

**STUDY MATERIAL
FOR THE
EXAMINATION
FOR:**

**FIREGUARD FOR
SHELTERS (F-44)**

ALSO INCLUDED IN THIS BOOKLET YOU WILL
FIND THE FOLLOWING:

1. NOTICE OF EXAMINATION (NOE)

NOTICE OF EXAMINATION FOR

Title: Examination for the Certificate of Fitness for Fireguard-Shelters
(F-44)

Date of Test: Written tests are conducted Monday through Fridays (except legal holidays) 9:00 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 submit notarized statements and meet requirements as per Memorandum of Understanding.
4. Applicants must present two (2) forms of satisfactory identification i.e., driver's license and passport picture ID.

APPLICATION INFORMATION

Application Fees: \$25.00 for originals and \$15.00 for renewals. The fee may be paid 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 MetroTech 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.

ADDITIONAL INFORMATION

Applicants holding a Certificate as a Site Safety Manager from the Department of Buildings; or having a certificate as a Peace Officer as required by the Municipal Police Training Council and issued by the NYS Division of Criminal Justice, **and** having satisfactorily received the Fireguard Training from the NYC Department of Homeless Services, **and** having three (3) years of full time paid experience in a homeless shelter in a security guard or building service capacity, **and** when a computer-based test is not practicable, may have the test waived. This is the alternative issuance policy. Call (718) 999-1986 for additional information and forms.

This study material will help you prepare for the Certificate of Fitness Examination for Fireguard for Shelters (F-44). The study material includes information taken from the Fire Prevention Code, the Rules of the City of New York, and the Fire Prevention Directives of the Bureau of Fire Prevention, FDNY. The study material does not contain all of the information you need to know in order to perform the job of a fireguard at your shelter. It is your responsibility to learn whatever else you need to know to do your job. It is strongly suggested that you become familiar with the Rules of the City of New York - 3RCNY, even if they are not covered in this study material.

The CoF examination will be administered by a computer on a touch screen monitor similar to an ATM machine. All questions on the CoF examination are multiple-choice, with four alternative answers to each question; only one answer is correct. If you do not answer the question it will be scored as incorrect. You will be able to “REVIEW” all your answer as long as you do not press “FINISH”. A score of 70% is required in order to qualify for the Certificate of Fitness. Read each question carefully before selecting the most correct answer.

SAMPLE QUESTIONS

1. At what of the following locations are fireguards required?

- (A) Construction sites.
- (B) Marinas.
- (C) Shelters.
- (D) All answers are correct.

The correct answer is “**D**”. You would press “**D**” on your touch screen computer monitor.

2. The purpose of conducting fire drills is to:

- (A) give employees a break from work.
- (B) practice emergency evacuation procedures.
- (C) make sure the sprinkler system works.
- (D) make sure the alarm system works.

The correct answer is “**B**”. You would press “**B**” on your touch screen computer monitor.

FIREGUARDS FOR SHELTERS

Shelters offer overnight accommodation and some personal care services to those in need of aid. These shelters were designed to cater to the needs of many people including the homeless, elderly, battered persons, unwed mothers, and runaway children. Generally, the shelters are designed to provide refuge for more than 15 people.

An employee of the shelter for the homeless is designated as the Fire safety coordinator. Other employees may be designated as Deputy Fire safety Coordinators. **Fireguards are also required** in each shelter. Along with the fire safety coordinator, fireguards are responsible for the safety of all occupants, and to reduce the threat of fires and to help in the evacuation of occupants in case of a fire emergency. The fire safety coordinator supervises the fireguards and outlines their duties in the shelter. Fireguards are required in a variety of other locations. For example, they are required in places of public assembly, hotels, film studios, and construction sites.

Fireguards are employed when a sprinkler system is not installed or when the automatic fire protection system is shut down while undergoing maintenance or repairs. Generally, fireguards are responsible for making sure that fire safety regulations are obeyed in the shelter. It is very important that fireguards have a good working knowledge of basic firefighting and fire protection techniques. They must know the location of all fire protection devices in the shelter. They must make sure that these devices are in good working at all times. The fireguard's duties at a homeless shelter are outlined in greater detail in the following pages.

