

FIRE DEPARTMENT • CITY OF NEW YORK



**STUDY MATERIAL FOR THE
CERTIFICATE OF FITNESS EXAMINATION
F-01
CITYWIDE FIRE GUARD FOR IMPAIRMENT**

(The new test is available on 12/01/2011)

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NOTICE OF EXAMINATION

Title: Examination for Certificate of Fitness for Citywide Fire Guard for Impairment (F-01).

Date of Test: Written tests are conducted Monday through Friday (except legal holidays) 8:00 AM to 2:30 PM.

QUALIFICATION REQUIREMENTS

1. Applicants must be at least 18 years of age.
2. Applicants must have a reasonable understanding of the English language.
3. Applicants must present a letter of recommendation from his/her employer. The letter must be on official letterhead, and must state the applicant's full name, character, physical conditions, and experience.
4. Applicants must present two (2) forms of satisfactory identification i.e., driver's license, passport, vehicle registration, library card, or equivalent.
5. Additional important notice:
 - The new **F-01** Certificate of Fitness tests will be available on **12/1/2011**.
(F-01 Certificate of Fitness will replace F-32, F-36 and F-91)
 - The F-00 Certificate of Fitness for Fire Guard will **NO** longer be available from **12/1/2011**.
 - The **F-32, F-36 and F-91** Certificate of Fitness tests will be available as a separate test until **1/1/2012**.
 - All applicants who pass the **F-00** and want to apply for **F-32, F-36, F-91** and **F-93** must submit their letter from employer by **12/31/2012**.
 - **F-32, F-36, F-91**, and **F-93** will not be issued from **F-00** letter after **12/31/2012**.
 - **F-93** will not be issued from F-00 letter issued after **6-1-2011**.
 - **F-44, F-92** and **F-94** will be issued from F-00 letter until it expires.
 - Current **F-32, F-36, F-44, F-91, F-92** and **F-94** Certificate of Fitness's are valid and renewable.
 - The **F-44, F-92** and **F-94** Certificate of Fitness tests will be available as a separate test.

APPLICATION INFORMATION

Application Fees: \$25.00 for originals and \$15.00 for renewals. The fee may be paid by credit card (no debit), in cash, money order, or personal check payable to New York City Fire Department. The \$25.00 fee must be payable by all applicants prior to taking the Certificate of Fitness test. Application forms are available at the Public Certification Unit, 1st floor, 9 Metro Tech Center, Brooklyn, NY 11201.

TEST INFORMATION

Test:

The test will be of the written, multiple choice type. A passing score of at least 70% is required in order to secure a Certificate of Fitness. Call 718-999-1988, or 2504 for additional information and forms.

STUDY MATERIAL AND TEST DESCRIPTION

About the Study Material

This study material will help you prepare for the examination for the Certificate of Fitness for fire guard for impairment. The study material includes information taken from the New York City Fire Code. This study material consists of 2 parts. The exam covers the entire booklet and any tables. **It will not be provided to you during the test. It is critical that you read and understand this booklet to help increase your chance of passing this exam.** The study material does not contain all of the information you need to know to work as a fire guard. It is your responsibility to become familiar with all applicable rules and regulations of the City of New York, even if they are not covered in this study material. In order to adequately prepare for the exam, you need to be familiar with the Fire Code Section 401.3, 408, 901 and 906 (See Appendix A) and the NFPA 25 Chapter 15 which regulate the duties of fire guards for performing fire watch when any required fire protection system is out of service.

About the Test

All questions on the Certificate of Fitness examination are of the multiple choice type with four alternative answers to each question. Only one answer is most correct for each question. If you do not answer a question or if you mark more than one alternative your answer will be scored as incorrect. A score of 70% is required on the examination in order to qualify for the Certificate of Fitness. Read each question carefully before marking your answer. There is no penalty for guessing.

Sample Questions

1. Who was the first President of the United States?

- (A) George Jefferson.
- (B) George Washington
- (C) Bill Clinton.
- (D) Barack H. Obama.

The correct answer is "**B**". You would press "**B**" on your computer terminal.

2. The city in the United States referred to as The Big Apple is:

- (A) Los Angeles.
- (B) Buffalo.
- (C) Florida.
- (D) New York.

The correct answer is "D". You would press "D" on your computer terminal.

INTRODUCTION

This document outlines New York City Fire Department requirements for fire guard conducting a fire watch when a required fire protection system is out of service. Fire guards are required to monitor the areas in which the fire protection systems are out of service for fires.

Responsibility of the Building Owner

The building owner or their agent shall assign an impairment coordinator to maintain records of all system inspections, tests, servicing and other items relating to maintenance of fire protection systems. Such records shall be kept on site for a period of three years and made available for inspection by any member of the FDNY. In absence of a specific designee, the building owner shall be considered the impairment coordinator.

Requirements

In any occupancy, where a required fire protection system (e.g. sprinkler system, fire alarm system and standpipe system) is out of service, a fire watch shall be maintained by one or more persons holding an F-01 or F-32 (Fire Guard for Shopping Center) or F-36 (Fire Guard Generic) or F-91 (Hotels/Motels/Office Buildings) certificate of fitness for fire guard. The fire guard(s) is/are required to be immediately available when the system is out-of-service with the following exception:

For the initial 4 hours of an unplanned and planned out of service condition when the effected area does not exceed 50,000 square feet, the impairment coordinator or a trained and knowledgeable person who is capable of performing fire watch duties and is designated by the building owner may perform the duties of the fire watch.

In other words, the impairment coordinator or a trained and knowledgeable person designated by the building owner should immediately begin conducting a fire watch in the area where the fire protection systems are out of service. After 4 hours of an out of service condition, such patrols shall only be conducted by fire guards holding the F-01 certificate of fitness or a valid F-32/F-36/F-91 certificate of fitness.

The number of fire guards generally depends on the location and the size of the area affected by the out of service fire protection system. A fire guard should be available to patrol all areas in which the fire protection system is out of service at least once every hour. No individual fire guard should patrol more than 50,000 square feet of building floor area. To meet this standard, it may be necessary that more than one fire guard be designated.

The recommended coverage for performing fire watch in affected area(s) is summarized in the table below.

Area	Planned or Unplanned	
	The initial 4 hours	> 4 hours
≤ 50,000 ft ²	A F-01/F-32/F-36/F-91 C of F holder or an Impairment coordinator or a trained and knowledgeable person	One F-01/F-32/F-36/F-91 C of F holder

> 50,000 ft ²	One F-01/F-32/F-36/F-91 C of F holder per 50,000 square feet	

The fire guard should be maintained continuously, 24 hours a day, until such systems are restored to good working order. In some cases, Fire Department personnel may be on scene and provide additional direction on the number of required fire guards or other fire protection measures that may be required until such time as the fire protection system is restored to good working order.

The Certificate of Fitness holder must keep the Certificates of Fitness upon his or her person, or otherwise readily available for inspection by any representative of the Department, at all times while conducting or supervising the material, operation or facility for which the certificate is required.

The fire guard for impairment is recommended to be familiar with the types of fire safety evacuation plans for the buildings where they provide fire watch and the associated staffs available to implement the fire plan. The fire guard must be familiar of his obligations for notifying the Fire Department in the event of fire (**FC Chapter 4 Section 401.3**). Further information is available at:

- Emergency Planning and Preparedness: [**FC Chapter 4 Section 401.3 and Section 408**]
- Fire Protection System: [**FC Chapter 9 Section 901 and Section 906**]

DEFINITIONS

FIRE GUARD: A person holding a Certificate of Fitness for such purposes, who is trained in and responsible for maintaining a fire watch and performing such fire safety duties as may be prescribed by the commissioner.

FIRE WATCH: A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purposes of identifying and controlling fire hazards, detecting early signs of fire, raising an alarm for fire, and notifying the department.

IMPAIRMENT: Any condition in which a fire protection system cannot perform its designed fire safety function. Fire protection systems include sprinkler systems, standpipe/hose systems, fire pumps, fire protection water supplies, fire mains, fire alarm systems, and special extinguishing systems (i.e. clean agent, carbon dioxide, wet/dry chemical, foam/water, etc.).

IMPAIRMENT COORDINATOR: The person designated by the owner and responsible for ensuring that proper notification and safety precautions are taken when a fire protection system is out of service.

PLANNED OUT OF SERVICE CONDITION: The impairment coordinator shall be made aware in advance of any planned removal from service of a standpipe system, sprinkler system or fire alarm system, or system component, for repair, servicing, testing, maintenance, alteration, or to allow construction to be performed in the area protected by the system without unnecessarily activating it.

UNPLANNED OUT OF SERVICE CONDITION: Unplanned out of service conditions are serious defects such as empty tanks, breaks or major leaks in the system water piping, inoperative or shut water supply valves, defective fire department connections, etc. which render a standpipe system, sprinkler system or fire alarm system inoperable or otherwise causing it to no longer be in good working order.

PART 1. REQUIREMENTS AND DUTIES

Fire guards are required to reduce the threat of fires in a variety of locations. For example, fire guards are used when a sprinkler system is not installed, e.g., at construction sites. Fire guards are also used when an automatic fire protection system is taking out of service while repairs are conducted. The fire guards are responsible for making sure that fire safety regulations are complied with.

Fire guards must have a general knowledge of portable fire extinguishers. If the fire extinguishers and/or fire alarm pull station is available in their areas of responsibility, they must know their locations.

