

**MERCY WAY  
Parcel Split  
APN: 102-231-55**

**Wildland Fire Safe Plan**

**Prepared for:**

**Jong and Renee Yi**

**Prepared by:**


**CDS Fire Prevention Planning  
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**October 15, 2008**

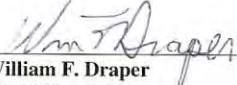
Mercy Way

Plan Approved by:

 10-26-08  
Date  
Guy Delaney, Fire Captain  
Fire Prevention  
Rescue Fire Protection District

 11-5-08  
Date  
Chris Anthony, Battalion Chief  
Fire Prevention  
California Department of Forestry  
and Fire Protection

Prepared by:

 11-10-08  
Date  
William F. Draper  
RPF 898



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## **I. PURPOSE AND SCOPE**

Communities are increasingly concerned about wildfire safety. Drought years coupled with flammable vegetation and annual periods of severe fire weather insure the potential for periodic wildfires.

The purpose of this plan is to assess the wildfire hazards and risks of Jong and Renee Yi's Mercy Way parcel split, to identify measures to reduce these hazards and risks and protect the native vegetation. There are moderate fuel hazards and gentle to moderate topography associated with this proposed project both on and adjacent to the project.

The possibility of large fires occurring when the parcel split is complete will be greatly reduced. However, small wildfires in the open space areas and on the larger lots may occur due to the increase in public uses.

Incorporation of the fire hazard reduction measures into the design and maintenance of the future parcels will reduce the size and intensity of wildfires and help prevent catastrophic fire losses. State and County regulations provide the basic guidelines and requirements for fire safe mitigation measures and defensible space around dwellings. This plan builds on these basic rules and provides additional fire hazard reduction measures customized to the topography and vegetation of the development with special emphases on the interface of homes and wildland fuels.

The scope of the Mercy Way Wildland Fire Safe Plan recognizes the extraordinary natural features of the area and designs wildfire safety measures which are meant to compliment and become part of the community design. The Plan contains measures for providing and maintaining defensible space around future homes. Plan implementation measures must be maintained in order to assure adequate wildfire protection.

Homeowners who live in and adjacent to the wildfire environment must take primary responsibility along with the fire services for ensuring their homes have sufficient low ignitability and surrounding fuel reduction treatment. The fire services should become a community partner providing homeowners with technical assistance as well as fire response. For this to succeed it must be shared and implemented equally by homeowners and the fire services.

## **II. FIRE PLAN LIMITATIONS**

The Wildland Fire Safe Plan for the Jong and Renee Yi parcel split does not guarantee that wildfire will not threaten, damage or destroy natural resources, homes or endanger residents. However, the full implementation of the mitigation measures will greatly reduce the exposure of homes to potential loss from wildfire and provide defensible space for firefighters and residents as well as protect the native vegetation. Specific items are listed for homeowner's attention to aid in home wildfire safety.

## **III. MERCY WAY WILDLAND FIRE SAFE PLAN**

### **1. PROJECT DESCRIPTION**

The Yi parcel split is located just outside the community of Rescue. It is located on Mercy Way approximately .1 miles from Starbuck Road. It is on west to south facing slopes in

flat to gentle terrain of oak woodland vegetation just west of Pine Hill. This project is planning to split parcel APN: 102-231-55 totaling 21.3 acres into 4 lots. Each lot will be at least 5 acres in size. Parcels 2 and 3 have steeper slopes along the western property line and have a heavy stand of chamise and manzanita with a scattered overstory of gray pines and oaks. The eastern edge of the property has heavy fuel loading and slopes up towards Pine Hill. Tree canopy over the roadway needs to be no less than 15' above the road surface for safe passage of emergency equipment. Access is going to be Mercy Way currently an 18' road with poor fuel treatment along a portion of the road until you come to the project site. Fuel hazard reduction has been occurring on the project. On site, the road needs to be widened to a 20' road with a fuel hazard reduction zone along the roadway. The 20' road width is required by the 2001 California Fire Code and specified in the comments from the Rescue Fire Protection District. The road runs approximately 1,500' with a proposed cul-de-sac turnaround at the end, and the road length is consistent with zoning. The road needs to meet the 75,000 pound weight limit imposed by the 2007 California Fire Code. The project will have a fuel hazard reduction zone of 10' on both sides of the roadway for the length of Mercy Way. The lots are going to be on well water and a fire hydrant (standpipe) for fire protection will be included at each new house when constructed. Residential fire sprinklers are required for each house built as per the 2007 California Fire Code. An option to residential fire sprinklers is providing fire flow for the entire project site. Fire flow requirements are specified in the 2007 California Fire Code. Houses are required to have a minimum of 3,000 gallons of water stored at 20 lbs pressure (psi) for fire protection. Water storage requirements will increase depending on the square footage of the residence. This tank shall be kept full at all times and shall be incorporated into the domestic water supply (See Diagram A). Contact El Dorado County Environmental Health for specifications for the mixed use of the water. The water tank and fire sprinklers shall meet the specifications of Rescue Fire Protection District. Freeze protection needs to be provided to all exposed plumbing. A fuel hazard reduction zone for fire protection shall be built along both sides of the driveways and annually maintained by the individual homeowners. The zone will be 10' wide.

