

## SECTION R313

### Residential Smoke Alarms and Carbon Monoxide Detectors

**[F] R313.1 Smoke alarms.** 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, but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit 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. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

All smoke alarms shall be listed and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.

**(Amd) R313.1.1 Alterations and additions.** When alterations or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the entire dwelling shall be provided with smoke detectors located as required for new dwellings. The smoke detectors shall have a power source in accordance with Section R313.2.

**Exceptions:**

1. The smoke detectors may be battery operated and are not required to be interconnected when other remodeling considerations do not require the removal of the appropriate wall and ceiling coverings to facilitate concealed interconnected wiring.
2. Alterations to the exterior surfaces of dwellings including, but not limited to, re-roofing, re-siding, window replacement and the construction of decks without roofs, are exempt from the requirements of this section.

**[F] R313.2 Power source.** In new construction, the required 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. Smoke alarms

shall be permitted to be battery operated when installed in buildings without commercial power or in buildings that undergo alterations, repairs, or additions regulated by Section R313.1.1.

**(Add) R313.3 Carbon monoxide detectors.** Carbon monoxide detectors shall be installed outside of each sleeping area in the immediate vicinity of the bedrooms. When more than one carbon monoxide detector is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one carbon monoxide detector will activate all of the carbon monoxide detectors in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. All carbon monoxide detectors shall be listed and shall be installed in accordance with their listing and the manufacturer's installation instructions.

**Exception:** Carbon monoxide detectors shall not be required in dwelling units not containing a fuel-burning appliance, fireplace or attached garage.

**(Add) R313.3.1 Power source.** In new construction, the required carbon monoxide detectors shall be permanently installed and shall receive their primary power from the building wiring when such wiring is served from a commercial source. When primary power from the building wiring is interrupted, they shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Carbon monoxide detectors shall be permitted to be battery operated when installed in buildings without commercial power or in buildings that undergo alterations or additions regulated by Section R313.3.2.

**(Add) R313.3.2 Alterations and additions.** When alterations or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the entire dwelling shall be provided with carbon monoxide detectors located as required for new dwellings. The carbon monoxide detectors shall have a power source in accordance with Section R313.3.1.

**Exceptions:**

1. The carbon monoxide detectors may be battery operated or plug-in and are not required to be interconnected when other remodeling considerations do not require the removal of the appropriate wall and ceiling coverings to facilitate concealed interconnected wiring.
2. Alterations to the exterior surfaces of dwellings including, but not limited to, re-roofing, re-siding, window replacement and the construction of decks without roofs, shall be exempt from the requirements of this section.
3. Carbon monoxide detectors shall not be required in dwelling units not containing a fuel-burning appliance, fireplace or attached garage.