An impairment of fire protection system poses special hazards since working detection and notification systems and extinguishing systems are not operational. Individuals and premises can not rely upon installed fire protection systems to protect properties. In certain cases, individuals have placed trust and reliability upon fire protection systems but if systems are impaired, they will not be providing needed notifications.

1.1 Orientation

The F-01 Citywide Certificate of Fitness authorizes the holder as an impairment fire guard to maintain fire watch duties at any particular location on a citywide basis. Given this condition, the citywide fire guard for impairment may perform their duties for different buildings and different occupancies.

Upon the fire guard's arrival at the area that is affected by the out of service fire protection system, the fire guard should be provided with an orientation from the fire safety director/fire safety coordinator, building owner, impairment coordinator or other on-site personnel familiar with and responsible for the buildings fire protection systems.

Normally, there is at least one fire safety director in a Group B (Office Building) or Group R-1 occupancy (Hotel) building (as described in the following table). The fire guard must work closely with the fire safety director to ensure the safety of the building's occupants.

If there is no fire safety director available in the building, the fire guard should become familiar with the specifics of the building from the building owner or the responsible person designated by the building owner.

For all buildings/occupancies, before starting to patrol the affected area, the fire guard should inquire during the orientation of the knowledge that includes, but is not limit to, the following:

- (1) the egress routes of the affected area;
- (2) the information of the extent of the out-of-service condition;
- (3) the location of hazardous materials that are stored, handled or used in the building including fuel oil storage tanks;
- (4) the location of portable fire extinguishers;
- (5) the means available for the fire guard to make required notification.

The fire guard should pay particular attention for the affected area in which any hazardous materials is stored, handled or used. The fire guard shall ensure the hazardous materials are stored, handled or used only in the designated areas and are away from any ignition sources. The following table presents the possibility of the hazardous materials that are stored, handled or used in different occupancies.

The fire guard should assess the risk of the impairment situation. The risk may be affected by the followings:

- (a) The dangerous level of the hazardous materials. For example: flammable liquids are more dangerous than combustible liquids.
- (b) The quantity of the hazardous materials. For example: the maximum quantity of aerosol products in a retail display purpose may be as much as 10,000 pounds for the ground level area, and as much as 24,000 pounds per floor in a warehouse.
- (c) The occupant density of the affected area. For example, it is more difficult to evacuate 1,000 people in a catering party than 10 people in a warehouse.
- (d) The characteristics of the building occupants (e.g. occupants' building familiarity). For example, the customers in a restaurant may need more assistance in finding the exit than residents in their own apartment. The children in day care facilities may need more assistance in evacuation than adults in a department store.
- (e) The number of impaired fire protection systems in the building. For example, if a building has both an out of service sprinkler system and fire alarm system, the risk to building occupants is greater than if only one system is out of service.

The higher risk the impairment situation may possess, the more attention and building familiarity the fire guard must have.

Occupancy	Occupancy Description	Examples	Hazardous materials?
Group A	Assembly: for gathering together people		Not likely
A-1	With fixed seating, intended for the production and viewing of the performance arts or motion pictures	Theaters, Concert halls	Not likely
A-2	Food and/or drink consumption	Banquet halls, Cafeterias, Bars, Restaurants	Not likely
A-3	Worship, recreation or amusement, and other assembly uses not classified elsewhere in Group A	Art galleries, Bowling alleys Classrooms (with 75 persons or more) Courtrooms, Houses of worship Museums, School auditoriums	Not likely
A-4	Indoor sporting events or activities with spectator seating	Swimming pools Tennis courts	Not likely
A-5	Participation in or viewing outdoor activities	Grandstands, Bleachers, Stadiums	Not likely
Group B	Business: Office, professional, service-type transaction, public or civic services	Banks Civic administration offices Educational occupancies above the 12 th grade (not in Group A) Nonproduction Laboratories Radio and television stations not admitting an audience	Moderately likely
Group E	Educational: 5 or more persons at any one time for educational purposes offered to children through the 12 th grade and where no more than 2 children under the age of 2	Schools, Day care facilities where no more than two children are under the age of 2	Moderately likely

Occupancy	Occupancy Description	Examples	Hazardous materials?
Group F	Factory: for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair, cleaning or processing operation that are not in Group H		Very likely
F-1	Moderate-hazard	Aircraft repairs, Bakeries Manufacturing motor vehicles Dry cleaning using or storing combustible solvents Food processing (except meat slaughtering) Production laboratories (moderate hazards)	Very likely
F-2	Low-hazard: involve non-combustible, non-flammable materials, or low-hazardous production	Appliances, Glass products Production laboratories (low hazards) Nonflammable plastic products	Very likely
Group H	High Hazard: for manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of the those found in BC table 307.7(1) and table 307.7(2)		Very likely
H-1	Materials that present a detonation hazard	Explosive Materials Denotable water-active materials	Very likely
H-2	Uses present a deflagration hazard or a hazard from accelerated burning	Flammable or combustible liquids are used in open system Flammable gas	Very likely
H-3	Materials that readily support combustion or present a physical hazard	Flammable or combustible liquids are used in close system Flammable solids Oxidizing cryogenic fluid	Very likely
H-4	Materials that are health hazards	Corrosive, Toxic materials	Very likely
H-5	Semiconductor fabrication facilities using hazardous production materials (HPM) in excess of the permitted aggregate quantity		Very likely
Group I	Institutional: people are cared for or live in a supervised environment		Not likely
I-1	Housing persons, on a 24-hours basis, capable of self-preservation and responding to an emergency situation without physical assistance from staff	Alcohol and drug abuse rehabilitation centers Halfway houses	Not likely

Occupancy	Occupancy Description	Examples	Hazardous materials?
I-2	Medical, surgical, nursing or custodial care, on a 24-hour basis, of more than 3 persons, who are not capable of self-preservation or responding to an emergency situation without physical assistance from staff	Hospitals, Nursing homes Metal hospitals where patients are not under restraint	Very likely
I-3	More than 5 persons who are detained under restraint or security reason	Mental hospitals where patients are under restraint Prisons, Jails, Detention centers	Not likely
I-4	Day care facilities, occupied by persons of any age who receive custodial care (without overnight) by individuals other than parents, guardians, or relatives in a place other than at the home.	Day nurseries	Not likely
Group M	Mercantile: display and sale of merchandise	Department stores, Drug stores Motor fuel-dispensing facilities Wholesale stores	Very likely
Group R	Residential: for dwelling or sleeping purposes when not classified as Group I		Not likely
R-1	Occupied for a period less than one month	Hotels, Homeless shelters School student dormitories not in R-2 Group	Not likely
R-2	More than 2 dwelling units for shelter and sleeping accommodation on a long-term basis for a month or more	Apartment houses, Apartment hotels Student apartments	Not likely
R-3	No more than 2 dwelling units on a long-term basis for a month or more	One- and two-family dwellings Group homes	Not likely
Group S	Storage: for storage when not classified as a hazardous occupancy		Moderately likely
S-1	Moderate-hazard storage occupancy for any flammable or combustible materials	Storage of Aerosol, Boots and shoes, Woolen clothing, Furniture Leather, Wax candles, etc	Very likely
S-2	Low hazard storage occupancy for non-combustible materials	Storage of Electrical motors, Food products, Glass, etc	Not likely
Group U	Utility & Miscellaneous: structures of an accessory character, or not classified in any specific occupancy	Carports, Fences more than 6 feet high Towers	Not likely

Example of an Orientation Checklist

Orientation Checklist

List	Mark "x" if yes	Note
1. Do you have a working cell phone?	<input type="checkbox"/>	If no, you must obtain one before starting your fire watch duty.
2. Are fire extinguishers provided in my area of responsibility?	<input type="checkbox"/>	If yes, where are they located? _____ If no, I must carry one fire extinguisher with me.
3. Are fire alarm pull stations provided and operational in my area of responsibility?	<input type="checkbox"/>	If yes, where are they located? _____ If no, what procedures will be used to notify the building occupants of a fire?
4. Do you know the name and contact information of building personnel to notify upon discovery of building hazards or fire?	<input type="checkbox"/>	For building related fire safety hazards: Name: _____ Phone number: _____ For fire situations, refer to the fire notification procedure below.
5. Information on the extent of out-of-service condition in my area of responsibility.		
Is the alarm system operational?	<input type="checkbox"/>	If no, what areas are out-of-service?
Is the sprinkler system operational?	<input type="checkbox"/>	If no, what areas are out-of-service?
Is the standpipe system operational?	<input type="checkbox"/>	If no, what areas are out-of-service?
6. Have you been provided the information regarding the hazardous materials stored on the premises, type of building occupancy, the characteristics and number of the building occupants, and the extent of the fire protection systems in other building areas?	<input type="checkbox"/>	If no, obtain such information before starting your fire watch duty.

Fire Notification Procedure:

- Call 911 or call the Fire Department Dispatcher number in the borough. The dispatcher number is _____.
- Notify the building occupants by _____.
- Call the designated people (e.g. fire safety director or building owner). Their phone numbers are:

Name	Phone number
_____	_____
_____	_____
_____	_____

1.2 Fire Guard Patrols

Buildings or portions of the building covered by the out-of-service fire protection system should be continuously patrolled. Every area of the building or part should be patrolled at least once every hour.

