

## ARTICLE 76 - WILDFIRE AND EMERGENCY SAFETY STANDARDS

Ordinance 2005-007, Effective October 18, 2005

### 76.010 - PURPOSE

The purpose of this Article is to establish minimum wildfire and safety mitigation standards for development, replacement, substantial improvement or relocation of structures. This Article is intended to reduce threats to human life and safety, to structures and to wild lands, and to improve access in emergencies.

It is also the intent of this Article to achieve the greatest possible application of wildfire and emergency safety standards by covering new dwellings where authorized as permitted uses. In order to achieve this objective, this Article shall provide for reduced review and approval procedures for new, replacement of, substantially improved and relocated dwellings in Other Zones, as specified in Sections 76.020.D and 76.100.A of this Article.

### 76.020 - APPLICATION OF WILDFIRE AND EMERGENCY SAFETY STANDARDS

The development and construction standards contained in this Article shall be applied during the review and approval of the following land use actions:

- A. Land Divisions. Land divisions in any zone approved pursuant to Chapter 5 of this code shall be required to develop wildfire mitigation plans that assure safety of the whole development, and that assure individual lots or parcels within the land division are able to comply with the provisions of this Article. The review body shall apply the standards contained in this Article to the extent needed to assure that its purposes are met.
- B. Site Plan Review and Conditional Use Permits. Any land development that requires review and approval pursuant to the provisions of Article 42 (*Site Plan Review*) or Article 45 (*Conditional Use Permits*) shall be required to develop wildfire mitigation plans that assure safety of the development. The review body shall apply the standards contained in this Article to assure that its purposes are met.
- C. Forest Zones. The development of new structures, the substantial improvement of existing structures, the relocation of structures and the replacement of structures in Forest Zones (Article 65) shall meet the requirements of this Article.
- D. Other Zones. The development of new dwellings in any zone other than the Forest Zones shall demonstrate compliance with all of the applicable standards of this Article. The relocation or replacement of existing dwellings in any zone other than the Forest Zones, shall be required to demonstrate compliance with the standards for construction (Section 76.030), fire protection service or on-site fire protection plan (Section 76.060) and vegetation mitigation (Section 76.080) only. Improvements to existing dwellings must only comply with the standards for construction (Section 76.030), except for roofing requirements, as they apply to the new construction and not the existing structure or structures. Compliance for all types of development under this section shall be accomplished by meeting the application and self-certification requirements contained in Section 76.100.A of this Article.

- E. Other Requirements. Nothing in this Article is intended to waive or diminish any other development standard, regulation or other provision required in this code or elsewhere.

#### **76.030 - SITE DEVELOPMENT AND CONSTRUCTION STANDARDS**

- A. Steep Slopes. Slopes in excess of 40% may be disturbed or altered only after the disturbance or alteration is authorized pursuant to the requirements for modification of standards contained in Section 76.090 of this Article. Dwellings in Forest Zones shall not be sited on slopes greater than 40%.

**NOTE: Site development that disturbs ground with slopes at or above 15%, or that have granitic soils, requires an approved erosion control plan prepared by a registered engineer before disturbance. See Article 83, Erosion and Storm Drain Facilities.**

- B. Construction of Structures. The development of new structures and the substantial improvement, relocation and replacement of existing structures shall implement the following construction features:
1. Roofing materials shall meet Fire Rating Class A or B as established by the National Fire Protection Association. Exterior wood roofing of any type is prohibited.
  2. Chimneys and stove pipes shall be capped with a spark arrester that meets the standards established by the National Fire Protection Association.
  3. The exposed undersides of porches, decks and balconies 3' or less above the ground shall be enclosed with 1/4" or smaller, non-combustible, corrosion resistant metal mesh.
  4. Areas beneath decks, porches, balconies and roofs greater than 3' above the ground shall be maintained free of combustible materials.
  5. Attic openings, soffit vents, foundation louvers and vents and other direct openings in outside walls, overhangs and roofs shall be no larger than 144 square inches and shall be covered with 1/4" noncombustible, corrosion resistant metal mesh.

