

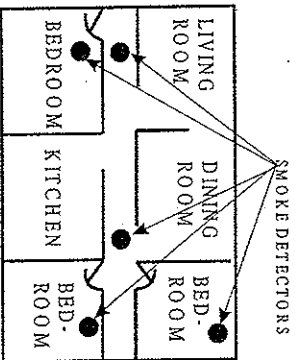
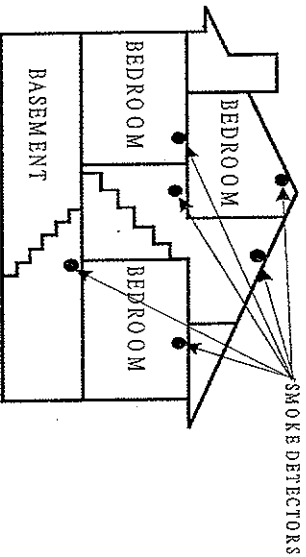
**When Required.** When the valuation of an addition, alteration or repair to residential occupancy exceeds \$1,000 and a permit is required, or when one or more sleeping rooms are added or created in existing residential occupancies, smoke detectors must be installed.

**EXCEPTION:** Work on the exterior of a Group R occupancy which does not require entry into the residential occupancy for inspection is exempt from the requirements of this section.

**Power source.** In new construction, required smoke detectors must receive their primary power from the building wiring when such wiring is served from a commercial source and must be equipped with a battery backup. The detector must emit a signal when the batteries are low. Wiring must be permanent and without a disconnecting switch other than those required for over-current protection. Smoke detectors may be solely battery operated when installed in existing buildings; or in buildings without commercial power; or in buildings, which undergo alterations, repairs or additions.

**Location within dwelling units.** In dwelling units, a detector must be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. When the dwelling unit has more than one story and in dwellings with basements, a detector must be installed on each story and in the basement.

In dwelling units where a story or basement is split into two or more levels, the smoke detector must be installed on the upper level, except that when the lower level contains a sleeping area, a detector must be installed on each level. When sleeping rooms are on an upper level, the detector must be placed at the ceiling of the upper level in close proximity to the stairway. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches or more, smoke detectors must be installed in the hallway and in the adjacent room. Detectors must sound an alarm audible in all sleeping areas of the dwelling unit in which they are located.



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CITY OF BUFFALO, MINNESOTA

**METRO WEST INSPECTION SERVICES, INC**



## Why are Smoke Detectors Required?

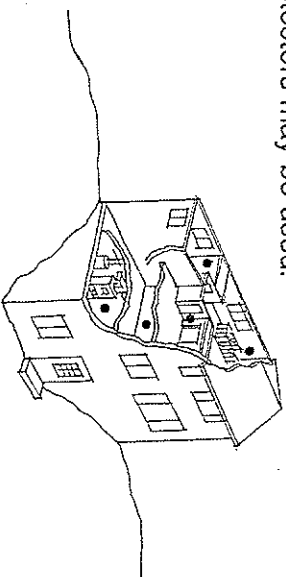
More fire deaths occur in residential buildings than in any other building type. More than half of all fire deaths that occur in residential buildings occur when the occupants are asleep and are unaware that a fire has occurred. Death usually results from asphyxiation long before the fire reaches the bedroom.

Smoke detectors installed in a home give an early warning of smoke and fire thus giving the occupants the critical few moments needed to escape.

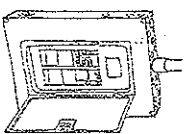
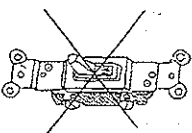
In order to address the tragic loss of life in residential buildings the Minnesota State Building Code has requirements for the installation of smoke detectors in a home when new construction, remodeling or repair is undertaken and the cost of construction exceeds \$1,000.00. (See specific code requirements below for exceptions.)

## General Requirements

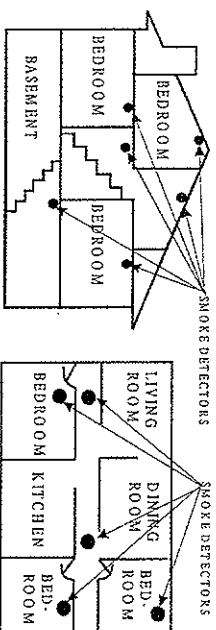
In general, the code requires that smoke detectors be provided on each floor of a dwelling, in the corridor giving access to bedrooms and in bedrooms. Detectors in new construction must receive their power from the building wiring and have a battery backup in the event power is lost. In remodeling where connection to the building wiring is difficult to achieve, battery operated detectors may be used.



An important feature of the requirement for detectors being connected into the building's electrical wiring is that there must be no disconnecting means other than the primary over current protection. This means detectors must be wired directly into the building's wiring system and that no switches, plugs or mechanical disconnects are permitted between the main fuse box and the detector.

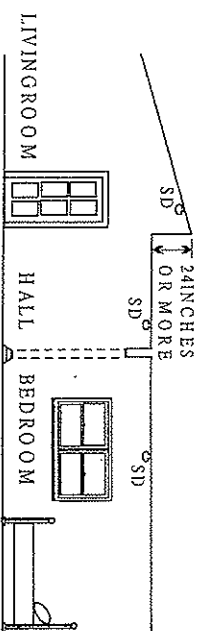


The code also requires that smoke detectors be located in each sleeping room and centrally located on the ceiling or wall of the corridor or area giving access to sleeping rooms.



Where sleeping rooms are on an upper floor, the code requires the detector to be placed on the ceiling in close proximity to the stairway. This requirement is based on the fact that any fire initiating on the lower floors will send products of combustion up the stairway. The position above the stairway will give the earliest warning to the sleeping occupants in rooms on the upper floor.

High vaulted ceilings in rooms that adjoin corridors and halls serving bedrooms, act as a reservoir for smoke and heat. This causes a delay in the response of adjoining hallway detectors. In order to insure early warning for the occupants, the code requires an additional detector be placed in the adjoining room high up in the vaulted area.



In buildings with basements, a detector is also required in the basement. The location of basement detectors is detailed in the specific code requirements below.

All Smoke detectors, regardless of the location in the dwelling, must be audible in the sleeping areas. In a large home this can be difficult to accomplish. In this case detectors are usually wired together so if one detects a fire they all sound the alarm. (See specific code requirements below for more details.)

## Specific Code Requirements.

**General.** Dwelling units, congregate residences and hotel or lodging guest rooms that are used for sleeping purposes must be provided with smoke detectors. Detectors must be installed in accordance with the approved manufacturer's instructions.