The fire guards are required to make regular inspections and patrols of the assigned area of responsibility. They shall not be assigned any other responsibilities as this would interfere or prevent them from carrying out their required duties. The fire guard shall inspect for smoke and fire, and when found, immediately notify the Fire Department (by a telephone that does not require a coin to operate.)

During the patrol of the area, the person should not only be looking for fire, but making sure that the other fire protection features of the building such as egress routes, fire extinguisher, and fire alarm pull station are available. If any defects are discovered the fire guard must report them to building owner or the responsible person designated by the building owner immediately. The designated responsible person will then make arrangements to have the defects corrected.

The inspections may vary depending of the location. However, the following general inspection guidelines apply for all locations.

- (a) **Inspect all exits, stairways, and hallways to determine condition and availability for use.** All exits, stairways, hallways must be kept free of obstructions. Obstructions may prevent occupants from exiting the building in case of an emergency. Provision shall be made for adequate clear routes of exit with doors opening in direction of travel. An exit aisle requirement accepted of Building Code are required generally not less than least 3 feet wide.

Locks, bolts, chains must not be installed on exit doors while the building is occupied. If locks are discovered they must be removed immediately. The fire guard must then report the fire safety violation to the building owner. The building owner must make sure that the chains or locks are removed.

- (b) **Examine all doors in the affected areas to determine operation conditions and availability for use.** Particular attention must be paid to the stairways and other areas of the building where fire doors are installed. Exit into the stairway must be available from each floor of the building. Generally, a panic bar is installed on the door. The panic bars permit the occupants to exit quickly from the premises in case of an emergency. The fire guard must make sure that the fire doors are present and are in good working order.
- (c) **Ensure that self-closing doors are unobstructed and require them to be closed.** The fire guard must make sure that all self-closing doors are not propped open for any reason. The self-closing doors are designed to slow down the spread of fire during an emergency. These doors must be marked with a sign indicating that they are self-closing doors. All self-closing doors throughout the building must be kept in good working order. They must be inspected to make sure that they may not be opened and closed freely. If any defects are discovered the building owner must be notified.
- (d) **Ensure that exits are properly identified and that hallways, stairways, etc. are properly lighted.** Emergency lighting shall be provided for such exits. Exit directional signs shall clearly indicate the path of egress. Exit directional signs posted above doors and emergency lighting must be illuminated as required by the building code.

- (e) **The entire premises must be checked daily for potential ignition sources.** Any potential ignition sources that are discovered must be corrected or removed immediately. For example, arcing or exposed electrical wiring should be reported.
- (f) **Enforcement of smoking prohibitions.** The fire guard should make sure that smoking does not occur in the areas of the building where the fire protection system is out of service. The fire guard must strictly enforce the no smoking rules.
- (g) **Continuously inspect premises for accumulation of rubbish.** Trash and garbage must not be allowed to accumulate anywhere inside the building. Accumulated trash is a fire hazard. It may be easily ignited by a stray spark. All trash and garbage must be removed from the premises; otherwise notification must be promptly made to the building owner.
- (h) **Have the knowledge of the location and use of fire extinguishers, and fire alarm pull stations when required.** All fire extinguishers and pull stations must be clearly visible. The fire guard must know how to activate the fire alarm pull station in case of fire and how to operate the fire extinguishers.

1.3 Inspection Record

(Fire Rule 901-04(d)(11))

A record shall be kept on the premises, maintained by the responsible person designated by the building owner and made available for inspection by any representative of the Department, of all fire safety-related activities. The record should be a written record or an approved electronic record. The record must be maintained for a minimum of 48 hours after the fire watch has concluded.

The daily written record must be signed by the fire guard. The following items should be recorded in this log:

- (a) the number of inspections conducted;
- (b) defects discovered;
- (c) violations that have been noticed, and
- (d) the date, name, Certificate of Fitness number and signature of the fire guard who conducted the inspections.

An example of the inspection record is shown below.

Example: Fire Watch/Fire Guard Daily Record

Building Address: _____ _____
Patrolled Area: _____

**Fire Watch/
Fire Guard Record**

Date: _____
C of F Holder's Name: _____
Signature: _____
C of F # : _____
Exp Date: _____

Instructions:

- As the designated Fire Guard, you are required to make hourly inspections, and to record the result of your inspections on this log.
- Enter "OK" for items that are satisfactory, "X" for items that are deficient, and "N/A" for items that are not applicable.
- Provide a description of any deficient items in the comments section and bring them to the attention of the designated responsible person.
- Print your name and sign this log at the end of your shift.

Time	__:__	__:__	__:__	__:__	__:__	__:__
Exits and stairways -ensure they are free of obstructions, exit doors/gates are free of locks, self-closing doors are not propped open, and lighting in exit corridors is adequate and fully operational.						
Potential Ignition Sources -watch for arcing or exposed electrical wiring.						
Trash Accumulation -ensure that access and exit corridors are free of debris and rubbish.						
No-Smoking - ensure no smoking rules are enforced in the affected areas.						
Fire Alarm Pull Stations -inspect for damage.						
Fire Extinguisher -ensure those fire extinguishers are in their designated locations.						
Standpipe and Sprinkler System -inspect for breaks, leaks, damage; ensure that there are no obstructions at the FDNY connection and fire hydrants.						
Comments						

1.4 Fire Department Notification and Emergency Procedures

1.4.1 Fire Department notification for impairment

The new fire code (FC) requires the Department be notified of any fire protection system (including fire alarm) outage. The general information (non-emergency) numbers for the 5 boroughs that should be used for notifications from owners, building managers, impairment coordinators, etc. are as follows:

Manhattan	(212) 570-4300
Brooklyn	(718) 965-8300
Queens	(718) 476-6200
Bronx	(718) 430-0200
Staten Island	(718) 494-4296

The impairment coordinator should be prepared to provide the following information:

- the impairment coordinator's name and contact information;
- the address of the building;
- the fire protection system that is being removed from service or is otherwise out of service;
- the floors or areas affected by the out-of-service system, the type of occupancy on those floors, and whether they will be occupied while the system is out of service;
- whether the fire protection system is out of service situation due to planned or unplanned removal from service;
- the estimated time the system will be out of service;
- whether the other fire protection systems are in good working order and will be operational while the fire protection system is out of service;
- the certificate of fitness holder for the system; and
- the names of any licensed companies that will be performing repairs.

1.4.2 Emergency procedures

The fire guard must have a method of communicating to the emergency services. Fire guards can use cell phones to make immediate notifications. Fire guards should ensure that there is enough power to cover their shift. **Notifying by phone is the most direct and effective way to notify the Fire Department.**

To report a fire by telephone, fire guards must dial 911 or, depending upon the borough in which the property is located, insert one of the following telephone numbers:

Manhattan properties	(212) 999-2222
Brooklyn properties	(718) 999-4444
Queens properties	(718) 999-5555
Bronx properties	(718) 999-3333
Staten Island properties	(718) 999-6666

When a fire is discovered the fire guard must also sound the fire alarm pull station when available. The fire guard must notify the Fire Department and the fire safety director or the building owner. The fire safety director or the building owner will also issue instructions to the fire guard. The fire guard must follow the instructions closely. For example, the fire safety director may instruct the fire guard how to take the safest evacuation route from the building.

1.4.3 Notification

The fire guard must be provided with at least one approved means for notification of the Fire Department and any staff on the premises responsible for the implementation of fire safety and evacuation plan. In case of a fire emergency, the fire guard must activate the fire alarm when available and must also call 911. The fire alarm will send an alarm signal and it may also notify an approved central station company. The Fire Department should be contacted directly by phone or other approved device. The Fire Department may also be contacted using a street fire alarm pull station. After the fire fighters arrive, the fire guard must direct the fire fighters to the scene of the fire.

In case of a fire emergency, building occupants may have to be evacuated. Occupants on the fire floor and the floor above are most seriously threatened by the spread of the fire and must be evacuated first. If the fire guard is responsible for assisting in the evacuation, the fire guard should remain composed and in control of the situation. He/she should speak in a clear and concise manner when assisting with the evacuation. The fire guard's instructions and his/her actions play an important role in reducing panic during an emergency. Occupants should be instructed to be calm and move quickly to the nearest exit in an orderly manner. The fire guard should guide the occupants not to use the elevators and should identify the stairwells or other routes of egress for occupants and direct them to use only those stairwells or routes of egress.

In summary, the notification procedures should be:

- Call 911 or the Fire Department Dispatcher number in the borough where the building is located.
- Notify the building occupants using the fire alarm pull station, if available.
- Notify the designated building personnel (e.g. fire safety director or building owner).

1.4.4 Manual or pull station devices

Fire alarm systems are intended to notify the building occupants to evacuate in the event of a fire or other emergency. Some fire alarm systems are activated automatically. Other fire alarm systems must be activated manually. Fire alarm systems that are manually activated use fire alarm pull stations. **The interior manual pull stations may not directly transmit a signal to the Fire Department. A telephone call must always be made to 911 or the Fire Department dispatcher. Do NOT assume that the Fire Department has been notified because you hear a fire alarm or smoke detector sounding in the building.**

Fire alarm pull stations shall be located near the exits throughout the protected area so that they are conspicuous, unobstructed, and accessible. There must be at least one manual fire alarm station on each floor of a building except residential buildings. Manual fire alarm pull stations should be of contrasting color to the background on which they are mounted. Approved plastic covers are permitted to protect fire alarm manual pull stations and provide relief from false alarms. There are two types of manual fire alarm pull stations. They are called **single action** and **double action** stations.

