TEN STEP PROCESS
PREPARING FIRE SAFETY PLANS

STEP 1 CONDUCT FIRE SAFETY AUDIT

- Identify building features and human resources.

STEP 2 APPOINTMENT OF SUPERVISORY STAFF

- identify trained supervisory staff duties and responsibilities.

STEP 3 DEVELOP EMERGENCY PROCEDURES

- Establish fire emergency evacuation procedures.

STEP 4 FIRE DRILL PROCEDURES AND TRAINING

- Training and practicing fire drills integral part of preparedness. Fire drill procedures prepared in consultation with chief fire official.

STEP 5 MAINTENANCE OF BUILDING FACILITIES AND FIRE PROTECTION EQUIPMENT

- detailed schedule of fire protection features checked, inspected, tested and maintained with *FIRE CODE*.

STEP 6 ALTERNATIVE MEASURES FOR OCCUPANT SAFETY

- establish fire watch procedures for temporary shutdown of fire protection equipment or systems.

STEP 7 CONTROL OF FIRE HAZARDS

- Avoid, prevent, reduce, and control fire hazards.

STEP 8 PREPARING SCHEMATIC DIAGRAMS AND SITE PLAN

- diagram legend identifies type, location and operation of building features and fire protection systems.

STEP 9 APPROVED FIRE SAFETY PLAN

- approval by chief fire official.

STEP 10 IMPLEMENT AND MAINTAIN FIRE SAFETY PLAN

owner implements and maintains fire safety plan.

TEN STEP PROCESS
PREPARING FIRE SAFETY PLANS

STEP 1 CONDUCT FIRE SAFETY AUDIT

The development of a Fire Safety Plan is intended to take into consideration:

- special nature of the occupancy;
- availability of human resources;
- fire safety features provided within each building or premise; and
- processes or operations which may create a fire hazard.

Before preparing a Fire Safety Plan, conduct a fire safety audit. The audit will identify those factors affecting fire safety. While conducting the audit, make notes of pertinent information relating to fire safety issues where applicable. This information is needed to develop a useful Fire Safety Plan. The resulting Fire Safety Plan will be a unique document, designed to address your property and its special needs and characteristics. It will ensure the optimum use of staff and all safety features provided.

Auditing Your Property

Start by preparing a site drawing. This may help you to gain a better overall view of the fire safety issues affecting the property. The site drawing may become a key element of your fire safety plan. Where necessary the drawing should be made to scale if possible and identify the following;

- drawing orientation (north, south, east, west)
- the property lines
- security fences
- the use or occupancy of adjoining properties, i.e., residential, industrial, or other and the approximate distances to closest neighboring buildings
- points of entry for fire fighting vehicles
- other points of entry
- vehicle roadways and fire department access routes suitable for heavy equipment
- buildings on site

- water supplies, private hydrants, public hydrants, ponds, or reservoirs
- outdoor storage areas listing the types and quantities of materials stored at each location
- waterways, dikes, drains, sewer and manholes
- gas shut off valves or other important isolation valves

Auditing Your Building: Prepare a separate detailed audit for each building on site.

Consider features below applicable to your building.

- the nature of building construction (combustible or noncombustible);
- building size by area, (area of each storey and total area);
- number of storeys, including basements;
- use and occupancy of the building;
- fire walls, fire separations
- explosion relief vents
- fire department access points, including the principal entrance for fire department response;
- portable fire extinguishers;
- fire alarm system;
- sprinkler system;
- fire standpipe (hose) system;
- fire department pumper connections;
- water supply control valves and fire pumps;
- exits;
- emergency power and lighting equipment;
- hazardous processing areas (identifying the nature of the process);
- storage areas (identifying type and quantities of materials stored).

Auditing Human Resources

Compile contact information.

- identify the number of full time and part time employees who work on site.
- Identify the people who work on different shifts, where applicable.
- Identify accommodation needs of employees (i.e., physical disabilities, language requirements)
- Identify security personnel if security staff is provided.
- Compile a list of telephone numbers for use during an emergency, including the building owner, the manager, supervisor, fire alarm monitoring numbers, etc.