Requirements and Duties

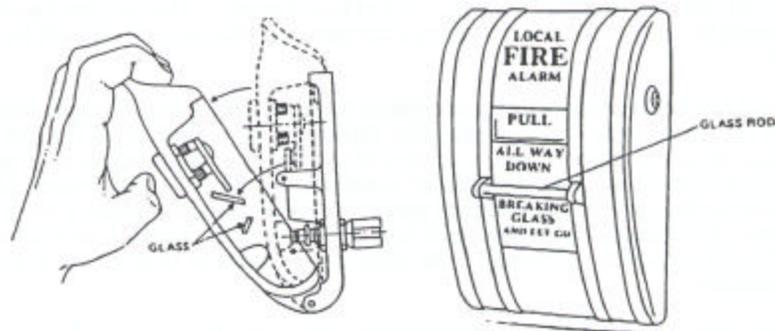
In order to perform the duties of a fireguard in a shelter for the homeless, individuals are required to hold a valid Certificate of Fitness issued by the Fire Department. This document must be available to be shown to FDNY inspectors. Fireguards for shelters are also required to wear some type of positive identification, such as armbands, caps, or picture I.D. cards so that they can be readily identified by occupants and other staff members, as well.

Fireguards are assigned to patrol a specific area within the shelter. These patrols must be performed **at least every hour**. Fireguards may be equipped with a walkie-talkies and/or bullhorns. Although the walkie-talkie and the bullhorn are not required by regulations or any fire directives, they are highly recommended. The walkie-talkie is used in case of a fire emergency to communicate with the fire safety coordinator, a supervisor or FDNY personnel. The bullhorn may be used to notify the occupants that there is a fire in the shelter, and to give instructions during fire drills. It allows the fireguard instructions to be heard clearly during an emergency. The bullhorn should also be used to direct the occupants when evacuating the building. The bullhorn and walkie-talkie should be inspected before making each patrol. Defective units must be repaired or replaced immediately.

The fireguards must know the location of all fire protection devices, and interior and exterior fire alarm box stations. At least one fire alarm box station is required on each floor of the shelter. The interior fire alarm boxes are located at the natural exits on each floor of the building. In

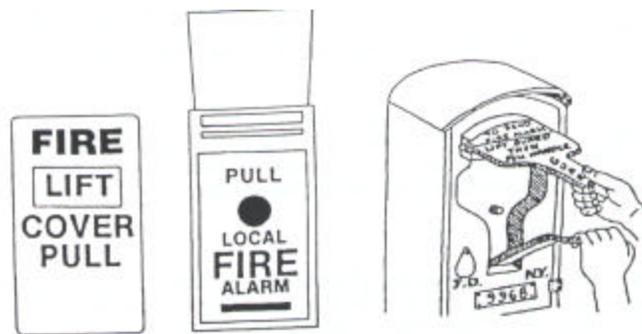
larger buildings, the fire alarm box stations must be spaced so that the distance between them does not exceed 200 feet. They must be securely mounted to the wall between 3.5 and 5 feet above the floor level. All fire alarm box stations must be painted **RED**.

There are two kinds of fire alarm box stations. They are called single action and double action stations. Single action fire alarm boxes require only one step to activate the alarm. For example, a single action fire alarm box station could be activated by simply pulling down on a lever. An example of a single fire alarm pull station is shown below. This kind of station is usually found indoors. The cover of these stations serves as a lever. When the cover is pulled down it allows a switch inside to close and send an alarm signal.



A Single Fire Alarm Station

The double action stations require the fireguard to take two steps in order to activate the alarm. The fireguard may have to remove a cover or break some glass before lever can be pulled down. Two kinds of double action stations are shown below. The fire alarm pull station on the right is



Double Action Alarm Stations

activated by lifting the cover and then pulling the lever. This kind of alarm pull station is generally found outdoors. The station is specially enclosed to protect it from bad weather.

