site prior to receiving seedlings by pulling weeds and brush away from planting area. Also pre-mark the planting area with flags in order to promptly pant the seedlings where they need to be. Keep seedlings cool and moist and fairly undisturbed until planting. Check the root system length and prune roots to a length of 8-9 inches just prior to planting; use sharp tool and make cuts clean. Place seedlings in a bucket and pack a moist medium around the roots such as peat moss, slurry mix, or cold water. If you select to use water do not leave in water medium for longer than 24 hours or you may damage/kill the seedlings. When planting seedlings, make a slit in the soil about 10-12 inches deep, and place the seedling down as far as you can and then pull upward (without twisting) until the root collar is about 1 inch below the soil surface. Make a second slit about 6 inches away from the first slit and push the planting slit together. Then step around the seedling to lightly pack the soil. Lightly pull up on the seedling to see if you have packed it well enough. If the roots emerge above the soil you must start again, otherwise you may move on to the next planting.

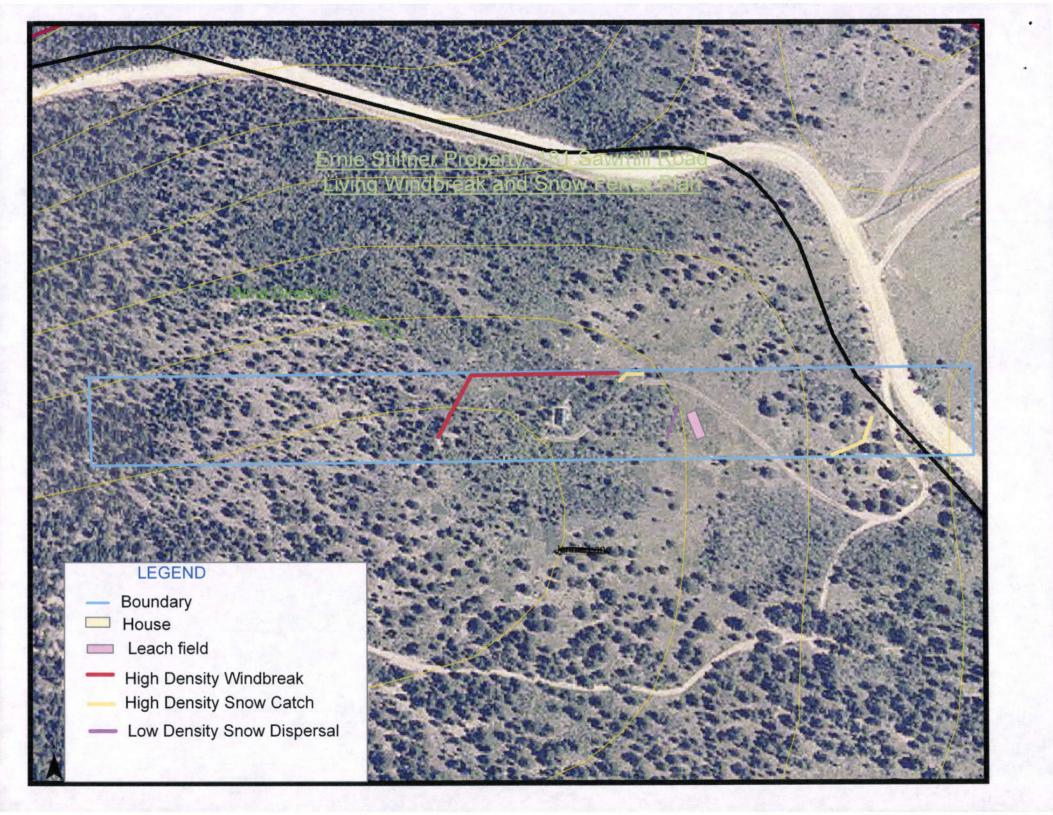
- After planting is complete, go back and apply 1 gallon of water to each seedling.
- Apply 1 gallon of water weekly throughout the first growing season.
- If you desire to fertilize, do not fertilize the plants until the second growing season.

## Weed barrier placement:

Be sure to tack the weed barrier down with pins and toss soil/rocks on the edges to ensure it will not be blown away. Take notice to any air pockets under the barrier and try to keep fabric as close to the ground as possible; air pockets may cause a drying effect and/or heat pocket on the soil instead of increasing water holding capacity. If you desire, you may also place wood chips over the weed barrier to help increase the water holding capacity as well as stabilizing the barrier from wind. Where the seedlings are planted make an "X" cut in the fabric to ensure future girdling of the seedlings does not occur (~6-10 inch "X" cut).

## Cost Breakdown of Materials Needed:

| Items                  | # Units | Quantity/Unit | Cost / Unit | Total Cost \$\$ |
|------------------------|---------|---------------|-------------|-----------------|
| American Plum          | 1       | 50            | \$29.50     | \$29.50         |
| Douglas-fir            | 2       | 30            | \$36.50     | \$73.00         |
| Rocky Mountain Juniper | 1       | 30            | \$36.50     | \$36.50         |
| Eastern Red Cedar      | 1       | 30            | \$27.50     | \$27.50         |
| Fertilizer tablets     | 4       | 50            | \$6.25      | \$25.00         |
| Polymer                | 10      | 1 lb          | \$10.00     | \$100.00        |
| Fabric mulch           | 2       | 250 ft x 4 ft | \$90.00     | \$180.00        |
| Fabric staples         | 2       | 50            | \$5.00      | \$10.00         |
| Tree guards            | 50      | 1             | \$.60       | \$30.00         |
|                        |         | SUB TOTAL     |             | \$511.50        |
|                        |         | TAX           |             | \$21.74         |
|                        |         | GRAND TOTAL   |             | \$533.24        |



### WILDFIRE MITIGATION PLAN

Colorado State FOREST SERVICE

Docket SPR-# 02-136

Inspection date: 4/23/03

Knowledge to Go Places

Boulder District

5625 Ute Highway Longmont, Colorado 80503-9130

(303) 823-5774

Prepared for:

Ernest Stiltner 181 Sawmill Road Jamestown, CO. 80455 Phone: 303-459-0180 Prepared by: Cory Secher

Forester – Boulder District Phone: (303) 823-5774

E-mail: csecher@lamar.colostate.edu

#### SITE LOCATION AND PROPERTY DESCRIPTION

The property is located at 181 Sawmill Road, Jamestown, CO. 80455. Access to the property is from Sawmill Road from the East, and Gold Hill Road from the West. The legal description is Section 18, Township 1N, and Range 72W; Boulder Valley Claim Number 16013. The fire protection district is the Left Hand fire protection district (303-444-6063). There will be 1 new structure located on site, consisting of a house and attached garage. The new structure will be located approximately 50 feet Southwest of an existing A-frame home that is also owned by Mr. Stiltner. The lot is 5 acre(s) in size and has a 6-8 percent slope with a Northern aspect. It is at 9,000 feet in elevation. The proposed building site is mid-slope near a saddle and is a relatively moist site. An existing meadow to the East and large Aspen grove surrounding the structure creates natural barriers that may help stop or slow the spread of a surface/crown fire on the site.