STEP 2 APPOINTMENT OF SUPERVISORY STAFF

The fire safety plan must also include the appointment and organization of designated "**supervisory staff"** and alternates who are required to be trained to respond to a fire emergency in a predetermined manner. Supervisory staff duties and responsibilities must be outlined in the fire safety plan. The person(s) designated as supervisory staff must be qualified and willing to take on the added duties and responsibilities. The person(s) who is designated as "supervisory staff" does not have to be from management or be a supervisor from the company.

Employee and emergency supervisory staff responses must be well planned in order to reduce the risks from fire. It is essential that supervisory staff understand their responsibilities and trained to respond to a fire emergency in a prompt, positive, and intelligent manner.

In order for the emergency response portion of the fire safety plan to be effectively implemented, management and every employee must understand the important role they play in promoting fire safety in the workplace. Everyone must be required to adhere to the fire safety practices and procedures. The orientation training program for all employees should include fire safety instructions on:

- what to do upon discovery of fire
- what to do upon hearing an alarm of fire
- how to prevent or minimize fire hazards in the workplace

Owner/Manager Responsibilities for Fire Safety

- Ensure the Fire Safety Plan is developed, approved and fully implemented.
- Appoint, organize and train emergency supervisory staff to carry out fire safety duties and emergency procedures.
- Ensure a sufficient number of assistants are designated and trained to act in a supervisory capacity in the event that the appointed emergency supervisory staff are absent from the building/site.
- Consider holding fire drills involving all staff are held at least once a year.
- Ensure that fire hazards are identified and eliminated or controlled.
- Provide alternative measures for fire safety during the temporary shutdown of fire protection equipment or systems.
- Complete the necessary checks, tests, inspections and maintenance of fire protection equipment as required by the Fire Code.
- Keep permanent records of all tests and corrective measures for two years.
- Keep adequate records of training and fire drills required by the Fire Code.
- Do not silence the fire alarm system or shut off the sprinklers until instructed to do so by the fire department

STEP 3 DEVELOP EMERGENCY PROCEDURES

The fire safety plan must include emergency procedures to be used in case of fire. This includes:

- sounding the fire alarm;
- notifying the fire department;
- instructing occupants on procedures to be followed when the fire alarm sounds;
- evacuating occupants, including special provisions for persons requiring assistance;
- procedures for use of elevators, and
- confining controlling and extinguishing the fire.

STEP 4 FIRE DRILL PROCEDURES AND TRAINING

Training and practicing fire drills must become an integral part of each facility's preparedness. A fire emergency often generates anxiety and excitement which may create a stressful environment for responders and decision makers. Persons with little training or experience may have difficulty dealing effectively with the emergency.

Fire drill procedures must be prepared in consultation with the fire department. The fire drill procedures must be outlined in the Fire Safety Plan. The fire drill must involve the response of supervisory staff while taking into consideration the response of other employees and people on site or present in the building.

Supervisory staff must be instructed in the fire emergency procedures that are described in the fire safety plan before they are given any responsibility for fire safety. A copy of the fire emergency procedures and other duties outlined in the fire safety plan must be given to all supervisory staff.

Employees should receive training in the safe use of portable fire extinguishers and other fire safety equipment. This would include instructions on how to activate and reset the fire alarm system where appropriate.
Staff must be instructed to react quickly to a fire emergency with emphasis placed on promoting and practicing personal safety.
Frequency of fire drill conducted in accordance with the Fire Code. The date and time of all fire drills, as well as the names of participating staff, must be recorded and retained for 12 months after the fire drill.

Other Factors to Consider When Organizing and Conducting Fire Drills

- Does the local fire department have to be notified about the fire drill?
- Do all employees understand the procedures they are expected to follow in an emergency, (are there language barriers, etc.)?
- Are there people who require assistance in evacuating (mobility/hearing disabilities)?
- Are the fire drills pre-announced or a surprise?
- Are employees trained to safely shut down critical systems or equipment they are using during an emergency in order to prevent further hazards?
- Are fire drills conducted at different times to train employees and supervisory staff on all shifts?
- Are there measures in place to respond to the safety needs of guests or contractors during an emergency?
- Will employees practice using firefighting and related safety equipment to enhance their personal safety and response to a fire emergency?
- Is there a procedure established to evaluate the fire drill once it has been completed?