The certificate of fitness holder must know to manually operate each alarm pull station in the shelter. Once activated, the fire alarm system cannot be shut off at the box station. The alarm must be shut off the main control panel using a special key. The key must be kept near the control panel at all times. The alarm system may be turned off only by a certificate of fitness holder or by a Fire Department representative.

In case of a fire emergency, shelter occupants must be evacuated. Occupants on the fire floor and the floor above the fire are most seriously threatened by the spread of fire. The fireguard must remain composed and in control of the situation during the fire emergency. The fireguard must speak in a clear and concise manner when assisting with the evacuation. The fireguards' instructions and their actions play an important role in reducing panic during an emergency. The fireguard should speak in a clear and firm voice with no evidence of alarm. Occupants should be instructed to be calm, and to move to the nearest way to safety in an orderly manner.

In case of a fire emergency the fireguard must activate the fire alarm and notify the Fire Department. The activation of the alarm will send a signal throughout the building. It will also send a signal to a central station. The Fire Department may be contacted directly by phone. The Fire Department may also be contacted using an exterior fire alarm pull station, if available. When using an exterior fire alarm pull station, the fireguard must wait at the alarm station until the firefighting units arrive. Then, the fireguard must direct the firefighters to the scene of the fire.

The fireguard must know the telephone numbers of the Fire Department Borough Communication Office. The Borough Communication Offices' numbers are listed below. These phone numbers must be posted near the phone most likely to be used in case of a fire emergency.

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

The fireguard must make sure that all exits, hallways, and stairways are kept free of obstructions at all times. An exit aisle of at least three feet wide is required at all locations. This aisle space is necessary to permit occupants to quickly exit the shelter in case of an emergency.

Safety Requirements

Several types of safety signs may be posted at various locations inside the shelter. The signs are designed to ensure the safety of all 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 firefighting 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 fireguard must make sure that all posted fire safety signs are clearly visible. The fireguard must also make sure that exits signs posted above doors are always illuminated. Examples of some of these signs are shown in the following page.



Typical Safety Signs

General Inspection Checklist

The fireguard is required to make regular visual inspection and patrols of the assigned area of responsibility. These inspections will vary depending on the shelter. However, the following general guidelines will apply for all shelters.

- (a) All exits, stairways, and hallways must be kept free of obstructions. Obstructions may prevent occupants from exiting the shelter in case of an emergency. An exit aisle of at least three feet wide (36 inches) must be maintained at all times.
- (b) Self-closing doors must not be propped open. These doors are designed to close automatically when an alarm is sounded. When the doors close it helps prevent the spread of fire.

- (c) Locks, bolts, or chains must not be installed on exit doors while there are occupants in the shelter. If locks, bolts, or chains are discovered, they must be removed immediately. The fireguard must then report the fire safety violation to the fire safety coordinator assigned to the shelter. The fire safety coordinator must make sure that the chains or locks are removed. If the chains and/or locks are not removed, the fireguard must notify the Fire Department.
- (d) 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, frayed electrical wires and defective electronic components must be either repaired or removed.
- (e) Trash and garbage must not be allowed to accumulate anywhere inside the shelter. Accumulated garbage is a fire hazard. It may be easily ignited by a stray spark. All trash and garbage must be removed from the premises.
- (f) Fire alarm pull stations must be visually inspected daily by the fireguard.
- (g) All required Fire Department permits and certificates must be current. The results of all tests and inspections must be recorded in the inspection log. The log, permits and certificates must be made available to Fire Department representatives upon request.
- (h) If a sprinkler system is installed, it must be visually inspected by the fireguard. The fireguard must report all defects to the supervisor. Serious defects must be reported to the Fire Department. For example, a defective water control valve must be reported to the Fire Department.
- (i) All fire extinguishers must be clearly visible. Signs must be posted indicating the location of the extinguishers. Signs indicating how to use the fire extinguishing devices must be posted also. The fireguard must make sure that the extinguishers are inspected monthly, and maintained and serviced annually. Fireguards must make sure that portable fire extinguishers are recharged after each time they are used.

