IN THE COUNTY COURT OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

FILED
WASCO COUNTY

2007 JAN -9 P 1:44

KAREN LEBRETON COATS
COUNTY CLERK

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)

) 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

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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 FURTHER APPEARING TO THE COURT: That on Tuesday, September 12, 2006, the Wasco County Planning Commission met to conduct a legally notified public hearing on the above matter. Following receipt and review of evidence, the Commission deliberated and, on a vote of 6 to 0 (1 Position Vacant) voted to elevate the request for 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 to the Wasco County Court with no recommendation; and

IT FURTHER APPEARING TO THE COURT: That the Wasco County Court met at the hour of 10:00 a.m. on Wednesday, November 1, 2006, in the Wasco County 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-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. A valid procedural challenge was made and the hearing was rescheduled to December 13, 2006; and

IT FURTHER APPEARING TO THE COURT: That the Wasco County Court met at the hour of 10:30 a.m. on Wednesday, December 13, 2006, in the Wasco County

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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-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

IT FURTHER APPEARING TO THE COURT: That the Court reviewed the record heard the Staff recommendation and all relevant comments from the parties. The Court considered the matter, and based upon the testimony present, the Court, being fully apprised in the premises, voted 3 - 0 to approve the siting standards, defensible space standards, and construction Standards, voted 2 -1 to approve the water standards, and voted 2 -1 to approve the access standards, regarding the Wasco County Planning Department's request for 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, as laid out in **Attachment A**; and

NOW THEREFORE IT IS HEREBY ORDERED: That the request by the Wasco County Planning Department for 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 is approved.

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SIGNED this 9th day of ~~December~~ January, 2007

Approved as to Form:

Eric J. Nisley
Wasco County District Attorney

WASCO COUNTY COURT

Dan Ericksen, Judge

Scott McKay, Commissioner

Sherry Holliday, Commissioner

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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. **Please consider volunteering.**

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.

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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.

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Applicability of Fire Safety Standards to Different Types of Land Uses	
All New Dwellings and Rural Commercial or Rural Industrial Buildings **CUP, Subject to Standards, Site Plan Review, and, Permitted Dwellings**	**Siting** – **(A)** Avoid slopes > 40% & **(B)** Set back from top of slopes > 30% **Defensible Space** – **(A)** Fire fuel break, & **(B)** Minimum of 50 feet to unmanaged lands around structures **Construction Standards** – **(A)** Roofing, **(B)** Spark Arresters, **(C)** Clear Clean & Protected Decks, **(D)** Screened Exterior Openings, **(E)** Overhanging trees, **(F)** Underground Utilities, **(G)** Stand Pipe **Access** – **(A)** Improved Surface & Minimum Driveway widths, **(B)** Turn Radius, Maximum Slopes, and Pull Outs, **(C)** Physical Clearance and Fire Fuel Breaks on Driveways, **(D)** Turnarounds, **(E)** Bridges and Culverts, **(F)** Gates, **(G)** Signs, **(H)** Roads to the property. **Structural Fire Protection Required**
Relocated Dwellings (Replacement in a new location)	**Siting** – **(A)** Avoid slopes > 40%, **(B)** Set back from top of slopes > 30% **Defensible Space** – **(A)** Fire fuel break, & **(B)** Minimum of 50 feet to unmanaged lands around structures. **Construction Standards** – **(A)** Roofing, **(B)** Spark Arresters, **(C)** Clear Clean & Protected Decks, **(D)** Screened Exterior Openings, **(E)** Overhanging trees, **(F)** Underground Utilities, **(G)** Stand Pipe **Access** – **(A)** Improved Surface & Minimum Driveway widths, **(B)** Turn Radius, Maximum Slopes, and Pull Outs, **(C)** Physical Clearance and Fire Fuel Breaks on Driveways, **(D)** Turnarounds, **(E)** Bridges and Culverts, **(F)** Gates, **(G)** Signs
Replacement Dwellings (In Kind – same size / same location)	**Defensible Space** – **(A)** Fire fuel break, & **(B)** Minimum of 50 feet to unmanaged lands around structures. **Construction Standards** – **(A)** Roofing, **(B)** Spark Arresters, **(C)** Clear Clean & Protected Decks, **(D)** Screened Exterior Openings, **(E)** Overhanging trees, **(F)** Underground Utilities, **(G)** Stand Pipe **Access** – **(A)** Improved Surface & Minimum Driveway widths, **(B)** Turn Radius, Maximum Slopes, and Pull Outs, **(C)** Physical Clearance and Fire Fuel Breaks on Driveways, **(D)** Turnarounds, **(E)** Bridges and Culverts, **(F)** Gates, **(G)** Signs
Improved Expanded Dwellings	**Defensible Space** – **(A)** Fire fuel break, & **(B)** Minimum of 50 feet to unmanaged lands around structures **Construction Standards** – **(A)** Roofing, **(B)** Spark Arresters, **(C)** Clear Clean & Protected Decks, **(D)** Screened Exterior Openings, **(E)** Overhanging trees, **(F)** Underground Utilities, **(G)** Stand Pipe **Access** – **(C)** Physical Clearance and Fire Fuel Breaks on Driveways, **(F)** Gates, **(G)** Signs
Accessory Buildings	**Siting** – **(A)** Avoid slopes > 40% & B. Set back from top of slopes > 30% **Defensible Space** – **(A)** Fire fuel break **Construction Standards** – **(A)** Roofing, **(B)** Spark Arresters, **(C)** Clear Clean & Protected Decks **(D)** Screened Exterior Openings, **(E)** Overhanging trees, **(F)** Underground Utilities, **(G)** Stand Pipe **Access** – **(C)** Physical Clearance and Fire Fuel Breaks on Driveways, **(F)** Gates, **(G)** Signs

