IN THE COUNTY COURT OF THE STATE OF OREGONSON COUNTY IN AND FOR THE COUNTY OF WASCO 2001 MAR 15 A 9: 42

IN THE MATTER OF THE WASCO COUNTY PLANNING AND DEVELOPMENT DEPARTMENT'S REQUEST TO APPROVE THE PROPOSED POST-ACKNOWLEDGEMENT LEGISLATIVE AMENDMENTS TO THE WASCO COUNTY ZONING ORDINANCE FIRE STANDARD TEXT TO REFLECT BEST AVAILABLE SCIENCE AND ACHIEVE BEST COMPATIBILITY WITH OREGON DEPARTMENT OF FORESTRY STANDARDS AND OREGON STATE FIRE CODE. (FILE NUMBER LUA-06-103)
LUA-06-103)

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Page 1 - ORDER

AMENDED ORDINANCE

NOW ON THIS DAY, the above-entitled matter having come on regularly for consideration, said day being one duly set in term for the transaction of public business and a majority of the Court being present; and IT APPEARING TO THE COURT: That the Wasco County Planning Department has requested a Post-Acknowledgement Plan Amendment for legislative amendments to the Wasco County Land Use and Development Ordinance fire standards text to reflect best available science and achieve best compatibility with Oregon Department of Forestry standards and Oregon State fire code; and pursuant to Measure 56, Wasco County sent notification to all affected landowners on August 3, 2006; and IT APPEARING TO THE COURT: That on August 15, 2006, the Wasco County Planning Department held a legally notified public workshop with the Wasco County Planning Commission, at the Gorge Discovery Center, to review back ground information and options for staff recommendations for the purpose of identifying preferred options and any potential needs for additional information prior to hearing; and IT APPEARING TO THE COURT: That on August 28, 2006, The Wasco County Planning Department held a legally notified public workshop, at the Maupin Community

Center, to review back ground information and options for staff recommendations for the 1 purpose of identifying preferred options and any potential needs for additional 2 3 information prior to hearing; and IT FURTHER APPEARING TO THE COURT: That on Tuesday, September 12, 4 2006, the Wasco County Planning Commission met to conduct a legally notified public 5 hearing on the above matter. Following receipt and review of evidence, the 6 Commission deliberated and, on a vote of 6 to 0 (1 Position Vacant) voted to elevate the 7 request for a Post-Acknowledgement Plan Amendment for legislative amendments to 8 9 the Wasco County Land Use and Development Ordinance fire standards text to reflect best available science and achieve best compatibility with Oregon Department of 10 Forestry standards and Oregon State fire code to the Wasco County Court with no 11 12 recommendation; and IT FURTHER APPEARING TO THE COURT: That the Wasco County Court met 13 at the hour of 10:00 a.m. on Wednesday, November 1, 2006, in the Wasco County 14 15 Courtroom, Room 202, of the Wasco County Courthouse, in The Dalles, Oregon, for a legally notified review of the Wasco County Planning Department's request for a Post-16 Acknowledgement Plan Amendment for legislative amendments to the Wasco County 17 18 Land Use and Development Ordinance fire standards text to reflect best available science and achieve best compatibility with Oregon Department of Forestry standards 19 and Oregon State fire code. A valid procedural challenge was made and the hearing 20 was rescheduled to December 13, 2006; and 21 IT FURTHER APPEARING TO THE COURT: That the Wasco County Court met 22

at the hour of 10:30 a.m. on Wednesday, December 13, 2006, in the Wasco County

P2001-0000 (45)

Page 2 - ORDER

23

1 Courtroom, Room 202, of the Wasco County Courthouse, in The Dalles, Oregon, for a 2 legally notified review of the Wasco County Planning Department's request for 3 amendments to the Wasco County National Scenic Area Land Use and Development 4 Ordinance fire standards text to reflect best available science and achieve best 5 compatibility with Oregon Department of Forestry standards and Oregon State fire code. The Court reviewed the record, heard the Staff recommendation and all relevant 6 testimony from the parties, then continued the hearing to the hour of 8:00 a.m. on 7 8 Wednesday, December 20, 2007, in Room 202 of the Wasco County Courthouse; and IT FURTHER APPEARING TO THE COURT: The County Court met at the hour 9 of 8:00 a.m. on Wednesday, December 20, 2007, in Room 202 of the Wasco County 10 Courthouse, considered the matter, and based upon the prior testimony, the Court, 11 being fully apprised in the premises, voted 3 - 0 to approve the siting standards, 12 defensible space standards, and construction Standards, voted 2 -1 to approve the 13 water standards, and voted 2-1 to approve the access standards, regarding the Wasco 14 County Planning Department's request for amendments to the Wasco County National 15 Scenic Area Land Use and Development Ordinance fire standards text to reflect best 16 17 available science and achieve best compatibility with Oregon Department of Forestry standards and Oregon State fire code, as laid out in Attachment A; and 18 NOW THEREFORE IT IS HEREBY ORDERED: That the request by the Wasco 19 County Planning Department for a Post-Acknowledgement Plan Amendment for 20 legislative amendments to the Wasco County Land Use and Development Ordinance 21

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Page 3 - ORDER

fire standards text to reflect best available science and achieve best compatibility with

Oregon Department of Forestry standards and Oregon State fire code is approved.

B2001-0100 (45)

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SIGNED this 7th day of March, 2007.

Approved as to Form:

Eric J. Nisley

Wasco County District Attorney

WASCO COUNTY COURT

Dan Ericksen, Judge

Sherry Holliday, Commissioner

Bill Lennox, Commissioner

P:\Long Range\Title III Forest Zone and Fire Safety\Fire Safety Standards\County Court\CC Order.doc

DETAILED TABLE OF CONTENTS

CHAPTER 10 FIRE SAFETY STANDARDS

<u>SECTION</u>		<u>PAGE</u>
10.010	PURPOSE OF FIRE SAFETY STANDARDS	10-1
10.020	APPLICIBILITY OF FIRE SAFETY STANDARDS	10-2
10.030	INTRODUCTION	10-5
10.110	SITING STANDARDS – LOCATING STRUCTURES FOR GOOD DEFENSIBILITY	10-8
10.120	DEFENSIBLE SPACE – CLEARING AND MAINTAINING A FIRE FUEL BREAK	10-12
10.130	CONSTRUCTION STANDARDS FOR DWELLINGS AND STRUCTURES DECREASING THE IGNITION RISKS BY PLANNING FOR A MORE FIRE SAFE STRUCTURE	10-16
10.140	ACCESS STANDARDS - PROVIDING SAFE ACCESS TO AND ESCAPE FROM YOUR HOME	10-20
10.150	FIRE PROTECTION OR ON SITE WATER REQUIRED - ENSURING DWELLINGS HAVE SOME FIRE PROTECTION AVAILABLE THROUGH MANNED OR UNMANNED RESPONSE	10-32
10.210	FIRE SAFETY STANDARD REVIEW PROCESS	10-36
10.220	MODIFICATION OF FIRE SAFETY STANDARDS	10-36
10.230	FIRE SAFETY PLAN	10-37
10.240	REVIEW OF REQUESTED MODIFICATIONS	10-38

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CHAPTER 10 FIRE SAFETY STANDARDS

SECTION 10.010 Purpose of Fire Safety Standards:

- A. To inform and notify rural residents that fire protection services are limited or non existent through much of Wasco County.
- B. Encourage residents to become familiar with the structural fire protection district that will respond to their property (if there is one), and
- C. To notify them that the volunteer fire protection districts can only serve if they have sufficient trained volunteers to meet demands. <u>Please consider volunteering.</u>
- **D.** To reduce threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.
- E. To educate current and future property owners about fire safety standards and regulate fire standards in a manner that decreases review process where possible while communicating requirements as clearly as possible.
- **F.** To provide flexibility where necessary by providing for a review process that will allow modifications to fire safety standards where necessary with comment and recommendations from emergency responders.
- **G.** To establish consistency between standards currently listed in various zones, Oregon Department of Forestry regulations, and best available science.