FIRE EXTINGUISHING DEVICES AND SYSTEMS

The fireguard must be familiar with the different types of fire extinguishers in the building. He must know how to operate the extinguishers in a safe and efficient manner. He must know the difference between the various types of extinguishers and when they may be used. A description of the three classes of fires and the appropriate extinguishers are described below.

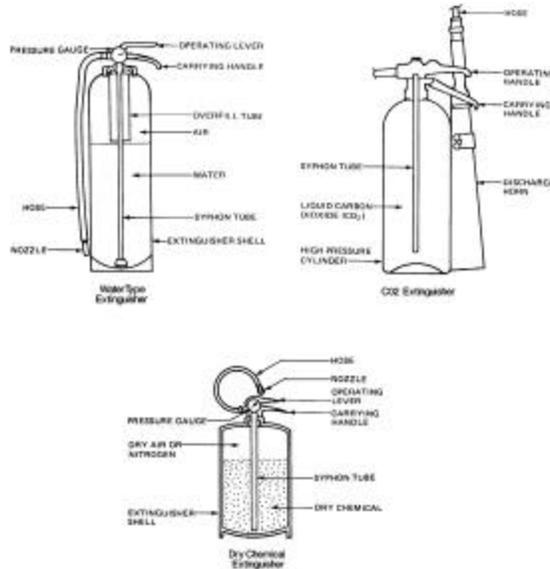
Class A fires are caused by ordinary combustible materials (such as wood, paper, and cloth), for which the quenching-cooling effect of quantities of water or solutions containing large percentages of water is most effective in reducing the temperature of the burning material below its ignition temperature..

Class B fires are caused by flammable petroleum products or other flammable liquids, greases, etc., for which the blanketing-smothering effect of oxygen-excluding media such as CO₂, dry chemical or foam is most effective.

Class C fires involve electrical equipment. The electrical non-conductivity of the extinguishing media is of first importance. These fires must be extinguished with non-conductive media such as CO₂ or dry chemical.

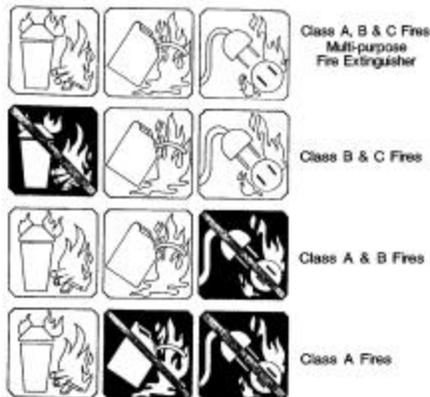
Class D fires are caused by ignitable metals, such as magnesium, titanium, and metallic sodium, or metals that are combustible under certain conditions, such as calcium, zinc, and aluminum. Generally, water should not be used to extinguish these fires.

A multi-purpose dry chemical fire extinguisher may be used to extinguish Class A, B, or C fires. Examples of Water type, CO₂ and Dry Chemical extinguishers are shown below.



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.



Typical Symbols Painted on Portable Fire Extinguishers

The symbol with the shaded background and the slash indicates that when the extinguisher must not be used. The fireguard must understand these symbols. The fireguard must make sure that the fire extinguishers are kept in good working order at all times.

Generally, operation instructions are clearly painted on the sides of the fire extinguisher. They clearly describe how to use the extinguisher in case of a fire emergency. An example of these instructions are shown below.



SPRINKLER SYSTEMS

Sprinkler systems are commonly installed in many buildings, including shelters. Sprinkler systems are designed to permit the discharge of water in case of a fire emergency. Basically, a sprinkler system is a series of faucet-like devices connected to a water supply. The sprinkler heads are screwed into the piping at regular intervals. When a fire occurs, and the sprinkler system is activated, water travels through the pipes out of the sprinkler heads.