Structural fire protection is provided by the Rescue Fire Protection District and wildland fire protection by the California Department of Forestry and Fire Protection (CAL FIRE).

## **2. PROJECT VEGETATION (FUELS)**

For wildfire planning purposes the vegetation is classified as follows:

- (a) ground fuels- annual grasses, chamise, toyon, redbud, manzanita, poison oak, and scattered down trees and limbs
- (b) overstory- scattered stands of Liveoak, white oak and California gray pines.

The heaviest vegetation is along the perimeter and western portion of the property. Chamise and manzanita are the dominate understory fuel hazards. An oak canopy around existing structures and along the road has been cleared underneath. On the slopes to the east of the property is a brushy area with a residence on an adjacent property. Fire hazard reduction of the fuels will be extremely important along the road and around the house sites. Parcels 2 and 3 have the greater fire hazards due to the heavier brush fuels and slopes. Gray pines need to be removed if within 30 feet of any structure. CDF guidelines for the 100 foot clearance requirements are attached. All structures on parcel 1 need to adhere to the current Fire Safe clearance standards required by PRC 4291. Extensive clearing has occurred and treatment of brush sprouts is becoming a problem.

### 3. PROBLEM STATEMENTS

**A. The brush fuels on the slopes will ignite and have a rapid rate of spread.**

Fire in the grass and brush fuels on the side slopes is the most serious wildfire problem for this project.

**B. A percentage of the project has slopes. This increases the rate of wildfire spread.**

Wildfire rate of spread increases dramatically as slope increases. This project has grass and brush slopes.

**C. Risk of fire starts will increase with development.**

The greatest risk from fire ignition will be along roads and on large lots as human use on these areas increases.

**D. Provisions must be made to maintain all fuel treatments.**

The wildfire protection values of fuel reduction are rapidly lost if not maintained. Annual maintenance by June 1 of each year is necessary.

**E. Typical home design and siting often does not recognize adequate wildfire mitigation measures.**

A review of many wildfires has conclusively shown that most home losses occur when: (1) there is inadequate clearing of flammable vegetation around a house, (2) roofs are not fire resistant, (3) homes are sited in hazardous locations, (4) firebrand ignition points and heat traps are not adequately protected and (5) there is a lack of water for suppression.

### 4. GOALS

- A. Modify the continuity of high hazard vegetation fuels.
- B. Reduce the size and intensity of wildfires.
- C. Ensure defensible space is provided around all structures.
- D. Design fuel treatments to minimize tree removal.
- E. Ensure fuel treatment measures are maintained.
- F. Identify fire safe structural features.
- G. Help homeowners protect their homes from wildfire.

### 5. WILDFIRE MITIGATION MEASURES

Wildfire mitigation measures are designed to accomplish the Goals by providing and maintaining defensible space and treating high hazard fuel areas. Fire hazard severity is reduced through these mitigation measures. The Wildland Fire Safe Plan places emphasis on defensible space around structures.

Mercy Way will separate parcels 1 and 2 then have a round-about at the common corners with parcels 1, 2 and 4. The road then turns south with a driveway to parcel 3 and a second driveway splitting off to parcel 3. Mercy Way terminates in a cul-de-sac on an adjacent parcel.