P2001-0100 (45)

SECTION 10.020 Applicability of Fire Safety Standards

A. Applicability of Fire Safety Standards in Different Rural Zones:

County Ordinances affect all rural zones (all zones outside an Urban Growth Boundary). All rural zones are subject to fire standards but the applicability of the specific standards varies by zone and by use type. Zoning terms used to classify groups of land use designations in the Fire Safety Standard Checklist, Sections 10.110 to 10.150, are defined in the following table (any more specific distinctions based on parcel shape or specific zoning designation are also called out in the checklist):

Zoning Classifications Referred to in the Fire Safety Standards Checklist, Sections 10.110-10.150		Zones
All Zones - All rural zones anywhere outside an adopted Urban Growth Boundary	Exception Areas and Smaller Lot Residential- Exception areas with smaller lot residential, rural commercial, rural industrial or rural community land use designations.	R-2, R-C, R-I, A-R, RC-TV, RC-Wamic
	Resource Zones and Large Lot Residential- Resource or recreation zones and rural residential areas with larger minimum lot sizes.	FF-10, RR-10, RR-5, A-1 (160), A-1 (40), F-1 & F-2

Please also work with the County Planning Department if you are permitting only an accessory structure or replacing or adding onto an existing home commercial or industrial structure and they will help you determine which standards do apply to that specific type of land use in accordance with (B) below.

B. Applicability of Fire Standards to Different Types of Land Uses

1. Zones affected by Fire Standards

Fire standards are applicable in all rural zones but different standards may apply in different types of zones. The applicability of fire standards by zone is discussed in (A) above and noted in fire safety standards checklist below, **Sections 10.110 to 10.150**. The checklist also highlights any specific differences in the applicability of the standard due to size of lot or specific zoning.

2. Uses affected by Fire Standards

Some fire standards are applicable only to new dwellings while others are applicable to all kinds of structures and alterations to structures. The following table lists the fire safety standards applicable to different types of development.

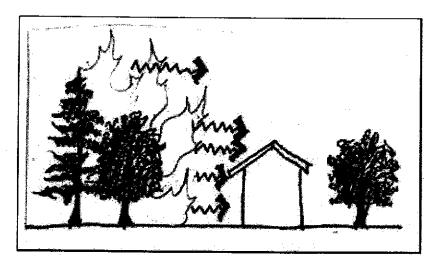
Applicability of Fire Safety Standards to Different Types of Land Uses			
Siting – (A) Avoid slopes > 40	% & (B) Set back from top of slopes		
All New Dwellings and > 30%			
Rural Commercial or Defensible Space – (A) Fire for	uel break, & (B) Minimum of 50 feet		
Rural Industrial to unmanaged lands around st			
Buildings Construction Standards – (A) Roofing, (B) Spark Arresters, (C)		
CUP, Subject to Clear Clean & Protected Decks (E) Overhanging trees. (F) Und	s, (D) Screened Exterior Openings,		
	derground Utilities, (G) Stand Pipe		
-	e & Minimum Driveway widths,		
	opes, and Pull Outs, (C) Physical		
- I - I - I - I - I - I - I - I - I - I	s on Driveways, (D) Turnarounds, Sates, (G) Signs, (H) Roads to the		
property.	dates, (G) Signs, (H) Roads to the		
	Structural Fire Protection Required		
	%, (B) Set back from top of slopes >		
Relocated Dwellings 30%	70, (b) Oct back from top of diopes		
(Replacement in a new Defensible Space - (A) Fire fu	uel break, & (B) Minimum of 50 feet		
location) to unmanaged lands around str			
Construction Standards - (A)	Roofing, (B) Spark Arresters, (C)		
Clear Clean & Protected Decks	s, (D) Screened Exterior Openings,		
(E) Overhanging trees, (F) Und	lerground Utilities, (G) Stand Pipe		
Access - (A) Improved Surface	e & Minimum Dri v eway widths,		
(B) Tum Radius, Maximum Slo	pes, and Pull Outs, (C) Physical		
Clearance and Fire Fuel Breaks	s on Driveways, (D) Turnarounds,		
(E) Bridges and Culverts, (F) G			
Replacement Dwellings to unmanaged lands around str	el break, & (B) Minimum of 50 feet		
1 an ana	Roofing, (B) Spark Arresters, (C)		
	, (D) Screened Exterior Openings,		
	erground Utilities, (G) Stand Pipe		
Access – (A) Improved Surface	e & Minimum Driveway widths		
	pes, and Pull Outs, (C) Physical		
	s on Driveways, (D) Turnarounds,		
(E) Bridges and Culverts, (F) G	ates, (G) Signs		
<u>Defensible Space</u> – (A) Fire fu	el break, & (B) Minimum of 50 feet		
Improved Expanded to unmanaged lands around str			
	Roofing, (B) Spark Arresters, (C)		
	, (D) Screened Exterior Openings,		
	erground Utilities, (G) Stand Pipe		
Access – (C) Physical Clearance			
Driveways, (F) Gates, (G) Signs			
Accessory Buildings 30%	6 & B. Set back from top of slopes >		
Defensible Space – (A) Fire fu	ol brook		
	Roofing, (B) Spark Arresters, (C)		
Clear Clean & Protected Decks	(D) Screened Exterior Openings,		
	erground Utilities, (G) Stand Pipe		
Access – (C) Physical Clearance	ce and Fire Fuel Breaks on		
Driveways, (F) Gates, (G) Signs			

Accessory or Agricultural Structures	<u>Construction Standards</u> – (A) Roofing, (B) Spark Arresters, (C)
the second of Agricultural Other City of	Clear Clean & Protected Decks (D) Screened
	Exterior Openings,
	(E) Overhanging trees, (F) Underground
	Utilities, (G) Stand Pipe
	Fire Mitigation Plan shall be submitted
Land Divisions	identifying all home sites, building envelopes,
	and access as necessary to demonstrate
	compliance with all applicable fire standards
	on proposed lots.