#### **76.040 - ACCESS**

Driveways and new public roads shall meet the following requirements:

- A. Driveways.
1. Driveways shall be developed to within 50' of all habitable structures and 150' of non-habitable structures.
  2. Driveways shall be constructed to meet all of the following minimum standards:

- a. **WIDTH.** Driveways shall be at least 12' wide in straight sections and at least 14' wide in all curves that have a centerline radius at any point less than 150'. It may be advisable to increase further the width of driveways in some curves to assure that emergency equipment remains on the developed surface throughout the entire turn.
- b. **TURNING DIMENSIONS.** Driveway curves shall have a minimum curve radius of 48'. Driveway approaches to public roads shall have an inner radius of 20' in both directions.
- c. **GRADE.** Driveways shall comply with the following grade limitations:
  - [1] Driveway development that disturbs areas with slopes at or above 15% or that involves granitic soils requires an approved erosion control plan prepared by a registered engineer before disturbance. See Article 83 (*Erosion and Storm Drain Facilities*).
  - [2] No portion of any driveway shall have grades that exceed 15%, except grades may increase to 18% for intervals of not more than 100' as long as there are no more than three 100' sections in excess of 15% per 1,000' of driveway.
  - [3] All areas within curves that have a centerline radius of less than 150' shall not exceed a 15% grade.
  - [4] Changes in grades within driveways shall not exceed 1% in 3'.
- d. **CLEARANCES.** Areas around driveways shall be cleared as follows:
  - [1] The area above the entire length and width of driveways shall be cleared and kept clear of all obstructions for a minimum vertical distance of 13.5'.
  - [2] A strip at least 2' wide along both sides of the prescribed width of the driveway, and for its entire length, shall be established to the standards for Secondary Safety Zones in Section 76.080.C.2, provided, however, that the vegetation in these areas cannot exceed 6" in height.
- e. **SURFACES.** Driveways shall be surfaced as follows:
  - [1] Driveways with slopes below 15% shall be constructed as follows:
    - [a] A base course of 6" - 8" of pit run rock; and
    - [b] A leveling course of 2" - 3" of 3/4" minus angular gravel; and

- [c] Compacted by proof-rolling the rocked and graveled courses with a fully loaded 10 cubic yard dump truck or other vehicle with equivalent weight; or
  - [d] Base and leveling courses and compaction standards for a Restricted Rural Residential road when the driveway is paved with asphalt; or
  - [e] To standards different from the ones specified in subsection [a] through [c] above, provided the alternative standards are supported by a driveway construction plan prepared by a registered engineer that contains a certification that the surface, as built, will support 50,000 pounds, provide adequate drainage and traction and prevent significant degradation or deterioration as a result of rain or freezing and thawing.
- [2] Driveways on granitic soils or with slopes of 15% or greater shall be constructed to the surface standards specified in a driveway construction plan prepared by a registered engineer that contains a certification that the surface, as built, will support 50,000, pounds, provide adequate drainage and traction and prevent significant degradation or deterioration as a result of rain or freezing and thawing.
- [3] In transitions from dirt, rock or gravel to hardened surfaces, the hardened surface shall be extended 25' on each end beyond the slope to minimize dig outs and other deterioration of the surface.
- f. **STRUCTURES.** A structure or fill and culvert shall be provided to cross all live streams, ravines, gullies, irrigation ditches and similar features. These structures shall have the same width as the width required for the driveway at the structure or fill and culvert location. Bridges shall be certified by a registered engineer as being capable of supporting at least 50,000 pounds. Culverts shall be a minimum of 12" in diameter and shall be designed carry American Association of State Highway and Transportation Officials HS-20 Loading.
- g. **TURNAROUNDS.** Driveways leading to structures or to water sources used for fire suppression shall terminate in a turnaround area that is surfaced consistent with the surface requirements for the connecting driveway and has a minimum inner radius of 27' and a minimum outer radius of 42'.
- h. **TURNOUTS.** Driveways in excess of 600' shall have vehicle turnouts at a maximum spacing of every 400'. Turnouts at more frequent intervals may be advisable when conditions caused by steep grades, dense vegetation, and/or frequent curves create unsafe passage. Turnouts shall consist of a

12' wide by 25' long driving area immediately adjacent to the driveway. Turnouts shall be surfaced with the same surface as the adjoining driveway.

- i. **GATES.** Gates on private driveways shall provide a clear opening of at least 12' on straight stretches and 14' on all curves. Gates must be set back at least 30' from the public road or highway to allow emergency vehicles to clear the roadway when stopped at the gate.
- j. **MAINTENANCE:** Driveways shall be maintained to these standards in order to assure the accessibility of property and to protect fire fighters and other emergency personnel.

