

Section

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31.01: Scope and Purpose

The purpose of 527 CMR 31 is to provide minimum requirements for the type, installation, location, maintenance, and inspection of carbon monoxide alarms in every dwelling, building or structure in accordance with the provisions of MGL 148 Section 26F<sup>1/2</sup>. These regulations shall apply to every dwelling, building or structure including those owned and operated by the Commonwealth, occupied in whole or in part for residential purposes, that:

- (a) contains fossil-fuel burning equipment or
- (b) incorporates enclosed parking within its structure.

31.02: Definitions

As used in 527 CMR 31.00, the following definitions shall have the meanings respectively assigned to them:

Adjacent Spaces: shall mean any area, space, room or dwelling unit located directly next to, below or above any area space, room or dwelling unit that contains fossil fuel burning equipment or enclosed parking.

Centralized Fossil Fuel Burning Equipment: shall mean a central heating plant, hot water heater, a combustion driven generator or fire pump, central laundry equipment, roof mounted air handling unit or similar equipment that emits carbon monoxide as a by-product of combustion and does not allow for air exchange between Centralized Fossil Fuel Burning Equipment and Dwelling Units or common areas.

Carbon Monoxide Alarm Protection: shall mean carbon monoxide alarm protection that may consist of either:

- (a) battery powered in compliance with NFPA 720, 5.2.3 and wireless appliances, or
- (b) ac (alternating current) plug-in with battery back up in accordance with NFPA 720, 5.2.2.6, or
- (c) an ac primary power source with battery back up in compliance with NFPA 720, 5.2.2, or

- (d) low voltage or wireless systems in compliance with NFPA 720, 5.2.4 , or
- (e) a Combination Appliance.

Such equipment shall operate as a Single Station Alarm Device or Single Station Carbon Monoxide Alarm.

Combination Appliance: shall mean a combination photoelectric smoke detector and carbon monoxide alarm which may be battery or ac (alternating current) powered with battery back up. A combination ionization detector and carbon monoxide alarm which may be battery or ac (alternating current) powered, with battery back up, may be utilized if it is installed not less than 20 ft. from any bathroom or kitchen entryway. Such Combination Appliances shall employ both simulated voice and tone alarm features which clearly distinguishes between carbon monoxide and smoke notification, in accordance with NFPA 720, 5.3.4.

Dwelling Unit: A single unit providing facilities for living and sleeping.

Enclosed Parking: An area or room enclosed within the overall building or structure that is designed or used for the parking of vehicles.

Fossil Fuel Burning Equipment: Any device, apparatus or appliance which is designed or used to consume fuel of any kind which emits carbon monoxide as a by-product of combustion.

Habitable: shall mean that portion of a cellar, basement or attic that is designed, used and furnished for living purposes.

Listed: A device listed by a Nationally Recognized Testing Laboratory meeting the requirements of 527 CMR 49.03 Appendix C and the standards in either IAS/CSA 6.19 or UL 2034 –Single and Multiple Station Carbon Monoxide Alarms, June 2002 Edition or UL 2075 –Gas and Vapor Detector Sensor, November 2004 Edition, as applicable for the installation.

NFPA 720: shall mean National Fire Protection Association (NFPA) 720 entitled “Standard for the Installation of Carbon (CO) warning Equipment in Dwelling Units”, 2005 Edition.

Residential Structures: shall include any dwelling, building or structure classified as use group R-2 through R-5, as defined in 780 CMR and those unclassified occupancies that have the same characteristics as R-2 through R-5. Where there is a dispute regarding Use Group classification of a building, a determination shall be made by the municipal or state building inspector.

Single Station Alarm Device: An assembly that incorporates the detector, the control equipment, and the alarm sounding device in one unit operated from a power source either located in the unit or obtained at the point of installation.

Single Station Carbon Monoxide Alarm: A detector comprising an assembly that incorporates a sensor, control components, and an alarm notification appliance in one unit operated from a power source either located in the unit or obtained at the point of installation.

State Building Code: 780 CMR, Massachusetts State Building Code.

### 31.03: General Installation Provisions

1. Any carbon monoxide alarm using an ac (alternating current) primary power source and any other wired carbon monoxide alarm protection

equipment shall be installed and maintained in accordance with the Massachusetts Electrical Code, 527 CMR 12 and in accordance with M.G.L. c. 143, s.3L and MGL 141, s. 1A, if applicable.

2. Buildings or structures owned or operated by the Commonwealth or any local housing authority are exempt from the requirements of 527 CMR 31.04 until January 1, 2007.
3. Buildings or structures constructed, renovated or undergo a change in use for which building permits have been issued on or after March 31, 2006, shall comply with any stricter carbon monoxide alarm requirements of The State Building Code, if applicable.
4. The installation of carbon monoxide detectors in accordance with 527 CMR 30, relating to certain Unvented Propane or Natural Gas-Fired Space Heaters, if applicable, shall satisfy the requirements of 527 CMR 31.00 for that level on which such heater is located, provided the installation complies with 527 CMR 31.04(1) (a)and(b).
5. The installation of carbon monoxide detectors in accordance with 248 CMR, The Commonwealth of Massachusetts Fuel Gas and Plumbing Code, if applicable, shall satisfy the requirements of 527 CMR 31.00 for that level on which the direct vented gas appliance is located, provided the installation complies with 527 CMR 31.04(1) (a)and(b).

