



CITY OF SAINT PAUL
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HARD-WIRED SMOKE DETECTOR INSTALLATION GUIDELINES **PER HARD-WIRED SMOKE DETECTOR WITH BATTERY BACK-UP ORDINANCE**

If you are selling your single-family home in the City of Saint Paul, you **must** have a 120 volt hard-wired battery back-up smoke detector installed within 60 days after notice from the Fire Department in order to satisfy the Hard-Wired Smoke Detector with Battery Back-up Ordinance. **The following guidelines are to assist if you, as the homeowner, are applying for the permit and installing the detector yourself:**

Only one detector, mounted in the hallway outside the bedrooms, is required to satisfy the ordinance. Additional detectors do increase your level of safety, but are not mandatory.

- If all the bedrooms in the home are on one level, the detector must be mounted in the hallway (not in a stairwell) outside of the bedrooms.
- Do not install the smoke detector in a kitchen.
- Install the detector as far away from the bathroom as possible. (Steam can make the detector go off.)
- If you have legal bedrooms on more than one level, the detector must be mounted as follows:
 1. The detector must be installed on the level with the **MOST** bedrooms. If, for example, you have three bedrooms on one level and one on the other, the detector must be mounted on the level with the three bedrooms.
 2. If you have an equal number of bedrooms on more than one floor, the detector must be installed on the upper level with bedrooms. For example, if your home has two bedrooms on the first floor and two on the second, the detector must be installed on the second floor.
 3. If the detector must be mounted on the upper level where there is only **ONE** bedroom occupying the **ENTIRE LEVEL**, mount at top of stairs on ceiling parallel to the floor (see Figure 2).

The detector may be mounted on the wall or ceiling (see Figure 1 on the following page). The **BEST** location is in the center of the ceiling, but if the construction of the home prohibits ceiling mount, it may be wall-mounted. **READ THE DIRECTIONS THAT COME WITH THE DETECTOR** - they will give certain measurements that must be followed for the distance down from the ceiling for a wall-mounted detector.

The power for the detector may be tapped from any **UNSWITCHED** power source. The detector **CANNOT** be put on a separate circuit. This will mean taking power from an outlet or from a lighting circuit ahead of any switches (be careful of getting power from a ceiling light). This tap from the power must be done in an electrical box (the box that a device such as a switch, outlet, or light fixture is mounted on). **DO NOT CONNECT TO ANY OPEN WIRING OUTSIDE OF THESE BOXES.**

The most popular method of running power from the existing electrical box to the new box you install for the detector is NM-B cable or Romex. Romex must be fished inside of a wall or ceiling. It **CANNOT** be run on the outside of a wall, floor, or ceiling without mechanical protection.

This cable is run through a **Knockout** or opening in the side or back of the electrical boxes. Some type of cable clamp or brushing is required where the cable goes through the knockout. There are several brands of plastic boxes available for remodeling work that have **ears** to hold the box in place in the wall, and that have integral cable clamps to hold the Romex.

THE SMOKE DETECTOR MUST BE MOUNTED ON AN ELECTRICAL BOX. When the box is cut into the ceiling or wall, the opening must be flush with the ceiling or wall surface. You should be able to see the electrical box opening when the detector is detached from the box (see Figure 3). You **MUST** use a plastic insulated type wire connector (such as the 3M "Scotchlock") for any wire splices - twisting the wires together and taping the bare wires is **NOT** acceptable. Your finished installation, prior to mounting the detector on the box, should look like Figure 3.

Mount the detector on the box before the inspection takes place. The inspector will disassemble anything they need to look at and reassemble when finished. Call your inspector for the final inspection - his/her name and direct number is on your copy of the permit. If you cannot find your copy, please call the Electrical Inspection's general number (651-266-9003) between 7:30 and 9:00 a.m. Monday through Friday and they will transfer you to the inspector that covers your area.

- Please note: Major remodeling projects will have different requirements from the Building Department. **THESE GUIDELINES ARE FOR THE HARD-WIRED SMOKE DETECTOR WITH BATTERY BACK-UP ORDINANCE ONLY.**