A. Single action stations: Single action stations require only one step to activate the alarm. The cover on these alarm stations serves as a lever. An example of a single action station is shown below. This kind of alarm station is often found indoors, e.g., in office buildings. When the cover is pulled down, it allows a switch inside to close. This sends the alarm signal.



Single action stations



Activate a single action station

B. Double action stations: Double action stations require two steps in order to activate the alarm. The user must first break a glass, open a door or lift a cover. The user can then gain access to a switch or lever which must then be operated to initiate an alarm. To activate this type of alarm station the cover must be lifted before the lever is pulled. This kind of double action station is often found indoors. Another kind of double action break glass station requires someone to break a small pane of glass with a small metal mallet.



Double action station



Activate a double action station

The fire guard must know how to manually operate each alarm station on the premises. Once activated, the fire alarm system can not be re-set at the fire alarm manual pull station only. The alarm must be re-set at a main FACP (Fire Alarm Control Panel) after the pull station reset to its normal condition. The alarm may be re-set only by an S-95 Certificate of Fitness holder after by instructed by a Fire Department representative if it is caused by a fire or a fire related emergency. Once activated, a key may be required to reset the manual pull station.

Fire guards should become familiar with the location of all fire protection devices, as well as, interior and street fire alarm pull stations. All fire alarm pull stations installed or relocated after April 1, 1984 should be installed so that the handle is approximately four feet from the floor and it is located within 5 feet of the exit doorway opening. Manual stations should never be blocked or obstructed.

1.4.5 Safety requirements

Several types of safety signs may be posted at various locations inside the building. The signs are designed to ensure the safety of occupants. For example these signs may indicate:

- (a) The general fire safety procedures to be followed during a fire emergency.
- (b) The location of fire extinguishers and emergency exits.
- (c) How to use the fire extinguishers and related fire fighting equipment.
- (d) How to sound the fire alarm in case of an emergency.
- (e) That the elevators must not be used in case of a fire unless otherwise instructed by the Fire Department.
- (f) The floor numbers.

The fire guard should be familiar with the requirements for the fire safety signs. Having knowledge of these signs would help this person to perform his duties. He/she should also make sure that exit signs posted above doors are always illuminated. Examples of some of these signs are shown below.

Typical Safety Signs

Exit Signs



Special Exit Signs



Fire Extinguisher Sign



Elevator Warning Sign



No-smoking Sign



Sprinkler Sign



Stair Signs



(posted by outside of door)



(posted by door inside of stairwell)

PART 2. FIRE PROTECTION SYSTEM AND FIRE EXTINGUISHERS

2.1 Sprinkler System

A fire sprinkler system is an active fire protection requirement specified by FDNY regulations and laws. All apartment buildings constructed after March 1999 are required by law to be equipped with fire sprinkler systems throughout the building. It consists of a water supply system that provides adequate pressure and flows at a rate to a water distribution piping system, onto which fire sprinklers are connected. Its purpose is to control the fire and to extinguish the fire.

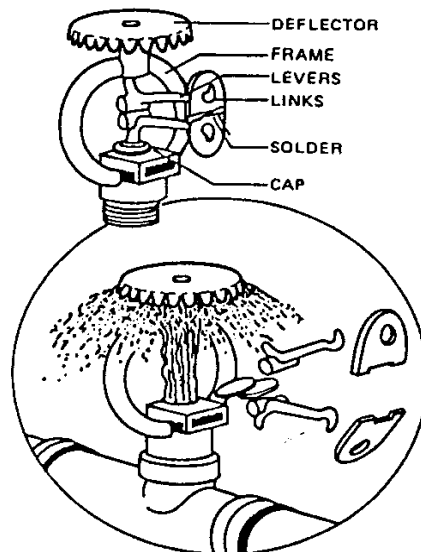
Sprinklers are intended to control the heat release rate of the fire to prevent building structure collapse, and pre-wet the surrounding materials to prevent fire spread. The fire is only extinguished when the burning combustibles are exhausted or after manual extinguishment is done by Firefighters. Water reactive substances may pose special risks at locations. When the sprinkler system is out of service, it can not extinguishing fires directly to prevent the spread of flames throughout other areas of the buildings. When sprinklers are not present, the chances of dying in a fire or the property loss in a fire will be significantly increased.

The sprinkler system is fitted with automatic devices designed to release water on a fire. These devices are called sprinkler heads. The sprinkler heads are normally closed by a disk or cap. This cap is held in place by a heat sensitive releasing element. A rise in temperature to a predetermined level causes the sprinkler head to open. Water is then discharged in the form of spray. When the sprinkler heads open they are said to have fused. The sprinkler heads are fitted at standard intervals on the piping. If more than one head opens, the area sprayed by each overlaps that of the sprinkler head next to it.

A Certificate of Fitness for S-12 for Supervision of Citywide Sprinkler System is responsible for conducting inspections and ensuring maintenance in compliance with Fire Code.

A typical fusible link type sprinkler head is shown in the picture below.

A typical sprinkler head

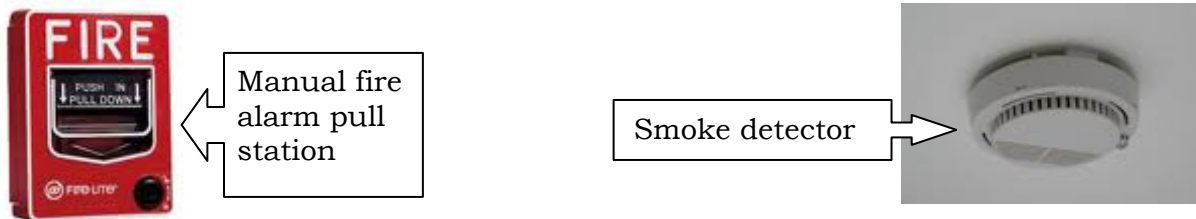


2.2 Standpipe System

A standpipe system is a fire protection system that is designed to provide rapid access to water in the event that a fire breaks out. Standpipes are installed as stand alone systems which act like building-specific fire hydrants. Standpipe systems can be combined with sprinkler systems. They can provide automatic or manual sprinklers as well as connection points for fire hoses. If the standpipe system is out of service, fire fighters may not be able to access to the water delivery system for manual firefighting.

These systems are most commonly installed in buildings which are tall, large, or highly specialized or in other buildings. Dry standpipe systems consist of a series of pipes which bring water to various points in a building when it is used by Fire fighters. The pipes are dry and empty whenever there is not a need. Wet systems are “charged,” meaning that they always are filled with water. Water reactive substances may pose special risks at locations.

2.3 Fire Alarm System



Fire alarm systems are required in many premises as part of a fire protection system. The new Fire Code has expanded the requirement for fire alarm systems which include but are not limited to the following buildings: hospitals, universities or as specified in New York City Building Code. The primary purpose of fire alarm systems within protected premises is to warn building occupants and transmit signals indicating a fire condition to the Fire Department via an approved central station company. The out-of-service fire alarm system may cause a delay in building users and the Fire Department being alerted to a fire and then lead to a risk of serious property loss, personal injury or death.

A fire alarm system is a system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm and supervisory signal-initiating devices, and to initiate the appropriate response to these signals.

In general, a fire alarm system is classified as automatic, manually activated, or both. If a fire condition occurs, the alarm system warns the occupants within the premises by actuating loud sirens, gongs, bells, speakers, horns and flashing lights (strobes). An S-95 Certificate of Fitness for Supervision of Fire Alarm System is responsible for conducting inspections and ensuring maintenance.

2.4 Portable Fire Extinguishers

The fire guard must be familiar with the use of the fire extinguisher and related fire fighting equipment required to be on the site. In residential properties, a portable fire extinguisher may not be readily available, therefore the fire guard should carry the appropriate type and size fire extinguisher while conducting the fire watch.

All fire extinguishers must be installed so that the top of the extinguisher is not more than 5 ft above the floor and the clearance between the bottom of the extinguisher and the floor is not less than 4 in. In other words, **no fire extinguisher is allowed to be on the floor.**



The bottom of the extinguisher must be at least 4 in above the floor.

- (1) The top of the fire extinguishers must not be more than 5 ft above the floor.
- (2) The fire extinguishers must be accessible and unobstructed.



In the event of a fire extinguisher has been discharged, a fully charged replacement is required before work can resume. Portable fire extinguishers are important in preventing a small fire from growing into a catastrophic fire, however, they are not intended to fight large or spreading fires. **Fire guards are responsible for extinguishing fires when they are limited in size and spread such that they can readily be extinguished using a portable fire extinguisher.** By the time the fire has spread, fire extinguishers, even if used properly, will not be adequate to extinguish the fire. Such fires should be extinguished by the building fire extinguishing systems or trained firefighters only. In case of any fire, 911 must be called. Fire extinguishers must be used in accordance with the instructions painted on the side of the extinguisher. They clearly describe how to use the extinguisher in case of an emergency. The Fire Guard Certificate of Fitness holder should be familiar with the use of portable fire extinguishers. When it comes to using a fire-extinguisher just remember the acronym P.A.S.S. to help make sure you use it properly. P.A.S.S. stands for Pull, Aim, Squeeze, Sweep.

The fire guard must be familiar with the different types of fire extinguishers available at the work site. The Certificate of Fitness holder must know how to operate the

extinguishers in a safe and efficient manner. The Certificate of Fitness holder must also know the difference between the various types of extinguishers and when they may be used. An example of these instructions is depicted in the picture.