#### 31.04 Specific Installation Provisions

1. Residential Structures: Effective March 31, 2006 every Residential Structure that presently or in the future contains Fossil Fuel Burning Equipment or has enclosed parking shall be equipped, by the owner, landlord or superintendent, with working and Listed Carbon Monoxide Alarm Protection.

- (a) Carbon Monoxide Alarm Protection shall be located in each level of each Dwelling Unit including Habitable portions of basements, cellars and attics, but not including crawl spaces. The installation of said unit shall be located in accordance with the manufacturer's instructions.
- (b) When mounting Carbon Monoxide Alarm Protection on a level of a Dwelling Unit with a sleeping area, the alarm shall be installed in the immediate vicinity of the sleeping area, not to exceed 10 ft. as measured in any direction from any bedroom door.
- (c) Alternative Compliance Option: Such Residential Structures, as an alternative to providing Carbon Monoxide Alarm Protection within each level of each Dwelling Unit,

may provide protection in the following areas of the structure, if applicable.

1. Areas or rooms containing Centralized Fossil Fuel Burning Equipment and all Adjacent Spaces: All areas or rooms containing Centralized Fossil Fuel Burning Equipment and adjacent spaces shall employ Carbon Monoxide Alarm Protection meeting UL 2034 or UL 2075, as applicable, using either an ac (alternating current) primary power source with battery back up that meets the requirements of NFPA 720, 5.2.2. or a low voltage or wireless system. Such installation shall be in accordance with the manufacturer's instructions. Such protection shall be monitored in accordance with NFPA 720, 5.3.9. Such method of monitoring is to be determined at the discretion of the building owner. In accordance with NFPA 720, 5.3.9.3 (1) the retransmission of the signal shall be at the discretion of the head of the fire department.
  2. Adjacent Spaces of Enclosed Parking: All Adjacent Spaces of Enclosed Parking shall employ Carbon Monoxide Alarm Protection meeting UL 2034 or UL 2075, as applicable, using either an ac (alternating current) primary power source with battery back up that meets the requirements of NFPA 720, 5.2.2. or low voltage or wireless system. Such protection shall be monitored in accordance with NFPA 720, 5.3.9. Such method of monitoring is to be determined at the discretion of the building owner. In accordance with NFPA 720, 5.3.9.3 (1) the retransmission of the signal shall be at the discretion of the head of the fire department.
  3. Carbon Monoxide Alarm Protection shall also be installed in any Dwelling Unit that contains Fossil Fuel Burning Equipment in accordance with 527 CMR 31.04(1)(a) and (b).
- (d) Alternative compliance deadline for certain installations  
Any owner who intends to meet the requirements of 527 CMR 31.04 by installing either: (1) ac (alternating current) primary power source with battery back up or wired, low voltage, carbon monoxide alarm protection or (2) the Alternative Compliance Option of 527 CMR 31.04 (1)(c), shall not be required to complete such installation until 1-1-07 if said owner provides written

notification of such intent to the head of the fire department by 5-15-06. The submission of such notification shall be deemed to be the consent by the owner to the future inspection of the subject building by the head of the fire department to determine compliance. Installation of carbon monoxide alarm protection pursuant to 527 CMR 31.04(1)(d) may be allowed notwithstanding the late filing of the written notification, only upon the approval of the head of the fire department who may require temporary carbon monoxide alarm protection pending the completion of installation.

2. Other Transient Residential and Institutional Structures Required to have Hard-Wired Carbon Monoxide Alarm Protection by January 1, 2007.

(a) Reserved

31.05: Inspection and Maintenance Requirements

1. The head of the fire department or designee shall enforce the provisions of 527 CMR 31.00, including the inspection for conformance with the carbon monoxide alarm requirements, upon sale or transfer of such dwelling, building or structure used in whole or in part for residential purposes.

31.06 Landlord Installation, Inspection and Maintenance Duties

1. Every owner, superintendent, or landlord shall, at a minimum, maintain, test, repair, or replace, if necessary, every carbon monoxide alarm upon renewal of any lease term for any dwelling unit or on an annual basis, whichever is more frequent. All common areas shall be inspected annually. All carbon monoxide alarm batteries shall be replaced, on an annual basis by the owner, landlord or superintendent.

Exception: Low voltage system batteries shall be maintained in accordance with applicable sections of NFPA 720.

31.07 Carbon Monoxide Alarms Installed in Dwelling Units Inhabited by a Persons Who are Hearing Impaired

Every owner, superintendent, or landlord having control of any dwelling unit inhabited by a person who is hearing impaired, shall comply with any carbon monoxide provisions, if applicable, established by the Architectural Access Board pursuant to 521 CMR.

REGULATORY AUTHORITY  
MGL c. 148, §§ 26F<sup>1/2</sup>, 28