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

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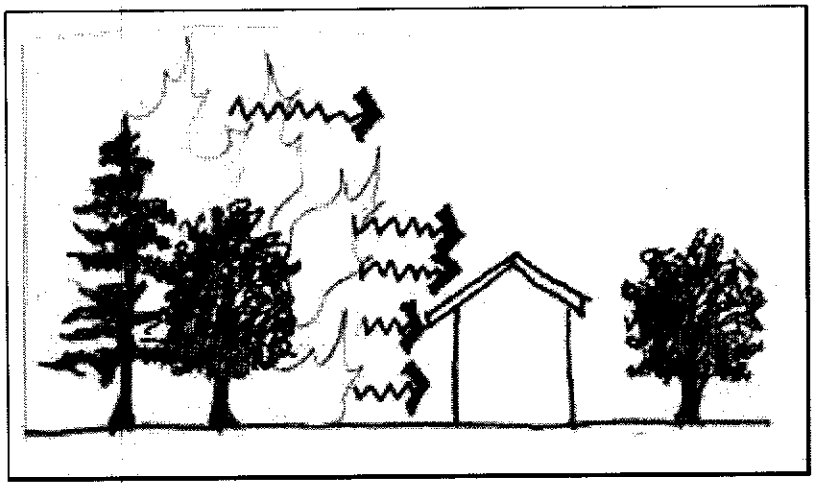
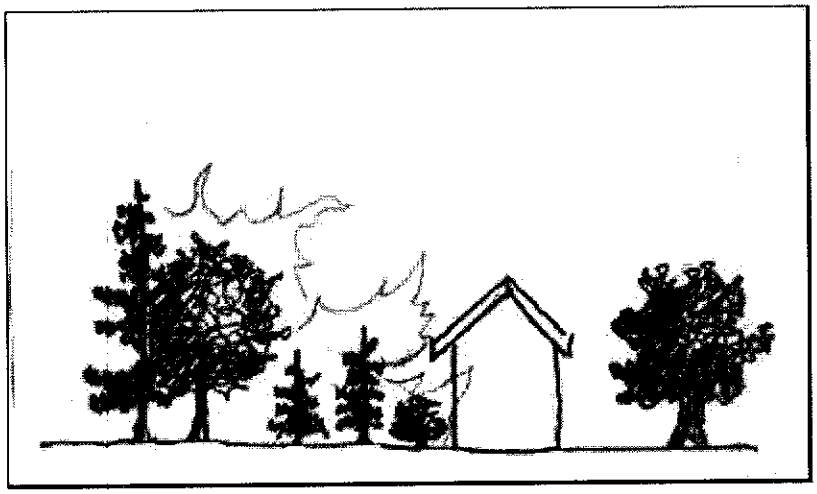
SECTION 10.030 Introduction

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.



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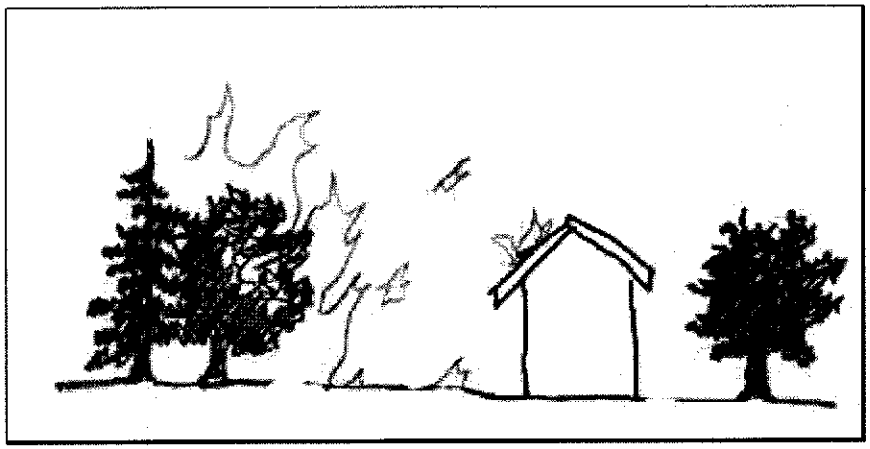
3. Firebrands or Contact with Flying Embers – Fires can start from burning embers carried aloft from as far away as a mile or more. Fire brands are most dangerous when they:
   a. Land on flammable roofs or decks,
   b. Settle or are sucked into openings in eaves, soffits, roof vents, under decking, 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.

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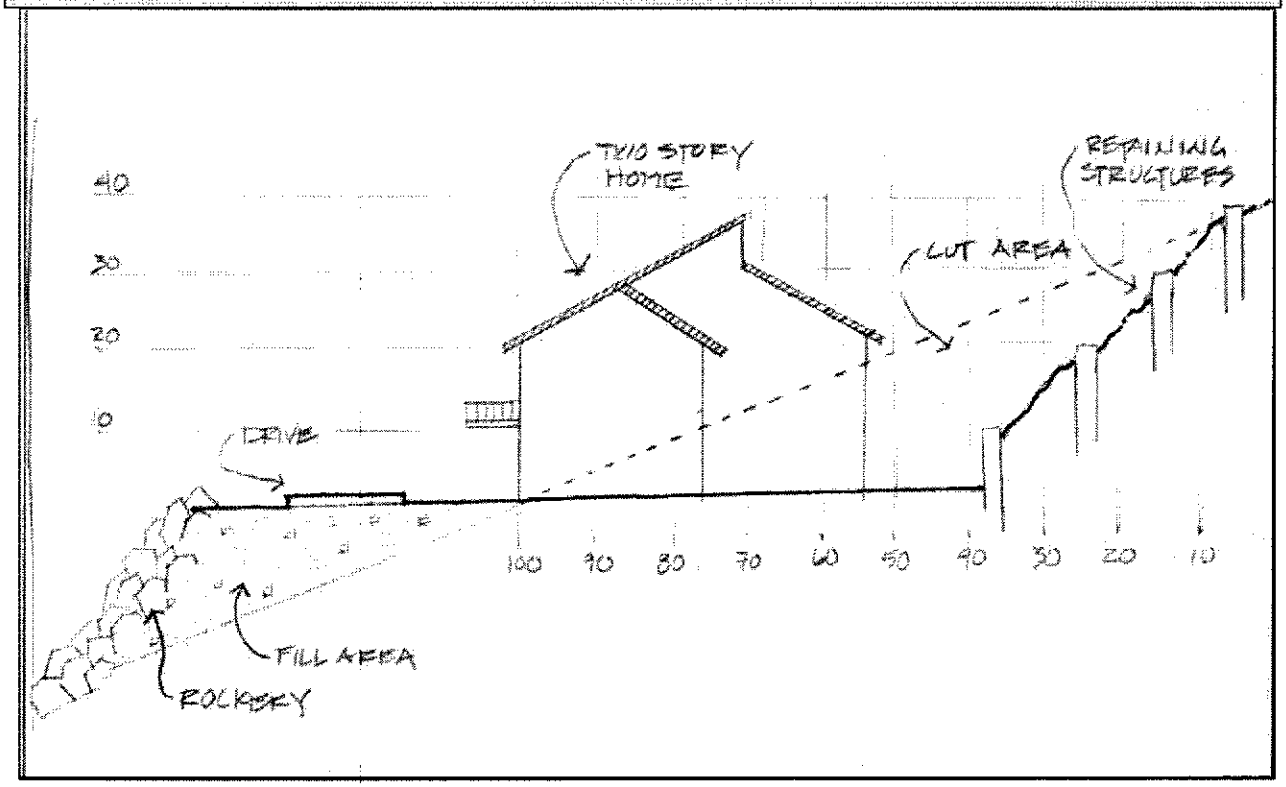
SECTION 10.110 Siting Standards - Locating Structures for Good Defensibility

