

# **WILDFIRE PROTECTION PLAN**

**CRYSTAL PARK SITE # S-237 R  
AKA 5320 LOST CABIN ROAD, MANITOU SPRINGS, CO**

**DEVELOPED FOR  
BILL & ANNIE BOMGAARS, OWNERS**

Prepared by

**PALACE**  
HOMES, INC

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Submitted to  
El Paso County Land Use Office and the Crystal Park Fire Department  
County Zoning Department  
El Paso County, Colorado

## **WILDFIRE PROTECTION PLAN**

This wildfire protection plan is submitted to the Land Use Office of the El Paso County Colorado, County Zoning Department and the Crystal Park Fire Department to satisfy the requirements of both entities in regard to planning for wildfire protection and mitigation in connection with construction of new homes within the wildland-urban interface characteristic of much of El Paso County.

### **Property Subject to Plan**

This plan is presented in connection with the planned construction of a new home for Bill and Annie Bomgaars on Site S-237 R of Crystal Park, located at 5320 Lost Cabin Road of that development.

The site plan for the proposed home, including contour plot lines, is provided in the attached figure along with photos of the site.

Application for a building permit for the home is in process.

The site is moderately to sparsely covered Coniferous Trees (less than 10) with a 12" to 18" calipers. Ground cover consists of native grasses.

In developing this plan it was necessary to determine the required allocation of defensible space around the proposed home site and to identify the vegetation and forest characteristics in the immediate surroundings.

Drawing upon the information presented in Colorado State Forest Service, Quick Guide Series "Protecting Your Home from Wildfire: Creating Wildfire-Defensible Zones", (formally CSU Extension Factsheet 6.302), an inspection of the site and surrounding terrain has been conducted and the following plan developed in accordance with the guidance of the subject fact sheet

Most importantly, the homeowner needs to recognize that firefighters will always do their best to protect you and your home, but ultimately, **it is YOUR responsibility to protect your life, family, animals and property from Wildfire.**

### **Structural Ignitability**

Use of fire-resistant building materials is greatly encouraged in Crystal Park to the degree that all new construction or reroofing is required to be a Class "A" material. Most decks are highly combustible heat traps. For this reason, patios are preferred or even concrete decks with steel supports. Exterior walls of non-combustible materials such as stucco or concrete boards are a good choice. The roof eaves and fascia can also be stucco or other fire-resistant materials. Finally, windows are one of the weakest parts of a home and should be given careful consideration. For more information, refer to

the CSFS Fire Wise Construction: Site Design and Building Materials at [www.csfs.colostate.edu](http://www.csfs.colostate.edu).

## **Defensible Space**

Defensible space is the area around a home that has been modified to reduce fire hazard. It will give your home a fighting chance against a wildfire. This entails developing three zones around all structures on the property as follows.

**Defensible Space Management Zone 1** requires the maximum hazard reduction and will consist of an area of 30 feet around all structures on the site in which all flammable vegetation is removed. These 30 feet are measured from the outside edge of the structures eaves and any attached structures, such as decks. In that the majority of the Lee's property is Zone 1 this is where the areas of mitigation will be addressed.

Within this defensible zone, the following will be accomplished:

- Plant nothing within 5 feet of the structure. No plants may be placed directly beneath windows or next to foundation vents. Install non-flammable ground cover such as decorative rock.
- If the siding is noncombustible (stucco, concrete, stone or brick), widely spaced foundation plantings of low-growing shrubs or other fire-resistant plants are acceptable, but not beneath windows or next to foundation vents. Be sure areas of continuous grass are not adjacent to plantings. Information of fire-resistant plants is available on the CSFS website at [www.csfs.colostate.edu](http://www.csfs.colostate.edu).
- Prune and maintain any plants in Zone 1 to prevent excessive growth. Also, remove all dead branches, stems and leaves within and below the plant.
- Due to the wells in Crystal Park being household use only, we are unable to irrigate, and are required to keep all landscape wild. Revegetate with native plants. Keep wild grasses mowed to a height of 6 inches or less.
- Do not store firewood or other combustible materials anywhere in this zone. Keep firewood at least 30 feet away from structures, and uphill if possible.
- Enclosed or screen decks with 1/8<sup>th</sup> inch or smaller metal mesh screening (1/16<sup>th</sup> inch mesh is preferable). **Do not use area under deck for storage.**
- Ideally, remove all trees from Zone 1 to reduce fire hazards. The more trees you remove, the safer your home will be.
- If you do keep any trees within the zone, consider them part of the structure and extend the distance of the entire zone accordingly.
- Remove any branches that overhang or touch the roof, and remove all fuels within 10 feet of the chimney.
- Remove all pine needles and other debris from the roof, deck and gutters.
- Rake pine needles and other organic debris at least 10 feet away from all decks and structures.
- Remove slash, Wood chips and other woody debris from Zone 1.

**Defensible Space Management Zone 2** is an area of fuels reduction designed to diminish the intensity of a fire approaching your home. It should be

noted that this zone is predominately off of the Lee site. The width of Zone 2 depends on the slope of the ground where the structure is built. Typically, this Zone should extend at least 100 feet from all structures. If it extends beyond your property line, work with adjoining property owners to complete the defensible space. If it extends into common ground, please see the "Implementation" section on the final page of this document.

Within this defensible zone, the following will be accomplished:  
In accordance with the guidelines of "Creating Wildfire-Defensible Zones".

