

Alternative #2: Monitored Alarms. The building may be provided with a monitored CO alarm system. These alarms must be placed in every room containing a fuel-burning appliance, and connected to an alarm monitoring station that is staffed at all times by a trained and qualified person. CO alarms and fire alarms may be incorporated into a common monitored system, provided that authorities would be able to distinguish each alarm type.

The following table indicates the areas of the building that are required to be provided with a CO alarm in the vicinity of sleeping rooms in each dwelling unit or guest room based upon the compliance option chosen:

	No Common Area or Monitored Alternative	Alternative #1: Common Area System	Alternative #2: Monitored Alarms
Dwelling unit or guest room contains a fuel-burning appliance or has an attached garage	X	X	X
Dwelling unit or guest room is connected by ductwork or ventilation shaft to a room containing a fuel-burning appliance or to an attached garage	X	X	
Dwelling unit or guest room is only one story above or below any story that contains a fuel-burning appliance or has an attached garage, or is on the floor of the fuel-burning appliance or the floor that has the attached garage	X	X	
All other dwelling units or guest rooms contained within the building	X		

The following is an example of a building configuration and the alarm requirements or options:

A seven-story hotel (Group R-1) contains gas dryers in the laundry room on the first floor. There are no vertical shafts or duct work connecting the laundry room and any of the guest rooms. There are three suites on the seventh floor that contain gas fireplaces. If the designer chooses not to provide any of the alternative protection, all of the guest rooms are required to be provided with CO alarms in the immediate vicinity of the sleeping areas. If the designer chooses to install Alternative #1, Common Area Alarms, in addition to the common area alarms, all guest rooms on the first, second, sixth, and seventh floors are required to be provided with CO alarms within the guest rooms. This is based upon the requirement that units within one floor above and below the floor containing fuel-burning appliances are required to be provided with alarms. If the designer chooses

to install Alternative #2, Monitored Alarms, only those guest rooms that contain fuel-burning appliances are required to be provided with alarms within the guest room. In this case, alarms would be required in the seventh floor suites with gas fireplaces, as well as in the laundry room.

UL 2034 and NFPA 720

The CO alarm is required to be manufactured, listed, and labeled in accordance with UL 2034 entitled, "Single- and Multiple-Station Carbon Monoxide Alarms." Each device shall have a label indicating that it meets this requirement.

In the locations specified above, the alarms are required to be installed as follows:

1. The device is permitted to be a battery-powered, hard-wired, or plug-in type.
2. If installing an electrically operated device, the AC power source is required to be supplied from either a dedicated branch circuit or the unswitched portion of a branch circuit also used for power and lighting. Operation of a switch (other than a circuit breaker) or a ground-fault circuit interrupter is not permitted to cause loss of power to the alarm.
3. The alarm may be located on the wall, ceiling, or other location as specified in the manufacturer's installation instructions.
4. The device is required to be supported independently of its attachment to wires.
5. For alarms installed in the vicinity of sleeping rooms, the alarm notification appliance is required to be clearly audible in all bedrooms over background noise levels and with all intervening doors closed, with a minimum rating of 85dBA at 10 feet (3m). If the alarm is intended to notify occupants in the same room, the sound pressure level is permitted to be 75dBA at 10 feet.

Under most situations, compliance with the requirements listed above should be acceptable for approval of the installation. However, should a situation arise that is not addressed above, please refer to NFPA 720 for additional installation requirements.

For your information, Kidde Safety has recalled some CO devices. The models that have been recalled are the "Nighthawk" and the "Lifesaver." The Nighthawk models included in this recall are all models manufactured between November 8, 1998 and March 9, 1999. The date of manufacture is on the back of the unit as year, month, and day. "NIGHTHAWK" and "Carbon Monoxide Alarm" are written on the front of the unit. If only "Carbon Monoxide Alarm" is written on the front, the unit is not included in the recall. The Lifesaver models included in the recall are models 9CO-1 and 9CO-1C, manufactured between June 1, 1997 and January 31, 1998. The manufacture date is on the back of the unit as the first six numbers of the serial number, located above the UPC. The manufacture date is written as day, month, and year. "LIFESAVER" and "Carbon Monoxide Detector" are written on the front of the unit. Should you identify a unit that has been included in the recall, do not approve its installation; direct the owner to contact Kidde Safety at (888) 543-3346.

Rules applicable on or after December 5, 2017:

All new building occupancies and buildings undergoing a rehabilitation (rehab) project are now required to install CO alarms. The Uniform Construction Code enforcement effective date (end of the six month grace period) was December 5, 2017. After that date, any applications for rehabilitation projects or new buildings must include CO alarms per the new rules. The Korman Parks Law (P.L. 2015, c. 146), which is the basis for the new CO detection requirements in the Uniform Construction Code, contains a provision that states buildings that were in compliance with the 1999 CO detector law do not need to meet the requirements under the Korman Parks Law. So, Use Groups R-1, R-2, R-3, R-4 or I-1 that complied with the Uniform Construction Code before December 5, 2017 don't need to comply the new rules.

New Construction

The building subcode now requires CO alarms in all buildings that contain a fuel-burning appliance or fireplace or have attached garages with communicating openings into the building. Newly-installed CO alarms must receive their primary power from the building wiring and have a secondary battery backup source. Where there is no commercial power source in the building, battery CO alarms can be used. Alarms must be installed in compliance with the building subcode, Section 915.

Existing Buildings – Rehab Subcode

For existing buildings undergoing a rehabilitation project battery-powered or plug-in type CO alarms are acceptable. "When alarms are installed in lieu of detection, they must be located such that the audible signal is not less than 15 dB above the average ambient sound level." When a change in use occurs per N.J.A.C. 5:23-6.31 that involves Groups I-1, I-2, I-4 or R or classrooms in Group E occupancies, systems complying with the building subcode, Section 915 for new construction must be installed (battery-powered or plug-in type CO alarms are not acceptable).

Detection Systems

It is important to note that detection systems are not required. As per the above, alarms are acceptable for meeting the requirements for carbon monoxide detection. When someone wishes to install a CO detection system, the system must comply with the installation requirements of the building subcode, Section 915 for location and the balance of the system must comply with NFPA 720.