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



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A. This Standard is applicable to dwellings, accessory buildings, and agricultural buildings in: -All zones	
A. If <u>Yes</u> Then	**A. If <u>No</u> Then**
• Extensive and costly grading and ground disturbance will be avoided • Emergency responders will have room to access and maneuver around all sides of the structure • Structure will avoid exposure to the hottest side of fast moving flames climbing the slope • Structure will avoid potential of trapping heat rising off of flames on the slope below.	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: • 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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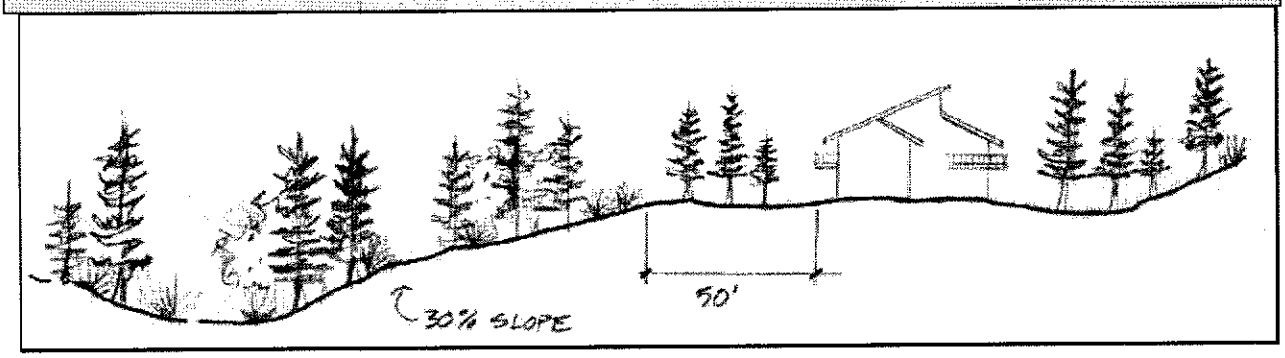
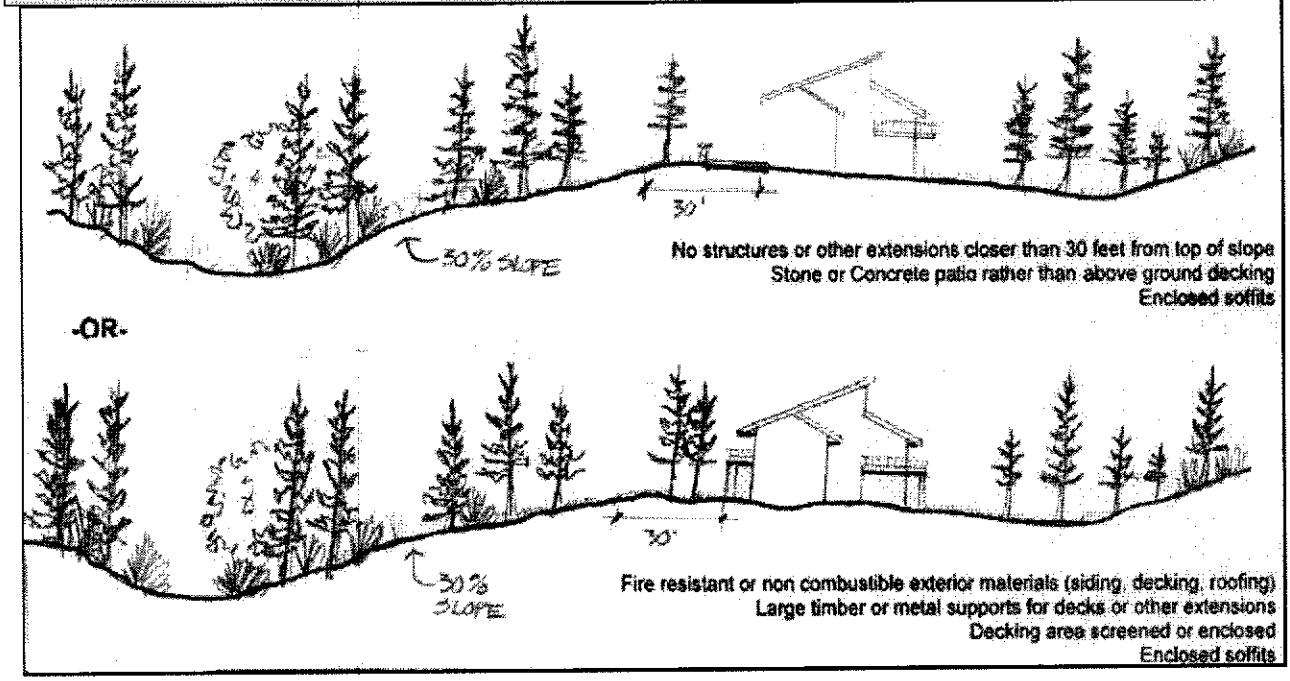
B. Setbacks

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 Yes Then	**B(1). If No 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 Yes Then	**B(2) - If No 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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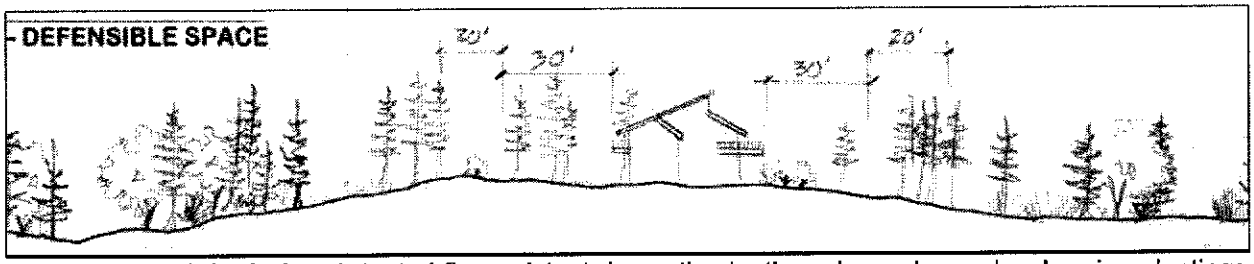
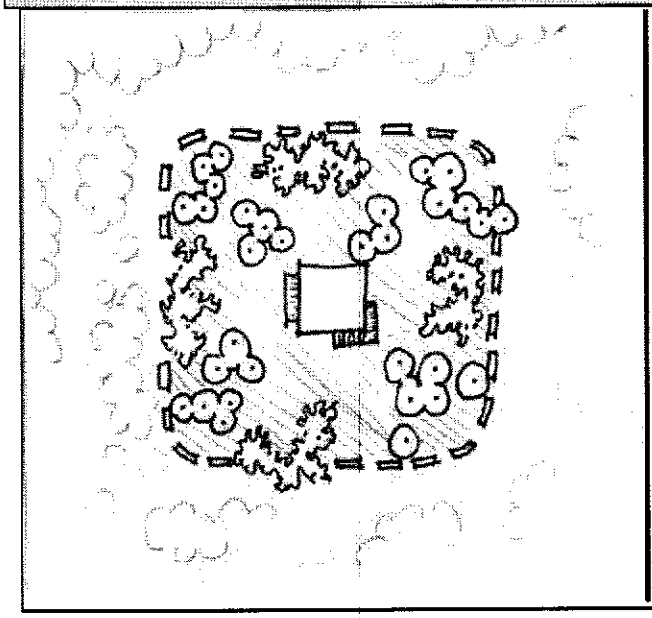
SECTION 10.120 Defensible Space – Clearing and Maintaining a Fire Fuel Break