Class A fires are caused by ordinary combustible materials (such as wood, paper, and cloth). To extinguish a Class A fire, these extinguishers utilize either the heat-absorbing effects of water or the coating effects of certain dry chemicals.



Class B fires are caused by flammable or combustible liquids and gases such as oil, gasoline, etc. To extinguish a Class B fire, the blanketing-smothering effect of oxygen-excluding media such as CO₂, dry chemical or foam is most effective.

Class C fires involve electrical equipment. These fires must be fought with fire extinguishers that do not conduct electricity. Foam and water type extinguishers must not be used to extinguish electrical fires. After shutting off the electrical equipment, extinguishers for Class A or B fires may be used.

Class D fires are caused by ignitable metals, such as magnesium, titanium, and metallic sodium, or metals that are combustible under certain conditions, such as calcium, zinc, and aluminum. Generally, water should not be used to extinguish these fires.

A multi-purpose dry chemical fire extinguisher may be used to extinguish more than 2 classes fires. Examples of some fire extinguishers are shown below.

Examples of fire extinguishers

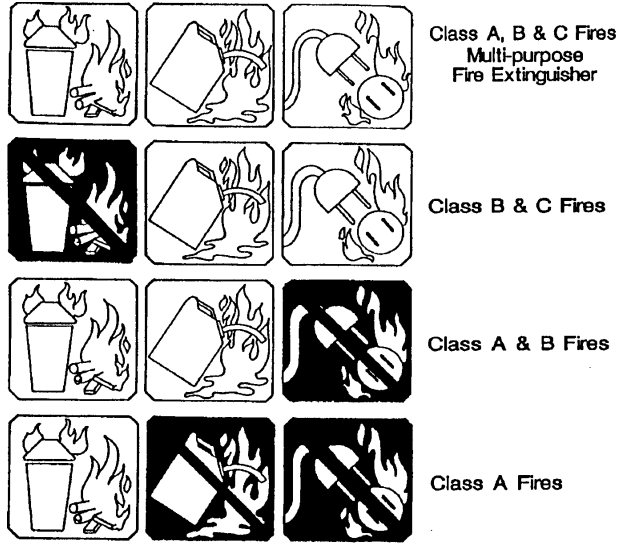
10-B:C (10BC)	3-A:40-B:C(3A40BC)	3-A:40-B:C(3A40BC), wheeled
		

2.4.1 Typical fire extinguishers

Symbols may also be painted on the extinguisher. The symbols indicate what kind of fires the extinguisher may be used on. Examples of these symbols are shown below.

The symbol with the shaded background and the slash indicates when the extinguisher must not be used. The Certificate of Fitness holder must understand these symbols. All fire extinguishers should be kept in good working order at all times.

CLASSES OF FIRES	TYPES OF FIRES	PICTURE SYMBOL
A	Wood, paper, cloth, trash & other ordinary materials.	
B	Gasoline, oil, paint and other flammable liquids.	
C	May be used on fires involving live electrical equipment without danger to the operator.	
D	Combustible metals and combustible metal alloys.	
K	Cooking media (Vegetable or Animal Oils and Fats)	



Fire Extinguisher Identification Symbols

2.4.2 Fire extinguisher inspections

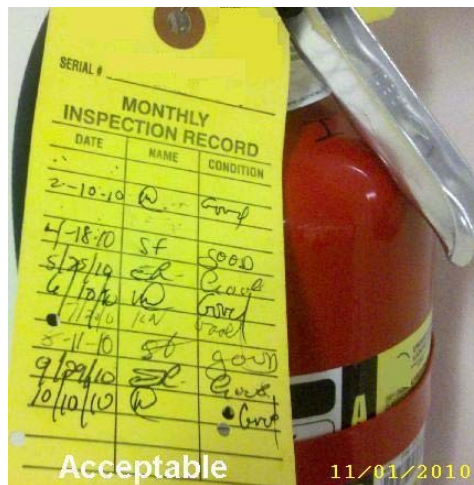
The extinguishers are required to be inspected (quick check) monthly. The owner of the premises is responsible to designate a person to perform a monthly inspection. This inspection is a "quick check" that a fire extinguisher is available and will operate.

The quick check should check if

- (1) the fire extinguisher is fully charged;
- (2) it is in its designated place;
- (3) it has not been actuated or tampered with;
- (4) there is no obvious or physical damage or condition to prevent its operation.

The information of the monthly inspection record must include the date the inspection was performed, the person performing the inspection, and those portable fire extinguishers found to require corrective action. At least once per year, all fire extinguishers must be maintained by a FDNY approved company and a W-96 Certificate of Fitness holder.

Monthly inspection tag. →



Appendix A

CHAPTER 4 EMERGENCY PLANNING AND PREPAREDNESS

SECTION FC 401

GENERAL

401.3 Emergency notification. Any owner, occupant or other person who becomes aware of a fire or explosion or any other emergency shall immediately report such emergency to the department. No owner or other person shall issue any directive or take any action to prevent or delay the reporting of a fire or other emergency to the department.

401.3.1 Reserved.

401.3.2 Reserved.

401.3.3 Fire drills and emergency action plan drills. Nothing in this section shall prohibit the sounding or other activation of a fire alarm signal for the purposes of conducting a fire drill or EAP drill in accordance with Section 405.

SECTION FC 408

USE AND OCCUPANCY-RELATED REQUIREMENTS

408.1 General. The premises used or occupied for the purposes set forth in this section shall additionally comply with the requirements of this section, as applicable.

408.2 Group A occupancies. All Group A occupancies shall comply with the requirements of Sections 408.2.1.

408.2.1 Seating plan. A copy of the seating plan for Group A occupancies required by the Building Code shall be submitted to the department prior to occupancy.

408.3 Group B occupancies. Group B occupancy office buildings or parts thereof, occupied or designed to be occupied by more than 500 persons on one or more floors, including street level, or by more than 100 persons on one or more floors other than street level, shall be operated and maintained in compliance with the additional emergency preparedness and planning requirements set forth in the rules.

408.4 Group H-5 occupancies. Group H-5 occupancies shall comply with the requirements of Sections 408.4.1 through 408.4.4.

408.4.1 Plans and diagrams. In addition to the requirements of Section 404 and Section 407.6, plans and diagrams shall be maintained in an approved location on the premises indicating the plan for each area, the amount and type of HPM stored, handled and used, locations of shutoff valves for HPM supply piping, emergency telephone locations and locations of exits.

408.4.2 Periodic review and revision. The plans and diagrams required by Section 408.4.1 shall be maintained up to date and the commissioner shall be notified of all changes in use or occupancy, and design and arrangement of the premises.

408.4.3 Emergency response team. Responsible persons shall be designated the on-site emergency response team and trained to be liaison personnel for the department. These persons shall aid the department in preplanning emergency responses, identifying locations where HPM is stored, handled and used, and be familiar with the chemical nature of such material. An adequate number of personnel for each work shift shall be designated.

408.4.4 Emergency drills. Emergency drills of the on-site emergency response team shall be conducted on a regular basis but not less than once every three months. Records of emergency drills conducted shall be maintained in the same manner as records of fire drills.

408.5 Group I-1 occupancies. Group I-1 occupancies shall comply with the requirements of Sections 408.5.1 through 408.5.5.

408.5.1 Fire safety and evacuation plan. The fire safety and evacuation plan required by Section 404 shall include special FSP staff actions, including fire protection procedures necessary for residents, and shall be revised upon admission of any resident with special needs.

408.5.2 Reserved.

408.5.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program. Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

408.5.4 Reserved.

408.5.5 Resident participation. Fire drills shall involve the actual evacuation of all residents to a selected assembly area.

408.6 Group I-2 occupancies. Group I-2 occupancies shall comply with the requirements of Sections 408.6.1 and 408.6.2.

408.6.1 Evacuation not required. During fire drills, the movement of patients to safe areas or to the exterior of the building is not required.

408.6.2 Coded alarm signal. When fire drills are conducted after visiting hours or when patients or residents are expected to be asleep, a coded announcement is allowed instead of audible alarms.

408.7 Group I-3 occupancies. Group I-3 occupancies shall comply with the requirements of Sections 408.7.1 through 408.7.4.

408.7.1 FSP staff training content. FSP staff shall be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment.

408.7.2 Staffing. In Group I-3 occupancies, FSP staff shall be in the building at all times, and within three floors or 300 feet (91 440 mm) horizontal distance of the access door of each resident housing area. When movement of occupants from one smoke compartment to another or egress from the building is impeded by staff-controlled manual releases, the FSP staff responsible for controlling such movement or egress must be continuously available to initiate emergency procedures within 2 minutes of an alarm.

Exception: FSP staff shall not be required to be located within three floors or 300 feet (9144 mm) of areas in which all locks may be unlocked automatically in accordance with Section 408.4 of the Building Code.

408.7.3 Notification. Provision shall be made to promptly notify FSP staff of an emergency.

408.7.4 Keys. Keys necessary for unlocking doors installed in a means of egress shall be individually identifiable by both touch and sight.

408.8 Group R-1 occupancies. Group R-1 occupancies shall comply with the requirements of Sections 408.8.1 and 408.8.3.

408.8.1 Evacuation diagrams. A diagram depicting two evacuation routes shall be posted on or immediately adjacent to every required egress door from each hotel guest room, motel guest room, or dormitory room. The diagram shall indicate the following:

1. A visual representation of the number of doors opening onto the public corridor which must be passed to reach each exit stair.
2. Location of the fire alarm pull stations.
3. Procedures to be followed in the event of a fire alarm or smoke detector alarm.
4. A written description or visual representation of the procedures to be followed in the event of fire or smoke conditions.