The road placement, standpipe location and fuel treatments will be extremely important in the development of these new lots. Fuel hazard reduction zones of at least 10 feet in width shall be installed along the road and driveways and annually maintained.

This parcel split is in a Moderate Fire Hazard Severity Zone. Wildland-Urban Interface Fire Areas Building Standards will be required in new construction. These standards address roofing, venting, eave enclosure, windows, exterior doors, siding, and decking.

Clearance along the road and around structures is very important and necessary. All trees in the fuel hazard reduction zones shall be thinned so the crowns are not touching. Branches on trees remaining shall be pruned up 10 feet as measured on the uphill side of the tree. Brush shall be removed. Grasses shall be kept mowed to a 2 inch stubble annually by June 1. Any tree crown canopy over the road shall be pruned at least 15 feet up from the road surface.

The fuel hazard reduction zone shall continue along both sides of the road and driveways and be at least 10 feet wide. This zone is in addition to the clearances required by state law. The State required Fire Safe clearances (PRC 4291) shall be implemented around all structures (See CDF Guideline). Clearances may be required at the time of construction.

**More restrictive standards may be applied by approving El Dorado County Authorities. Approval of this plan does not by itself guarantee approval of this project.**

### **Mitigation Measures:**

- **Lots over 1 acre shall be landscaped to Firescaping Standards Zones I and II. (See Appendix A)**
  - a. **Responsibility- homeowner at the time construction starts**
- **All new residences shall have an approved 13-D fire sprinkler system or meet fire flow as prescribed in the 2007 California Fire Code. The fire sprinkler system shall be approved by Rescue Fire Protection District and installed by a licensed contractor.**
  - a. **Responsibility- builder/homeowner**
- **Mercy Way and turnaround on the project shall have an all-weather surface and constructed to El Dorado County Department of Transportation (DOT) specifications. The weight limit (75,000 lbs) on the road shall be consistent with the 2007 California Fire Code.**
  - a. **Responsibility- developer**
- **Driveways shall be 12 feet wide.**
  - a. **Responsibility- builder/homeowner**
- **No parcel shall have a shared driveway. Each driveway shall connect directly to Mercy Way.**
  - a. **Responsibility- developer/builder**
- **Driveways over 16% grade shall be paved.**
  - a. **Responsibility- builder/homeowner**

- All private driveway gates shall be inset on the driveway at least 30 feet from the road. Gate opening shall be 2 feet wider than the driveway. Knox lock assess shall be provided to the fire department and meet their specifications for all gates.
  - a. Responsibility- homeowner
- Driveways over 300' shall have a turnaround within 150' of a residence but not closer than 50'. The standpipe shall be located on the turnaround.
  - a. Responsibility-builder/homeowner
- All homes shall have Class A listed roof covering.
  - a. Responsibility- builder/homeowner
- Decks that are cantilevered over the natural slope shall be enclosed.
  - a. Responsibility- builder/homeowner (See Appendix C for guidelines)
- The houses shall be constructed with exterior wall sheathing that shall be rated noncombustible.
  - a. Responsibility-builder/homeowner
- Windows and doors on the sides of the structure shall have tempered glass and fire resistant frames.
  - a. Responsibility-builder/homeowner
- Rafter tails shall be enclosed with noncombustible material on the sides of the structure.
  - a. Responsibility-builder/homeowner
- Gutters and downspouts shall be noncombustible.
  - a. Responsibility-builder/homeowner
- Attic and floor vents shall be covered with ¼ inch, or less, noncombustible mesh and horizontal to the ground.
  - a. Responsibility-builder/homeowner
- All lots shall have a 30 foot setback from the property line for residences including any accessory buildings and a 30 foot setback from the center of the road.
  - a. Responsibility- builder/homeowner

**6. OTHER FIRE SAFE REQUIREMENTS**

- A. A 3,000+ gallon water tank filled for domestic use, fire sprinklers and fire protection shall be installed and plumbed with a standpipe with a NTS 2 ½" male hose connection. It shall have a valve at the connection. The tank and connect shall conform to Rescue Fire Protection District standards. (Diagram A)