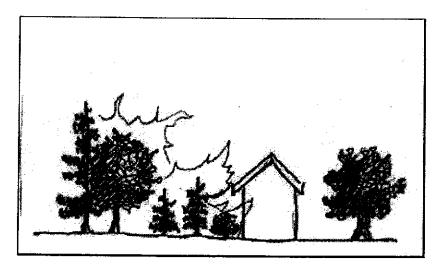
SECTION 10.030 Introduction

A. Cause of Wild Land and Fire Spread and Residential Starts

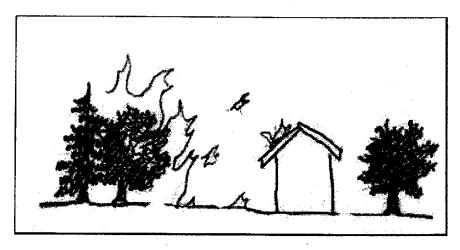
1. Radiated Heat – Fires are started by heat that radiates or spreads out from flames. (e.g. run your finger above a candle flame) Flames of every size radiate heat. Smaller ground level flames radiate less heat than larger flames generated by crown fires. The larger the flames near a structure the greater the chance of the structure being ignited by radiant heat. Radiant heat is also hotter above the flames than it is beside the flame so where a structure is located on a slope can also affect the risk of a structure igniting from radiated heat from a wild fire.



2. Convection or Direct Contact with Flames – Fires are also ignited by direct contact between the structure and the flame. When flammable material (wood piles, shrubbery, dead leaves or grass) accumulates under eaves or decks or near the house the structure is exposed to a much greater risk of ignition as the flammable fuel will feed the flames right at the structure.



- 3. <u>Firebrands or Contact with Flying Embers</u> Fires can start from burning embers carried aloft from as far away as a mile or more. Fire brands are most dangerous when they:
 - a. Land on flammable roofs or decks,
 - **b.** Settle or are sucked into openings in eaves, soffits, roof vents, under decking, or in crawl spaces through foundation vents, or
 - c. Fall on and ignite nearby vegetation or flammable materials especially if stored or accumulated under eaves, decks or other structural extensions that can trap the heat generated by the burning of flammable materials.



B. What's Necessary to Defend Against Wild Land Fire?

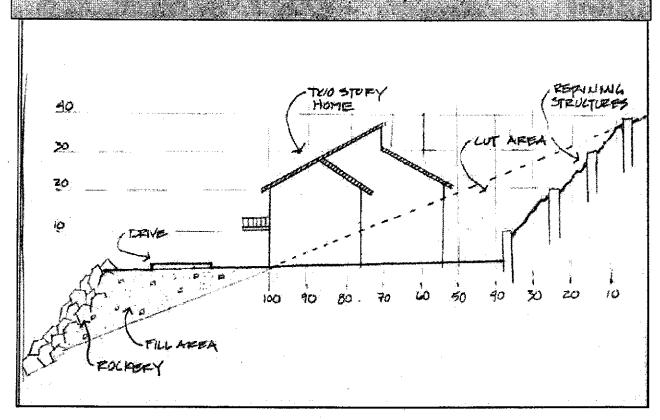
- 1. Access to structures and property.
- 2. Room to maneuver around structures.
- 3. Elimination and containment of fire fuels to limit ignition risks around the structure.
- **4.** Use of fire resistant materials to decrease ignition risks at the dwelling or structure.
- 5. On site water supplies to help extinguish a small fire before it requires a full response or becomes a wild land fire start.

C. Fire Safety Standards

Sections 10.110 to 10.150 state the Fire Safety Standards on one page. The zones in which the safety standards apply, the benefits of compliance with safety standards, and the necessary actions if an applicable standard can not be met are stated on the facing pages. **Sections 10.210 to 10.240** describe the review and self certification process and necessary steps to permitting a modification of fire safety standards.

SECTION 10.110 Siting Standards - Locating Structures for Good Defensibility

A. Does your building avoid slopes steeper than 40% (more than 40 foot elevation gain over 100 feet horizontal distance)?



A. This Standard is applicable to dwellings, accessory buildings, and agricultural buildings in: -All zones

A. If Y	es Then	A. If <u>No</u> Then
dist	ensive and costly grading and ground turbance will be avoided ergency responders will have room to	A modification of fire safety standards must be requested.
acc the • Stru	sess and maneuver around all sides of structure ucture will avoid exposure to the hottest e of fast moving flames climbing the	The fire mitigation plan submitted with the request for modification must propose mitigation measures such as:
siop • Stru	pe ucture will avoid potential of trapping	 Structural fire proofing (thermal windows, smaller windows, fire retardant building

heat rising off of flames on the slope

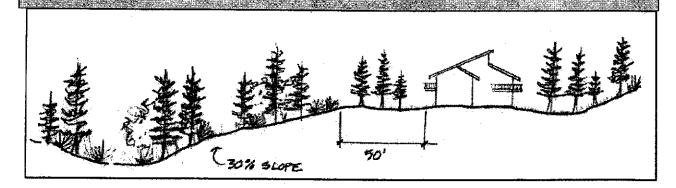
below.

- ng (thermal windows, smaller windows, fire retardant building materials on all sides)
- NFPA Sprinkler system if access standards cannot be met
- Expanded fire fuel breaks
- Additional irrigation on all sides of the home and an on site water supply capable of running the irrigation system for extended periods
- Evacuation plan

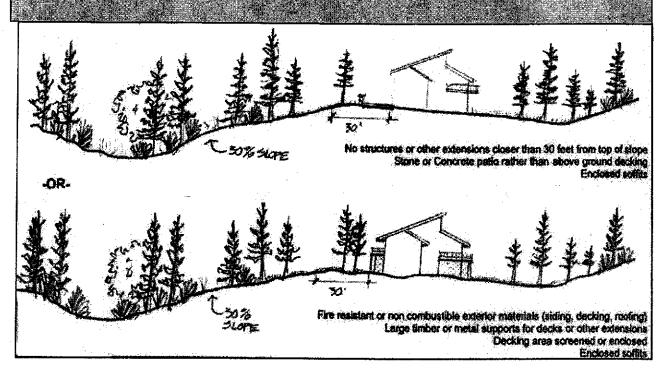
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B. Setbacks