STEP 5 MAINTENANCE OF BUILDING FACILITIES AND FIRE PROTECTION EQUIPMENT

The fire safety plan must contain a detailed schedule identifying the required **checks**, **inspections** and **tests** (Fire Code defined words) of all fire safety systems and features provided.

The building owner/manager must:

- Ensure that all fire protection features provided in each building are **checked**, **inspected**, **tested** and maintained in accordance with the frequencies specified in Division B Part 2 and Part 6 of the Fire Code and all applicable referenced standards;
- When using in-house personnel to conduct some of the checks, inspections and tests, ensure they are fully trained and qualified to carry out the activity;
- Keep permanent records of all tests and corrective measures taken for a period of two years after they are made. The records are to be made available upon request to the Chief Fire Official.

STEP 6 ALTERNATIVE MEASURES FOR OCCUPANT SAFETY

Alternative measures are intended to be included in the fire safety plan. The following information outlines some examples of alternative measures. Where possible, all staff should be made aware of temporary shut downs. The following practices and procedures are provided as a guide:

Example Temporary Shut Down of Fire Alarm System

Notify all supervisory staff that the fire alarm system is temporarily shut down. A fire watch shall be appointed to conduct a sequential tour of the building in areas normally served by fire detection devices (i.e., rooms or spaces protected by sprinklers, heat detectors, smoke detectors or some other form of fire detection devices). The fire watch individual would record their patrols and also have some means of communication that can be used to notify the fire department in the event of a fire. In the event of fire, efforts should be taken to notify persons in the building that a fire emergency exists.

Example Temporary Shut Down of Sprinkler System

Notify the Fire Department (phone # _____) and all supervisory staff that the sprinkler system is temporarily shut down. The work conducted on the sprinkler system shall be programmed by the contractor to enable the system to be operational as quickly as is possible in the circumstances. Full sprinkler protection shall be restored when work on the system is discontinued. Closed sprinkler valves shall be tagged or marked in an approved manner. (Refer to Ontario Fire Code Subsection 6.5.2.)
While the sprinklers are shut down, a fire watch shall patrol the area until the sprinkler system has been restored. "Hot works" such as welding or cutting, must be prohibited in the area until the sprinkler protection has been restored or have precautions put into place if the "hot works" have to be used.

STEP 7 CONTROL OF FIRE HAZARDS

One of the goals of effective fire safety planning is to reduce the frequency of fire. In order to achieve this goal, fire hazards must be identified and preventative measures put in place.
The owner and/or managers must take the lead role in identifying potential fire hazards and establishing fire prevention practices to eliminate or control the hazard(s) safely. All employees must understand that every precaution is to be taken to minimize accidents and prevent injuries. Employees must be fully trained in the established fire prevention practices and these practices must be adopted by everyone and be fully enforced.

The information collected while preparing the building audit in Step One may reveal a number of potentially hazardous activities that should be rigidly monitored and controlled. The Fire Safety Plan must contain detailed procedures/practices for monitoring and controlling each of the activities. The fire prevention practices should take into account the requirements of applicable regulations and practical fire safety precautions.

To identify and control common fire hazards, a designated person should perform a weekly walk-through of the facility, examining common areas, storage areas, access routes for fire fighting, stairwells, furnace rooms and other service areas.

Examples of potential controlled fire hazards:

- Smoking is restricted to designated areas.
- Smoking materials are disposed of with caution and never in combustible containers.
- Furnace and electrical service rooms are always kept clear of combustible materials.
- Unobstructed access is available to these areas at all times.
- Materials or equipment are not stored in exit stairwells.
- Fire doors remain closed. Doors must not be wedged open or interfere with the self-closing device installed on any door.
- All appliances used on site meet with appropriate CSA or certified standards.

STEP 8 PREPARING SCHEMATIC DIAGRAMS AND SITE PLAN

Fire Code Division B Clause 2.8.2.1. (d) "requires documents, including diagrams, showing the type, location and operation of the building fire emergency systems" be prepared to assist supervisory staff and fire fighters during an emergency.
Where the property is large, or there are outdoor activities that may pose a fire or access problem, a site drawing should also be prepared and incorporated in the fire safety plan. When preparing the schematic diagrams and site plan, ensure that the information is useful and simple. Use of legend sample symbols help to standardize the various elements that are identified on the drawings. Also remember to include a compass type of orientation symbol (North arrow). Consult with the fire department to determine the nature of the drawings that should be prepared and incorporated into your fire safety plan.

