



**TOWN OF BRIGHTON**  
*Office of the Fire Marshal*  
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## ***Commercial Building Carbon Monoxide Worksheet***

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*This worksheet is to provide guidance for evaluation for the installation of Carbon monoxide detection and hereby shall be provided in accordance with the provisions of this section 1228.4 in every commercial building both new and existing that contains any carbon monoxide source including, but not limited to, any garage or any other motor-vehicle-related occupancy.*

### **Scope**

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Section 1228.4 covers the provision of carbon monoxide detection, and the application, installation, performance, and maintenance of carbon monoxide alarms and carbon monoxide detection systems, in new and existing commercial buildings

### **Effective Date & Transition Period**

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This section 1228.4 shall take effect on June 27, 2015 and transition period effective date of this section and June 27, 2016

Owners of existing commercial buildings are encouraged to install carbon monoxide detection that complies with the requirements of this this section 1228.4 in their buildings as quickly as practicable.

The owner of an existing commercial building shall not be deemed to be in violation of this section 1228.4 during the transition period if such owner provides to the authority having jurisdiction a written statement certifying that such owner is attempting in good faith to install carbon monoxide detection that complies with the requirements of this section 1228.4 in such owner's existing commercial building as quickly as practicable section 1228.4 in their buildings as quickly as practicable.

### **Definitions**

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**CARBON MONOXIDE SOURCE.** The term "carbon monoxide source" means any appliance, equipment, device or system that may emit carbon monoxide (including, but not limited to fuel fired furnaces; fuel fired boilers; space heaters with pilot lights or open flames; kerosene heaters; wood stoves; fireplaces; and stoves, ovens, dryers, water heaters and refrigerators that use gas or liquid fuel), garages, and other motor vehicle related occupancies.

**CENTRAL LOCATION.** The term "central location" means the point that, in the judgment of the authority having jurisdiction, maximizes (i) the detection of carbon monoxide, (ii) the notification of occupants in normally occupied areas, and (iii) the notification of occupants prior to entering normally unoccupied areas.

**COMMERCIAL BUILDING.** The term "commercial building" means any new or existing building that is not a one-family dwelling, a two-family dwelling, or a building containing only townhouses.

**DETECTION ZONE.** The term “detection zone” means a story of a commercial building.

*However:*

(i) if a story is arranged so that two or more separate carbon monoxide-producing HVAC systems are used to serve separate portions of the story, each such portion of the story shall be deemed to be a separate detection zone.

(ii) if a story contains one or more classrooms, each classroom shall be deemed to be a separate detection zone and the portion, if any, of the story that is not a classroom shall be deemed to be a separate detection zone.

(iii) if a portion of a story is used as a garage, the portion used as a garage shall not be deemed to be a detection zone and the portion not used as a garage shall be deemed to be a detection zone; and

(iv) if an entire story is used as a garage, such story shall not be deemed to be a detection zone.

**EXISTING COMMERCIAL BUILDING.** The term “existing commercial building” means a commercial building that was constructed or obtained a permit prior to December 31, 2015.

**NEW COMMERCIAL BUILDING.** The term “new commercial building” means a commercial building that is not an existing commercial building.

