



# Smoke and Carbon Monoxide Alarms

08/30/2019

City of Palo Alto (CPA) Fire Prevention Bureau  
285 Hamilton Ave Palo Alto, CA 94301-2572  
Inspection Request: (650) 329-2184

General Requirements: Residential

**Applicable Codes:** CRCR314, CRCR315, CFC 907.2.11, CFC 915, PAMC 16.06.200, UL 217, UL 2034, UL 2075

*The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.*

**Photoelectric Smoke Alarms** are required and shall be installed and maintained in the following locations:

- Each room used for sleeping purposes
- In the immediate vicinity outside of rooms used for sleeping
- Each additional story of the dwelling, including basements and habitable attics
- At the top and bottom landings of all interior staircases

**Carbon Monoxide (CO) Alarms** are required and shall be installed and maintained in the following locations:

- In the immediate vicinity outside rooms used for sleeping
- On every occupiable level of a dwelling unit, including basements
- Where fuel-burning appliance is located within the bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom (e.g., a bedroom with a fireplace)

**Dual Sensor (Photoelectric/Ionization) Alarms** if installed shall comply with the following requirements:

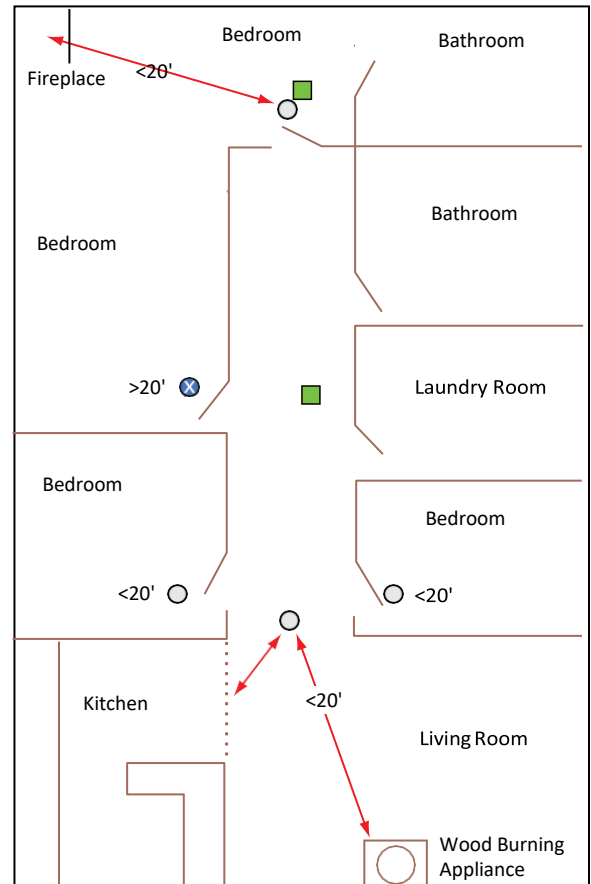
- Located a minimum of 20' horizontal distance from a permanently cooking appliance
- Not located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer
- Not located in unfinished attics, garages, mechanical rooms
- Not located where the mounting surface could become considerably warmer or cooler than the room
- Not less than 3' horizontally from the door or opening of a bathroom that contains a bathtub or shower
- Not less than 3' horizontal path from the tip of the blade of a ceiling-suspended fan
- Not installed within 3' horizontal path from the supply registers of a forced air heating or cooling system and shall be outside of the direct airflow from those registers
- Not located in a room with a wood burning appliance or with 20' of an entry to a room containing a wood burning appliance

### Special Considerations

- Hallways over 40' in length shall require a smoke alarm at each end.
- Smoke alarms are either to be ceiling- or wall-mounted. Wall-mounted smoke alarms shall not be mounted within 4" of a wall or ceiling corner.
- Smoke alarms installed within 20 ft. of a kitchen, bathroom, or room containing a fireplace or wood burning stove shall be of the photoelectric type only.
- Smoke and carbon monoxide alarms shall receive their primary power from the building wiring, be equipped with battery back-up, and be interconnected in such a manner that the activation of one alarm will activate all the alarms. (This may not be applicable for smaller remodels).
- For placement of smoke and carbon monoxide alarms in rooms with variations in ceiling heights (e.g., slopped, pitched, etc.), refer to the manufacturer's installation instruction for proper placement.
- If the smoke alarms currently installed in the residence are more than 10 years old (10 years from the date of installation) they are required to be replaced with new smoke alarms in accordance with the City of Palo Alto Municipal Code.

### Alarm Listing Requirements

- Smoke alarms shall be listed to UL 217 and California State Fire Marshal listed
- Carbon Monoxide alarms shall be listed to UL 2034 and UL 2075
- Combination Smoke and Carbon Monoxide alarms shall be California State Fire Marshal listed
- Go to <https://osfm.fire.ca.gov/divisions/fire-engineering-and-investigations/building-materials-listing/bml-search-building-materials-listing/> for a current list of approved State Fire Marshal alarms.



> Greater than  
< Less than

- Photoelectric Smoke Alarms
- ⊗ Dual Sensor (Photoelectric/Ionization) Alarm
- Carbon Monoxide (CO) Alarm