The site has a dominant overstory consisting of Aspen and mixed conifers such as Ponderosa pine, Spruce, and Bristlecone pine component. The area is predominantly fuel model 2 with an understory consisting of grasses and forbs. There was no sign of insect or disease on the property, with the exception of common Cytospora canker on the Aspens...

#### CONSTRUCTION DESIGN AND MATERIALS

The proposed house has a relatively simple design with a simple roofline and is oriented with a Southern aspect. The roofing material will consist of metal. The exterior wall material is to be cement board. Soffits are to be 3/4" thick cement board.

There are many medium sized windows with the primary viewing direction being toward the Southwest side of the structure. Windows will be double glazed with low e-coating with frames made of wood. Exterior doors are to be 1-3/4", fire-rated, and made of fire resistant composit materials.

The propane tank will be set on a pad of crushed rock overlaying a fiberglass weedbarrier approximately 75 feet East of the house, and be at the same elevation if not slightly lower as the house.

#### **DEFENSIBLE SPACE ZONES**

There are three defensible space zones to be created around the structure on the site.

- **Zone 1** Starts at the foundation and extends out 15 feet in all directions from the outside edge of the structure. Zone 1 is broken down into three segments: (Zones 1B and 1C overlap)
  - **Zone 1A** Consists of the structure(s) themselves and the area immediately adjacent to and surrounding the structure on all sides. A three-foot wide, non-flammable strip will be created using crushed stone over a weed barrier material. This strip will also extend back under, and out to, two feet past the drip line of any decks.
  - **Zone 1B** Extends out from Zone 1A. In this zone, all highly flammable vegetation is to be removed. Any large dead woody material on the ground will also be removed. Firewise plants will be used for landscaping and revegetation. Grasses will be irrigated when possible and mowed to a maximum height of 6 to 8 inches.
  - **Zone 1C** This zone extends out from Zone 1B to 15 feet from the house. All understory trees (ladder fuels) will be removed as marked. These are small seedling and sapling size trees that can be ladders for fire to get in the crowns of the larger trees. A few of the larger, healthy trees are to be retained for screening. All remaining trees in this zone will be pruned to a height of 10 feet. They must be well spaced so that the crowns are not touching (10 foot crown spacing). No trees will overhang the house or decks. Trees should be at least 15 feet away from the house on all side.
- **Zone 2** This zone extends out from Zone 1C, and acts as a transition zone between the heavily thinned area near the house to the existing forest setting. It extends down slope for 100 feet, to either side for 100 feet and behind the house for 100 feet assuming no boundary restrictions. Tree spacing begins as in Zone 1C and gradually decreases as your

approach the outer edge of the zone. Ladder fuels and poor quality, suppressed and/or diseased trees, 6 to 8 inches in diameter, make up the majority of the removals. The remaining mature trees will be pruned to a height of 8 feet at the intersection of Zones 1 and 2 with limbing reduced in height to 6 feet as you approach Zone 3.

**Zone 3** - This zone extends out from Zone 2 to the edge of the property. It may extend out to areas that are not part of the immediate mitigation efforts. In this zone, a few thicker clumps of trees are acceptable, as well as some unpruned trees near the outer edge. Thinning in this zone adds some protection, but is aimed more at forest health. Trees that are of poor quality or form, or have insect or disease infestations, should be removed. Slash in this zone can be lopped and scattered and/or piled for wildlife use.

- · Thin suppressed trees and trees with disease and insect infestations and retain the larger, healthier trees.
- Snags should be retained for wildlife.
- Some slash in this zone can be lopped and scattered and/or piled for wildlife enhancement and shelter.
- Large amounts of slash should be disposed of by chipping, hauling to an approved site, or burning.
- · For burning permits, check with your local fire protection district.

#### **EMERGENCY ACCESS**

The proposed driveway will create some additional site disturbance and soil compaction and will require the removal of only a few trees. The driveway is to be (12) feet wide with a vertical clearance of (13'6"). Grade is less than 12%, with a maximum of 14%. The driveway is 1,300 feet long therefore 1-2 hammerhead turn-around(s) will be present. The driveway is greater than 400 feet therefore 3 pull-outs will be created at approximately 400 foot intervals.

#### WATER SUPPLY / UTILITIES / SEPTIC FIELD

The water source will be from a Well that is located approximately 12 feet East of house and 12 feet South of garage. There will also be an 1800-gallon cistern located within the vicinity of the well. Utilities for the property will be photovoltaic and be located in the garage, which will be cleary marked as "Battery Area". The septic field is located 150 feet East of house.

#### MAINTENANCE AND RECCOMMENDATIONS

As detailed in fact sheet 6.302, <u>Creating Wildfire Defensible Zones</u>, an important factor that determines a structure's ability to survive wildfire is defensible space. Defensible space is a maintained area around a structure where fuels (flammable materials) are modified to slow the possible spread of wildfire to the structure, as well as from the structure to the surrounding areas. Defensible space provides a place where structure protection and fire suppression operations may occur. Wildfire hazard mitigation work breaks up fuel continuity, potentially decreasing a wildfire's intensity, and for more effectiveness should be completed beyond a home's defensible space area.