STEP 9 APPROVED FIRE SAFETY PLAN

Fire Safety Plans are approved by the Chief Fire Official. Consult with the local fire department for their approval procedures (set up a meeting, number of copies).

STEP 10 IMPLEMENT AND MAINTAIN FIRE SAFETY PLAN

- Owner implements all aspects of the Fire Safety Plan. A copy of the Fire Safety Plan must be kept in an approved location. Supervisory staff is trained.

- The emergency procedures prominently posted and maintained on each floor area.

- Ensure occupants understand procedures to take upon discovery of fire or upon hearing an alarm of fire.

- Ensure employees are trained in the precautions and procedures required to be taken to control and eliminate fire hazards.

- The schematic diagrams, instructions and related information about the property are readily accessible to responding fire department personnel in an emergency.

- Conduct required fire drills as required.

- Schedule and perform the required maintenance of the fire safety features.

- At least once a year, review the contents of Fire Safety Plan to ensure that it remains current.

- Consult with the local Chief Fire Official if you plan to make any changes to the Fire Safety Plan.

Sample Symbols for Diagrams and Drawings

2HR	FIRE-RATED WALL (FULL BUILDING HEIGHT)
	FIRE-RATED SEPARATION
2HR	FIRE-RATED SEPARATION (NOT FULL HEIGHT OF THE BUILDING)
	SMOKE BARRIER (NOT RATED)
	SMOKE BARRIER (NOT RATED PARTITION WALL)
	SMOKE BARRIER (COMBINATION FIRE AND SMOKE BARRIER)
	SWINGING FIRE DOOR
FD	SLIDING/ROLLING FIRE DOOR
EXIT	EXITS
FDA	FIRE DEPARTMENT ACCESS POINTS
FE	ELEVATORS (FIRE FIGHTERS)
E	ELEVATORS (GENERAL)
ANN	FIRE ALARM ANNUNCIATOR
FAP	FIRE ALARM CONTROL PANELS
FHC	STAND PIPE FIRE HOSE STATION
SP	SPRINKLER CONTROL VALVES
	HYDRANTS (PRIVATE)
	HYDRANTS (PUBLIC)
AS	SPRINKLERED AREAS
FE	FIRE EXTINGUISHERS
NS	NON-SPRINKLERED AREAS
	FIXED EXTINGUISHING SYSTEM
APP	APPROVED FIRE SUPPRESSION SYSTEM
	FIRE DEPARTMENT CONNECTIONS
	WATER TOWER OR TANK ABOVE GROUND -- VERTICAL
	WATER TOWER OR TANK ABOVE GROUND -- HORIZONTAL
	PRESSURE TANK
ST	ISOLATION VALVE -- STANDPIPE
IV	ISOLATION VALVE
6"	WATER MAINS WITH SIZE INDICATION

1	EXPLOSIVES
2	COMPRESSED GAS
3	FLAMMABLE LIQUIDS
4	FLAMMABLE SOLIDS
5	OXIDIZING SUBSTANCES
6	POISONOUS AND INFECTIOUS SUBSTANCES
7	RADIOACTIVE MATERIALS
8	CORROSIVE SUBSTANCES
9	MISCELLANEOUS
PCB	POLYCHLORINATED BIPHENYL
MSDS	MATERIALS SAFETY DATA SHEET
NG	NATURAL GAS SHUT OFF VALVE
P	PROPANE SHUT OFF VALVE
O	OIL SHUT OFF VALVE
	WATER SHUTOFF VALVE
EP	ELECTRICAL MAIN DISCONNECT SWITCHES OR PANEL
T	ELECTRICAL TRANSFORMER ROOMS
	FIRE FIGHTING WATER DRAINAGE POINTS
	VENTILATION OPENINGS
	PRESSURIZED STAIRWELL
S	SMOKE SHAFT OPENING IN THE ROOF
S	SMOKE SHAFT OPENING
F.D. ACCESS	FIRE DEPARTMENT ACCESS ROUTES
	EXPLOSION RELIEF WALL (DIRECTION OF EXPLOSION)
	BLAST RESISTANT WALL
GEN	EMERGENCY GENERATOR
	MANUAL START-UP SYSTEMS