1. Is your building set back from the top of slopes greater than 30% by at least 50 feet? -or-



2. Is your building set back from the top of slopes greater than 30% at least 30 feet? -and-

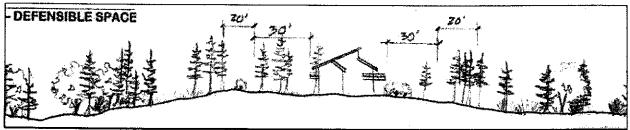


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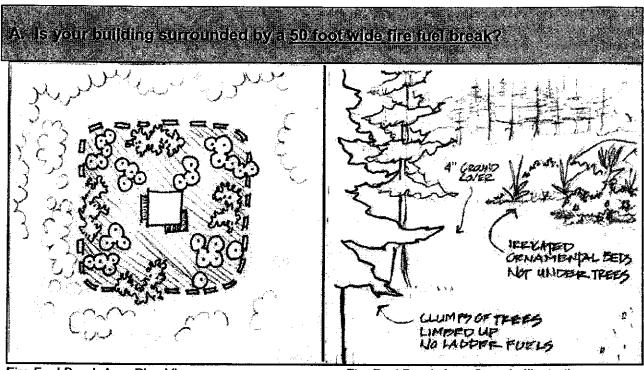
B. This Standard is applicable to dwellings, accessory buildings, and agricultural buildings in: -Resource and Large Lot Residential Zones		
B(1). If <u>Yes</u> Then	B(1). If <u>No</u> Then	
 Emergency responders will have room to access and maneuver around all sides of the building Building will avoid exposure to the hottest side of fast moving flames climbing the slope Building will avoid trapping heat rising off flames below. 	Refer to B(2) below.	
B(2) - If <u>Yes</u> Then	B(2) - If <u>No</u> Then	
 Emergency responders can still access and maneuver around all sides of the building Building will be closer to the hottest side of fast moving flames climbing the slope but additional fire proofing of the building will help mitigate risks of ignition Flattening the design of the façade on the down hill side of the building will help avoid potential of trapping heat rising off of flames on the slope below allowing the building to be constructed nearer the top of slope. 	A modification of fire safety standards must be requested. The fire mitigation plan submitted with the request for modification must propose mitigation measures such as: Eliminate decks and eaves Structural fire proofing (thermal windows, smaller windows, fire retardant building materials on all sides) NFPA Sprinkler system if access standards cannot be met Expanded fire fuel breaks Additional irrigation on all sides of the home and an on site water supply capable of running the irrigation system for extended periods Evacuation plan	

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SECTION 10.120 Defensible Space - Clearing and Maintaining a Fire Fuel Break



Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.



Fire Fuel Break Area Plan View

Fire Fuel Break Area Sample Illustration

MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:

- Ground cover maximum 4" tall:
- Trees limbed up approximately 8 feet from the ground.
- Trees kept free from dead, dry or flammable material;
- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;
- Keep shrubs and ornamental beds 15 feet away from edge of buildings and drip line of tree canopy;
 and
- Use well irrigated or flame resistant vegetation (SEE OSU Extension Service publication called "Fire Resistant Plants for Oregon Home Landscapes")

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A. This standard is applicable to all dwellings, accessory buildings, and agricultural buildings in:

-All Zones

This standard may be decreased to 30; in width for parcels <u>inside</u> an exception aleasor smaller for residentializone. The decrease to a 30; fire fuel break may be allowed without a request for modification of fire standards upon a demonstration that the 50 foot fire fuel break cannot be met.

A. If Yes Then

- Eliminating ladder fuels and limbing trees up helps keep fire on the ground
- Including trees in the fire fuel break can catch and deflect flying embers before they land on the structure
- Spacing between bedding plants or shrub groupings allows ornamental plantings that do not create a fuel bed
- Irngation provides moisture during the dry months and shading from healthy trees retains moisture longer. Moisture is key to helping dissipate fire energy.
- Shading by healthy limbed trees retains moisture longer. Moisture is key to helping dissipate fire energy near the home.
- Fire resistant vegetation also helps slow spread of fire toward the structure.

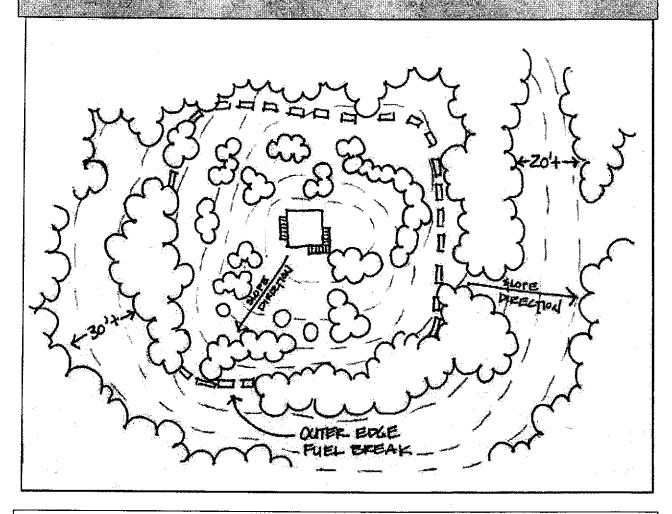
A. If No Then

A modification of fire safety standards must be requested.

The fire mitigation plan submitted with the request for modification must document that the fire fuel break cannot be met:

- Demonstration why an alternate site on the property cannot be used to allow for the full fire fuel break.
- Demonstration that an easement allowing for the full fire fuel break cannot be provided for by easement on adjoining land
- The fire mitigation plan submitted with the request for modification must also propose mitigation measures such as:
- Eliminate decks and eaves
- Structural fire proofing (thermal windows, smaller windows, fire retardant building materials on all sides)
- Additional irrigation on the side of the home where fire fuel break width requirements cannot be met and an on site water supply capable of running the irrigation system for extended periods
- Evacuation plan

B. Is dense unmanaged vegetation <u>beyond 50 feet</u> from the outer edges of your buildings, including any extensions such as decks or eaves, kept to a MINIMUM?

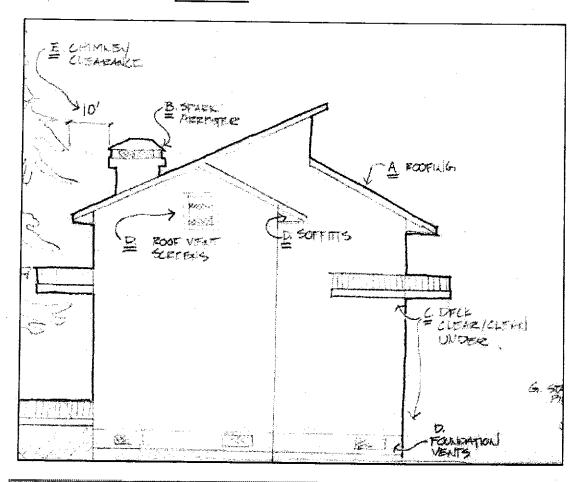


- Those developing steeper properties are <u>advised</u> to provide breaks in the tree canopy across the slope at the outer edges and extending beyond the fire fuel breaks.
- Land beyond the fire fuel break can always be managed for additional safety.
- This is the place for tight trees, dense under-story vegetation, tall waving grass, and unmanaged or less managed lands.
- The outer edge of the fuel break zone can be feathered back into the unmanaged area to provide for a more natural appearing edge condition.

B. «This Standard is applicable to all dwellings accessory buildings, and agricultural buildings in:
-Resource and Large Lot Residential Zones

B. If Yes Then B. If No Then If slopes cannot be avoided providing for This standard is advisory. No request for broad breaks in the canopy across the modification of fire safety standards is slope 20-30 feet and more can help limit required if it cannot be met. the spread of a canopy fire up slope. Keeping some wild unmanaged areas is OK if they are far enough from the structure that a wild fire's progress will be slowed by the decrease in fire fuels as approaches developed areas. **NOTE:** slope hazards increase the threat of structural fire ignition by increasing the chance of a wild land fire getting into and traveling through the tree canopy. If you are developing in a wooded area with steep slopes, every attempt should be made to locate away from the steeper ground. (see 10.110(A) and (B) above)

SECTION 10.130 <u>Construction Standards for Dwellings and Structures – Decreasing the ignition risks by planning for a more fire safe structure.</u>



A distribution of the interest control of the product of the control of the contr

A(1) & (2) These Standards are applicable to all dwellings accessory buildings;		
A(1). If Yes Then	A(1). If No Then	
Your roof will resist ignition from fire brands. Fire resistant roofing is one of the most important standards of defensibility	There is no way to mitigate risks of a wild land fire ignition related to use of more flammable roofing. Fire brands can be carried over a quarter mile to land on a roof.	
A(2). If <u>Yes</u> Then	A(2). If No Then	
Sparks and embers in the fire box of a fireplace or stove will not be allowed to escape through the chimney and start a wild land fire.	Spark arresters are common and widely available. There is no alternative to the requirement that they be installed and maintained.	