All trees to be removed are marked with blue spray paint on the trunk of the tree. All trees that are to remain within zones 1 and 2 will remain unmarked. The boundaries for zones 1 and 2 will be marked with orange flagging. A boundary constriction on the South side of the house interrupted marking of these zones, however for this instance the property boundary was marked with orange flagging. Harvested wood that remains on site will be stacked at least 30 feet from the house. Slash from the harvest will be chipped. Note that if you choose to burn piles, you must obtain a valid Open Burning Permit from the Boulder County Environmental Health Department and notify your local Fire Protection District (Left Hand fire protection district (303-444-6063)).

In addition to the above recommendations, several other measures can be taken to make your home more fire safe and add an additional measure of safety for your family. While not required through site plan review, the following measures should be undertaken to maintain the home and defensible space in the future.

- Maintain your defensible space yearly; contact your local forester for a 5-year maintenance inspection
- Keep firewood at least 30 feet away from buildings; clear weeds and grass from around pile
- When possible, maintain an irrigated green space; mow grasses 6" to 8" high
- Connect, and have available, a minimum of 50 feet of garden hose with an adjustable nozzle
- Be aware of fire danger; fire danger signs are posted at the entrance of most major canyons
- Keep driveways and property address marked with visible signage
- · Check the screens on foundations, soffit vents, roof vents, and attic openings
- Get rid of unnecessary accumulations of debris and trash from yards
- Keep tools such as shovels, rakes and axes, available and ready for use
- Clean debris from the roof and gutters at least two times a year
- Check screens and maintain spark arresters on chimneys
- Check to make sure address markers are clearly visible
- Avoid storing combustibles under decks

#### PAYMENT

Inspection was conducted on 4/23/03.

Payment for marking the timber, consultation, and written plan was received on 4/23/03, for the amount of \$200. Payment for the final inspection has not yet been received, for the amount of \$50.

#### **DEFINITIONS**

Aspect - Exposure. The direction a slope faces.

Canopy - The cover of branches and foliage formed collectively by crowns of adjacent trees.

Crown - Branches and foliage of a tree.

Dominant fuel type - Matter that would carry a fire, found on the ground.

Fuel continuity – The proximity of fuels to each other. Helps determine if a fire can sustain itself.

Limb (verb) -To remove the branches from a tree.

Overstory – The tree species that forms the uppermost forest layer (dominant and co-dominant).

Snag - Standing dead tree, often used by wildlife such as woodpeckers, owls, and sometimes squirrels.

Wildfire mitigation plan – A plan to reduce wildfire hazards around a home or other structure through fuels reduction and landowner awareness.



Knowledge to Go Places

Boulder District 5625 Ute Highway Longmont, Colorado 80503-9130 (303) 823-5774

August 7, 2003

Ernest Stiltner 181 Sawmill Road Jamestown, CO. 80455

Docket Number:

02-0180

Dear Ernest Stiltner,

This letter is to notify you that the inspection of your wildfire mitigation around your property located at 181 Sawmill Road, Jamestown, CO. 80455, for your Site Plan Review requirements was satisfactory. A letter has been sent to County Land Use Department informing them of our completed inspection. Please contact County Land Use Department at 303-441-3930 for the next step in this process.

If you have any questions please contact me at 303-823-5774 or by email at <a href="mailto:csecher@lamar.colostate.edu">csecher@lamar.colostate.edu</a>.