408.8.2 Reserved.

408.8.3 Signage. Group R-1 occupancies shall comply with the additional signage and such other emergency preparedness and planning requirements set forth in the rules.

408.9 Group R-2 occupancies. Group R-2 occupancy buildings or parts thereof with 3 or more dwelling units, including apartment houses, apartment buildings, apartment hotels and other residential buildings or parts thereof that are occupied for the shelter and sleeping accommodations of individuals on a month to month or longer-term basis shall comply with the requirements of Sections 408.9.1 through 408.9.4 and the rules. Such buildings or parts thereof shall not be required to comply with the supervision requirements of Sections 401, and the requirements of Sections 404, 405 and 406.

Exception: Group R-2 occupancy buildings or parts thereof required to prepare a fire safety and evacuation plan as set forth in Section 404.2.1(8). Such buildings or parts thereof shall be operated and maintained in compliance with the additional emergency preparedness and planning requirements set forth in the rules.

408.9.1 Residential fire safety guide and notices. The owner of any premises containing a Group R-2 occupancy shall cause a fire safety guide to be prepared for such premises, and periodically reviewed, amended and distributed in accordance with this section and the rules.

408.9.1.1 Fire safety guide. The residential fire safety guide shall serve to inform building occupants and building service employees as to the building's construction, fire safety systems, means of egress, and evacuation and other procedures to be followed in the event of fire in the building.

408.9.1.2 Fire safety notices. The fire safety notice shall serve to inform building occupants, building service employees and visitors as to the evacuation and other procedures to be followed in the event of fire in the building. Such notice shall be in such form as prescribed by the commissioner by rule and shall be posted within each dwelling unit and such other locations as set forth in the rules.

408.9.2 Periodic review and revision. Fire safety guides and notices shall be reviewed prior to each distribution and posting, and shall be revised within 60 days of any material change in the building's fire safety systems, means of egress or other building condition required to be included in such fire safety guide or notice.

408.9.3 Distribution and posting. A copy of the fire safety guide and fire safety notice shall be distributed to building occupants, and fire safety notices shall be posted as set forth in this section and the rules.

408.9.3.1 Cooperative or condominium. In Group R-2 occupancies with a cooperative or condominium form of ownership and management, the board of directors, condominium association or other party generally responsible for maintenance of common areas shall be responsible for the preparation and distribution of the fire safety guide, the posting and maintenance of fire safety notices in common areas, and the preparation and distribution to individual dwelling unit owners or proprietary lessees of fire safety notices for dwelling unit doors, including instructions and the means for affixing the notice. The owners or proprietary lessees of the individual units in such residential buildings or parts thereof shall be responsible for the posting and maintenance of the fire safety notice on their respective dwelling unit doors.

408.9.4 Floor numbering list. The commissioner shall promulgate rules establishing requirements for the electronic submission of floor numbering lists to the department by owners of buildings or parts thereof classified in Group R-2 occupancies that are 150 feet (45 720 mm) or more in height, and such other occupancies as the commissioner may designate by rule. Such rules shall provide that each owner of a building with non-sequential or non-standard floor numbering, as defined by rule, submit a floor numbering list indicating the floor numbers assigned to each floor, and submit an

amended floor numbering list within 2 business days of a change in any floor numbering designation.

408.10 Group R-1 occupancy school and college dormitories. Group R-1 school and college dormitories shall prepare an FSP, or prepare and distribute a fire safety guide and notice, as prescribed by the commissioner by rule.

408.11 Covered mall buildings. Covered mall buildings shall comply with the requirements of Sections 408.11.1 through 408.11.3.

408.11.1 Floor plan. The floor plan required by Section 404.3.1(4) shall additionally include the following information:

1. Each occupancy, including identification of tenant.
2. Exits from each tenant space.

408.11.2 Tenant identification. Each occupied tenant space provided with a secondary exit to the exterior or exit corridor shall be provided with tenant identification by business name and/or address. Letters and numbers shall be conspicuously posted on the exterior or exit corridor side of the door, be plainly legible and shall contrast with their background.

408.11.3 Maintenance. Unoccupied tenant spaces shall be:

1. Kept free from the storage of any combustible materials.
2. Kept separate from other tenant spaces and areas of the mall by maintaining any fire separation requirement of the Building Code during the period of time that the space remains unoccupied or under reconstruction.
3. Periodically inspected on at least a weekly basis to ensure that the space is being maintained in accordance with this section. Doors to spaces shall be secured from entry by keeping all doors locked at all times when the space is unoccupied.
4. Kept free from rubbish and other combustible waste.

408.12 Buildings with Class B or M fire alarm systems. Buildings or parts thereof equipped with a fire alarm system with voice communication of the type required in Class B or M occupancies, regardless of whether such system is required in such building or space, shall be operated and maintained in compliance with the requirements of Section 408.3.

408.13 Buildings with Class R-1 fire alarm systems. Buildings or parts thereof equipped with a fire alarm system with voice communication of the type required in Group R-1 occupancies, regardless of whether such system is required in such building or space, shall be operated and maintained in compliance with the requirements of Section 408.8.3.

408.14 Fire emergency reporting. In a conspicuous location in every lobby or entrance hall of a commercial or public building, the owner shall post a sign indicating the method of transmitting a fire alarm. Such signs shall conform to the following format and the owner shall insert all information necessary to complete the instructions contained therein:

Fire alarm box at _____ and _____

(Name of street) (Name of street)

or

To report a fire by telephone dial "911" or, depending upon the borough in which the property is located, insert one of the following telephone numbers:

- Bronx properties (718) 999-3333
- Brooklyn properties (718) 999-4444
- Manhattan properties (212) 999-2222
- Queens properties (718) 999-5555
- Staten Island properties (718) 999-6666

Exception: This section shall not apply to educational facilities where fire drills are conducted in accordance with Section FC 405.

408.14.1 Fire emergency reporting signs. Signs required by this section shall be of such size and contain such lettering as the commissioner may prescribe by rule.

CHAPTER 9 FIRE PROTECTION SYSTEMS

SECTION FC 901

GENERAL

901.1 Scope. This chapter shall govern the design, installation, operation and maintenance, including inspection and testing, of fire protection devices, equipment and systems, and other fire protection measures for the control and extinguishment of fire.

901.1.1 General. Fire protection systems shall be designed, installed, operated and maintained in accordance with this chapter and the reference standards set forth in Table 901.6.

901.2 Design and installation documents. The commissioner may require design and installation documents and calculations to be submitted for review for all fire protection systems. Design and installation documents required or regulated by this code or the rules shall be submitted for review and approval prior to installation, and shall certify that the design complies with the requirements of this code and the rules.

901.3 Permits. Permits shall be required as set forth in Section 105.6.

901.4 Design and installation. Fire protection systems shall be designed and installed in accordance with Sections 901.4.1 through 901.4.5.

901.4.1 Required fire protection systems. Fire protection systems shall be designed and installed in accordance with the construction codes, including the Building Code, and, as applicable, this code and the rules, and the applicable referenced standards listed in this code. Required systems shall be extended or altered as necessary to maintain and continue protection whenever the building or structure is altered. Alterations to fire protection systems shall be performed in compliance with the requirements of this code, the rules, and the construction codes, as applicable. Buildings and structures shall be provided with such fire hose, portable fire extinguishers and other means of preventing and extinguishing fires as the commissioner may direct.

901.4.2 Fire protection systems not required by code. Any fire protection system or portion thereof not required by this code, the rules or the construction codes, including the Building Code, may be installed to provide partial or complete protection of a building or structure, provided such system meets the requirements of this code, the rules and the construction codes, including the Building Code, as applicable. Where the design and installation of such fire protection system is governed by this code or the rules, the commissioner may modify such requirements, consistent with the interests of fire safety, upon a determination that such modification will promote public safety by encouraging the installation of such systems.

901.4.3 Additional fire protection systems. Where the material or operation to be conducted in a particular occupancy gives rise to special hazards in addition to the normal hazards of the occupancy, or where the commissioner determines that access to the occupancy would unduly delay the ability of firefighting personnel to respond to the hazard, the commissioner may require additional safeguards. Such safeguards include, but shall not be limited to, the following: automatic fire detection systems, fire alarm systems, fire extinguishing systems, standpipe systems, or portable or fixed extinguishers. Fire protection equipment shall be installed in accordance with the construction codes, including the Building Code.

901.4.4 Prohibition of deceptive equipment. It shall be unlawful to install or maintain any device that has the physical appearance of fire protection equipment but that does not perform the fire protection function, in any building, structure or premises where it may be confused with actual fire protection equipment.

901.4.5 Certificate of approval. The following fire protection devices, equipment and systems shall be of a type for which a certificate of approval has been issued in accordance with this code, or which was approved by the Department of Buildings or the

Board of Standards and Appeals prior to the effective date of this section, unless such approval by the Department of Buildings or the Board of Standards and Appeals is amended or repealed by the commissioner:

1. Pre-engineered non-water fire extinguishing systems, including systems installed in connection with commercial cooking systems.
2. Prefabricated hoods and grease filters installed in connection with commercial cooking systems.
3. Fire department siamese connections, standpipe system hose outlets and pressure reducing valves.
4. Fire alarm system control panels.