- B. Contact El Dorado County Environmental Health for specific requirements for the shared use of domestic and fire protection water in a single tank.**
- C. The standpipe shall be located near the residence but not closer than 50' nor more than 150' and on a turnout/turnaround.**
- D. A 10' fuel hazard reduction zone along both sides of the road on the project property and a 10' zone along the driveways shall be installed and annually maintained by June 1.**
- E. The property owners shall be charged with the responsibility for forming a Home Owners Association (HOA) for maintaining the fuel treatment zone along the road.**
- F. Every 5 years the Fire Department may review fuel treatment zones with the residences to determine if additional fuel hazard reduction work is necessary.**
- G. A Notice of Restriction shall be filed with the final parcel map which stipulates that a Wildland Fire Safe Plan has been prepared and wildfire mitigation measures must be implemented. All road improvements and fuel hazard reduction zone requirements shall be completed prior to filing the final map.**
- H. The project shall meet all the Public Resource Codes 4290 as amended (the 1991 SRA Fire Safe Regulations- Article 2 Access, Article 3 Signing, Article 4 Water, Article 5 Fuels), County and Fire Department ordinances.**
- I. The home/property owner is responsible for any future fire safe or building code changes adopted by the State or local authority.**
- J. Composite deck material shall be allowed if it meets the specifications set in Chapter 7A of the California Building Code.**
- K. Mercy Way shall be posted "No Parking"**

#### **IV. Appendix**

**APPENDIX A**

**MERCY WAY**

**FIRESCAPING STANDARDS**

Firescaping is an approach to landscaping to help protect homes from wildland fires. The goal is to create a landscape that will slow the advance of a wildfire and create a Defensible Space that provides the key point for fire fighting agencies to defend the home. This approach has a landscape zone surrounding the home containing a balance of native and exotic plants that are fire and drought resistant, help control erosion, and are visually pleasing. Firescaping is designed not only to protect the home but to reduce damage to oaks and other plants.

Zone I

The zone extends for not less than 30 feet from the house **or to the property line which ever is less** in all directions and has a traditional look of irrigated shrubs, flowers gardens, trees and lawns. All dead trees, brush, concentrations of dead ground fuels (tree limbs, logs etc. exceeding 1inch in diameter) shall be removed. All native oak trees and brush species are pruned up to 6-8 feet above the ground as measured on the uphill side but no more than 1/3 of the live crown. The plants in this zone are generally less than 18 inches in height, must be slow to ignite from wind blown sparks and flames. Such plants should produce only small amounts of litter and retain high levels of moisture in their foliage year around. Gray pines shall be excluded from this zone. Native and exotic trees are permitted inside the Zone, but foliage may not be within 10 feet of the roof or chimney. Grass and other herbaceous growth within this zone must be irrigated or if left to cure must be mowed to a 2 inch stubble, chemically treated or removed. Such treatment must be accomplished by June 1, annually. This zone has built in firebreaks created by driveways, sidewalks etc.

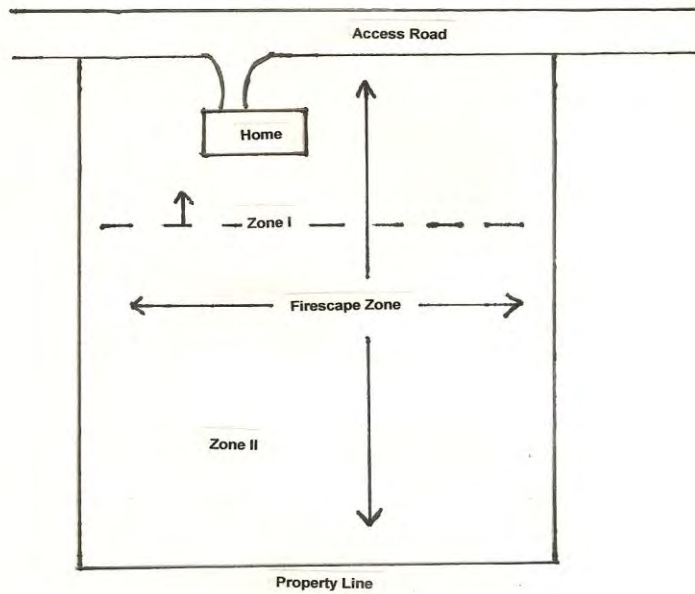
Zone II

This Zone adds 70 feet to Zone I and extends a minimum of 100 feet from the house in all directions, **or to the property line which ever is less**, and is a transition area to the outlying vegetation. The zone is a band of low growing succulent ground covers designed to reduce the intensity, flame length and rate of spread of an approaching wildfire. Irrigation may be necessary to maintain a quality appearance and retain the retardant ability of the plants. All dead trees, brush, concentration of dead ground fuels (tree limbs, logs etc.) exceeding 2 inches in diameter shall be removed. Annual grasses shall be mowed after they have cured to a 2 inch stubble by June 1, annually. Native trees and brush species may be preserved and pruned of limbs up to 8 feet above the ground as measured on the uphill side.

