

## TOWNSHIP CODE AUTHORITY

### Smoke Detectors

Smoke detectors should be found in every home, both old and new. The smoke detector is a very inexpensive piece of equipment that when properly installed and maintained, could save the life of those in a building, should a fire start. Properly installed detectors can alert those in a building, by an audible signal, that there is a hazardous smoke inside, and that evacuation of the building might be needed.

There are specific locations where smoke detectors are required, in both new construction and remodel/alteration projects. While the electrical code contains the specifics on wiring of smoke detectors, the 2003 Michigan Residential Code (MRC) contains the information and code requirements on the location, and installation, of smoke detectors in a residence. Section R313.1 lists the areas where smoke detectors are required to be installed. These locations include the following:

- Any room used for a sleeping area or bedroom must be equipped with a smoke detector in the room. For example, a room used as a den, that may at many times be used as a sleeping area for extra guests, would require a smoke detector.
- A smoke detector must be located outside of, but in the immediate vicinity of the bedrooms. Smoke detector manufacturers consider a distance of up to 20 feet as immediate vicinity. Smoke detectors are not recommended to be installed in kitchens, laundry rooms, bathrooms, garages or in close proximity to heating equipment such as furnaces, water heaters, wood stoves or fireplaces. Everyday activities in those areas can cause the smoke detector to activate unnecessarily. Careful planning in the location of smoke detectors must be considered for proper operation.
- A minimum of one smoke detector must be located on each floor of a residence. Crawlspace and uninhabitable attic areas are not considered floors or levels, and are exempt from the smoke detector requirements.

When more than one smoke detector is required to be installed, all smoke detectors in the residence must be interconnected, so that when one smoke detector is activated, the remainder of the smoke detectors in the residence will be activated as well. The smoke detectors must receive their primary power from the building's wiring. The smoke detector must be of a type that has a battery backup, so that the power is provided to the detector, should be primary power to be interrupted.

Section R313.1.1 contains the code requirements for smoke detectors in alteration, repair and addition projects. These types of projects, that require a permit, are required to have the smoke detectors updated to a basement, crawlspace or attic space is available providing access to install wiring and interconnection, then updating of smoke detectors is required. Repairs to just the exterior of a residence, where a permit may be required are exempt from the updating of smoke detectors.

Smoke detectors should also be located as per the manufacturer's specifications. Typically, smoke detector or manufacturer's provide details to install their products on either wall or ceiling locations. Instructions can usually be found for either flat or cathedral ceilings. The instructions should be followed for proper operation of the detector. Improperly installed detectors may not do the job they are installed to do, which could cause serious injury, possibly even death, in a fire.

While currently not required by the 2003 MRC, carbon monoxide detectors are available, and are a worthwhile investment in any building. Carbon monoxide has no odor, is not visible, and many times is not detected in a building until it is too late.

By following the installation instructions and the code requirements for smoke detectors, and installing a carbon monoxide detector, a home owner is provided with some simple and fairly inexpensive safety equipment. That equipment could possibly save the life of those in the home, in the event of a fire, or deadly carbon monoxide buildup in a building. The life a loved one is certainly worth much more than the small investment required meeting the building code requirements for smoke detectors.