B. **Public Roads.** New public roads longer than 800' in length that are created by a land division pursuant to Chapter 5 of this code shall provide access for residents and emergency service personnel consistent with the following requirements.

- 1. **LOOPED ROADS.** When it is both feasible and practical, new public roads shall connect to existing public maintained or non-maintained roads to create a looped road system.
- 2. **EMERGENCY ACCESS.** When a looped road system cannot be achieved, and it is feasible and practical to do so, new public roads shall be developed with emergency access. Emergency access is easement access that lawfully connects a new public road to another public road, street plug, public usage road, way of necessity or service road under control of the United States Departments of Agriculture or Interior. An emergency access may be gated or temporarily blocked in compliance with the standards and procedures set forth in Josephine County Board of Commissioner Order No. 2001-13 (*Gated Streets*), or as otherwise approved by the fire authority having jurisdiction under the Order.
- 3. **SPECIAL MITIGATION MEASURES.** When it is not feasible or practical to develop new public roads with looped or emergency access as required above, then the tentative plan shall be reviewed using the *Modification of Standards* procedures contained in Section 76.090. The Wildfire and emergency safety standards Review Committee may develop a fire mitigation plan for the land division and for individual lots within the land division that offset, to the greatest extent feasible, the lack of looped or emergency access through other practical measures.

#### **76.050 - SIGNS**

Address and direction signs shall be permanently posted and maintained at driveway entrances and at any subsequent driveway intersections so that they clearly and effectively direct approaching emergency traffic to structure locations. Signs shall be posted and kept visible to indicate the nature and location of water sources that can be used for fire suppression. Numbers or letters used in the signs shall be at least 3 inches high and consist of light reflective material.

#### **76.060 - FIRE PROTECTION SERVICE OR ON-SITE FIRE PROTECTION PLAN**

As a condition of a permit to develop, the owner shall provide proof of fire protection service or fire protection measures that meets one of the following options:

- A. Fire Protection District. The property upon which a structure or structures are to be developed is located within a fire protection district and the district agrees in writing to cover the structures, or the property is not located within a fire district, but the owner has requested to be included in the district and the district agrees in writing to include the property within the district before the development of any structure begins; or
- B. Contract Fire Protection. If the property cannot be located within a fire protection district, but fire protection service is available from a commercial fire service provider that is listed on the State Fire Marshal Roster and the owner provides a contract for fire protection to cover the property before the development of any structure begins; or
- C. On-Site Fire Protection Plan. If the options described in Subsections A and B above are not achieved, the owner shall devise and implement a special on-site fire protection plan as a condition of the permit. The plan shall include measures such as on-site water storage, fire sprinkling systems, additional safety zones, the placement of structures in the most defensible locations, storage of on-site fire-fighting equipment, and any other practical and effective measures given the conditions at the site. The special on-site fire mitigation measures shall be reviewed and approved utilizing the modification of standards procedures contained in Section 76.090. Note: In the Forest zones, a dwelling shall be located in accordance with A or B above and only C if residential fire protection is determined to be impracticable per OAR 660-006-0035.

#### **76.070 - ON SITE WATER FOR FIRE PROTECTION**

On site water sources required for fire protection pursuant to Subsection 76.060.C shall comply with the following requirements:

- A. Water Source. Water sources shall meet one of the following requirements:
  - 1. A pond, swimming pool, noncombustible storage tank, lake or a similar body of water, that contains at least 4,000 gallons of water year around; or
  - 2. A stream or spring having a continuous year around flow of at least 1 cubic foot per second.

- B. Authorization. The application shall include a written statement from the Oregon Water Resources Department verifying that permits or registrations required for any water diversion or storage are obtained or not required.
- C. Access. Driveway access and a turnaround meeting the requirements of Section 76.040.A.2 shall be developed to within 10' of the water source.
- D. Signs. Permanent signs meeting the requirements of Section 76.050 shall be posted along the driveway to direct emergency vehicles to approved water sources. "No Parking" signs shall be posted and maintained to prevent interference with equipment attempting to gain access to such water sources.