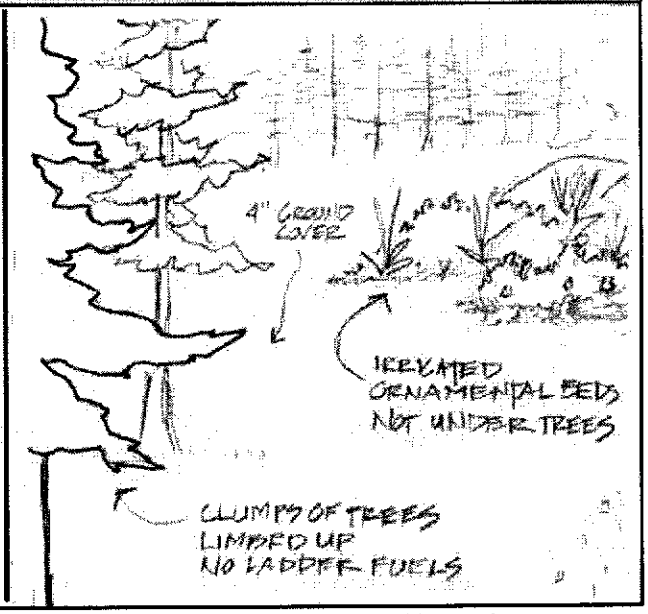


Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire 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.

A. Is your building surrounded by a 50 foot wide fire fuel break?



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 *inside* an exception area or smaller lot residential zone. 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	A. If No 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 • Irrigation 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 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

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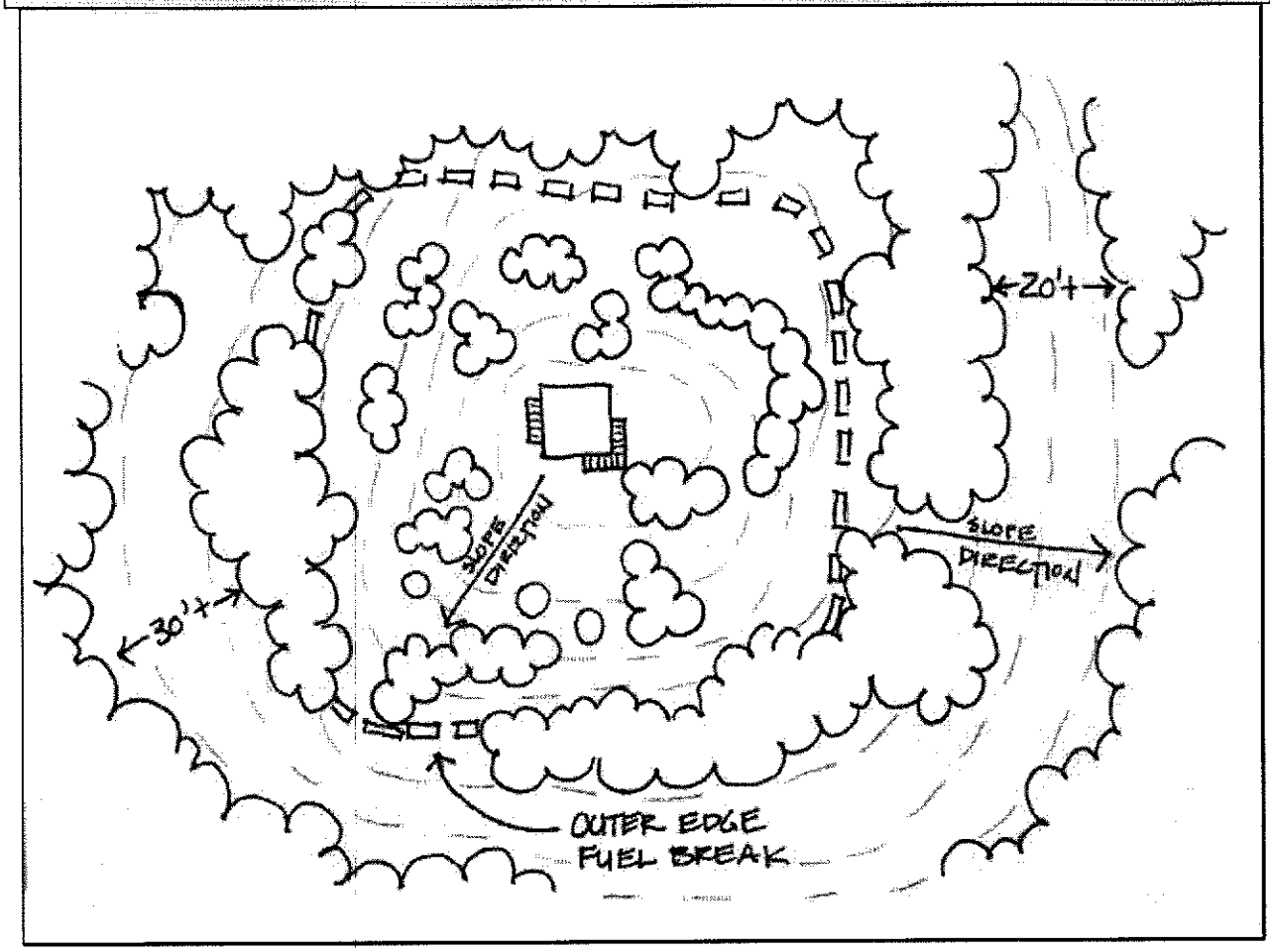
B. Is dense unmanaged vegetation <u>beyond 50 feet</u> from the outer edges of your buildings, including any extensions such as decks or eaves, kept to a <u>MINIMUM</u>?