For All Zones With Oaks

Mature, multi stemmed Oaks can present a serious wildfire problem if untreated. Treat the Oaks as to the following specifications: (a) remove all dead limbs and stems and (b) cut off green stems at 10 feet above the ground as measured on the uphill side that arch over and are growing down towards the ground.

**APPENDIX A-1  
FIRESCAPING ZONES  
EXHIBIT**



**Typical Lot in Oak Woodland**  
(schematic, no scale)

## **APPENDIX B**

### **MERCY WAY FUEL TREATMENT SPECIFICATIONS For OAK WOODLAND Within The Designated Fuel Treatment Areas**

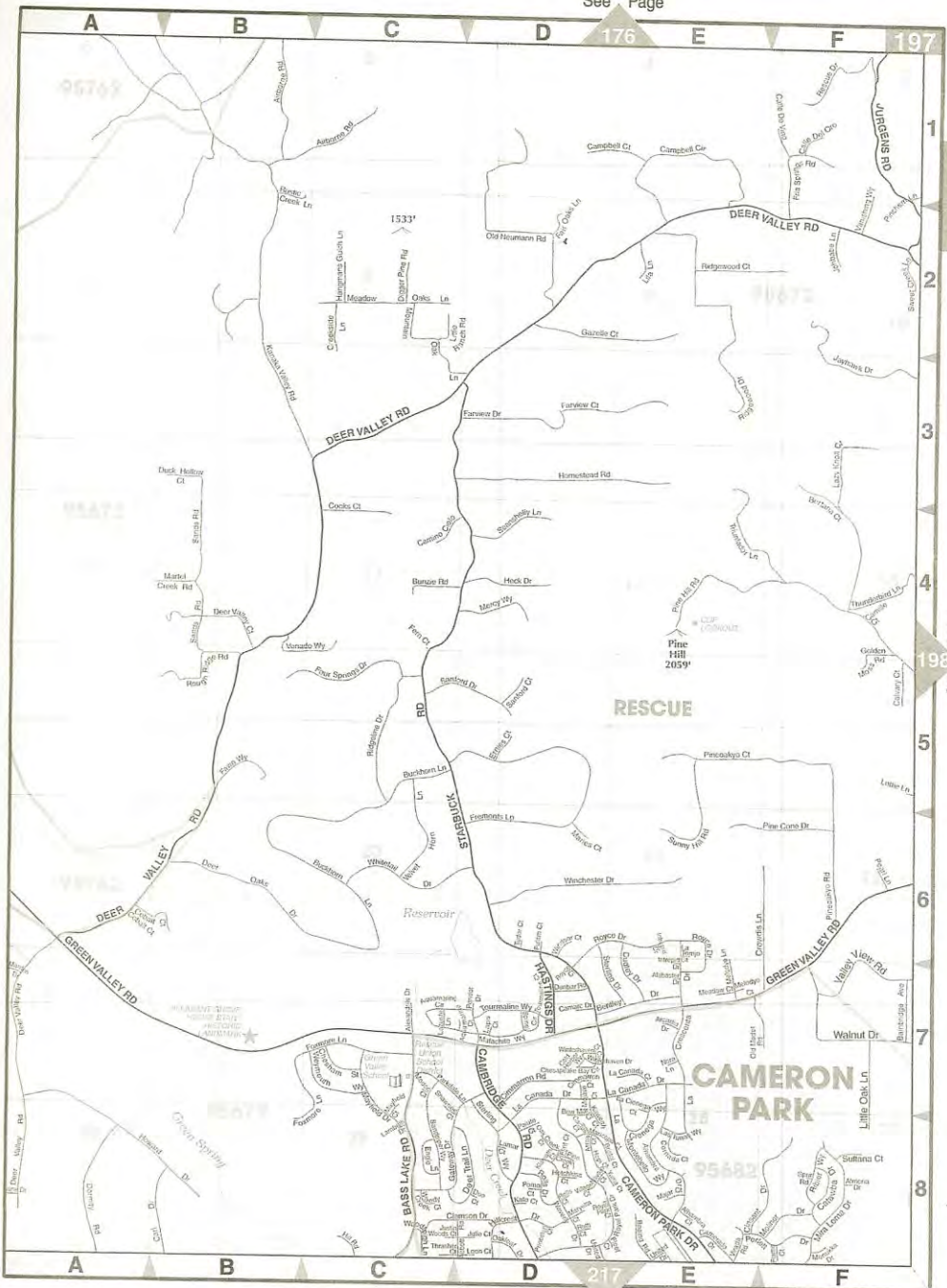
1. Leave all live trees.
2. Remove all dead trees.
3. Remove all brush.
4. Prune all live trees of dead branches and green branches 10 feet from the ground as measured on the uphill side of the tree, except no more than 1/3 of the live crown is removed. All slash created by pruning must be disposed of by chipping or hauling off site.
5. Annually by June 1, reduce the grass or weeds to a 2 inch stubble by mowing, chemical treatment, disking or a combination of treatments.
6. Mature, multi stem Oak trees: remove all dead limbs and stems, cut off green stems at 10 feet above the ground as measured on the uphill side that arch over and are growing down towards the ground.
7. Gray pines within 30 feet of a house shall be removed. Those pines in Zone II shall be isolated with no brush understory within the dripline of the tree.