Sincerely,

Cory Secher Forester



Knowledge to Go Places

Boulder District 5625 Ute Highway Longmont, Colorado 80503-9130 (303) 823-5774

August 7, 2003

Eric Phillips Boulder County Land Use Dept. P.O. Box 471 Boulder, CO 80306

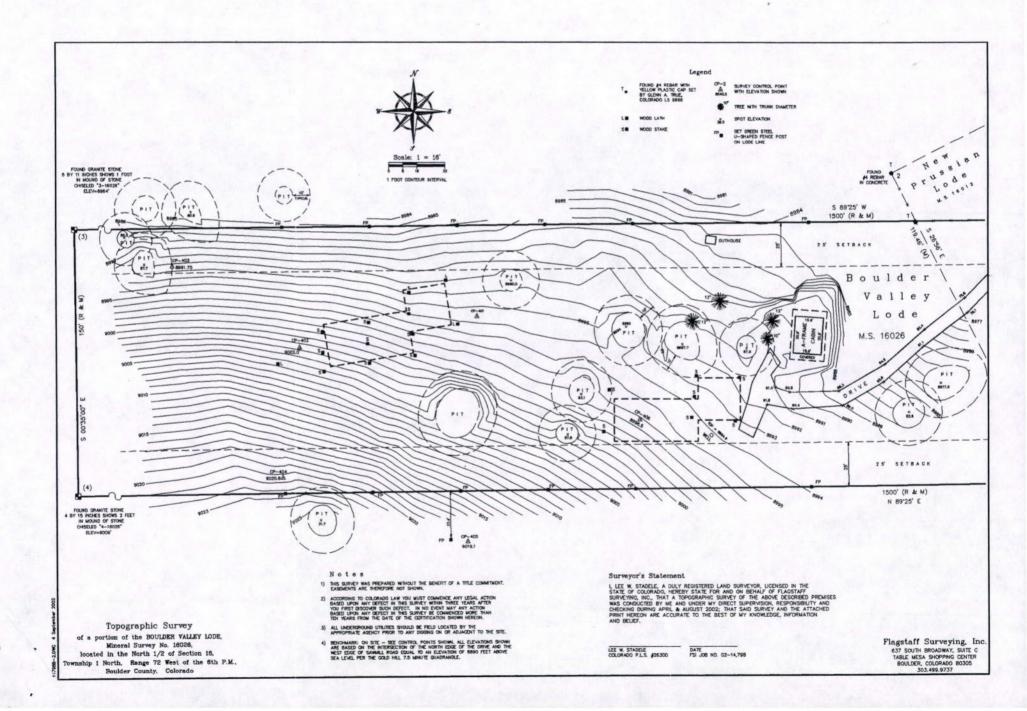
Dear Eric,

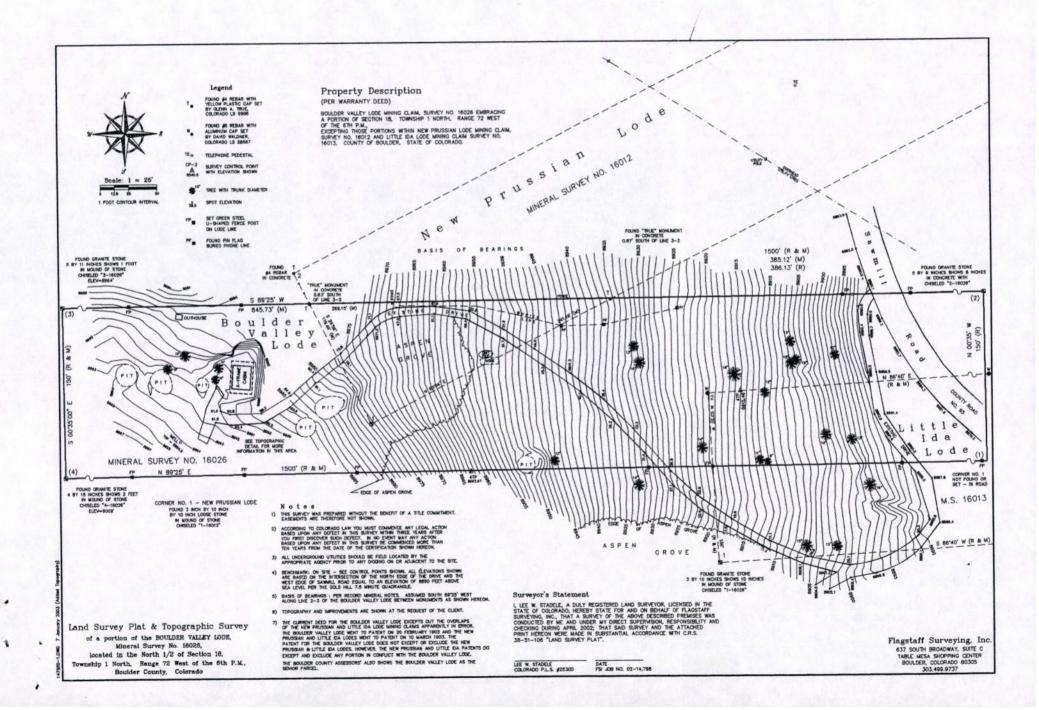
This letter is to inform you that Ernest Stiltner, SPR# 02-0180, has completed his fire mitigation work on his property located at 181 Sawmill Road, Jamestown, CO. 80455. The Colorado State Forest Service has inspected Ernest Stiltner work accomplishment on August 7, 2003 and is satisfied with the results.

If you have any questions please contact us at 303-823-5774 or by email at csecher@lamar.colostate.edu.

Sincerely,

Cory Secher Forester





## SITE PLAN REVIEW

FIELD DATA FORM

| Inspection Date:    | 4-23-07   |
|---------------------|---|
| Landowner name:     | Ernest Stiltner                                     |
| Mailing address:    | 181 Sawmill Road                                    |
| City, State. Zip:   | James Jown, Ca 80455                                |
| Site address:       | Same  |
| Phone number:       | 303/459-0180  |
| Road access:        | Sowmil Rd. / Gold Hill Rd. (Name of access road)    |
| Docket Number:      | SR-02-136 (SPR, LU, Etc.)                           |
| Section:            | 18  |
| Township:           | 1 N   |
| Range:              | 72W,  |
| Legal Discription:  | Boulder Valley Lode, Claim #1601:                   |
| FPD:                | Word  |
| Dominant fuel type: | Aspen, mixed Confer. (Grass/forbs/shrubs/slash/etc) |
| Dominant overstory: |   |
| Co-dominant oversto | ry:   |
| Fuel model type:    |   |
| Slash disposal:     | (Chipped/hauled/burned/lop-scatter)                 |
| Aspect:             | North (Direction of slope)                          |
| Slope:              | 8-8ch   |
|                     |   |

|    | Elevation: 900                   | (feet)                                   |  |  |  |
|----|----------------------------------|--|--|--|--|
|    | Building site:                   | (Chimney saddle/valley/ridge/mid-slope)  |  |  |  |
| ^  | Site moisture:                   |  |  |  |  |
| 4  | Natural fire barrier: Aspen gv   | one (lage) - North dam stype.            |  |  |  |
| 1  | Insect & Disease Diagnosis: //ov |  |  |  |  |
|    | Lot size (acres): 5.126          | (Acres)                                  |  |  |  |
| 11 | Number of Structures:   New      |  |  |  |  |
| #  | Type of Structures:              | (House/barn/garage)                      |  |  |  |
| V  | Driveway length: 25 mly.         | (<> 150 ft. OR <> 400 ft)                |  |  |  |
|    | Driveway trees removed:(fev      | wmany)                                   |  |  |  |
|    | Home buffer material: Cvul       | buffer material: Cruba Home.             |  |  |  |
|    | House design:                    | (simple/complex)                         |  |  |  |
|    | Roof Design:                     | (simple/complex) 45°                     |  |  |  |
|    | Roof material:                   | (Asphalt shingles/concrete tiles/metal)  |  |  |  |
|    | Soffit type:                     | (Plywood/hardboard/cement board)         |  |  |  |
|    | Siding material:                 | (Cement/hardboard/log/stucco/stone/wood) |  |  |  |
|    | Windows (#): Many                | Maximum Solar Access                     |  |  |  |
|    | Windows Size:                    | (small/medium/large)                     |  |  |  |
|    | Windows Frames:                  | (Wood/aluminum/aluminum clad)            |  |  |  |
|    | Windows Aspect: South            | (Viewing direction)                      |  |  |  |
|    | Window Construction:             | (Tempered glass e-coating) - Low         |  |  |  |
|    | Door Material:                   | (Wood/steel/fiberglass/composit)         |  |  |  |

| Deck material:                        | (Wood/composite materials)                                 |
|---------------------------------------|--|
| Deck Description:                     | (Enclosed/open)  |
| Deck support type: NA                 | (Timber posts/logs/steel/concrete/stone)                   |
| Deck buffer material: N/A             | (Crushed rock/gravel)                                      |
| Deck weed barrier:                    | (Fiberglass/polyester)                                     |
| Structure SQR. FT.: 1,152             | (P)ot Vottic)  |
| Utility Location: above grand - Delle | Fole Xft from house/buried in trench)                      |
| Structure aspect: Facing South        | (Predominant facing direction - view)                      |
| Leech field: East of home ~ 150       | (Distance from house,propane,septic NSEW)                  |
| Cistern or Well: East of Lave ~ 12    | Suth of Garage (Distance from house, propane, septic NSEW) |
| Cistern size: 1,800                   | (gallons)  |
| Propane Tank location: 60st ~ 75      | (Level w/house & >50ft from cistern)                       |

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181 Sawmill Road, Boulder Valley Lode, General plans narrative

Revision as of August 31, 2002

Building Size and Siting -

The house is a 24 by 48 foot rectangle and the garage is an adjacent 24 by 24 foot rectangle. The building is to be placed to the southwest of the existing cabin at the end of the existing driveway in a level area that has no more than a three foot slope over the house footprint.