### **Tree Thinning and Pruning**

- Remove all stressed, diseased, dead or dying trees and shrubs.
- Remove enough trees, (with the exception of mature stands of aspen – see section on aspen), and large shrubs to create at least 10 feet between crowns. Crown separation is measured from the outermost branch of one tree to the nearest branch on the next tree. On steep slopes, increase the distance between tree crowns even more.
  - This will include maintenance of a minimum distance of 30 feet between tree crowns on the steep slope of 20' where the slope is 21-40%, 15' where the slope is 11-20% and 10' if less than 11%.
- Remove all ladder fuels from under remaining trees. Prune tree branches off the trunk to a height of 10 feet from the ground or 1/3 the height, whichever is less.
- If your driveway extends more than 100 feet from your home, thin out trees within a 30 feet buffer along both sides of your driveway, all the way to the main access road. Again, thin all trees to create 10 foot spacing between tree crowns.
- Small groups of 2 or 3 trees may be retained, but leave a minimum distance of 30 feet between their crowns and surrounding trees.
- Because Zone 2 forms an aesthetic buffer and provides a transition between zones, it is necessary to blend the requirements for Zone 1 and Zone 3.

Example - if you have a tree in Zone 2 with branches extending into Zone 1, the tree can be retained if there is proper crown spacing.

- Limit the number of dead trees (snags) to one or two per acre. Be sure snags cannot fall onto the house, power lines, roads or driveways.
- As in Zone 1, the more trees and shrubs removed, the more likely your home will survive a wildfire.

### **Shrub Thinning/Gambel Oak/Pruning and Surface Fuels**

- Isolate shrubs may remain in Zone 2, provided they are not under tree crowns.
- Keep shrubs at least 10 feet away from the edge of tree branches. This keeps them from becoming ladder fuels.
- Minimum spacing recommendations between clumps of shrubs is 2 ½ times the mature height of the vegetation. As with tree-crown spacing, all measurements are made from the edge of vegetation crowns.

Example – for shrubs 6 feet high, spacing between shrub clumps should be 15 feet or more (measured from edge of the crowns of

vegetation clumps). The diameter of these shrub clumps should not exceed 12 feet.

- Periodically prune and maintain shrubs to prevent excessive growth, and remove dead stems from shrubs annually. Common ground junipers should be removed whenever possible because they are highly flammable.
- Mow grasses as needed through the growing season, keeping them a maximum of 6 inches high. This is very critical in the fall, when grasses dry out.
- Mow Gambel Oak sprouts at least once a year in Zone 1 and Zone 2.
- Avoid accumulation of surface fuels, such as logs, branches, slash and wood chips greater than 4 inches deep.

### **Firewood**

- Stack firewood uphill or on the same elevation as any structure, but at least 30 feet away. Never stack wood under a deck or against the structure.
- Clear any flammable vegetation that is within 10 feet of woodpiles.

### **Propane Tanks – No Natural Gas in Crystal Park**

- Locate propane tanks at least 30 feet from any structures, preferably on the same elevation as the structure. Clear any flammable vegetation that is within 10 feet of the tank.
- The propane tank should not be located below your house because if it ignites, the fire would tend to burn uphill. Conversely, if the tank is located above your home and it develops a leak, gas will flow downhill into your home.
- Do not visibly screen propane tanks with shrubs, vegetation or flammable fencing. Instead, install 5 feet of non-flammable ground cover around the tank.

### **Clipper**

- Dispose of slash (limbs, branches and other woody debris) by clipping or lop-and-scatter (cutting into very small pieces and distributing it over the ground). Crystal Park has a chipper for this purpose. Contact the Park Office at 719-685-9729.

**Defensible Space Management Zone 3** is of no specified width. It should provide a gradual transition from Zone 2 to areas farther from the home that have other forest management objectives. Your local Colorado State Forest Service forester can help you with this zone.

Consider the following when deciding forest management objectives in Zone 3:

- The healthiest forest is one that includes trees of multiple ages, size and species and where adequate growing room is maintained over time.
- Remember to consider the hazards associated with ladder fuels. A forest with a higher canopy reduces the chance of surface fire climbing into the tops of the trees. This is a priority on steep slopes.

- The greater number of snags – two or three per acre, standing or fallen – can be retained in Zone 3 to provide wildlife habitat. They should have a minimum diameter of 8 inches and pose no threat to power lines or firefighter access roads.
- Pruning is generally not necessary in Zone 3, but will help reduce ladder fuels, and enhance wildfire safety.
- Mowing is not necessary.
- Chipping or lop-and-scatter slash.

## **Other Recommendations**

### **Windthrow**

Lodgepole pine, Engelman spruce and Douglas-fir, are very susceptible to damage and uprooting by high winds or windthrow. If you see evidence of this around your home, consider making adjustments to these guidelines. It is highly recommended that you contact a professional forester to help design your defensible space, if you have windthrow concerns.

### **Water Supply**

Crystal Park has a number of cisterns installed around the Park for the express purpose of firefighting. There is no cistern in the area of the Lee home.

## **Recommendations for Specific Forest Types**

The above recommendations refer primarily to Ponderosa pine, Douglas fir and mixed conifer ecosystems which do not make up the majority of the Lee Site.

Please refer to additional recommendations below:

## **Implementation**

This plan is to be effected and provisions implemented on the Lee site by the time of construction completion. This does not include adjacent sites within the boundary of the Defensible Space Management Zones owned by others, nor common ground owned by Crystal Park. The owner is encouraged to work with adjoining property owners to complete the defensible space. The area owned by Crystal Park within the Defensible Space Management Zones may be brought into compliance with the Lee's Protection Plan by mutual agreement with Crystal Park. The owner is encouraged to contact the Crystal Park Forestry Committee (through the Crystal Park Office 719-685-9729) for further information.