## **APPENDIX C**

### **MERCY WAY ENCLOSED DECK GUIDELINES**

The purpose of enclosing the underside of decks that are cantilevered out over the natural slope is to help prevent heat traps and fire brands from a wildfire igniting the deck or fuels under the deck.

1. Does not apply to decks that are constructed using fire resistant materials such as concrete, steel, stucco etc.
2. Any composite deck surface shall comply with the ignition resistant standards set forth in Chapter 7A of the 2007 California Building Code.
3. Applies to decks one story or less above natural slopes.
4. Combustible material must not be stored under the deck.



EL DORADO COUNTY

# APN 10223155

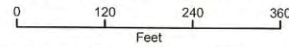


Disclaimer: This depiction was compiled from unverified public and private sources and is illustrative only. No representation is made as to accuracy of this information. Parcel boundaries are particularly unreliable. Users make use of this depiction at their own risk.

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Map displayed in State Plane Coordinate System  
(NAD 1983 California Zone 2, feet)

# LOT MAP

- SHEET INDEX**
- 1 TENTATIVE PARCEL MAP
  - 2 TYPICAL SECTIONS AND DETAIL
  - 3 PRELIMINARY GRADING SITE PLAN #1
  - 4 PRELIMINARY GRADING SITE PLAN #2
  - 5 PRELIMINARY DRAINAGE PLAN

**PREPARED BY**

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 TEL: (505) 825-5888  
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**PROJECT ADDRESS**