#### **76.080 - VEGETATION MITIGATION**

- A. Purpose. The purpose of this section is to establish and implement fire safety zones. A fire safety zone is an area in which fire hazard is mitigated by the reduction, removal or limitation of vegetative fuels around structures. Safety zones can also be enhanced by the selection and placement of special fire resistant landscaping.
  - 1. Fire safety zones shall be established to reduce the risk to structures from advancing wildfire, the risk to residents and emergency personnel who may be evacuating or accessing the site during wildfire conditions, and the threat to surrounding neighborhoods from structure fires.
  - 2. Fire safety zones shall not be imposed in streamside setbacks established in Article 72 to protect riparian vegetation. The presence of protected riparian vegetation within a fire safety zone shall not require the relocation of a site proposed for a structure or the denial of a permit sought under this Article.
- B. Fire Safety Zones.
  - 1. **PURPOSE**. A fire safety zone is a fuel break designed to slow the speed and intensity of fire to or from structures, and to create an area in which fire suppression operations may more safely and effectively occur.
  - 2. **CHARACTER**. Fire safety zones shall be a natural or a human-made area where material capable of allowing fire to spread either does not exist or has been cleared, modified or treated in a way that significantly reduces the speed and intensity of fire to move to and from structures.
  - 3. **TYPES OF ZONES**. There shall be two types of fire safety zones, designated as the primary safety zone and the secondary safety zone. In all cases the primary safety zone shall be developed for a distance of 50' in all directions from structures as measured along the ground from the farthest extension of the structure, to include attached carports, decks or eaves. A secondary safety zone shall be established around the primary safety zone for an additional 50' in all directions. On sites on which the slope abutting any structure exceeds 20%, the secondary safety zone shall extend an additional 50' in all directions.

C. Fuel Mitigation. Fuel mitigation within fire safety zones shall conform to all of the following requirements:

1. **PRIMARY SAFETY ZONES.**

a. Ground cover within the primary safety zone shall consist of one or more of the following conditions:

[1] An area of asphalt, bare soil, concrete, rock or other nonflammable material; or

[2] An area of dead grass cut to 4" or less, leaves, needles, twigs and other similar flammable materials, provided such materials do not create a continuous fuel bed and are at least 4' away from structures; or

[3] An area of low growing vegetation species such as green grass, ivy, succulents and other similar species, provided that it is maintained in a green condition and substantially free of dead plant material.

b. Other vegetation within the primary safety zone shall consist of single specimens or isolated groupings of native trees and shrubs, and fire resistant ornamental trees, shrubs and other plants, provided that they are:

[1] Maintained in a green condition;

[2] Maintained substantially free of dead plant material;

[3] Pruned and maintained so that crowns are separated by a distance of 15' and limbs below 8' in height are removed; and

[4] Pruned and maintained so that no limbs touch a structure, or overhang a roof or are within 15' of a chimney or stovepipe.

[5] Live fruit trees shall not be required to meet the requirements of Subsections [3] and [4] above.

c. Open firewood storage shall not occur within 30' from structures.

2. **SECONDARY SAFETY ZONES.** Trees within the secondary safety zone shall be pruned and maintained so that trunks are separated by a distance of 15' and any branches below 8' in height are removed. Live fruit trees shall not be required to meet these spacing and limbing requirements. Small trees, brush growing underneath the remaining trees and dead vegetation and other debris shall be removed.

3. **FIRE RESISTANT PLANTS.** Characteristics and examples of appropriate landscape plants can be found in "Fire-Resistant Plants for Oregon Home Landscapes", published in 2002 by Oregon State University Extension Service as Forest

Resource Note No. 6. Additional information is available from firewise.org and other internet sites.

4. **MODIFICATION OF SAFETY ZONES.** In the event a property owner is unable to meet the space requirements for primary or secondary safety zones because the proposed homesite is too close to one or more property lines, it is the policy of this Article to resolve space issues using the following priority of actions:
  - a. The homesite shall be relocated to an alternative site that allows the space requirements to be met; or
  - b. If an alternative and qualifying homesite is infeasible or impractical, the property owner shall obtain the necessary easement(s) from the adjoining property owner(s) that allows the needed safety zone area to be added, developed and maintained; or
  - c. If the actions described in a. and b. above cannot be achieved, then the request to modify the space requirements shall be reviewed using the *Modification of Standards* procedures contained in Section 76.090.

