



## DEPARTMENT OF BUILDING REGULATIONS

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**SAFETY FIRST!**



# SMOKE DETECTORS SAVE LIVES!

For residential occupancies, the Building Code has a unique provision that requires smoke detectors to be retrofitted in existing dwelling units. Residential fire deaths far exceed those of any other building use. Most fire fatalities in residential buildings occur between 2 a.m. and 6 a.m. - while most people are sleeping.

A common misconception is that smoke will awaken you if a fire does break out. In fact, the toxic smoke may actually put you into a deeper sleep, making a safe escape impossible. Additionally, more than one-half of the fire deaths among all buildings have occurred because of a delay in detection due to the occupants being asleep at the time of the fire. Smoke from a residential fire can quickly kill any occupants, while a smoke detector could easily save those lives.

U.S. Department of Commerce - National Institute of Standards and Technology (NIST) Technical Note 1455-1 (December 2007 Revision) states that both types of commercially available home smoke detectors, consistently provide people enough time to escape most residential fires. It stressed the need for immediate response to an activated alarm and showed that individuals caught in a flaming fire (as opposed to a smoldering fire) have an average of three minutes from an alarm's first warning to escape.

For this reason, smoke detectors are required to be installed not only in new residential construction, but also existing, when any addition, alteration, or repair causes a permit to occur. This provision is intended to speed up the installation of smoke detectors in residential buildings, as they have proven to be very effective in the reduction of fire deaths.

Section 313 of the 2006 Residential Code of Ohio for One-, Two- and Three-Family Dwellings establishes the minimum provisions for smoke alarms (detectors) in residential occupancies and structures.

## **SECTION 313 SMOKE ALARMS**

### **313.1 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 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.

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.

#### **313.1.1 Alterations, repairs and additions.**

When interior 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 provided with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

#### **Exceptions:**

1. Smoke alarms in existing areas shall not be required to be interconnected and hard wired 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 and interconnection without the removal of interior finishes.
2. Repairs to the exterior surfaces of dwellings are exempt from the requirements of this section.
3. *For the purpose of this section a screened porch, deck or similar structure is not considered an interior alteration, repair or addition.*

### **313.2 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 [313.1.1](#).