901.5 Installation acceptance testing. Fire detection and alarm systems, fire extinguishing systems, private fire hydrant systems, yard hydrant systems, standpipe systems, fire pump systems, private fire service mains and all other fire protection systems and appurtenances thereto shall be subject to acceptance tests as set forth in the installation standards specified in this code. Where required by the construction codes, including the Building Code, this code or the rules, such tests shall be conducted, at the owner's risk, by his or her representative before a representative of the department.

901.5.1 Occupancy. It shall be unlawful to occupy any portion of a building or structure until any required fire detection system, fire alarm system, standpipe system and fire extinguishing systems have been tested and approved.

901.6 Maintenance. Fire protection systems shall be maintained in good working order at all times. Any fire protection system that is not in good working order shall be repaired or replaced as necessary to restore such system to good working order, or, where authorized by the Building Code, removed from the premises.

901.6.1 Standards. Fire protection systems shall be inspected, tested, serviced and otherwise maintained in accordance with this section, the rules and the referenced standards listed in Table 901.6.1. Where required by this section, such inspection, testing and maintenance shall additionally comply with the rules. Where applicable, the requirements of the reference standards listed in Table 901.6.1 shall be in addition to those requirements specified in the rules.

**TABLE 901.6.1
FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS**

SYSTEM	STANDARD
Portable fire extinguishers	NFPA 10
Low, medium and high expansion foam systems	NFPA 11 and NFPA 25
Carbon dioxide fire extinguishing system	NFPA 12
Halon 1301 fire extinguishing systems	NFPA 12A
Foam water sprinkler and spray systems	NFPA 16 and NFPA 25
Dry chemical fire extinguishing systems	NFPA 17
Wet chemical fire extinguishing systems	NFPA 17A
Water based fire protection systems	NFPA 25
Fire alarm systems	NFPA 72
Water mist fire extinguishing systems	NFPA 750
Clean agent fire extinguishing systems	NFPA 2001

901.6.2 Records. Records of all system inspections, tests, servicing and other maintenance required by this code, the rules or the referenced standards shall be maintained on the premises for a minimum of 3 years and made available for inspection by any department representative.

901.6.2.1 Standpipe and sprinkler systems. In addition to those records required by NFPA 25, an approved card bearing the dates of each inspection, certificate of fitness number and signature of the certificate of fitness holder shall be posted on the premises near the main water supply control valve. A detailed inspection report

relative to conditions of water supply, gravity and pressure tanks and levels therein, valves, risers, piping, sprinkler heads, hose valves, hose and nozzles, siamese connections, alarms, fire pumps, obstructions, and conditions of all other system equipment and appurtenances shall be completed monthly by the certificate of fitness holder. All defects or violations shall be noted on the inspection report.

901.6.3 Supervision. Inspection, testing, servicing and other maintenance of the following fire protection systems shall be performed under the personal supervision of a person holding a certificate of fitness.

1. Sprinkler systems.

Exception: Buildings classified in Group R-3 occupancies.

2. Standpipe systems.

3. Foam fire extinguishing systems.

4. Fire alarm systems.

5. Private fire hydrant systems.

6. Yard hydrant systems.

901.6.3.1 Servicing of portable fire extinguishers. It shall be unlawful for any person engaged in the business of servicing portable fire extinguishers to service portable fire extinguishers without a portable fire extinguisher servicing company certificate. Any person that services portable fire extinguishers shall hold a certificate of fitness, except that a person training for such certificate of fitness may service portable fire extinguishers under the personal supervision of a certificate of fitness holder. Nothing in this section shall preclude portable fire extinguishers that are maintained on a premises for use at such premises from being serviced by the owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for portable fire extinguisher servicing and the tools, materials, equipment and facility necessary to perform such services.

901.6.3.2 Portable fire extinguisher sales. It shall be unlawful for any person to engage in the business of selling portable fire extinguishers door to door to owners of buildings or businesses for use on their premises without a portable fire extinguisher sales company certificate.

Exception: Sale to owners of Group R-2 and R-3 occupancy buildings.

901.6.3.3 Commercial cooking exhaust systems. It shall be unlawful for any person engaged in the business of inspecting and cleaning commercial cooking exhaust systems as required by the provisions of this code to perform such service without a commercial cooking exhaust system servicing company certificate. The inspection and cleaning of commercial cooking exhaust systems required by Section 904.11 shall be performed by a person holding a certificate of fitness. Nothing in this section shall preclude commercial cooking exhaust systems from being inspected and cleaned by the owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for inspecting and cleaning commercial cooking exhaust systems and the tools, materials, and equipment necessary to perform such services in accordance with this section.

901.6.3.4 Smoke detector cleaning and testing. The cleaning and testing for smoke entry and sensitivity of smoke detectors installed in a defined fire alarm system shall be performed by a person holding a certificate of fitness for smoke detector maintenance. Such work shall be performed under the supervision and by employees of a person holding a smoke detector maintenance company certificate, except that such smoke detector cleaning and testing may be performed by an owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for smoke detector maintenance, and possesses the tools, instruments or other equipment necessary to perform such services in accordance this code and the rules. All other smoke detector maintenance shall be

performed by a person possessing the requisite qualifications and experience, and any applicable license or certificate.

901.6.3.5 Central station fire alarm monitoring. It shall be unlawful for any person to operate a central station that monitors fire alarm systems and maintain transmitters in protected premises without a certificate of operation.

901.7 Out of service systems. Where a required fire protection system is out of service, the department shall be notified immediately and unless otherwise directed by the commissioner, either the building shall be evacuated or a fire watch shall be maintained by one or more persons holding a certificate of fitness for fire guard. Any other actions as the commissioner may direct in addition to or in lieu of such measures shall also be undertaken, until the fire protection system has been returned to service. Where utilized, fire guards shall be provided with at least one approved means for notification of the department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

901.7.1 Impairment coordinator. The building owner shall assign an impairment coordinator to comply with the requirements of this section. In the absence of a specific designee, the owner shall be considered the impairment coordinator.

901.7.2 Tag required. A tag shall be used to indicate that a system, or portion thereof, is out of service.

901.7.3 Placement of tag. The tag shall be posted at each fire department connection, system control valve, fire alarm control unit, fire alarm annunciator and fire command center, indicating which system, or part thereof, is out of service. The commissioner shall specify where the tag is to be placed.

901.7.4 Planned removal from service. The certificate of fitness holder and the impairment coordinator shall be made aware of and authorize the placing of systems out of service. Before authorizing such action the impairment coordinator shall:

1. Determine the extent and expected duration of the out of service condition.
2. Inspect the areas or buildings involved and assess the increased risks.
3. Make appropriate recommendations to the owner.
4. Notify the department and the responsible person designated by the owner to issue hot work authorizations in accordance with Chapter 26.
5. Notify the central station and insurance carrier.
6. Notify the occupants in the affected areas.
7. Place out of service tags at all required and appropriate locations.
8. Maintain system in service until work is ready to begin.

901.7.5 Unplanned out of service condition. The certificate of fitness holder, impairment coordinator, and/or other person responsible for inspecting, maintaining or supervising the operation of a fire protection system who observes a serious defect such as an empty tank, break or major leak in system water piping, inoperative or shut water supply valves, defective siamese connections, or complete or partial shut down of sprinkler and/or standpipe systems, 145

* FC901.7.7 added by Local Law No. 64 of 2009, effective 2/4/10.

other than a shutdown for scheduled inspection, testing or maintenance, shall immediately report such condition to the owner of the building, and to the department. When a system fails or otherwise goes out of service, the certificate of fitness holder or the impairment coordinator shall take the actions set forth in Section 901.7.4. and such other actions necessary or appropriate to protect the occupants of the building and minimize property damage. When the certificate of fitness holder or other such person observes a minor defect or other condition not presenting a serious safety hazard, he or she shall report the defect or condition to the owner, and if the defect or condition is not corrected within 30 days, shall report it in writing to the department.

901.7.6 Restoring systems to service. When an out of service device, equipment or system is restored to normal working order, the impairment coordinator shall:

1. Conduct necessary inspections and tests to verify that the affected systems are operational.
2. Reserved.
3. Notify the department.
4. Notify the owner, central station, insurance carrier and occupants in the affected areas.
5. Remove the out of service tags.

901.7.7 Out of service standpipe systems at construction sites.* The owner, fire safety manager and/or impairment coordinator shall take the following actions whenever a standpipe system at a construction site is out of service:

1. Immediately notify the department of any unplanned out of service condition, and otherwise comply with the requirements of Section 901.7.5.
2. Notify the department at least 24 hours prior to any planned removal of the standpipe system from service, and otherwise comply with the requirements of Section 901.7.4.
3. Ensure that a fire watch is continuously maintained in compliance with the requirements of Section 901.7 while the standpipe system is out of service.
4. Repair the standpipe system and return it to service in compliance with the requirements of Sections 901.6 and 901.7.6 and Section 3303.8.1 of the New York City Building Code. The construction site may continue to be occupied, and construction, demolition or alteration activities may continue, pending such repair and restoration to service, except:
 - 4.1. As otherwise provided in Section 3303.8.1 of the New York City Building Code; and/or
 - 4.2. As otherwise directed by the commissioner upon a determination that, in the absence of an operable standpipe system, the conduct of certain construction, demolition or alteration activities would be imminently perilous to life or property; and
 - 4.3 That in no circumstance shall hot work be conducted on the construction site until such time as the standpipe system is restored to service and the standpipe alarm reactivated.