Sprinkler Heads

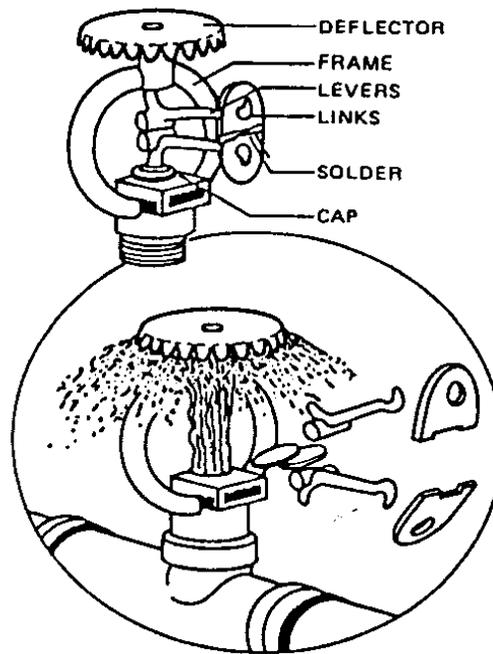
The sprinkler heads in an automatic sprinkler system are temperature-sensitive. This means that they are designed to open when the heat in an area reaches a dangerous level. Water is then discharge on the fire. The advantage of this system is that water is discharged in the area closest to the fire.

Sprinkler heads are made of metal. They are screwed into the piping at standard intervals. The water is prevented from leaving the sprinkler head by an arrangement of levers and links. The levers and links are soldered together on the sprinkler head. The solder is a metal alloy with a fixed melting point. Other types of sprinkler heads use a quartz bulb, which expands and breaks under heat. Still another type uses a solid chemical held in a cylinder, which is broken by heat action. The sprinkler head is designed to withstand at least 500 psi without injury or leakage. If properly installed, there is little danger of the sprinkler head breaking apart unless it is damaged.

The latest type of sprinkler head is called the "cycling sprinkler". This sprinkler head cycles water on and off depending on the temperature. When the disk reaches a temperature of 165°F, the valve opens, permitting water to flow. When the disk temperature cools the valve closes to shut off the water.

Some sprinkler heads are designed to be used in special situations. Sprinkler heads exposed to corrosive conditions are often covered with a protective coat of wax, or lead. Corrosive vapors are likely to make automatic sprinklers inoperative or slow down the speed of operation. They can also seriously block the spray nozzles in the sprinkler heads. They can damage, weaken or destroy the delicate parts of the sprinkler heads. In most cases such corrosive action takes place over a long time. For this reason the sprinkler heads must be carefully watched for signs of corrosion. Care must be taken to make sure that the protective coating is not damaged when handling or replacing the heads.

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



A typical sprinkler head

Spray Pattern of Sprinklers. The best way to put out a fire is to spray the water from the sprinkler head downward and horizontally. The spray pattern will also prevent the spread of the fire. The force of the water against the deflector creates a heavy spray, which is directed outward and downward. The shape of the deflector determines the spray pattern of the water discharged from the sprinkler head. Usually, this is an umbrella-shaped spray pattern. At a distance of 4 feet below the deflector, the spray covers a circular area having a diameter of approximately 16 feet when the sprinkler is discharging 15 gpm. The newest kinds of sprinkler heads allow the sprinklers to be placed farther apart needing lower flow rates to give coverage to an area. These new heads offer more effective fire protection and are less likely to cause water damage than the old sprinkler heads.