#### **76.090 - MODIFICATION OF STANDARDS**

- A. **Purpose.** The purpose of this Section is to establish procedures for the review and possible modification of certain wildfire and emergency safety standards.
- B. **Standards Subject to Modification.** The standards that may be modified under this Section are subject to the following rules:
  1. **GENERAL STANDARDS SUBJECT TO MODIFICATION.** The following wildfire and emergency safety standards may be modified under the authority of this Section:
    - a. Site development and construction standards (§76.030)
    - b. Special Mitigation Measures for Public Roads (76.040.B.3)
    - c. On-site fire protection plan (76.060.C)
    - d. Vegetation Mitigation (76.080).
  2. **ACCESS STANDARDS SUBJECT TO MODIFICATION.**
    - a. **Driveway Connects To Maintained Public Road.** When a driveway wholly on the applicant's property connects to a road that is maintained by the county or state, the access standards contained in Section 76.040 may be modified, except that the provisions of Section 76.040.A.2.c (maximum driveway grade of 18%), Section 76.040.A.2.e (driveway surfaces), and Section 76.040.A.2.f (driveway structures) shall not be modified.

- b. **Driveway Connects To Private or Non-Maintained Public Access.** When a driveway connects to an easement or public usage road, or the applicant's property is served by a non-maintained public road (or any combination of these circumstances), the Wildfire and Emergency Standards Review Committee is authorized to recommend modifications to any of the access standards contained in Section 76.040.
- C. **Application Requirements.** Modification of wildfire and emergency safety standards shall be initiated by site plan review application pursuant to the review procedures contained in Article 42 (*Site Plan Review*) of this code. The Director shall develop wildfire and emergency safety standards modification application and mapping requirements consistent with the functions of this Article and Article 42.
- D. **Wildfire and Emergency Safety Standards Review Committee.** All requests to review and modify wildfire and emergency safety standards shall be reviewed by a special site plan review committee called the Wildfire and Emergency Safety Standards Review Committee.
  - 1. **COMPOSITION.** The Director shall notify and involve other appropriate county departments, government agencies, political jurisdictions and fire protection districts. In addition, other wildfire and safety experts may be involved as the Director determines necessary or helpful to review applications.
  - 2. **FUNCTION.** It is the function of the Committee to review all requests to modify the standards noted above in Subsection B. The Committee may recommend or oppose proposed modifications. If the Committee recommends modification, it may also recommend other mitigation measures that are designed to offset risks resulting from modification. If the Committee recommends against modification, it shall explain why the modification should not occur. The Committee's recommendation shall be in writing.
  - 3. **AUTHORITY.** Action by the Committee shall not be considered a land use decision or final decision for appeal. The Director shall consider the recommendations of the Committee in making the final decision as specified in Section 42.040.C. The Director, however, shall not modify any wildfire or safety standard without Committee review.
- E. **Variances.** The wildfire and emergency safety standards contained in this Article shall not be modified by procedures for variances (Article 44, *Variances*).
- F. **Forest Zones.** The wildfire and emergency safety standards for new dwellings in Forest Zones, as established by Oregon Administrative Rule, Chapter 660, Division 006, Sections 0029 and 0035 shall not be made less restrictive using the procedures in this Article or Article 44 (*Variances*).

**76.100 - APPLICATIONS FOR OTHER DWELLINGS**

The development of new, remodeled, relocated or replaced dwellings in any zone other than the Forest Zones shall comply with the following application and approval procedures.

- A. Application Requirements. Prior to issuance of a Development Permit for the development of dwellings in Other Zones, the owner shall submit to the Planning Office for review and approval:
  - 1. A plot plan meeting the requirements of subsection 41.020.B.3 of this code;
  - 2. Proof of fire protection service meeting the requirements of subsection 76.060.A. or B (if fire protection service is not available, the application shall be subject to the requirements of subsection C set forth below).
  - 3. Proof of on-site water supply.
- B. Certification of Compliance. Prior to obtaining a Certificate of Occupancy from the county Building and Safety Department, the owner(s) shall complete a certificate of compliance on forms provided by the Planning Office. The certificate of compliance shall certify, by the signature of all owners of record for the property, that all applicable wildfire and emergency safety standards required by this Article have been satisfied. The Planning Director shall maintain the original certificate of compliance in the Planning Office file for the property.
- C. Absence of Fire Protection Service. In the event that the lot or parcel cannot demonstrate proof of fire protection as required by subsection A.2 above, the owners shall submit an on-site fire protection plan as described in subsection 76.060.C of this Article. The plan shall be reviewed pursuant to Section 76.090 (*Modification of Standards*).