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Chapter 10-Fire Safety Standards

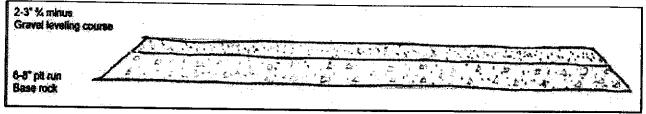
- E. is your structure designed, built, and maintained to include the following . . features and materials necessary to make the structure more fire resistant?
 - Indian kon Milimi nacks berkept dies of the wood, item rethe building material of y
 line of subject of arc other sample them called Will decay less than three
 (e.g. observed also be accomed with percombositely conceins resistant
 mest screening memorial with opening Winnings in a color to beck as required
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agricultural buildings or structuresAll Zönes	to dwellings, accessory buildings, and in:
B(1). If <u>Yes</u> Then	B(1). If No Then
Horizontal extensions, like decks, will be protected from the accumulation of fire fuel. Horizontal extensions create a heat trap for heat if flames are generated beneath them. Limiting fire fuels under horizontal extensions and screening to keep embers or fire bombs from getting in under lower decks will help eliminate the risk of heat being trapped under a deck or porch and igniting a structure.	There is no alternative to the screening and maintenance required under and around the extenor of a structure, its decks, and other horizontal extensions.
B(2). If Yes Then	B(2). If <u>No</u> Then
Vents are built to funnel air through enclosed areas of a structure. Screening on the vents or behind vent louvers ensure that embers are not sucked into the hard to reach recesses behind the vents	There is no alternative to the screening of exterior vents and openings.
B(3). If Yes Then	B(3). If No Then
Healthy green trees around the house can be retained and may actually help shelter the dwelling from fire brands. Trees and their debris must be maintained in a clean healthy condition.	If maintenance of trees near or overhanging the house is too onerous the trees can be removed. NOTE: The presence of trees has been shown to have the benefits discussed in 10.120(A) above if properly maintained.
B(4). If Yes Then	B(4). If No Then
 Threat of a fire start due to downed service lines will be minimized. Access to and around the structure will be simplified by limiting aerial access to the structure to a single location. Responders will be able to shut down main power so they can respond safely to the structure at the main service switch. 	There is no alternative to the requirement that private utility service routes be kept clear and that development of new buildings or structures served by electricity have a clearly marked power disconnect switch at the pole or off grid power source.
B(5). If Yes Then	B(5). If <u>No</u> Then
This stand pipe will be available to the homeowner for use to help contain smaller fires prior to emergency responders getting to the site.	Rural response times are always longer than in town. The land owner must do what they can to provide immediate response to small fire starts. No alterative is provided to provision of a standpipe 50 feet from all combustible structures.

SECTION 10.140 <u>Access Standards - Providing safe access to and escape from your home.</u>

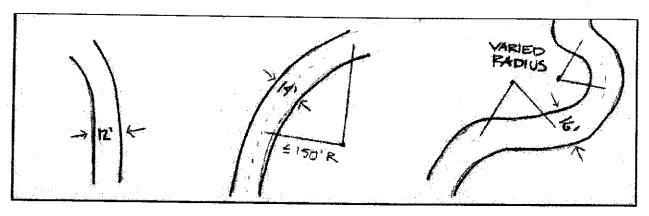
IMPROVED SURFACE REQUIREMENTS



90-95% Compaction

Driveway surface standards shall meet the specifications above or meet an alternate design standard established by a licensed engineer who will certify that the alternate design standard is capable of supporting 75,000 pound gross vehicle weight year round, wet or dry. Compliance shall be demonstrated prior to inspection by County Road Department to confirm compliance with road approach permit.

MINIMUM DRIVEWAY WIDTHS



Minimum all improved width is 12 feet on straight sections And through gentle curves

Minimum improved width is 14 feet on single curves with less than 150 foot radius

Minimum improved width is 16 feet when curves are linked or located on a slope in excess of 10%

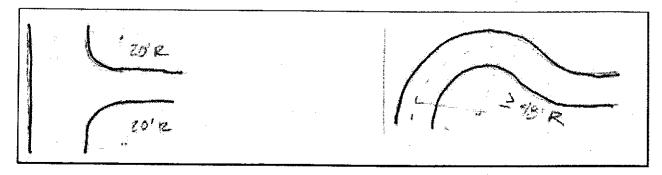
Pacon-0100 (45)

A. This Standard is applicable to residential driveways in: All Zones	
A. If Yes Then A	A. If <u>No</u> Then
Emergency responders will be able to bring all vehicles onto your property and to your building site.	A modification of fire safety standards must be requested. The fire mitigation plan submitted with the request for modification must propose mitigation measures such as: A demonstration why standards cannot be met and that an alternate site will not allow standards to be met. Proposed alternate road lay out that can allow the best access possible to the building site. NFPA Sprinkler system if alternate access standards cannot provide for timely response Expanded fire fuel breaks Additional irrigation on all sides of the home and an on site water supply capable of running the irrigation system for extended periods Structural fire proofing (thermal windows, smaller windows, fire retardant building materials on all sides)

Chapter 10-Fire Safety Standards

b. Is routed welling sincessed by and iveryny with convex each slopes that are transmis provided as needed to allow vehicles to pass safely?

CAN LARGE EQUIPMENT MAKE IT AROUND THE TURNS IN YOUR DRIVEWAY?



Minimum 20' turn radius onto driveway from road.

Minimum 48' turn radius for curves or switchbacks in the driveway. Larger radius, more gentle turns are desirable where possible.

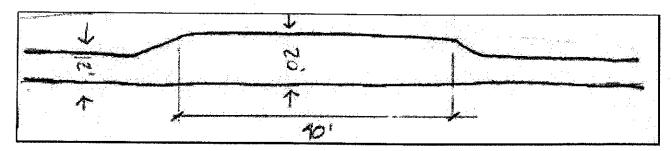
IS THE SLOPE OF YOUR DRIVEWAY GENTLE ENOUGH FOR EQUIPMENT TO GET UP AND DOWN SAFELY?



Maximum steady grade of 10% or 10 feet of elevation gain over 100 feet of distance

Maximum steady grade of 10% may be exceeded for short pitches. Short (up to 100 foot lengths) intermittent sections may be up to 12% No more than three 100' lengths in 1,000 feet.

IF YOUR DRIVEWAY IS LONGER THAN 200 FEET ARE TURNOUTS PROVIDED ALONG ITS LENGTH?