STANDPIPE SYSTEMS

Dry pipe sprinkler or dry standpipe systems are installed where wet pipe systems cannot be heated to prevent freezing. Under normal conditions there is no water in the piping. Instead the piping in the system is filled with air under pressure. The air pressure in the system is controlled automatically by an air maintenance device. The system use standard sprinkler heads or hoses and nozzles. When a sprinkler head is opened by the heat from a fire or a nozzle is manually opened, the air pressure is reduced in the piping. The drop in air pressure causes a special dry pipe valve to open. A supervisory device signals when the valve is opened. Then water flows into the piping and out of the opened sprinkler heads or out of the hoses. This water flow also sounds a local alarm to alert the occupants in the building. The alarm may also be transmitted to a central station company. The central station company will then notify the Fire Department that there is a fire. In buildings where life hazard is very high (e.g., schools, hospitals) the alarm is transmitted directly to the Fire Department. Sometimes a combination of a wet pipe and a dry pipe system may be used when part of the building cannot be heated.

INSPECTIONS

The fireguard must make sure that all fire protection devices are kept in good working order. When a problem is suspected with any part of the system, the fireguard must report it to the fire safety coordinator. Then arrangements must be made to have the problem corrected.

Portable Fire Extinguisher Inspections

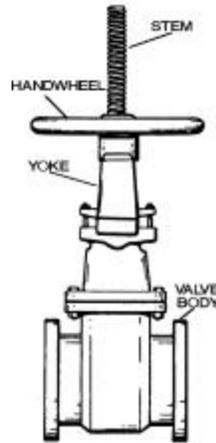
Portable fire extinguishers must be inspected at least once a month. The fireguard may conduct this monthly inspection. Additionally, portable fire extinguishers must be tested at least once a year. This annual test, and recharging, when necessary, must be performed by certified company or an individual holding a certificate of fitness for this purpose. The fireguard must make sure that all inspections and tests are recorded in the inspection log. All inspections and tests must be recorded on a tag attached to the portable fire extinguisher, as well.

Furthermore, the fireguard must conduct a visual inspection of all portable fire extinguishers daily. The fireguard must make sure that they are positioned in the correct position and clearly visible. When a damaged fire extinguisher is discovered, it must be repaired or replaced immediately. The fireguard must check that all portable fire extinguishers in his/her assigned area are fully charged. The condition of the fire extinguisher is checked by looking at the gauge connected to the neck of the extinguisher. A needle indicating the condition of the extinguisher is positioned inside this gauge. When the needle points to the green area, the extinguisher is fully charged; when the needle points to the red area, the extinguisher needs to be recharged. It is the responsibility of the fireguard to make arrangements to have the extinguishers recharged.

Sprinkler/Standpipe System Inspections

When a sprinkler or an standpipe system is installed, the fireguard must make sure that the OS&Y valve is sealed in the open position. The OS&Y valve controls the main supply of water

into the sprinkler/standpipe system. The position of the valve is easily determined; when the stem of the valve is raised, the valve is open. When the stem is not raised the valve is closed. These valves are commonly sealed in the open position using a padlock and chain. A typical OS&Y valve is shown below.



Typical OS&Y Valve

The fireguard must visually check the condition of the sprinkler/standpipe system. If the fireguard discovers any defects, they must be reported immediately to the fire safety coordinator and to the Fire Department. Both the sprinkler and the standpipe systems must be inspected annually by a qualified technician. The technician who makes the annual inspections must hold a certificate of fitness for the inspection of sprinkler and standpipe systems.

GENERAL SAFEGUARDS

Flammable and combustible materials must be stored in a safe location. This location must be free of sources of heat and ignition. It is recommended that these materials be stored in an outdoor enclosure.

Trash and garbage must not be allowed to accumulate on the premises. Trash is a fire hazard as it is easily ignited. The fireguard must make sure that trash and garbage are promptly removed from the premises.

The fireguard must make sure that no smoking is permitted in designated **NO SMOKING** areas. This is especially important in areas where flammable or combustible materials are stored.

The fireguard must make sure that only approved electrical devices are used. Frayed wires, defective appliances and other potential sources of electrical fires must be repaired or replaced. Fireguards must report any life threatening fire hazards to the Fire Department immediately.