The foundations of the building will be a simple slab-on-grade with no crawl space nor any basement.

Access -

Access will be an existing road that has been used for the past 25 years and apparently goes back to the 1920's. This road crosses a neighbor's property, The Little Ida Claim, owned by David Knollenberg. Basements have been obtained and recorded, numbers 2317296 and 2317297, recorded on August 8, 2002, to cross his area. The road will be upgraded to county standards.

Lighting plans -

There will only outdoor lights above building entrances, both house and garage. These lighting fixtures will comply with the county standards of no emitting surface visible at more than 30 degrees from vertical under the light.

Building colors -

Both siding will be a subdued brown earth tone, the roofs will be a subdued green earth tone (not the brilliant green that so many roofs in the area have.), that blends in with the surroundings.

Water -

A well was drilled about 25 years ago and capped off. At that time, it was reported to supply an adequate flow rate for a house. This well will be developed and used to maintain a fire cistern for fire mitigation plus another cistern for a house water supply.

Healthy House -

Personal health concerns dictate that this development be according to healthy house guidelines - minimum VOC's, formaldehydes, petrochemicals, insecticides, and their oxidation products, such as tobacco smoke, especially within the livable space.

Radon

A test in the existing cabin revealed a moderately high radon level. Radon mitigation measures will be used in the house.

House siting -

The building site is on a ridge some 700 feet from and 100 feet higher than the nearest county road. It is expected that the final development will be invisible from the local roads unless one knows exactly where to look.

Existing structures -

There is an existing vacation cabin, 16 by 20 foot floor that was constructed circa 1960 which I have had several outstanding building permits to upgrade. This building will be converted to storage and workshop space. There is a storage shed, 8 by 14 feet constructed in 2002 that will be maintained for storage. There is an outhouse which dates back to when the property was purchased.

Mine pits -

There are several mine pits on the property. An assessment by a soils engineer (See Western Soils report) advised that no foundation be laid within ten feet of the berm of any pit. Accordingly, the house and garage will be laid out to meet this requirement. The mine pit areas will be filled in and compacted per recommendations and landscaped into an open space.

House Heating -

The house will emphasize maximum passive solar gain. With propane as an auxiliary heat source. As such, the long dimensions will be oriented east <> west. All vegetation to the east, south and west will be cleared and/or drastically thinned.

Power -

The site is far enough away from existing power lines that it is cheaper to install an off grid system, probably a photovoltaic system which dictates a 45 degree roof given the wind situation. And avoid unsightly an power line spur across the area. A special consideration for fire mitigation - the outside of the utilities room where batteries are located will be prominently marked with a "Battery Area" sign so firefighters can be aware of a hazardous area.

August 31, 2002

Boulder Valley Lode, Fire mitigation plans -

The property a 150 foot North to South by 1500 foot Bast to West mining claim located at 181 Sawmill Road, Jamestown, Colorado, 80455. Legal description is Township T1N. Range R72, Section S18. Access is directly off the Boulder County Sawmill Road onto the east end of the property.

There are currently two existing structures - a vacation cabin and a storage shed - located on the site.

The lot is 5.126 acres in size.

The terrain is a gradually increasing slope open mountain meadow immediately west of Sawmill Road, becoming a mostly level aspen grove toward the top of the hill, which is some 700 feet from the road. The west end of the parcel is mixed aspen, fir and pine trees which drops off steeply toward Leftnad Creek.

The building site is on a broad ridge on a fairly level area immediately west of the existing cabin on a dry, open area.

Natural barriers to spread of a surface fire include the open meadow to the east of the building site. Plus a moderately open area to the south of the property.

The building site is mostly fuel model zero with aspen and a few fir and pine trees. There is a little evidence of mountain pine beetle in the area.

It is believed the site has a low wildfire hazard. The external surfaces of the structures will be constructed of fire resistant materials as much as possible.

The east portion of the property is largely an open alpine meadow with a few scattered pine and fir trees and some aspen stands. This area will be left open except for the upper part of it being used for a septic drain field and the surface restored.

The building site, about the center of the property, is on the side of a ridge about 100 feet above the level of the Sawmill Road. This area is an aspen grove with a few fir and pine trees. The house design emphasizes passive solar gain, so most of the trees within some 30 feet will be removed or drastically thinned.

The west end of the property transitions into a steep hillside with mixed aspen, fir and pine trees that slopes down into Lefthand Creek. This area will be cleaned up of any dead wood piles on the ground and otherwise left as is.

A well was drilled on the property some 20 years ago and capped off. That well will be developed and used to fill a cistern for fire suppression purposes plus another cistern for domestic water. The building site is so far from commercial power lines that off-grid power will be used. The use of a direct connected photovoltaic panel connection to run a pump on an ongoing basis to fill both cisterns whenever the sun is shining will be investigated.

#### Other concerns -

There is a branch off of the access road, close to the turnoff from Sawmill Road, that goes southwest across Forest Service land and is presumably an old access road to other mining claims in the area. There are several trashed out campfire rings along this road apparently from unauthorized campers. It is planned to leave this road intact for forest management, but posted with prominent "Private Property, No Trespassing" signs. The aim is to restrict usage to people knowledgeable in forest management and especially to prevent possible out of control campfires.

This property is located uphill from the intersection between Lefthand Canyon and Sawmill Road. There have occasionally been itinerants who have camped in that area and used fires. With the prevailing wind coming from the west and northwest, it is planned to approach the County to have this area closed off for campfires since an out of control fire in that area would come right up the hill to my property.