1	Does the Commercial Building have a permanent Carbon Monoxide Source?	YES	NO	Section 1228.4 (c)(1)
2	Exceptions Occupancy Classification [S] Storage or [U] Utility which is occupied only occasionally and only for building or equipment maintenance?	YES	NO	Section 1228.4 (c)(2)(i)
<b>Triggering Condition 1</b>				
3	Presence of any carbon monoxide source in a detection zone.	YES	NO	Section 1228.4 (d)(1)(i)
<b>Triggering Condition 2</b>				
4	A duct opening or other outlet from a carbon monoxide-producing HVAC system for such detection zone.	YES	NO	Section 1228.4 (d)(1)(ii)
Not a triggering condition if <b>YES</b> to either below question				
4A	Carbon monoxide detection is provided in the first room or area served by each main duct leaving the carbon monoxide source?	YES	NO	Section 1228.4 (d)(1)(ii)(a)
4B	Signals from the carbon monoxide detection equipment in the first room or area served by each such main duct are automatically transmitted to an approved location.	YES	NO	Section 1228.4 (d)(1)(ii)(b)
<b>Triggering Condition 3</b>				
5	A garage or other motor-vehicle-related occupancy in location that is adjacent to a detection zone. (Even if there are no openings, penetrations, or air transfer openings between the detection zone and the adjacent garage or other motor-vehicle-related occupancy.)	YES	NO	Section 1228.4 (d)(1)(iii)
Not a triggering condition if <b>YES</b> to either below question				
5A	If the garage or other motor-vehicle-related occupancy is attached to, or between the garage or other motor-vehicle-related occupancy and the commercial building is only through a covered walkway that is open (without sidewalls or drops) on 50 percent or more of its perimeter.	YES	NO	Section 1228.4 (d)(1)(iii)(a)
5B	If the garage is attached to, but not located in, the commercial building in which the detection zone is located, and the garage is an open parking garage that complies with Section 406.3 of the 2010 BCNYS.	YES	NO	Section 1228.4 (d)(1)(iii)(b)
5C	Is there an ambient conditions that would, under normal conditions and with all required ventilation and exhaust systems installed and operating properly, activate the carbon monoxide detection devices that otherwise would be required in such detection zone under this section 1228.4, and an alternative safety plan for the commercial building in which such detection zone is located shall have been approved by the authority having jurisdiction.	YES	NO	Section 1228.4 (d)(iii)(2)(i)
5D	Detection zone is open (without sidewalls or drops) on 50 percent or more of its perimeter, and there is no occupiable area within such detection zone that is not open on 50 percent or more of its perimeter	YES	NO	Section 1228.4 (d)(iii)(2)(ii)

6	What is the square footage of the Commercial Building?				Square Feet
	6A	Is a detection zone having an area <b><u>less than 10,000 square feet</u></b> ?	YES	NO	Section 1228.4 (e)(1)
	6B	Carbon monoxide detection shall be placed in a central location within such detection zone.	YES	NO	
7	Is a detection zone having an area <b><u>10,000 square feet or larger</u></b> ,		YES	NO	Section 1228.4 (e)(2)(i)
	7A	Carbon monoxide detection shall be placed in a central location within such detection zone and at such additional locations within such detection zone as may be necessary to assure that no point in the detection zone is more than 100 feet (travel distance) from carbon monoxide detection.	YES	NO	
Acceptable alternative to compliance					
	7B	(a) contains only one carbon monoxide source (b) is not served by a carbon monoxide-producing HVAC system (c) is not adjacent to a garage or other motor-vehicle-related occupancy, and (d) is not a classroom	YES	NO	Section 1228.4 (e)(2)(ii)
If <b><u>YES</u></b> for alternative of compliance <b><u>THEN</u></b>					
	7C	Carbon monoxide detection shall be placed in a central location within detection zone and at one of the following locations:  (1) in an approved location between the carbon monoxide source and the remainder of the detection zone or  (2) on the ceiling of, or at another approved location in, the room containing the carbon monoxide source.	YES	NO	Section 1228.4 (e)(2)(ii)(1) & (2)
8	Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.		YES	NO	Section 1228.4 (g)(1)(i)
	8A	Exception. Carbon monoxide alarms powered solely by a 10-year battery shall be permitted in: (a) existing commercial buildings and (b) commercial buildings without commercial electric power.	YES	NO	Section 1228.4 (g)(1)(ii)