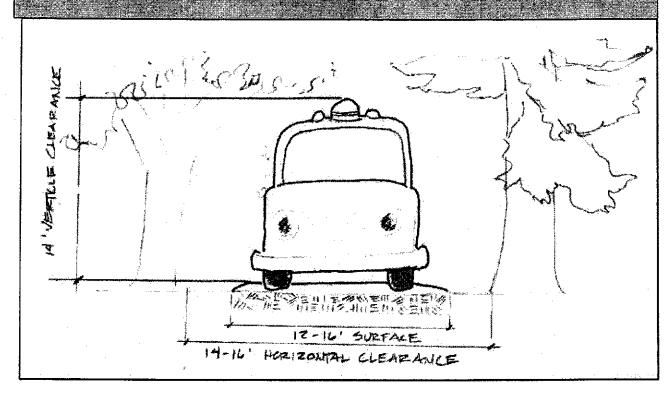


Turnouts need to be provided at least every 400 feet. Turn outs are intended to allow vehicles to pass safely, especially during an emergency. This should be kept in mind when siting the turnouts. Steeper slopes or tighter corners may require turnouts to be located closer than every 400 feet.

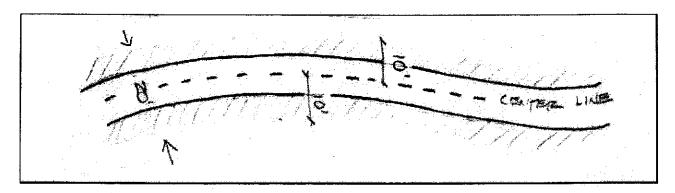
P2007400 (45)

В.	B. This Standard is applicable to all residential driveways in:		
В.	If <u>Yes</u> Then	B. If No Then	
•	Emergency responders will be able to bring all vehicles onto your property and to your building site.	See (A) above	
•	You will be able to get off your property as the fire equipment accesses the site.		

P2007-010(45) Chapter 10-Fire Safety Standards C. Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?



Responding vehicles need over 13' vertical and a minimum of 14' horizontal clearance to pass through vegetation along a driveway

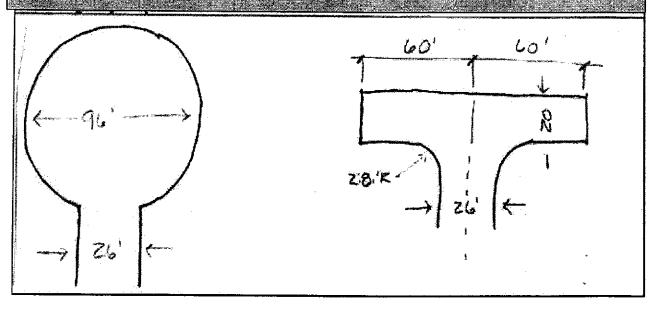


A fire fuel break extending 10 feet either side of the center line of the driveway is required.

C.	This Standard is applicable to all resident	al driveways in:
C.	If <u>Yes</u> Then	C. If No Then
•	Emergency responders will be able to access your property with out damaging your landscaping, native trees, or their vehicles.	See (A) above
•	If there is a need to respond from the driveway, there will be room to maneuver more safely around the emergency vehicles.	
	If there is a major wild land fire, the fire fuel break along the drive will help ensure that the driveway remains passable during the response.	

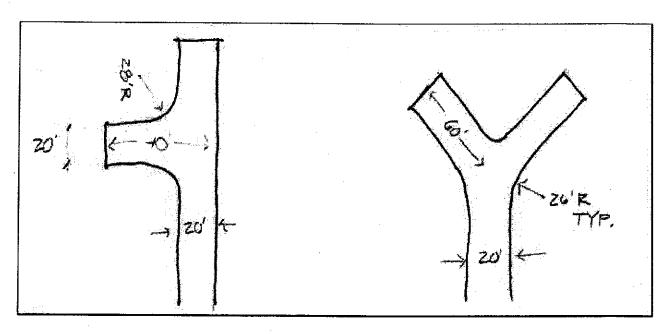
D2001-0100 (45)

D. If your residential driveway is longer than 150 feet, does it end with a turnaround that is passable for emergency responders?



95 foot diameter cul-de-sac

120' hammerhead



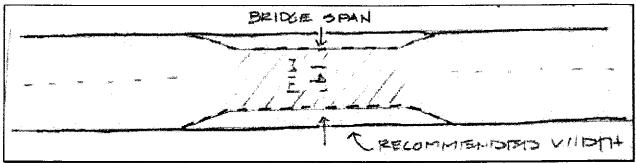
Acceptable alternative to 120' hammerhead hammerhead

Acceptable alternative to 120'

D. This Standard is applicable to residential o -All Zones	irivēways in:
D. If <u>Yes</u> Then	D. If No Then
Responders accessing your property in an emergency will be able to get turned around to leave the property, make room for additional responders, or to refill tenders and return.	See (A) above

Er Canthe Bridges or ou vertsicrossed to apolics your dwelling on your property accommodate emergancy response valuales?

Culverts larger than 6' diameter and all tridges that are relied on to access development must be engineered constructed and maintained to support 75,000 pounds gross vehicle weight. Culverts less than 6' diameter must be installed to manufacturers specifications including requirements that the culvert be embedded sufficiently to maximize water flow and minimize risk of scouring or undercutting below the pipe.



Bridges should match the finished width of the road or driveway. A minimum bridge width of 14 feet is required and may be built if pullouts 7' wide and 50 feet long are provided on either side of the bridge.

F. Can emergency responders get through your gate?

- · Gates need to swing or glide
- Gates need to be operable by a single person and to be maintained in operable condition
- The horizontal clearance through a gate must be a minimum of 14 feet
- Electric or locked gates must be operable or removable by emergency responders.

G. Are the signs you've posted for emergency responders legible and in good repair?

Signs required to:

- Limit parking
- Mark fire lanes
- Direct responders to on site water source
- Identify electrical service shut off @ the power pole or off grid power source, and
- Post weight limits on existing bridges or culverts

Must be made and maintained so that:

- Lettering is light colored and reflective against a dark background except red and white 12X18" fire lane, no parking signs Per Figure D 103.6 2004 Oregon Fire Code.
- Letters are a minimum of 4" tall
- Letters are a minimum of .5" wide letter strokes, and

Signs are posted and kept clear of vegetation so they are fully visible

\$2007- 8100 (45)

EaThis Standard is applicable to residential driveways in: -All Zones			
E. If <u>Yes</u> Then	E. If <u>No</u> Then		
Emergency responders will be able to get to or through your property without risk of damage to equipment or roadway structures	1		

F. This Standard is applicable to residential driveways in: All Zones			
F. If Yes Then	F. If No Then		
Emergency responders will be able to access your property.	No modifications exist for the requirement for a passable gate.		
GaTrijs Standard is applicable to residental d	rvewaysin:		
G. If <u>Yes</u> Then	G. If <u>No</u> Then		
Emergency responders will be able to access and navigate your property and the development site.	No modifications exist for the requirement for that clear and legible signage be installed and maintained.		

f2007-0100 (45)

H. Are the roads to your residential property maintained in a condition that is passable for emergency vehicles? Do you know who is responsible for required improvements and maintenance?