August 10, 2002

February 5, 2003
181 Sawmill Road
Jamestown, Colorado
80455-9700
Tel: 303/459-0180
Email: stiltner@indra.com
(No attachments)

Colorado State Forest Service 5625 Ute Highway Longmont, Colorado 80503-9130

Attn: Cory,

Dear Cory,

Re a fire mitigation survey plan, here are copies of much of the information I supplied to the County for the original building application (apologies for the printer going berserk), and their response.

Assuming you can use the information I supplied previously, please contact me if further questions.

Smie Stiltner

The snow is melting fast, so I'll plan to call you in about a week or so when the ground around the building site is bare.

Thank you,

Ernie Stiltner

SIR: 02-136

February 5, 2003
181 Sawmill Road
Jamestown, Colorado
80455-9700
Tel: 303/459-0180
Email: stiltner@indra.com
(No attachments)

Colorado State Forest Service 5625 Ute Highway Longmont, Colorado 80503-9130

Attn: Holly Asmus

Dear Ms. Asmus,

Thank you for the mailing of information on fire management. As for my property, enclosed are a couple survey maps, one from Sawmill Road up to the cabin, and other the location for a house.

The house is planned to be at the outline immediately to the west of the cabin, and has been approved by the County. (They did not like the outline further to the west.)

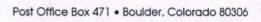
Other considerations - the area around the cabin and house is largely an aspen grove with a few conifers. I plan to use as much passive solar gain as possible plus photovoltaics for power, so the trees to the south of the house will definitely be removed. There are a few conifers around the house area, especially to the west, that I would like to maintain, largely for wind breaks.

Otherwise, contact me if any questions, or I will look forward to seeing you Wednesday the 12th at 1:00 pm at the driveway on Sawmill Road.

Sincerely,

Ernie Stiltner

Sania S





# Land Use Department

Courthouse Annex 2045 13th Street • 13th & Spruce Streets • Boulder, Colorado 80302 • (303) 441-3930

September 13, 2002

Ernest Stiltner 181 Sawmill Road Jamestovn, CO 80455

Dear Ernest Stiltner:

This letter certifies that in accordance with section 4-800 of the Poulder County Land Use Code, the Boulder County Land Use Director has Approved with Conditions the site plan for the following, effective September 13, 2002.

Docket SPR-02-136: STILTNER Residence/Garage Site Plan Review

Request: Site Plan Review for the construction of a 1,152 square foot residence AND a

625 square foot garage. (Above Grade for residence=1,152 Sq. Ft./Celow Grade=0 Sq. Ft./Finished Floor Area=1,152 Sq. Ft./Unfinished Floor Area=0 Sq. Ft.) (Above Grade for garage=625 Sq. Ft./Below Grade=0 Sq. Ft./Finished

Floor Area=625 Sq. Ft./Onfinished Floor Area=0 Sq. Ft.)

Location:

At 131 Sawmill Road in Section 18, T1N, R72W

Zoning:

Forestry (F)

Applicant:

Ernest Selbuer

This is a Conditional Approval made by the Land Use Director, and is not final until a 14-day referral period has transpired. During the next 14 days, the Board of County Commissioners (FOCC) may choose to call this cocket up for a public hearing. If no hearing is required, this letter will serve as the final determination. Building, grading and access permits will be subject to any small conditions of approval.

If the BOCC should decide to modify the Land Use Director's approved, or determines that further review is necessary, a public hearing will be held. Upon completion of the public hearing and approval by the BOCC, if a building, grading or access permit has been applied for, it will continue in the process and permits may be issued subject to any and all conditions of approval.

In the event that you wish to appeal any conditions of the Land Use Director's determination, you are entitled to appeal the determination to the BOCC. You must file an appeal for this purpose with the Land Use Department in writing no later than 14 days after the date of this letter. If an appeal is requested, the BOCC will review the Land Use Director's determination at a public meeting.

Page 1 of 2

Please be aware that the attached Conditions of Approval become final if the docket is not called up by the BOCC at the end of the 14-day review period. There are no other administrative means to appeal. If you wish to resubmit information with regards to complying with any of the attached Conditions of Approval, and have this information reviewed for approval by staff prior to the end of the 14-day review period, your submissions must be received by the office no later than 10 days from the date of this letter.

Site Plan Review approval is valid for three years from the date of this letter although any changes in County regulations could affect the proposal prior to application for a building permit. In order to be issued a building permit, the project must comply with all policies and regulations in effect at the time of permit application.

A Building Permit cannot be issued for this project until the applicable conditions above have been met. Furthermore, a Certificate of Occupancy cannot be issued for this project until the applicable conditions above have been met. A SPR inspection will need to be scheduled with this department prior to the issuance of a Certificate of Occupancy. None of the conditions of approval will be waived or a Certificate of Occupancy issued for this project based upon the applicant's need to meet financial obligations (i.e., construction cost overruns or loan closing dates). Any future additions to the approved structure, regardless of size, will require SPR approval to amend this SPR.

You have the option of returning the Public Notice sign placed on the review site or having the Land Use Department retrieve the sign. If you wish to return the sign it must be returned no sooner than 14 days after the date on this letter and no later than 28 days after the date on this letter. If the sign is not returned within this time, you will be assessed a fee reflecting the staff time required to retrieve the sign (a minimum of \$25 - a higher fee for remote locations). If you wish our department to retrieve the sign for this fee, please let me know. For Site Plan Review applications that require a public hearing, please return the sign within 14 days of the final hearing.

Please carefully review the attached conditions of approval. Compliance with these conditions will be confirmed as is necessary throughout the process.

Sincerely,

Heather Stroud, Planner Land Use Department

#### CONDITIONS OF APPROVAL

Article 4-806 of the Land Use Code states that no Site Plan Review can be approved without compliance with the following standards. A site plan shall be approved if the Director finds that the site plan is in accordance with the following standards, or parts thereof, which the Director has determined to be applicable based on the nature and extent of the proposed development. Only those standards applicable to this project are included in this list.

1. The location of existing or proposed buildings, structures, equipment, or uses on the lot will not impose an undue burden on public services and infrastructure.

### A. LEGAL ACCESS REQUIREMENTS

The application materials indicate that there currently is no legal access to the property from a public right-of-way. The application materials include an easement over the Little Ida mining load but not over the adjacent US Forest Service property.

Prior to issuance of building or grading permits, the Boulder County Transportation and Land Use Departments will require documentation of legal access to the parcel. Such documentation should include easement deeds and a survey map showing the easement location. This site plan review approval by the Land Use Director is not to be construed as approval of access, nor is it a waiver of the requirement.