9	<b><u>A combination carbon monoxide / smoke alarm shall not be deemed to satisfy the requirements of this section 1228.4</u></b>			Section 1228.4 (g)(3)
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10	<p>In new commercial buildings, where a carbon monoxide alarm is installed in a normally unoccupied detection zone, such carbon monoxide alarm shall be interconnected with a carbon monoxide alarm that is placed in an adjacent and normally occupied detection zone.</p>		YES	NO	Section 1228.4 (g)(4)
	10A	<p>An approved sign shall be place in an approved location in the proximity of each carbon monoxide alarm installed in a normally occupied detection zone that is interconnected to one or more carbon monoxide alarms installed in one or more normally unoccupied detection zones.</p> <p>Such sign shall identify and describe the location of each normally unoccupied detection zone that contains any such interconnected carbon monoxide alarm.</p>	YES	NO	Section 1228.4 (g)(4)
11	<p>Manufacturer's instructions. Carbon monoxide alarms shall be installed, operated, and maintained in accordance with the manufacturer's instructions.</p>		YES	NO	Section 1228.4 (g)(5)

Carbon Monoxide Detection Systems				
1	Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.	YES	NO	Section 1228.4 (h)(1)
2	Combination carbon monoxide / smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided such combination detectors are listed in accordance with UL 2075 and UL 268.	YES	NO	Section 1228.4 (h)(3)
3	Notification appliances shall be provided in the locations specified in NFPA 720 or, in the alternative, in the locations specified in subdivisions (d) and (e) and paragraph (4) of subdivision (g) of this section 1228.4 as the required locations for carbon monoxide detection.	YES	NO	Section 1228.4 (h)(4)
4	The power source for carbon monoxide detection systems shall comply with NFPA 720.	YES	NO	Section 1228.4 (h)(5)
5	Group E occupancies. In a new commercial building that has an occupant load of 31 or more a carbon monoxide alarm signals shall be automatically transmitted to an approved on-site location that is normally staffed by school personnel during normal school hours.	YES	NO	Section 1228.4 (i)
6	Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced as soon as practicable.	YES	NO	Section 1228.4 (j)
7	All carbon monoxide detection systems installed in accordance with subdivision (h) of this Section 1228.4 shall have off-premises signal transmission in accordance with NFPA 720.	YES	NO	Section 1228.4 (k)(1)
8	All carbon monoxide detection systems in new commercial buildings that are required by section 903 or section 907 of the 2010 FCNYS to have a fire alarm control panel installed shall have off-premises signal transmission in accordance with NFPA 720.	YES	NO	Section 1228.4 (k)(2)
9	Signal. Carbon monoxide detection systems shall not activate a fire signal to a fire alarm control panel.	YES	NO	Section 1228.4 (k)(3)(i)
10	Carbon monoxide detection systems shall not activate any notification appliance that announces a fire alarm or any other alarm that is not distinctive from a fire notification as required by NFPA 72.	YES	NO	Section 1228.4 (k)(3)(ii)
11	Where notification of carbon monoxide detection system is permitted to be transmitted to approved locations, at least one approved notification appliance shall be provided within every building that transmits a signal to an approved location.	YES	NO	Section 1228.4 (k)(3)(iii)

By affixing my signature as owner / agent of the below-referenced property, I hereby certify that the Carbon Monoxide Detection referenced in Part 1228 of Title 19 NYCRR has/have been installed in accordance with the manufacturer's instructions and in compliance with the New York State Uniform Fire Prevention and Building Code.

I, , being duly sworn, deposes and states:

The property located at,

I have verified that the carbon monoxide alarms / detection system have been installed in compliance with Part 1228 of Title 19 NYCRR and has been inspected, tested, maintained and are properly functioning.

This affidavit is submitted in accordance with New York State Executive Law Section 378, as modified by the current requirements of the New York State Uniform Fire Prevention and Building Code.

This information is based upon personal knowledge, information and belief. False statements made herein are punishable as a Class "A" Misdemeanor pursuant to section 210.45 of the New York State Penal Law.

Notary public				Signature of Owner	
Sworn and subscribed to before me this				Name (Print)	
	day of		20		
				Date	