DEFINITIONS - WHO IMPROVES AND MAINTAINS WHICH EXISTING ROADS?

County Roads are:

- Fully dedicated public roads over which the County has full jurisdiction.
- The County is responsible for improvements and maintenance of county roads including bridges, culverts, ditches etc.
- Most, if not all public roads in the county meet the minimum access requirements for emergency vehicles

Local Access Roads are:

- Public roads over which the County has limited jurisdiction.
- The County is not liable for failure to improve the local access road or keep it in repair.
- The County has limited ability to spend money on local access roads and expenditure on local access roads is made only in emergencies and is subject to special review process prior to the expenditure.
- Landowners served by the road must improve or maintain the road if it is to stay in good repair.
- Some local access roads have organized maintenance organizations but most do not.
- Many local access roads meet minimum access requirements but some will require improvements to be made accessible to emergency responders and all will require maintenance.

Private Roads are:

- Neither public roads nor county roads.
- The County cannot improve or maintain private roads.
- Private roads serve more than one dwelling but are not required to be open to the public.
- The land owners served by the private road are solely responsible for its improvement and maintenance.
- Many private roads will require improvements to be made accessible to emergency responders and all will require maintenance.

Driveways are:

- Private access roads serving no more than two dwellings.
- The home owner bears sole responsibility for driveway improvement and maintenance.

Per ORS 368.001-368.031

ACCESS ROAD STANDARDS – WHAT MAY HAVE TO BE DONE TO ROADS LEADING TO BUT NOT PART OF YOUR PROPERTY?

If a legally created parcel is accessed by a County or State improved and maintained road, the applicant must demonstrate that driveway standards are met on the property and is responsible for continued maintenance of the driveway in accordance with standards.

If a legally created parcel is accessed by a local access or private road the road way will need

to be determined to meet county road standards or minimum standards for fire apparatus access road defined in Chapter 5 of the 2004 Oregon Fire Code prior to new construction. A fire apparatus access road needs to have an improved all weather surface 20 feet wide or sections of the road with a finished road surface width of 20' for a length of 40' at no greater than 400 foot intervals. All access standards, other than width, turn radius, and slope or grade that are applicable to driveways, (A) – (H), are also applicable to local access and private roads. Improvements made within a local access road will require a permit to do work in a public ROW.

Land divisions creating new parcels need to improve roads up to the point of access to the proposed land division to meet public road standards prior to final land division approval.

H, This Standard is applicable to residential development in:

H. If Yes Then

Emergency responders will be able to get to your property with any vehicle at a reasonable rate of speed with little risk of damage to equipment or roads.

H. If No Then

A modification of fire safety standards must be requested.

The fire mitigation plan submitted with the request for modification must:

- Employ applicable mitigation measures listed in (A) above - AND -
- Demonstrate that county road or fire apparatus access road standards cannot feasibly be met.
- Demonstrate that improvements achieve basic access (driveway standard) along sections determined incapable of meeting a higher standard.
- If basic driveway standard is not met at any point that section shall be clearly signed from both directions calling out the weight limit, width of narrow road section, or grade and length of steep road way etc.
- Ability of responders to get to a site is limited by the ability of an applicant to make and maintain off site improvements.
- The land owner will be notified of service limitations resulting from substandard access and required to document acknowledgement of limitations to emergency services prior to receiving a building permit.

12001-0100 (45)

SECTION 10.150 <u>Fire Protection or On Site Water Required</u> - Ensuring dwellings have some fire protection available through manned or unmanned response.

DEFINITION - FIRE DISTRICT FOR PURPOSE OF APPLICATION OF FIRE STANDARDS.An actively trained and reporting structural fire protection district having a boundary on file with the State Fire Marshal and recognized as a qualified structural fire protection district by the State Fire Marshal's Office.

A. Are you proposing to construct a dwelling inside a structural fire protection district? -OR:

ON SITE WATER IS REQUIRED IN BOTH URBAN AND RURAL ENVIRONMENTS FOR FIRE SAFETY (Fire Flow Requirements)

Dwellings less than or equal to 3,500 square feet, can rely on emergency responders to meet the on site water requirements if they are inside a fire protection district.

Dwellings in excess of 3,500 square feet require on site water in excess of the amount of water that could reasonably be delivered to the site by emergency responders. Dwellings in excess of 3,500 square feet need to provide an NFPA sprinkler system to meet on site water requirements. Provision of an NFPA sprinkler system meets fire code fire flow requirements.

Structures must be located inside a structural fire protection district if possible. It is not possible to be in a fire protection district when it is demonstrated that the dwelling cannot locate within, annex into a district, or contract with a structural fire protection district for service

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A This Standard is applicable in: All Zones - as specifically noted in the standard.				
A. If <u>Yes</u> Then	A. If <u>No</u> Then			
A special taxing district exists and volunteer or professional fire fighters will respond to and defend a structure, to the best of their ability.	Refer to (B) Below			
 Installation of an NFPA approved sprinkler system meets the fire flow requirements for rural structures when a responders' ability to bring water to the site cannot. (see other benefits of NFPA sprinkler systems in (B) below) 	·			

12001-0110 (45)

B. Are you proposing to construct a dwelling outside a structural fire protection district?

ON SITE WATER IS REQUIRED IN BOTH URBAN AND RURAL ENVIRONMENTS FOR FIRE SAFETY EVEN OUTSIDE A STRUCTURAL FIRE PROTECTION DISTRICT (Fire Flow Requirements)

Dwellings can be located outside a structural fire protection district upon demonstration that the parcel or home site cannot locate within, annex into or contract with a structural fire protection district for service. If a dwelling is proposed outside a structural fire protection district, you cannot rely on emergency responders to meet the fire code fire flow requirements. Providing an NFPA sprinkler system is required to meet fire flow requirements unless a request for modification of the fire safety standards has been requested and approved.

Dwellings in the Forest Zones and outside a structural fire protection district must provide a year round on site 4,000 gallon water source, or access to a stream or spring having continuous year round flow of at least 1 cubic foot per second

- The applicant must provide a written statement from Oregon Water Resources
 Department venifying that permits or registrations required for any water diversion or
 storage are obtained or not required
- Driveway access and a turnaround meeting the access standards in Section 10.140 must be extended to within 10 feet of the water source.
- Permanent signs shall be posted directing emergency vehicles to approved water sources.

B. This Standard is applicable in:

-All Zones - as specifically noted in the standard

B. If Yes Then

- Provision of an NFPA sprinkler system does not rely on a responder's presence to function and can often extinguish a small ignition before it grows to the point where a large scale response is necessary.
- Meeting fire flow requirements for larger structures can require an on site water source of 8,000 Gallons or more (see alternatives to sprinkler system).
- Installation of a sprinkler system in site built homes, particularly larger homes, is often the most affordable way to meet fire flow requirements. Installation of an NFPA approved sprinkler system can save a home owner a significant amount on their fire insurance rates and will pay for its self over time.