#### B. ACCESS REQUIREMENTS

The proposed drive must comply with Boulder County's Private Access Standards (County Road Standards and Specifications Article 4.5). These requirements include a 12-foot road width.

Prior to issuance of building or grading permits, submit two copies of a road improvement plan for review and approval by the Boulder County Land Use and Transportation Departments. The plan must include all required emergency vehicle turn-arounds and turn-outs (see attached handout "Emergency Access and Water Supply.")

*Prior to issuance of a certificate of occupancy*, the improved driveway plan must be inspected and approved by the Transportation Department.

- 2. The height, size, location, exterior materials, color, and lighting of proposed structures must be compatible with the topography, vegetation, and general character of the surrounding area.
  - A. HEIGHT, SIZE, LOCATION, EXTERIOR COLOR, MATERIALS

#### and LIGHTING

The following items have been reviewed and are approved as proposed in the application materials dated 8/16/2002:

|   | Description   | Approved  |  |
|---|---|-----------|--|
| Height: approximately 26 feet from existing grade for the residence and 22 feet from existing grade for the detached garage |   | 9/10/2002 |  |
| Size:   | 1,153 sq. ft. residence and 625 sq. ft. detached garage | 9/10/2002 |  |
| Location:   | as shown on revised site plan, dated 9/9/02             | 9/10/2002 |  |

#### B. SIZE

Information submitted with the application materials indicates that size of the new residence is proposed at 1,153 sq. ft. and the detached garage is proposed at 625 sq. ft. The proposed residence is a one story structure. The proposed size, totaling 1,778 sq. ft. is approved as submitted in the application documents.

#### C. LOCATION: SETBACK SURVEY NEEDED

The revised site plan submitted with the application materials indicate that the footprint of the proposed structure is within 20 percent of the minimum required 25-foot side yard setback for the south property line (See Article 4-101(E)(2)(b) of the Land Use Code). Therefore, a Setback Survey Verification Form is required. This form will be provided at the time a building permit is processed.

The Setback Survey Verification Form must be completed by a licensed surveyor and submitted to the Land Use Department *prior to the foundation form inspection*.

#### D. EXTERIOR COLOR REQUIREMENT

No color choices were indicated in the application materials. The proposed colors should be chosen to ensure that they are compatible with the policies and goals established by the Comprehensive Plan and provisions of the Land Use Code and will not result in an adverse impact on surrounding properties.

**Prior to issuance of building permits**, submit to the Land Use Department for review and approval, one set of samples (color chips, brochure, or catalog page) of all exterior colors to be used including roof, siding and trim. Given the building site's visible position in the landscape, these

colors should be carefully selected from the dark to medium brown, gray, or green color range so as to blend with the natural environment. Please note that all color samples need to be small enough to fit into a file and will be kept for the record.

**Prior to issuance of a certificate of occupancy**, the Land Use Department must inspect and verify that the approved color samples are used on the new structure.

#### E. LIGHTING

The locations and types of exterior lighting fixtures were not provided in the application. Because of the potential for nighttime visibility from distant locations and to avoid disturbing wildlife, placement of exterior lighting fixtures shall be limited to:

- i. Only one (1) fixture is permitted for each exterior entrance.
- ii. No landscape lighting is permitted.

Prior to issuance of building permits, one copy of a proposed lighting plan must be submitted to the Land Use Department for review and approval. This may consist of the electrical plan that is submitted ay the time of building permit application. Down-lighting is required, and all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. The lighting plan must indicate the location of all exterior fixtures on the site and structure, and must include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures.

*Prior to issuance of a certificate of occupancy*, the full installation of the approved lighting plan must be inspected and approved by the Land Use Department.

3. Plans for the proposed development have satisfactorily mitigated any geologic hazards, such as soils, landslides, slope, rock falls, flash flood corridors, floodplains, subsidence, avalanches, and alluvial fans, which may occur on the site.

#### A. MINING ACTIVITY AND GEOLOGICAL HAZARDS

The proposed residence is located within 50 feet of several exploration pits. In order to minimize any geological hazards associated with the mining activity, additional information is required. The Colorado Division of Minerals and Geology Abandoned Mine Reclamation Program must be contacted to determine whether any serious geological hazards exist.

**Prior to issuance of building or grading permits,** submit to the Land Use Department a letter from the Colorado Division of Minerals and Geology Abandoned Mine Reclamation Program that addresses any hazards on the

SPR-02-136: STILTNER Residence/Garage 181 Sawmill Road Page 4 of 7

site. This letter should also indicate whether any mine closures are recommended.

Prior to issuance of a certificate of occupancy, any mine closure recommendations made by the Colorado Division of Minerals and Geology must be implemented.

4. The site plan shall satisfactorily mitigate the risk of wildfire both to the subject property and properties in the surrounding area, including with respect to the location of structures, fuel reduction, incorporation of a defensible space around structures, and the use of ignition (fire) resistant building materials. Safe access shall be provided, including a second emergency access where the local fire district finds the primary access to a public road is insufficient and the second access does not create significant environmental impacts. In assessing the applicable wildfire risk and appropriate mitigation measures, the Director shall consider the referral comments of the County Wildfire Mitigation Coordinator and the applicable fire district, and may also consult accepted national standards as amended, such as the 1997 Urban-Wildland Interface Code; NFPA / 80A, 299, 1231; 1997 Uniform Fire Code; and the 1997 Uniform Building Code.

#### A. WILDFIRE DEFENSIBLE SPACE

Adequate defensible space is required around the structure to prevent the spread of fire to and from the structure and to allow firefighters to access the structure safely in the case of a wildfire. The defensible space plan must be revised include the following:

- Ground surfaces within three feet of the structure and below all roofline projections and decks must be covered with crushed rock or other nonflammable ground cover, and kept free of vegetation by utilizing a weed barrier.
- ii. Flammable vegetation must be removed from zone 1, which extends fifteen feet from the residence. Any mature trees that are to be kept must be pruned to 10 feet above the ground and the canopies must be separated from those of the trees in zone 2.
- iii. In zone 2, trees must be pruned up to 6 to 8 feet and adequately spaced. Zone 2 extends approximately 75 to 125 feet from the residence, depending on the steepness of the site.
- iv. The tree preservation and screening plan must be incorporated into the wildfire mitigation plan (see item 10.A.)