General Safety Requirements Inside the Shelter

Shelters for the homeless are provided with several kinds of fire protection and life safety equipment. A system of electrically supervised smoke detectors is installed throughout the shelter. An interior fire alarm system is also installed in the shelter. The smoke detector system

and the interior fire alarm system are provided with a connection to a central station company. Additionally, an automatic sprinkler system is required in all shelters. The sprinkler system is designed to automatically discharge water in case of a fire emergency. An alarm is sounded throughout the shelter when the sprinkler system is activated.

A fire command station is required in each shelter. Usually, a control panel for the fire protection system is located at fire command station. The fire command station must be equipped with a walkie-talkie and a phone. The fire coordinator will give evacuation instructions from the fire command station during a fire emergency. The fireguard will assist in the evacuation of the occupants of the shelter. The fireguard may also need to investigate the cause of the alarm, and to use the portable fire extinguisher, if it is a small fire.

Several sleeping areas may be located in each shelter. These sleeping areas may be located anywhere in the building except the basement. Each sleeping area must be supervised at all times. The supervisor must make sure that no smoking is permitted in the sleeping areas. Each sleeping and dining area must be provided with at least two metal trashcans. These trashcans must have tight fitting covers installed. The trashcans must be emptied at least twice daily. Rubbish awaiting collection may be stored outside the building or in a sprinklered room on the ground floor.

Some of the most common sources of ignition in shelters are listed below

- (a) Smoking
- (b) Defective electrical cords
- (c) Defective appliances
- (d) Improper use of electrical cords and appliances
- (e) Improper use of portable heating appliances

The fireguard should check to see if any of these dangerous conditions exist and to correct them if necessary. Furthermore, the fireguard must pay close attention to any kind of suspicious behavior. Any kind of suspicious behavior must be reported to the fire safety coordinator immediately.

The fireguard must check all portable heating appliances. Heating appliances must be positioned at a safe distance from combustible materials.

Several types of safety signs must be posted at various locations inside the shelter. The signs are designed to ensure the safety of occupants inside the shelter. These signs must indicate:

- (a) The location of emergency exits.
- (b) General safety procedures to be followed during an emergency
- (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. The stairs must be used instead
- (g) That no smoking is permitted in the shelter

The fireguard must make sure that safety signs are clearly visible at all times. Defective or missing signs must be replaced immediately.

Patrols

The fireguard must patrol the entire shelter at least once every hour. During this patrol the fireguard must look for signs of fire. The fireguard must investigate any signs of smoke in the shelter. If any fire safety violations are discovered he must report them to the fire safety coordinator. The fire safety coordinator must then take action to correct the situation. For example, he must make arrangements to remove any accumulated rubbish. Breaks or leaks in the sprinkler system, no matter how small, must be reported to the Fire Department immediately. The fireguard should check the condition of the fire protection equipment. For example, the fireguard should make sure that the Fire Department connection outside the shelter is kept free of all obstructions. The fireguard must keep a log of all patrols. This log should record the fireguard's name and signature and, the time and date of the patrol. The results of all patrols must be recorded in the log. For example, any safety violation must be recorded.

Emergency Procedures

When a fire is discovered by the fireguard must he must sound the interior fire alarm. After the alarm is sounded the fireguard must contact the fire safety coordinator. Generally, the fire safety coordinator is contacted using a walkie-talkie. However, a telephone may be used if the fireguard does not have a walkie-talkie. The fire safety coordinator will then tell the fireguard what to do during the emergency. For example, the fire safety coordinator will tell the fireguard how to evacuate the building. The fire safety coordinator will also indicate the safest route to be taken while evacuating the building. The fireguard must follow all of the instructions issued by the fire coordinator. The fireguard must make sure that all occupants have evacuated the building.

Fire Drills

Fire drills must be conducted at least once a month in the shelter. These drills must be supervised by the fire drill conductor. Everyone in the shelter must participate in the fire drills. These drills must be conducted in orderly manner. The fireguard will assist the fire drill conductor when the fire drill is conducted.