- 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.

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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 broad breaks in the canopy across the slope 20-30 feet and more can help limit 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 fire 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)	This standard is advisory. No request for modification of fire safety standards is required if it cannot be met.

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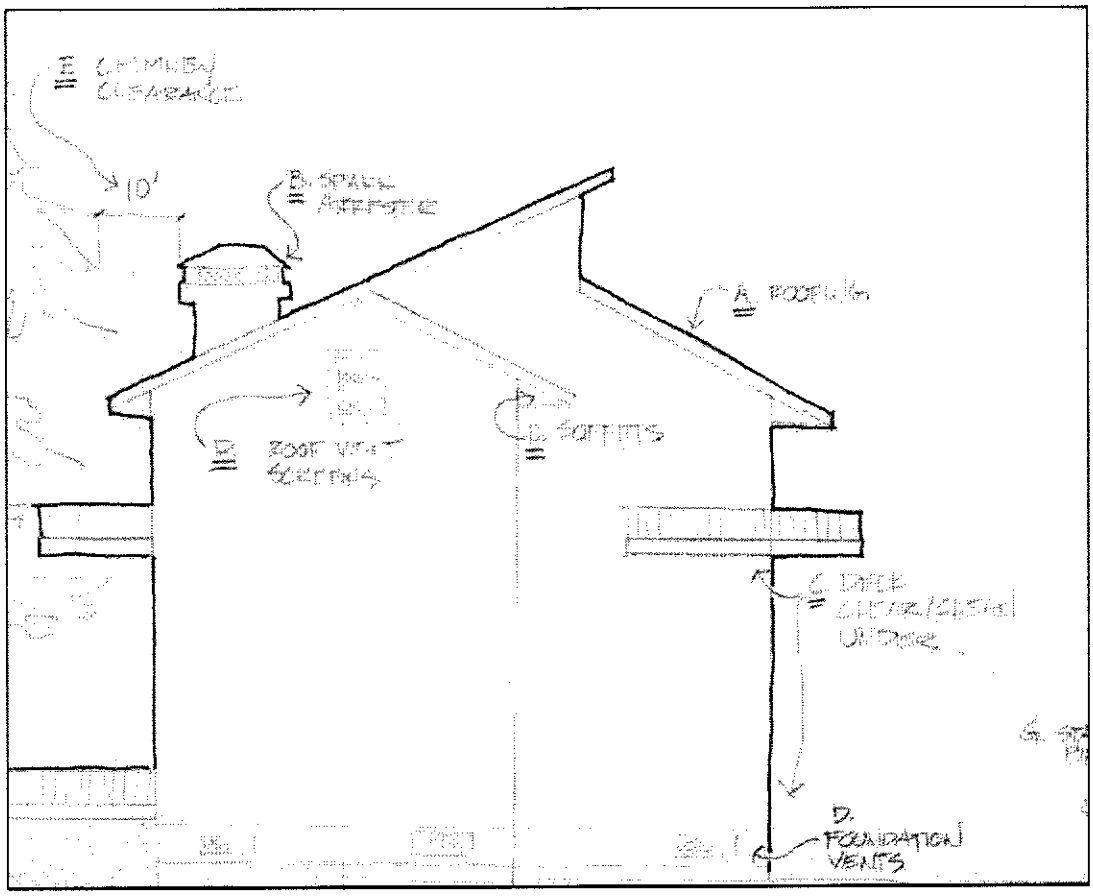
SECTION 10.130 Construction Standards for Dwellings and Structures – Decreasing the ignition risks by planning for a more fire safe structure.



A. Is your structure designed, built, and maintained to include the following features and materials necessary to make the structure more fire resistant?

1. Roof Materials: Do you or will you have fire resistant roofing installed to the manufacturers specification and rated by Underwriter's Laboratory as Class A, B, or its equivalent (includes but not limited to: slate, ceramic tile, composition shingles, and metal)?
   NOTE: To give your structure the best chance of surviving a wild fire, all structural projections such as balconies, decks and roof gables **should** be built with fire resistant materials equivalent to that specified in the uniform building code.

2. Spark Arrestors: Will all chimneys and stove pipes be capped with spark arresters meeting NFPA standards, e.g. constructed of 12 USA gauge wire mesh with openings ½" in size?

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A(1) & (2) These Standards are applicable to all dwellings accessory buildings, and agricultural buildings and structures in: -All Zones	
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 Yes 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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B. Is your structure designed, built, and maintained to include the following features and materials necessary to make the structure more fire resistant?

1. Decks: Will all decks be kept clear of fire wood, flammable building material, dry leaves and needles, and other flammable chemicals? Will decks less than three feet above ground also be screened with noncombustible corrosion resistant mesh screening material with openings ¼" or less in size? Will decks as required in accordance with standard **10.110(B)** above be built of fire resistant material? Will all flammables be removed from the area immediately surrounding the structure to be stored 20' from the structure or enclosed in a separate structure during fire season?

2. Openings: Will all openings into and under the exterior of the building including vents and louvers, be screened with noncombustible corrosion resistant mesh screening material with openings of ¼" or less.

3. Trees: Will all trees overhanging the building be limbed up 8 ' in accordance with fire fuel break requirements above, kept trimmed back 10 feet from any chimney or stove pipe and be maintained free of all dead material.

4. Utilities: If your private utility service lines are not underground will the utilities be:
   a. Kept clear along their route?
   b. Have a single point of access to the building?

   Do all new buildings and structures served by electricity include a clearly marked power disconnect switch at the pole or off grid power source?

5. Stand Pipe: Will a stand pipe be provided 50 feet from the dwelling or any structure served by a plumbed water system?

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B. These Standards are applicable to dwellings, accessory buildings, and agricultural buildings or structures in: -All Zones	
B(1). If Yes 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 exterior of a structure, its decks, and other horizontal extensions.
B(2). If Yes Then	**B(2). If No 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 No 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.