#### B. EMERGENCY WATER SUPPLY

To aid in the defense of the proposed structure from wildfire, an emergency water supply must be provided. This could include, but is not limited to, a nearby fire hydrant on a municipal water system, a dry hydrant in a nearby water body, membership in a community cistern, or installation of an individual cistern on the site. Contact the Indian Peaks

Fire Protection District to determine which option is best for your site. Note that if an individual cistern is to be installed, it must meet the following standards:

- i. Cistern capacity must be at least 1,800 gallons.
- ii. The cistern must be located no closer than 50 feet to the front of the proposed home and should be no more than 150 feet from the rear of the structure. The proposed location of the cistern, as shown on the site plan, is approved.

**Prior to issuance of building or grading permits**, submit one copy of a revised wildfire mitigation plan to the Land Use Department for review and approval.

At the time of foundation form inspection, the defensible space and emergency water supply plans must be approved, implemented, and inspected by the Land Use Department.

**Prior to issuance of a certificate of occupancy,** all cuttings, debris, and scrap lumber must be removed and a completed copy of the Boulder County Fire Sprinkler/Fire Hydrant/Cistern Approval form must be submitted to the Land Use Department for review and approval.

6. The development will not have a significant adverse impact on plant communities or wildlife habitat, migration corridors, or sensitive and unique plant or wildlife ecosystems.

#### A. WILDLIFE SAFE FENCE

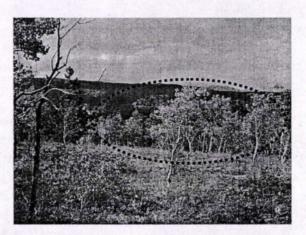
Because this area serves as a mountain wildlife movement corridor, the following wildlife-safe specifications shall apply for any new fences:

- i. Fencing is to be kept as close to the developed site as possible.
- ii. Top and bottom wires must be smooth, with wire spacing at 16-22-28-40 inches from ground. Please note that fences over 42 inches create serious negotiation problems for deer, and that fences between 42 inches and 8 feet can be lethal.
- iii. The bottom wire must be at least 16 inches from the ground for the passing of fawns.
- iv. A 12-inch gap between the top two wires is required to reduce entanglement and wire twisting.
- v. Materials like woven wire or tightly strung single strand wire must be used.
- vi. No chain-link fences are permitted except for small isolated pens or kennels, as wildlife are easily entangled in mesh fences and impaled on wrought iron pickets.
- 10. The development will not have a significant negative visual impact on the natural features or neighborhood character of the surrounding area. Development should

avoid prominent, steep, or visually exposed portions of the property and minimize the area of site disturbance. Particular consideration should be given to protecting views from public lands and rights-of-way.

#### A. TREE PRESERVATION

The preservation of existing trees and ground vegetation will provide visual screening from nearby areas including public open space and rights-of-way. The existing stand of aspens to the north of the proposed residence (see photo below) are important for visual screening from distant locations, including the Town of Ward, and must be preserved while providing for fire safe defensible space requirements.



**Prior to issuance of building and grading permits,** the tree preservation and screening plan must be incorporated into the wildfire mitigation plan and submitted for review and approval by the Land Use Department. The plan must demonstrate which stands of trees are to be removed and limbed for wild fire mitigation, and which stands of trees are to be preserved for screening.

11. The design and scale of the development will not cause unnecessary or excessive site disturbance to the property. Such disturbances include but are not limited to long driveways, parking areas, or severe alteration of a site's topography.

#### A. UTILITIES

To minimize disturbances to the site, any utility service lines shall be routed under ground (see article 7-1200 of the Land Use Code) and through areas already disturbed or proposed to be disturbed (e.g., along driveway).

**Prior to issuance of building and grading permits,** submit to the Land Use Department for review and approval a plan depicting the routing of all utility services.

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**Prior to issuance of a certificate of occupancy,** the full installation of the approved utility plan must be inspected and approved by the Land Use Department.

12. Runoff, erosion, and/or sedimentation from the development will not have a significant adverse impact on the surrounding area.

### A. RE-VEGETATION REQUIREMENT

**Prior to issuance of a building permit,** submit to the Land Use Department for review and approval one copy of the proposed revegetation plan that conforms with the enclosed handout titled "Revegetation." Every attempt should be made to preserve the existing vegetation (grasses, shrubs, and trees) and minimize ground disturbance.

**Prior to issuance of a certificate of occupancy**, the full installation of the approved re-vegetation plan must be inspected and approved by the Land Use Department. An irrevocable letter of credit or certified check will be required to assure completion of re-vegetation. Note that areas of disturbance not included on the re-vegetation plan are still subject to reseeding and matting.

#### FOR YOUR INFORMATION:

AFFIDAVIT FOR EXISTING DWELLING: Prior to the issuance of a certificate of occupancy for the new residence, the existing dwelling must be either demolished or all bathing and cooking facilities must be removed from the dwelling. If the dwelling is not demolished at the time the building permit for this property is processed, the Land Use Department will require the property owner to sign an affidavit agreeing to comply with zoning requirements of the Forestry Zoning District and the regulations of the Boulder County Land Use Code. A building permit will not be issued until we have received and approved the affidavit.

**SANITARY FACILITIES:** Sanitary facilities must be provided during construction and shall consist of a portable chemical toilet fabricated from steel, fiberglass or wood. Each facility must be well ventilated, must conform to State law, and must have a vented chemical tank and a separate urinal.

**INDIVIDUAL SEWAGE DISPOSAL SYSTEM:** A new permit for an Individual Sewage Disposal System may be required and must be obtained from the Boulder County Health Department (303-441-1190) prior to septic system installation and the issuance of a building permit.

**SUBMITTAL STICKERS:** Enclosed please find a sheet of SPR submittal stickers. To ensure the proper routing, handling, and timely review of all materials submitted for consideration / review of this Site Plan Review application and conditions of approval, please affix a sticker to each prior to delivery to the Land Use Department.

The Admitted Ernie Stiltner Property

50+26+26 = \$102. " Inna.



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3 From Calch \* \* \* \* \* \* \* RMJ + Norther Plum (birds)

& XXXX ERC