



Smoke Alarms

Bulletin 35

Division of Building Safety and Inspection for 2015 I Codes

The International Residential Code requires that smoke alarms be installed in multiple locations throughout dwelling units in new construction and dwellings undergoing alterations, repairs or additions. Smoke alarms must be wired to the building power supply and be interconnected in most occurrences as explained in this bulletin.

Smoke Alarm Locations IRC R314.3:

Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of the smoke alarm required by Section R314.3.
5. In napping areas in a family home child care.

Alterations, Repairs, & Additions R314.3.1:

When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck are exempt from the requirements of this section.
2. Installation, alteration or repairs of plumbing, electrical or mechanical systems are exempt from the requirements of this section.

Power Source R314.4:

Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Exceptions:

1. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power.
2. Hard wiring of smoke alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an *attic*, crawl space or *basement* available which could provide access for hard wiring without the removal of interior finishes.

Interconnection R314.4:

Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with [Section R314.3](#), the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Exception:

Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

Additional Requirements:

In addition to the smoke alarms the International Residential Code requires the installation of Carbon Monoxide Alarms in new and existing dwelling units. Refer to Pierce County Bulletin # 51 and International Residential Code Section R315 for further information.