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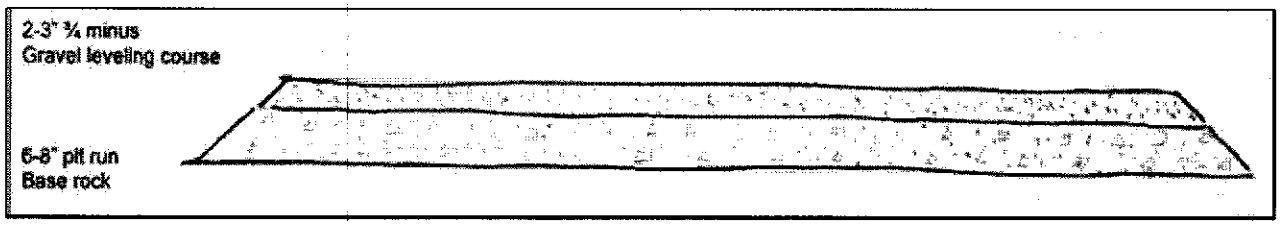
SECTION 10.140 Access Standards - Providing safe access to and escape from your home.

A. Does your residential driveway meet standards for improved, all weather, driveway surface and minimum driveway widths?

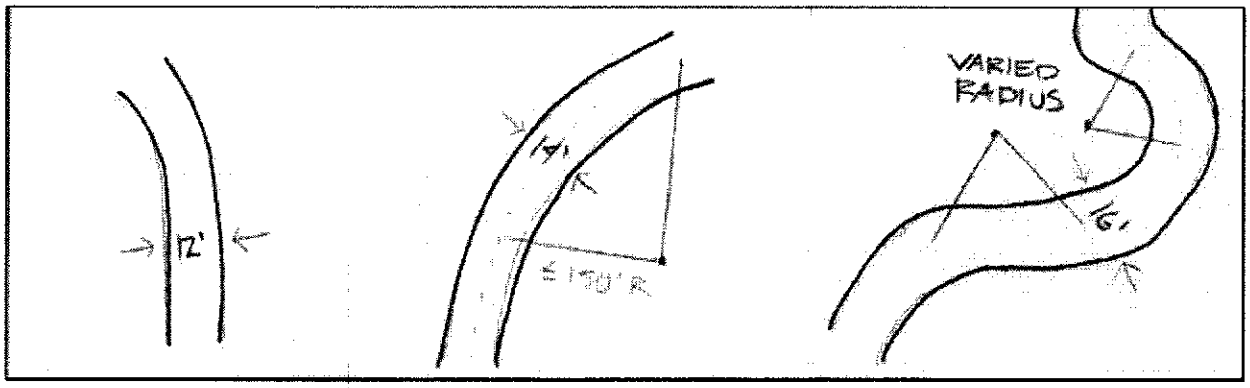
IMPROVED SURFACE REQUIREMENTS



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%

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A. This Standard is applicable to residential driveways in: -All Zones	
A. If Yes Then	**A. If No 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) • Evacuation plan and acknowledgment that some or all fire equipment may not have sufficient access to your property to respond

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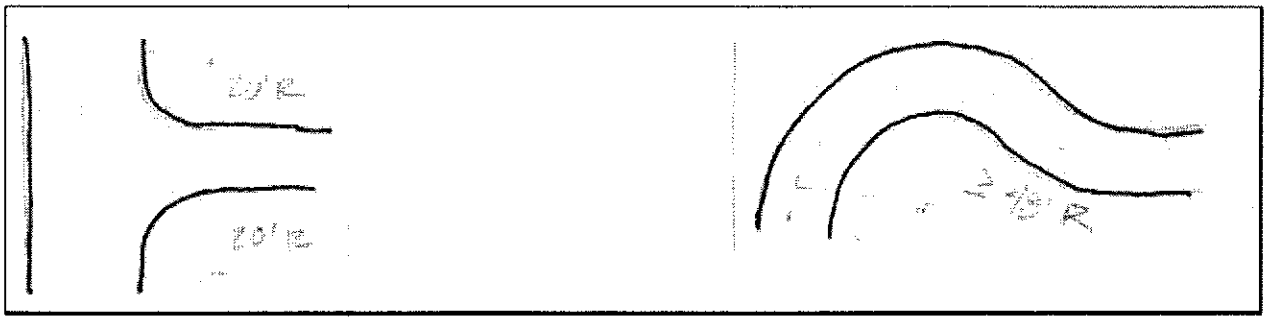
B. Is your dwelling accessed by a driveway with curves and slopes that are passable by emergency equipment? And are turnouts provided as needed to allow vehicles to pass safely?

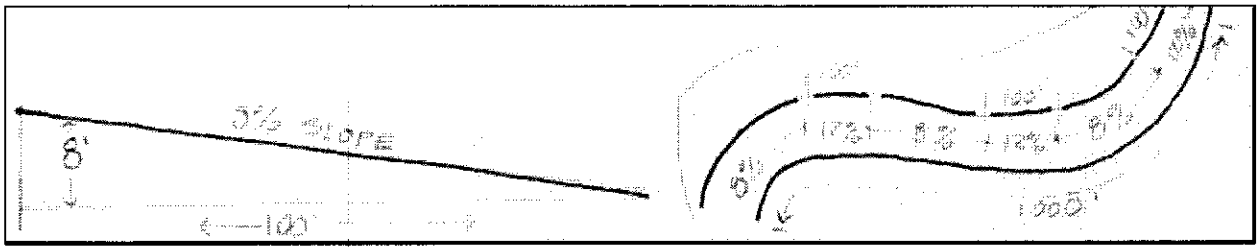
CAN LARGE EQUIPMENT MAKE IT AROUND THE TURNS IN YOUR DRIVEWAY?



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.

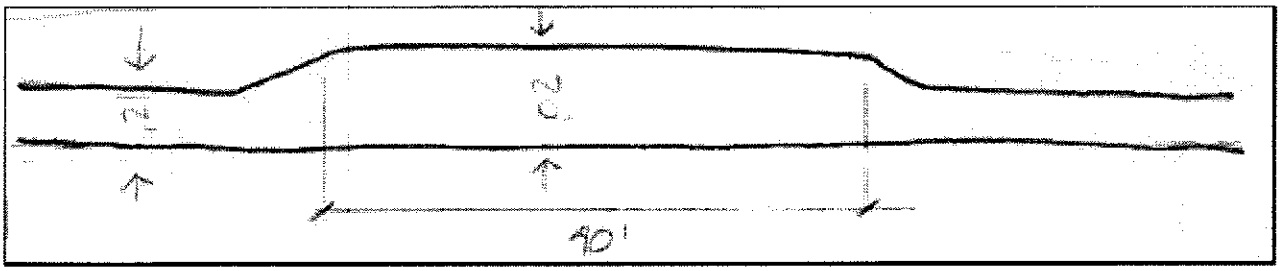
IS THE SLOPE OF YOUR DRIVEWAY GENTLE ENOUGH FOR EQUIPMENT TO GET UP AND DOWN SAFELY?



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.