901.8 Tampering with or rendering equipment inoperable. Fire protection systems and related apparatus shall not be tampered with or rendered inoperable, except as set forth in Section 107.4.

SECTION FC 906
PORTABLE FIRE EXTINGUISHERS

906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

1. In all Group A, B, E, F, H, I, M, R-1, R-2 adult homes and enriched housing, and S occupancies.
2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or combustible liquids are manufactured, stored, handled and used, including dispensing, in quantities requiring a permit pursuant to Section 105.6.
4. On each floor of structures under construction, alteration or demolition, except detached Group R-3 occupancies, in accordance with Section 1415.1.
5. Where required by the sections indicated in Table 906.1.
6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the commissioner.
7. Where required by other provisions of this code or the rules.

**TABLE 906.1
 ADDITIONAL REQUIRED PORTABLE FIRE EXTINGUISHERS**

SECTION	OSUBJECT
303.5	Tar kettles
304.4.3	Outdoor storage of combustible waste
307.4	Open fires
307.5	Barbecues on residential properties
308.6.5	Flaming food and beverages in Group A occupancies
309.4	Powered industrial trucks
315.3.4	Outdoor storage of combustible material
1105.2	Aircraft towing vehicles
1105.3	Aircraft welding apparatus
1105.4	Aircraft-fueling vehicles
1105.5	Aircraft hydrant-fueling vehicles
1105.6	Aircraft fuel-dispensing stations
1107.7	Heliports and helistops
1110.6.2	Helicopter lift operations
1208.4	Dry cleaning plants
1415.1	Buildings, structures, premises and facilities under construction, alteration or demolition
1417.3	Roofing operations
1418.1	Ammunition at a construction site
1504.6.4	Spray-finishing operations
1505.5	Dip-tank operations
1507.10	Powder coating operations
1908.8	Storage of wood chips and other wood waste materials
1909.5	Exterior lumber storage
2003.5	Organic-coating areas
2106.3	Industrial furnaces
2205.5	Automotive liquid motor fuel-dispensing facilities
2208.7.4.1	CNG motor fuel-dispensing facilities
2210.6.4	Marine liquid motor fuel-dispensing facilities
2211.6	Repair garages
2306.10	Rack storage
2404.12	Tents and other membrane structures
2508.2	Tire rebuilding/storage
2604.2.6	Welding and other hot work
2707.9.3	Transportation of flammable and combustible liquids in cargo tanks
2903.6 and 2906.6.4	Combustible fibers
3309.9.1	Special effects
3403.2.1	Flammable and combustible liquids, general
3404.3.3.1	Indoor storage of flammable and combustible liquids
3404.3.7.5.2	Liquid storage rooms for flammable and combustible liquids
3405.4.9	Solvent distillation units
3406.2.7	Construction sites—flammable and combustible liquids storage
3406.4.10.1	Bulk plants and terminals for flammable and combustible liquids
3406.8.1(20)	Vapor recovery and processing equipment at bulk plants and terminals
3506.5	Sterilizers using flammable gas containing ethylene oxide
3808.2	LPG

906.2 General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exception: The travel distance to reach a portable fire extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.

906.2.1 Maintenance. Portable fire extinguishers shall be maintained in accordance with Section 901.6 and this section.

906.2.1.1 Monthly inspection. An inspection to verify that the portable fire extinguishers are readily available and in good working order shall be conducted at least once a month. The person conducting such inspections shall keep records of all portable fire extinguishers inspected, including the date the inspection was performed, the person performing the inspection, and those portable fire extinguishers found to require corrective action. Such recordkeeping shall be either kept on a tag or label securely attached to the portable fire extinguisher, on an inspection checklist maintained on file or by an approved electronic method that provides a permanent record.

906.2.1.2 Servicing. Annual servicing and recharging shall be performed by a person or company meeting the requirements of Section 901.6.3.1. Records of servicing and recharging of portable fire extinguishers shall be provided and maintained in accordance with NFPA 10. The required tag or label for servicing shall also include the following information:

1. The name and certificate of fitness number of the person who serviced the portable fire extinguisher.
2. The month and year the portable fire extinguisher was serviced.
3. The name, street address and telephone number of the portable fire extinguisher servicing company, if any, servicing the portable fire extinguisher.

906.2.1.3 Hydrostatic testing. Periodic hydrostatic testing of portable fire extinguishers shall be done in accordance with NFPA 10.

906.3 Size and distribution. For occupancies that involve primarily Class A fire hazards, the minimum sizes and distribution shall comply with Table 906.3(1). Portable fire extinguishers for occupancies involving flammable or combustible liquids with depths of less than or equal to 0.25-inch (6.35 mm) shall be selected and placed in accordance with Table 906.3(2). Portable fire extinguishers for occupancies involving flammable or combustible liquids with a depth of greater than 0.25-inch (6.35 mm) or involving combustible metals shall be selected and placed in accordance with NFPA 10. Extinguishers for Class C fire hazards shall be selected and placed on the basis of the anticipated Class A or Class B hazard.

906.3.1 Sprinklered areas. In buildings classified as Group A-3 occupancy houses of worship and Group B occupancy office buildings that are protected throughout by a sprinkler system, the maximum floor area per unit of A required by Table 906.3(1) may be doubled.

**TABLE 906.3(1)
PORTABLE FIRE EXTINGUISHERS FOR CLASS A FIRE HAZARDS**

	LIGHT (Low) HAZARD OCCUPANCY _d	ORDINARY (Moderate) HAZARD OCCUPANCY _d	EXTRA (High) HAZARD OCCUPANCY _d
Minimum Rated Single Extinguisher	2-A _c	2-A	4-A _a
Maximum Floor Area Per Unit of A	3,000 square feet	1,500 square feet	1,000 square feet
Maximum Travel Distance to Extinguisher	75 feet	75 feet	75 feet

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m², 1 gallon = 3.785 L.

a. Two 2.5-gallon water-type extinguishers shall be deemed the equivalent of one 4-A rated extinguisher.

b. Reserved

c. Two water-type extinguishers each with a 1-A rating shall be deemed the equivalent of one 2-A rated extinguisher for Light (Low) Hazard Occupancies.

d. For the purposes of Table 906.3(1), the terms “Light (Low) Hazard”, “Ordinary (Moderate) Hazard” and “Extra (High) Hazard” shall be as defined in NFPA 10.

e. In areas classified as Groups A3, B, or E which are protected throughout by a sprinkler system, the maximum floor area per unit of A may be doubled.

TABLE 906.3(2)
FLAMMABLE OR COMBUSTIBLE LIQUIDS WITH DEPTHS OF LESS THAN
OR EQUAL TO 0.25-INCH

TYPE OF HAZARD	BASIC MINIMUM PORTABLE FIRE EXTINGUISHER RATING	MAXIMUM TRAVEL DISTANCE TO PORTABLE FIRE EXTINGUISHERS (feet)
Light (Low)	5-B	30
	10-B	50
Ordinary (Moderate)	10-B	30
	20-B	50
Extra (High)	40-B	30
	80-B	50

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

NOTE. For requirements on water-soluble flammable liquids and alternative sizing criteria, see NFPA 10, Sections 3-3 and 3-4.

906.4 Cooking grease fires. Portable fire extinguishers provided for the protection of cooking grease fires shall be of an approved type compatible with the fire extinguishing system agent and in accordance with Section 904.11.5.

906.5 Conspicuous location. Portable fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. These locations shall be along normal paths of travel, unless the commissioner determines that the hazard posed indicates the need for placement away from normal paths of travel.

Exceptions:

1. Portable fire extinguishers subject to theft, malicious use or damage may be located in locations approved by the commissioner.
2. In rooming houses and single room occupancies, as defined in the New York State Multiple Dwelling Law, with over 15 sleeping rooms, a 2-A rated portable fire extinguisher may be kept in the apartment of the manager or the building superintendent.

906.6 Unobstructed and unobscured - Portable fire extinguishers shall not be obstructed or obscured from view. In rooms or areas in which visual obstruction cannot be completely avoided, signs or other markings shall be provided to indicate the locations of portable fire extinguishers.

906.7 Hangers and brackets. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on the hangers or brackets supplied. Hangers or brackets shall be securely anchored to the mounting surface in accordance with the manufacturer's installation instructions.

906.8 Cabinets. Cabinets used to house portable fire extinguishers shall be readily identifiable and shall not be locked.

Exceptions:

1. Portable fire extinguishers subject to theft, malicious use or damage, if provided with an approved means of ready access.
2. Portable fire extinguishers in Group I-3 occupancies and in mental health areas in Group I-2 occupancies may be locked or located in staff locations, provided the staff of the institution has ready access to the cabinet or other storage location.

906.9 Height above floor. Portable fire extinguishers having a gross weight not exceeding 40 pounds (18 kg) shall be installed so that their tops are not more than 5 feet (1524 mm) above the floor. Hand-held portable fire extinguishers having a gross weight exceeding 40 pounds (18 kg) shall be installed so that their tops are not more than 3.5 feet (1067 mm) above the floor. The clearance between the floor and the bottom of installed hand-held extinguishers shall not be less than 4 inches (102 mm).

906.10 Wheeled units. Wheeled portable fire extinguishers shall be conspicuously located in a designated location.