2100 N. TOWNSHIP AND RANGE  
 SECTION 10, T10N, R10E, M10M.  
 RESSESSOR'S PARCEL NO.  
 231-56-100

**DATE OF TOPOGRAPHY**

NO. OF PARCELS  
 4  
 MAIN PARCEL AREA  
 ACRES  
 5.02

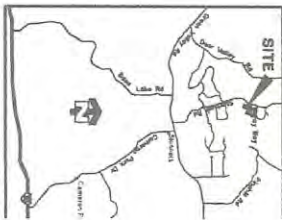
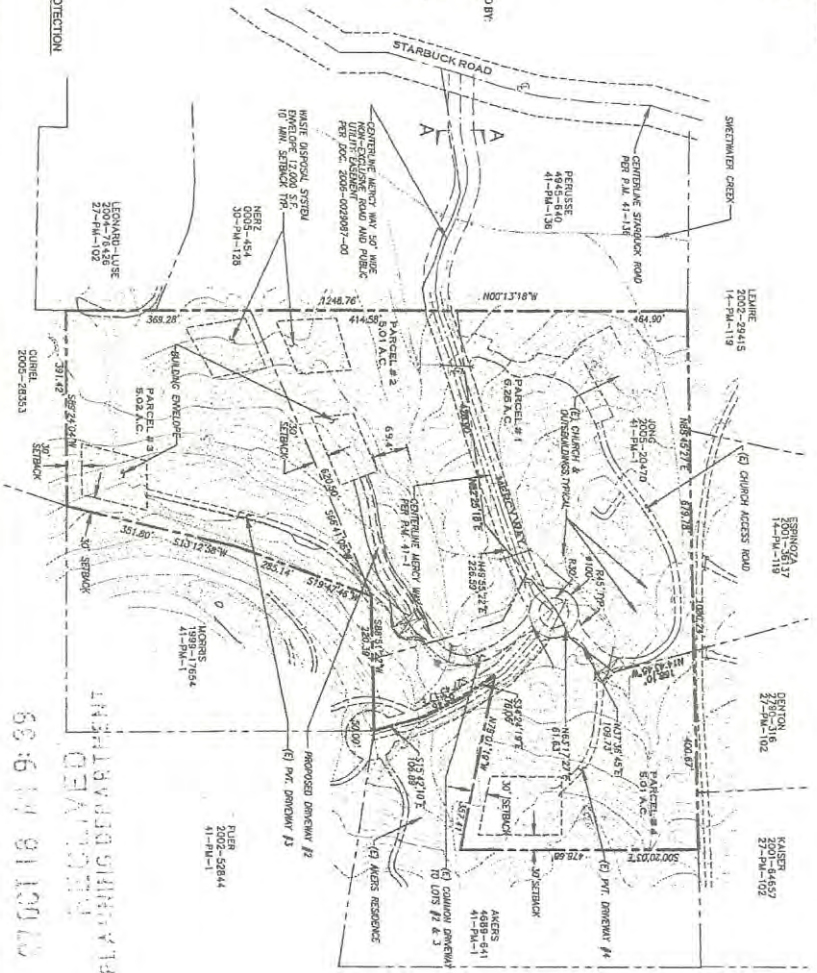
**DATE OF PREPARATION**

SEPTEMBER 14, 2007

**PROPOSED STRUCTURAL FIRE PROTECTION**

FOR THE PROPOSED SUBDIVISION

## TENTATIVE PARCEL MAP MINOR SUBDIVISION AT MERCY WAY RESCUE, EL DORADO COUNTY, CALIFORNIA SEPTEMBER, 2007



**LEGEND**

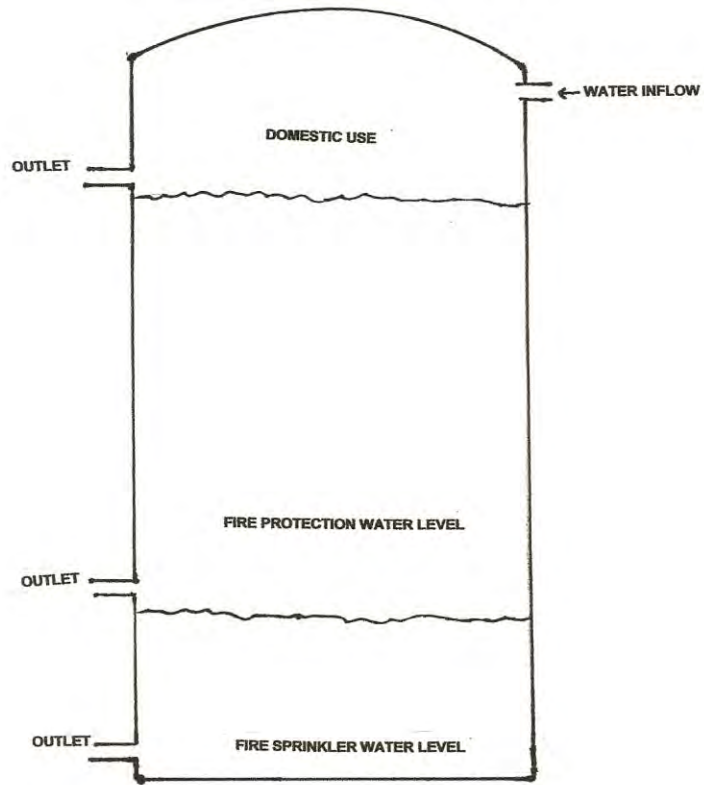
NOT TO SCALE

- SUBDIVISIONS**
- PARCEL 1 2728
  - PARCEL 2 2181
  - PARCEL 3 2185
  - PARCEL 4 2180

Zoning Administrator:  
 Approve/Denial Date:  
 Board of Supervisors:  
 Approve/Denial Date:  
 SHEET