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

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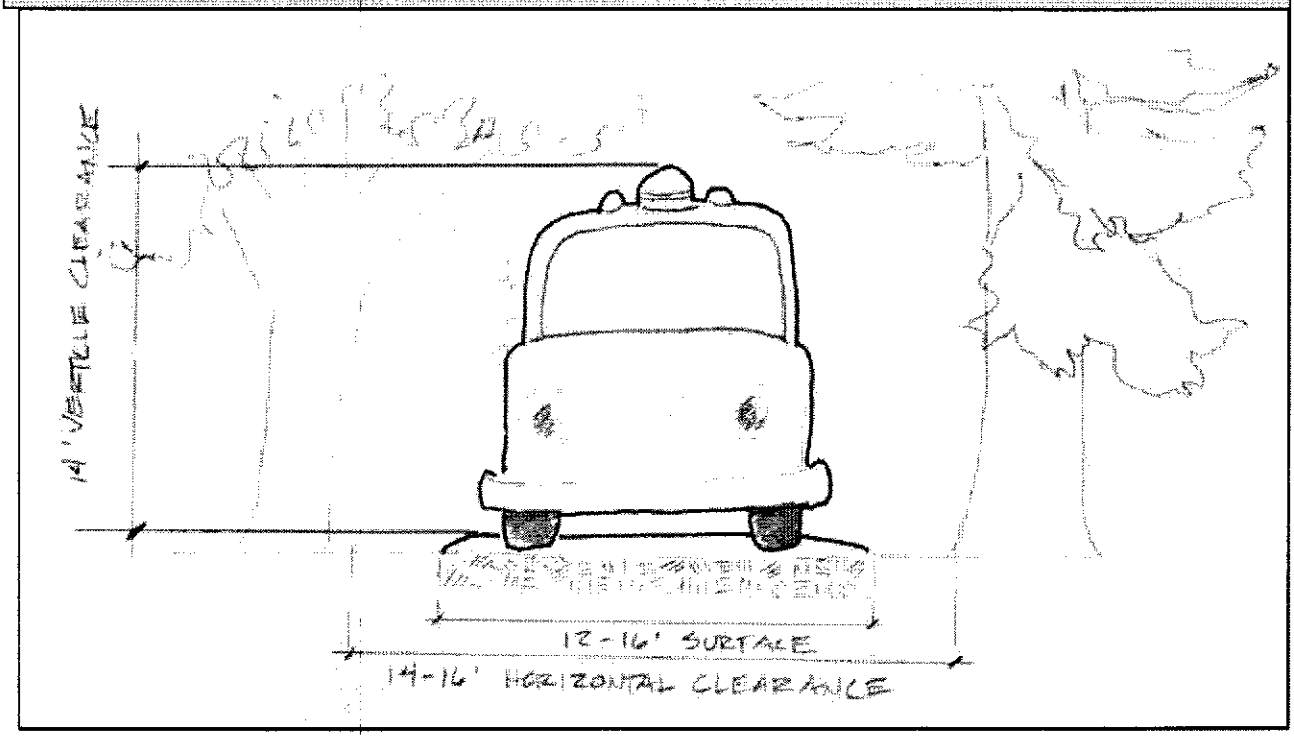
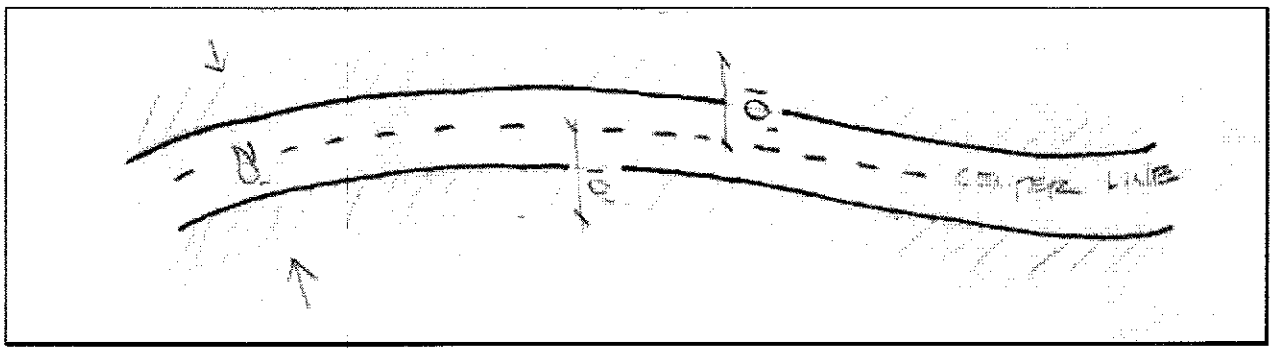
C. Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?



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.

P2007-00046(45)

C. This Standard is applicable to all residential driveways in: -All Zones	
C. If Yes Then	**C. If No Then**
• Emergency responders will be able to access your property with out damaging your landscaping, native trees, or their vehicles. • 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.	See **(A) above**

