



**Fire Prevention Bureau**

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Fire Marshal

## FIRE PREVENTION REQUIREMENTS FOR RESIDENTIAL STRUCTURES

This document has been written to provide general information on what may be required by the Fire Prevention Bureau for your building permit application. More specific information cannot be provided without additional clarification from you regarding building size, use, and location.

The Fire Prevention Bureau reviews single family residences and accessory dwelling units for fire flow and Emergency Vehicle Access (EVA). Accessory structures such as garages, sheds, and buildings used for agriculture are reviewed for fire flow only.

This handout applies to Fire Prevention Bureau requirements only. In some cases, these requirements may conflict with or impact requirements from other reviewing departments. Referenced forms may be found at [www.co.pierce.wa.us/pc/abtus/ourorg/dem/fireprev.htm](http://www.co.pierce.wa.us/pc/abtus/ourorg/dem/fireprev.htm)

### FIRE FLOW

Fire flow is regulated by Pierce County Ordinance 17C. 60.150. If the parcel is less than one acre in size a Certificate of Water Availability and water system vicinity map are required from the water purveyor before application can be made. If the parcel is larger than one acre, the applicant has a choice whether to obtain a Certificate of Water Availability and water system vicinity map or use 100% fire flow credits.

If required, hydrants shall be located within 350-feet of the centerline of your lot frontage and flow a minimum of 500 gpm for a minimum duration of 30 minutes at a residual pressure of not less than 20 psi. Dead ends up to 600-feet long can be served by one hydrant at the intersection. If your property is less than one acre, and the nearest hydrant is too far away, you will be required to install a hydrant if a water main that would support a hydrant is available within the required distance. If the parcel is larger than one acre, the applicant has a choice whether to install a hydrant or use 100% fire flow credits.

#### **Building Additions:**

If the building was legally constructed prior to November of 1992, a cumulative square foot addition of less than forty percent may be constructed without fire flow.

#### **New Buildings and cumulative additions of 40% or greater:**

The fire flow requirement for dwellings is based on the square footage including: attached garages, all stories, basements, covered porches and under upper story decks.

**Dwellings** less than 3,600 square feet require fire flow of 750 GPM for 45 minutes.

**Dwellings** that are 3,600 square feet or larger require fire flow of 1,000 GPM for 1 hour.

**Garages** less than 3,000 square feet in roof area require fire flow of 750 GPM for 45 minutes. Fire flow is not required for a garage meeting ALL of the following criteria: Does not exceed 2,500 square feet; the house meets fire flow requirements; setbacks from side and rear lot lines of at least 20 feet, and at least 10 feet from other buildings on the same lot.

**Sheds** less than 500 square feet are exempt from fire flow if they are separated from other buildings by a minimum of 10-feet.

**Agricultural buildings** are exempt from fire flow if they meet all of the following: 30-feet from other buildings; 30-feet from side & rear property lines and have a 20-foot wide access lane to within 50-feet of the building.



## **EMERGENCY VEHICLE ACCESS (EVA)**

Emergency Vehicle Access (EVA) is regulated by Pierce County Ordinance 17C. 60.160. EVA compliance is determined from a site plan. Site plans shall meet the Development Center Site Plan Example. When buildings are protected with an approved automatic fire sprinkler system, EVA requirements may be modified by the Fire Marshal through an Alternate Methods or Material review.

### **Building Additions:**

If the building was legally constructed prior to November of 1992, a one-time addition that does not exceed twenty-five percent of the original square footage may be constructed without triggering EVA requirements. Any subsequent addition would trigger EVA.

### **New Buildings and one-time additions which exceed 25% or any subsequent addition:**

Emergency Vehicle Access is required to extend from the property line to within 150-ft of all portions of the first story exterior of the home, including decks. This is measured as the fire truck would drive and fire fighters would pull fire hose in an approved route around the exterior of the building.

### **Width:**

EVA is required to be 15-ft wide if serving only one individual dwelling on a parcel.  
EVA is required to be 24-ft wide if serving more than one dwelling on a parcel. The width may be reduced to 15-ft at the point that only one dwelling is served.

### **Surface and Grade:**

EVA surfacing for gradients under 12% requires 2-inches of gravel if serving one single dwelling and pavement if serving more than one dwelling.

Portions of EVA that exceed 12% grade are required to be paved.  
If any portion of EVA exceeds 15%, a fire sprinkler system is required to be installed in the dwelling.  
If any portion of EVA exceeds 19%, an extended coverage fire sprinkler system is required to be installed in the dwelling.

### **Vertical Clearance:**

EVA shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. EVA shall not extend under roof structures of buildings.

### **Gates:**

Gates over EVA require a permit from Development Engineering. Contact 253-798-3150.

### **Turnarounds:**

A dead end EVA in excess of 150 feet in length shall be provided with a turnaround within 150 feet of the end of the EVA. The turnaround shall be a 40-ft radius cul-de-sac or a hammerhead (See Handout).