# DIAGRAM A

**WATER STORAGE TANK**  
(SCHEMATIC)

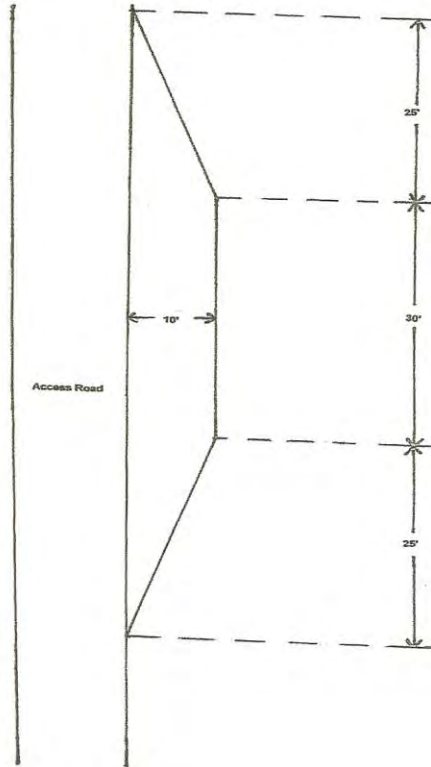


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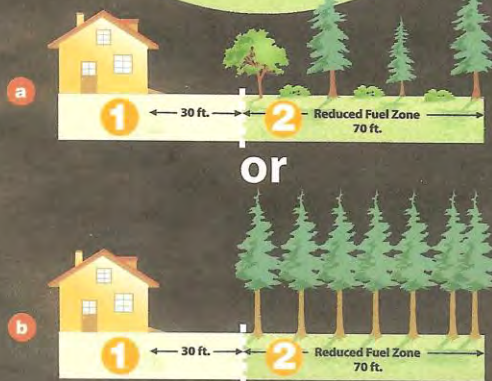


# DIAGRAM B

**DRIVEWAY TURNOUT**  
DIAGRAM  
(NOT TO SCALE)



# 100' DEFENSIBLE SPACE Make Your Home FIRE SAFE



Contact your local CDF office, fire department,  
or Fire Safe Council for tips and assistance.  
[www.fire.ca.gov](http://www.fire.ca.gov)

## Why 100 Feet?

Following these simple steps can dramatically increase the chance of your home surviving a wildfire!

A **Defensible Space** of 100 feet around your home is required by law.<sup>1</sup> The goal is to protect your home while providing a safe area for firefighters.

### 1 "Lean, Clean and Green Zone"

– Clearing an area of 30 feet immediately surrounding your home is critical. This area requires the greatest reduction in flammable vegetation.

### 2 "Reduced Fuel Zone."

– The fuel reduction zone in the remaining 70 feet (or to property line) will depend on the steepness of your property and the vegetation.

Spacing between plants improves the chance of stopping a wildfire before it destroys your home. You have two options in this area:

- a Create horizontal and vertical spacing between plants. The amount of space will depend on how steep the slope is and the size of the plants.
- b Large trees do not have to be cut and removed as long as all of the plants beneath them are removed. This eliminates a vertical "fire ladder."

When clearing vegetation, use care when operating equipment such as lawnmowers. One small spark may start a fire; a string trimmer is much safer.

Remove all build-up of needles and leaves from your roof and gutters. Keep tree limbs trimmed at least 10 feet from any chimneys and remove dead limbs that hang over your home or garage. The law also requires a screen over your chimney outlet of not more than 1/2 inch mesh.

1. These regulations affect most of the grass, brush, and timber-covered private lands in the State. Some fire department jurisdictions may have additional requirements. Some activities may require permits for tree removal. Also, some activities may require special procedures for: 1) threatened and endangered species, 2) avoiding erosion, and 3) protection of water quality. Check with local officials if in doubt. Current regulations allow an insurance company to require additional clearance. The area to be treated does not extend beyond your property. The State Board of Forestry and Fire Protection has approved Guidelines to assist you in complying with the new law. Contact your local CDF office for more details.



April 2005