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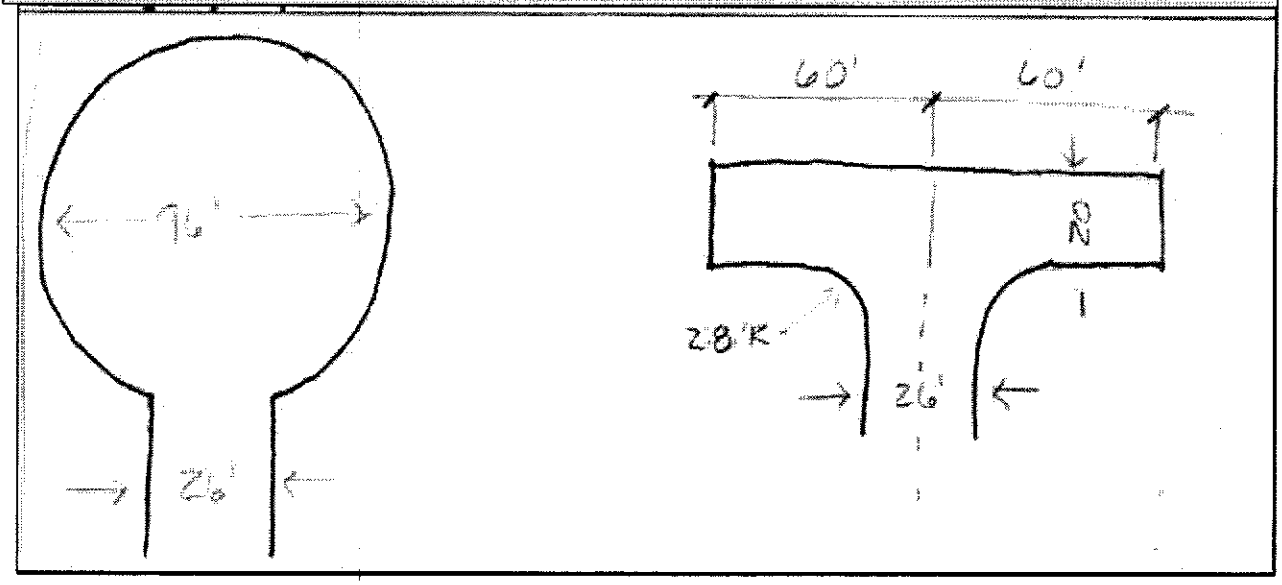
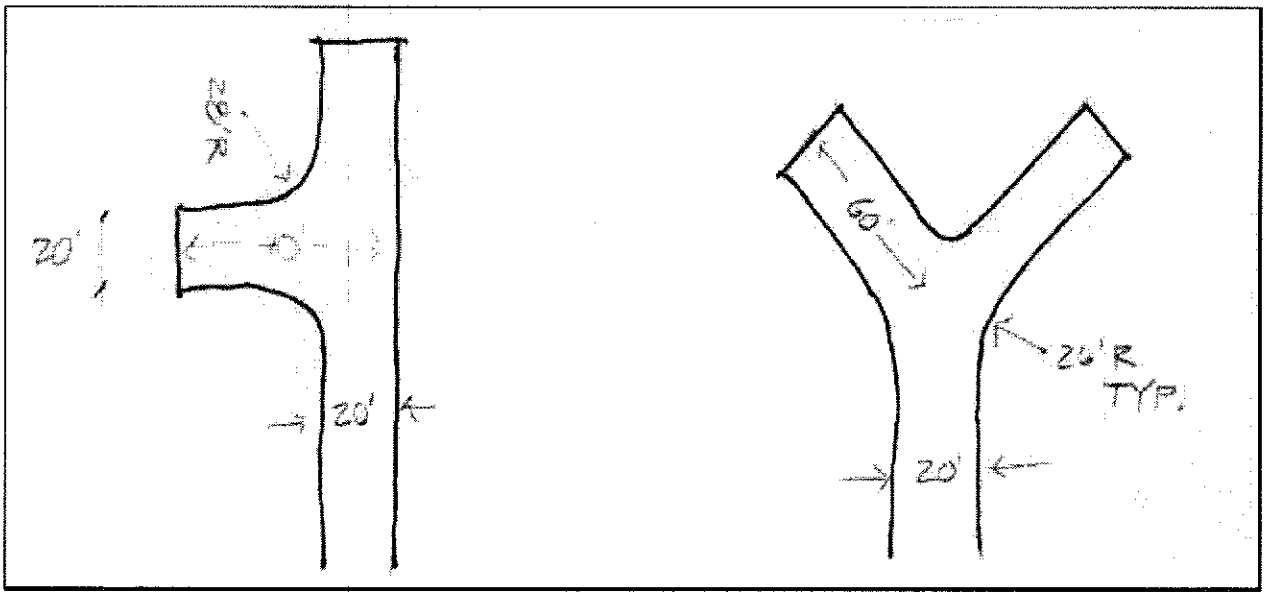
D. If your residential driveway is longer than 150 feet, does it end with a turnaround that is passable for emergency responders?



95 foot diameter cul-de-sac

120' hammerhead



Acceptable alternative to 120' hammerhead

Acceptable alternative to 120' hammerhead

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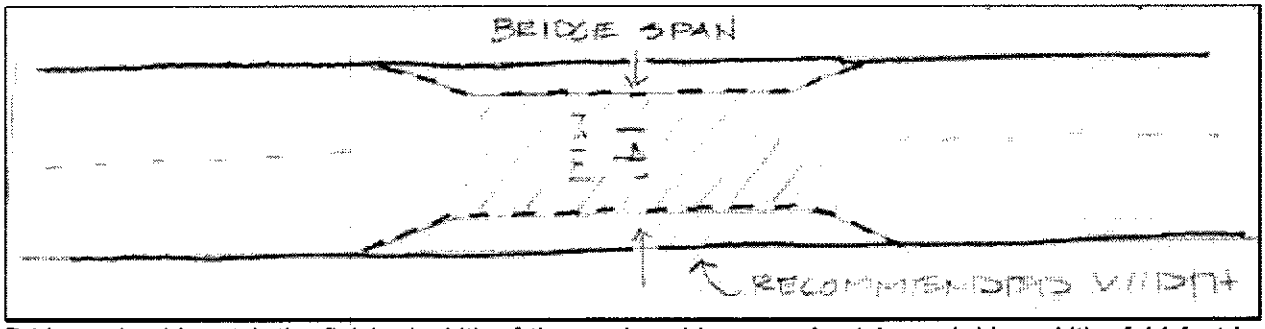
D. This Standard is applicable to residential driveways in: -All Zones	
D. If Yes Then	**D. If No Then**
Responders accessing your property in an emergency will be able to get turned around to leave the property, make room for additional responders, or to refill tenders and return.	See **(A) above**

P2007-00016(45)

E. Can the bridges or culverts crossed to access your dwelling on your property accommodate emergency response vehicles?

Culverts larger than 6' diameter and all bridges 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

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E. This Standard is applicable to residential driveways in: -All Zones	
E. If Yes Then	**E. If No Then**
Emergency responders will be able to get to or through your property without risk of damage to equipment or roadway structures	A modification of fire safety standards must be requested. The fire mitigation plan submitted with the request for modification must propose mitigation measures including: • Any culvert greater than 6' diameter or bridge not capable of supporting 75,000 GVW shall be posted at both entrances • Other applicable mitigation measures listed in **(A)** above

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.
G. This Standard is applicable to residential driveways in: -All Zones	
G. If Yes Then	**G. If No 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.

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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

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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: -All Zones	
H. If Yes Then	**H. If No 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.	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.

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SECTION 10.150 Fire Protection or On Site Water Required - 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

P3001-0016(45)

A. This Standard Is applicable in: -All Zones - as specifically noted in the standard	
A. If Yes Then	**A. If No 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. • 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)	Refer to **(B)** Below

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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 verifying 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.

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B. This Standard is applicable in: -All Zones - as specifically noted in the standard	
B. If Yes Then	**B. If No 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.	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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Section 10.210 Fire Safety Standard Review Process

A. Compliance with applicable fire safety standards 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 Modification of Fire Safety Standards

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

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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. Contents of a fire mitigation plan 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. Statement of Additional Action Proposed to Eliminate or Minimize Increased Risks

A clear list of additional measures proposed by the applicant to address any increased risks identified in the risk assessment.

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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.

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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.

5. 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.

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