



Mercer Island Fire Marshal's Office
3030 78th Avenue SE
Mercer Island, WA 98040
(206) 275-7966

HOUSEHOLD FIRE ALARM STANDARD

Inspection Scheduling:

Most residential sprinkler, fire alarm and final fire inspections require a three-day notice. Please schedule online at <https://inspection.mybuildingpermit.com/> or by calling the Fire Department Inspection Request Line at (206) 275-7979.

29.3.5 Fire-warning equipment shall produce the audible signal that is described in ANSI S3.41. Three-Pulse Temporal.

29.5.1.1 Required Detection.

- In all sleeping rooms and guest rooms.
- Outside of all sleeping rooms within 21 feet of the door.
- On every level of the dwelling unit, including basement.

29.5.1.3 Additional Locations.

- Where the interior floor area of a given floor, excluding garage, is greater than 1000 ft², a minimum of 1 smoke alarm shall be installed for every 500 ft².

29.5.2.1.2 Notification.

- Household Fire Alarm Systems (low voltage or wireless) shall notify per 18.4.3 and 18.4.5
 - 18.4.3 Audible Requirements.
 - A minimum sound level of 15 dB above average sound level shall be produced throughout.
 - 18.4.5 Sleeping Areas.
 - A sound level of 15 dB above average sound level and a minimum of 75dBA shall be produced in sleeping areas.
 - A low frequency alarm signal shall be used in all sleeping areas. (*This requirement may be waived by the Fire Code Official if devices are not available*)

29.7.2 Smoke Alarms and System Smoke Detectors shall be in compliance with UL 268, *Standard for Household Fire Warning System Units*.

Fire Alarm Circuit

- AC primary power shall not be from a GFCI or Arc Fault protected branch circuit.
- Permanently mark Breaker as “Fire Alarm Circuit”.

29.7.6.7 System control equipment shall be in compliance with UL 985, *Standard for Household Fire Warning System Units*.

29.7.8 Supervising Stations

- 29.7.8.1.1 Only a single phone line is required to transmit a signal.
- 29.8.1.4 A dedicated cellular phone line shall be permitted.

29.8.3.1 Peaked Ceilings. Detectors shall be located not less than 4” vertically or more than 36” horizontally of the peak.

29.8.3.4 Specific Location Requirements

(5) Detectors shall not be installed within 36” of a bathroom door containing a shower or tub.

(6) Detectors shall not be installed within 36” of a supply air register and shall be outside of the direct airflow path.

(7) Detectors shall not be installed within 36” of the tip of a fan.

(9) Stairs leading from the basement shall have detectors mounted on the ceiling near the entry to the stair.

R314.3.1 Installation near cooking appliances. Photoelectric smoke alarms shall not be installed less than 6 feet horizontally from a permanently installed cooking appliance.

R314.4 Interconnection

- Alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all the alarms in the individual dwelling unit.
- Wireless. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

R314.7.3 Permanent fixture. Where a household fire alarm is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner.

R314.7.4 Combination detectors. Combination smoke and carbon dioxide detectors shall be permitted to be installed in fire alarm systems in lieu of smoke detectors, provided they are listed in accordance with UL 268 and UL 2075.