#### **76.110 – APPLICATIONS REQUIRING FULL REVIEW**

Applications for new, remodeled, relocated and replaced dwellings and other structures within the Forest Zones, and as may be determined during application review for Land Divisions, Site Plan Reviews and Conditional Use Permits, shall include the following information and plot plans.

- A. Information.
  - 1. **SITE DESCRIPTION.** The site shall be described with current photographs depicting all areas proposed for the development of driveways, turnarounds and structures, together with a brief written description of the understory and over story vegetation present on the property. The description shall include an explanation of the clearing, thinning or landscaping planned on the property.
  - 2. **FIRE PROTECTION.** As required by the provisions of Section 76.060, fire protection shall be demonstrated in one of the following ways:
    - a. A written statement from the appropriate fire protection district stating the district agrees to include the property within the district before the development of any structure; or

- b. A copy of the contract for fire protection by a commercial fire service provider that will be effective before the development of any structure; or
    - c. A proposed on-site fire protection plan.
  3. **WATER SUPPLY.** Documentation shall be included showing the existing or proposed domestic water supply is authorized by the Oregon Department of Water Resources.
  4. **EROSION CONTROL PLAN.** If any development of the property will disturb areas that exhibit slopes that are 15% or greater, or involve granitic soils, a proposed erosion control plan pursuant to Article 83 (*Erosion & Storm Drain Facilities*) shall be included. No disturbance shall occur until the plan is approved.
  5. **DRIVEWAY CONSTRUCTION PLAN.** If a driveway construction plan is used or required to meet the surface requirements in Section 76.040.A.2.e, the proposed driveway construction plan and surface certification shall be included.
  6. **SAFETY ZONE DOCUMENTATION.** Copies of recorded easements shall be included if any part of the safety zones are to be implemented on other property.
  7. **PUBLIC ROADS.** Land divisions involving public roads longer than 800' in length shall include a mapped and written description of the looped road or emergency access features of the development plan. If the plan is supported by agreements with other landowners, copies of the agreements should be included with the application. If looped or emergency access is not practical or feasible, the application shall include a brief statement explaining why this is so.
  8. **GATE FEATURES.** If a gate is to be constructed within the driveway, a written description of the gate's features, and how these features comply with the requirements of Article 76.040.A.2.i, shall be supplied.
- B. **Homesite Plot Plan.** A plot plan for the homesite development shall be prepared that contains the following features:
  1. **BASIC MAPPING REQUIREMENTS.** The plot plan shall be drawn to a common, even scale (e.g., 1" = 50', 100', 200', 400') that accurately depicts development features at practical dimensions, and includes a north arrow. Inserts or breakout diagrams may be used when a single common scale is ineffective.
  2. **MAP FEATURES.** The plot plan shall depict or note the following features at scale:
    - a. Contour at intervals not greater than 40'
    - b. All structure locations with distances from the two closest property lines noted

- c. The location of driveways and required turnaround areas in the vicinity of the homesite demonstrating a 48' radius that utilizes an authorized design
- d. The location and kind of domestic water source
- e. The location of the existing or proposed septic system
- f. The location, dimension and capacity of water storage structures
- g. The location of the primary and secondary safety zones

C. Driveway Plot Plan.

1. **BASIC MAPPING REQUIREMENTS.** The driveway plot plan shall be a separate drawing from the homesite plot plan and shall be drawn to a common, even scale (e.g., 1" = 50', 100', 200', 400') that accurately depicts development features at practical dimensions, and includes a north arrow. Inserts or breakout diagrams may be used when a single common scale is ineffective.
2. **MAP FEATURES REQUIRED.** The plot plan shall depict the entire length of the driveway, to include turnaround areas, and consist of both flat and cross-sectional (plan and profile) views. The plot plan shall contain or note the following features at scale:
  - a. Location of all water sources capable of being used for fire suppression
  - b. Minimum width of the driveway with wider areas noted and measured
  - c. Radius and grade dimension within curves
  - d. Centerline radius of the driveway approach to a public road
  - e. Turnout locations and dimensions
  - f. Proposed driveway surface materials
  - g. Percentage of grade at regular intervals and transition points
  - h. Places of natural streams, ditches, ravines and drainage ways
  - i. Places of proposed driveway structures (bridges, fill and culverts, etc.) and cuts and fills that may exceed 4'
  - j. Areas of vegetation modification adjacent to the driveway
  - k. Gate locations
  - l. Survey data or maps if available