NOTE: Manufactured homes and historic structures may substitute on site water provision for inclusion of a residential sprinkler system when otherwise required. The county recognizes the disproportionately high cost of installation of NFPA sprinkler systems in this type of structure and the limited ability to alter design of structures when locating a historical structure or manufactured home. Applicants locating a Manufactured Home or historic structure on their property may elect to install an on site water source meeting the on site water requirements listed in this sub section. No request for modification needs to be made for these structures.

B. If No Then

If a NFPA sprinkler system is required but cannot be provided, a modification of fire safety standards must be requested. This is necessary because either no structural fire protection will be provided by a recognized district or because the dwelling exceeds the size determined to be defensible by local responders.

The fire mitigation plan submitted with the request for modification must include:

On site water source capable of meeting fire code requirements for water supplies in rural settings. Requirements for rural water supplies to meet fire flow requirements are generalized here.

- Minimum on site water storage 2,000 Gallons
- 1,500-3,500 s f. 4,000 Gallons
- >3,500-5,000 s.f. 8,000 Gallons
- >5,000 s.f. 13,000 Gallons

When on site water is provided to meet fire flow requirements within a fire protection district the on site source must be made accessible to responders.

When on site water is provided to meet fire flow requirements outside a fire protection district, then the fire mitigation plan shall include provisions by the home owner for applying the water to the structure in the event of a fire.

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Chapter 10-Fire Safety Standards

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Section 10.210 Fire Safety Standard Review Process

- A. <u>Compliance with applicable fire safety standards</u> is required by ordinance for new, replacement, and modified structures in all rural zones.
 - 1. Fire standards shall be made a part of the **conditions** of approval when conditional use permit, site plan or subject to standards review, partition, subdivision or other land use action is required prior to construction.
 - 2. Structures or alterations to structures that are subject to ministerial review must also comply with all applicable fire standards prior to receiving zoning approval on a building permit application.
 - 3. In all cases compliance with applicable fire standards shall be self certified prior to receiving zoning approval on a building permit.
- B. Continued compliance with fire safety standards is required.
 - 1. Responsibility of the land owner.
 - 2. Required compliance with fire safety standards shall be disclosed to future land owners prior to sale of any parcel. Where fire safety standards are applied through land use review as conditions of approval, the conditions of approval shall be recorded along with the notice of decision. Where fire safety standards are self certified prior to receiving zoning approval for a ministerial review of a building permit application, the self certification shall be recorded prior to receiving zoning approval on the building permit application.
- C. An illustrative checklist will be provided to land use permit applicants and building permit applicants that explains all necessary steps to comply with applicable fire safety standards. If applicable fire safety standards are or will be complied with the applicant shall self certify their compliance and record a statement of self certification in the county records prior to receiving zoning approval on a building permit application. If one or more applicable fire safety standards cannot be met the applicant may request a modification of standards. The requested modification must be approved and the terms of the approval recorded in the county records prior to receiving zoning approval on a building permit application.

Section 10.520 <u>Modification of Fire Safety Standards</u>

If one or more fire safety standard cannot be met, the applicant must request a modification to fire safety standards. The request for modification shall include a site specific fire safety mitigation plan. The modification of standards review shall be processed in accordance with the procedures in LUDO Section 2.060(A)(6). Notice prior to the decision shall be provided to commenting responders by the Planning

B2007- 8100 (45)

Director. The decision to approve or deny the request for modification shall meet all public notice requirements.

Section 10.230 Fire Safety Mitigation Plan

A fire safety mitigation plan is required when an applicant needs to request a modification to one or more fire safety standards listed on the self certification check list. A fire safety mitigation plan is also required for any land division creating lots that can accommodate dwellings.

- A. <u>Contents of a fire mitigation plan</u> include one or more maps and accompanying narrative statement addressing the following:
 - 1. Site description
 - 2. Documentation of fire protection service or proposed plan for on site fire protection
 - 3. Documentation of on-site water supply where required
 - **4.** Driveway construction plan including gate features, size and locations of bridges or culverts and proposed signage
 - 5. Documentation of fuel break areas if land on adjoining properties is relied on to meet fuel break requirements
 - **6.** Public or private road plans for new roads to serve proposed land divisions (including location, size, and type of bridges and culverts)
 - 7. Other information deemed necessary to allow adequate review of the request for modification

B. Statement of need

A clear statement of why the fire safety standards cannot feasibly be met.

C. Risk Assessment

An assessment of increased risk of wildfire damage if standard is modified. Risk assessments shall consider the purpose of the standard that cannot be met, the specific proposal, and site conditions to determine what, if any, additional exposure to wild land fire risks could be created by approval of the modification to fire safety standards. The consideration shall include increased risk of the proposed structure becoming a source of ignition and risks to the proposed structure from a wild land fire ignited elsewhere and traveling through the site.

D. <u>Statement of Additional Action Proposed to Eliminate or Minimize Increased Risks</u>
A clear list of additional measures proposed by the applicant to address any increased risks identified in the risk assessment.

D2007-0100 (45)

Section 10.240 Review of Requested Modification(s)

A. Planning Director Shall Seek Review

- 1. The Planning Director shall request and consider the comments and recommendations of local emergency responders, including ODF and the State Fire Marshal's Office when making the final decision on a request for modification of fire safety standards. The complete fire safety mitigation plan shall be forwarded to all commenting responders including the deputy state fire marshal.
- 2. Comments and recommendations by local responders shall be provided to the Planning Director within 15 days.

B. Responses to the Director's Request for Review

- 1. Responders' comments and recommendations shall do one of the following:
 - a. Support the modification with mitigation measures proposed by the applicant.
 - **b.** Support the modification with a recommendation for alternate mitigation measures detailed by the responders.
 - c. Accept the request for modification conditionally though minimum standards cannot be met. This will be done only when the responder commenting on the request can not recommend feasible means to mitigate risks resulting from approval of the modification. Acceptance of a modification that cannot be fully mitigated or meet minimal standards will also include an assessment of any limitations of service that may accompany approval of the modification.

E.g. an existing off site bridge is located along a private road accessing the applicant's dwelling and many existing dwellings. The bridge is weight limited but cannot be feasibly upgraded for the one new home. One or more responders may require that the weight limit of the existing bridge be determined and clearly posted and they may also elect to notify the current land owner and all other residents that larger responding vehicles will not respond to calls accessed by that bridge.

- d. Recommend denial of the requested modification(s) on the grounds that:
 - (1)The proposed modification is not necessary because standards can and should be met. Including consideration and selection of an alternative location for the development.
 - (2)Approval of the proposed modification will result in undue risk to life and safety.

f2007-0100 (45)

- 2. Comments and recommendations from emergency responders shall be supported by reasons sufficient to allow the Planning Director to weigh the evidence and arguments prior to deciding to grant, conditionally grant, or deny a request for modification of fire safety standards.
- 3. Approval or denial of a modification to standards is not subject to variance criteria in the LUDO.
- 4. A modification of standards can be reviewed and decided in conjunction with another land use decision where other land use permits are required.
- Approval of a modification of standards is subject to administrative review, public notice and the opportunity for further review on appeal under LUDO Section 2.160.
- 6. All self certifications may be verified by staff site visits at any time.