WINNIPEG FIRE PARAMEDIC SERVICE

FIRE PREVENTION BRANCH

PREPARATION GUIDELINES

FOR

FIRE SAFETY PLANS

Revised: Nov/15

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INTRODUCTION

The purpose of these guidelines is to assist building owners and managers to prepare effective and properly documented Fire Safety Plans. Fire Safety Plans contain measures to:

i) ***Control*** fire hazards in a building
ii) ***Ensure*** a safe and orderly evacuation of a building in case of fire
iii) ***Assure*** effective utilization of fire protection systems and equipment in a building

The Fire Safety Plan may provide important information to the Winnipeg Fire Paramedic Service for use in preparation of fire pre-plans for firefighting procedures. A building owner or designate has a responsibility to implement the provisions of a Fire Safety Plan and should be able to provide specific information on the building and its contents to responding fire personnel during an emergency.

A Fire Safety Plan may be subject to review or approval by the Winnipeg Fire Paramedic Service. Building owners/managers should closely follow the format and information contained herein and ensures that all required provisions of the Manitoba Fire Code have been met.

Building owners may choose to use the services of a Fire Protection Consultant to prepare a Fire Safety Plan. Other department guidelines/templates are also on-line under Fire Safety Plans Samples.

NOTE: This document may not be copied in whole or part without written permission from the Fire Prevention Branch, Winnipeg Fire Paramedic Service.

GENERAL INFORMATION

1) A copy of the fire emergency procedures and other duties for supervisory staff, as laid down in the Fire Safety Plan, shall be given to all supervisory staff**.**
2) The fire safety plan shall be kept in the building for reference by the Winnipeg Fire Paramedic Service, supervisory staff and other personnel.
3) The District Fire Inspector may, upon request and if required, provide advice, clarification and guidance for the preparation of a fire safety plan.
4) The Fire Safety Plan shall be reviewed at intervals not greater than 12 months to ensure that it takes into account changes in the use and other characteristics of the building.
5) The Fire Safety Plan should deal only with matters which pertain specifically to the particular building.
6) The Manitoba Fire Code requires that a Fire Safety Plan be provided for:
    A) every building containing an assembly or a care or detention occupancy,
    B) every building required by the Manitoba Building Code to have a fire alarm system,
    C) demolition and construction sites regulated under the Fire Code,
    D) indoor and outdoor storage areas regulated under the Fire Code,
    E) areas where flammable liquids or combustible liquids are stored or handled, including refineries and process plants**,**
    F) areas where hazardous processes or operations occur.
7) The fire safety plan shall include:
    A) the emergency procedures to be used in case of fire including
        (i) sounding the fire alarm,
        (ii) notifying the Winnipeg Fire Paramedic Service,
        (iii) instructing occupants on procedures to be followed when the fire alarm sounds,
        (iv) evacuating occupants, including special provisions for persons requiring assistance
        (v) confining, controlling and extinguishing the fire,
    B) the appointment and organization of designated supervisory staff to carry out fire safety duties,
    C) the training of supervisory staff and other occupants in their responsibilities for fire safety,
    D) documents, including diagrams, showing the type, location and operation of the building fire emergency systems,
    E) the holding of fire drills,
    F) the control of fire hazards in the building,
    G) the inspection and maintenance of building facilities provided for the safety of occupants, and
    H) additional requirements for High-Rise Buildings as indicated under **Step 9**.

STEP 1 - TITLE PAGE

1. The first page or cover page of the fire plan will be titled **Fire Safety Plan** and will include:
   (i) the business or building name (if applicable) and address of the building,
   (ii) the person or agency who prepared the plan,
   (iii) date the plan was prepared
   (iv) dates the plan was reviewed
   (v) photo of building (optional)

STEP 2 – TABLE OF CONTENTS

Select the steps you are using and prepare a table of contents with page numbers.

STEP 3 - BUILDING DESCRIPTION AND USE

1. ***Identify the type of occupancy***, i.e.: residential, hotel, office complex, etc. For an Industrial building be sure to specify if it is a bulk plant, warehouse, mill manufacturing plant, processing plant, repair or storage garage and so forth. Industrial buildings will also have to specify the specific use, i.e.: spray painting operations, processing of raw wood products, storage etc.
2. ***Physically describe your building,*** i.e.: square footage of main floor area, number of stories, basement, type of construction (combustible, non-combustible, combination), year of construction, and so forth.

STEP 4 - IDENTIFYING FIRE PROTECTION SYSTEMS AND EQUIPMENT

The following list gives a brief description of a number of fire protection and life safety systems which may be present in your building(s).
Make a list of the fire protection systems and life safety equipment that pertain to your building and give the required descriptions. ***See Appendix A (pg. 28)*** ***for sample.***

☐ ***Fire Alarm System***

The purpose of a fire alarm system is to alert all occupants of the building that a fire emergency may exist. Where a fire alarm system has been installed with no provisions to transmit a signal to the Winnipeg Fire Paramedic Service, a sign shall be posted at each manually actuated fire alarm pull station requesting that the Winnipeg Fire Paramedic Service be notified and the sign shall include the telephone number of that department, i.e. (9-1-1). A voice communication system is used primarily to provide information and instructions for occupants during an emergency.

There are **two main types of fire alarm** systems, single stage systems and two stage systems.

A) A **Single Stage System** sounds a general alarm throughout the facility. This may require total evacuation of the building. The fire alarm system may be activated by a manual pull station, heat detector, smoke detector or a sprinkler flow switch.

B) Activation of a **Two Stage** fire alarm system will cause an initial intermittent *alert* signal to sound. During this stage the *alert* signal allows staff up to 5 minutes to investigate the cause of the alarm and take appropriate action. This signal is a pre-

signal to the general alarm signal. Upon expiry of the 5 minute intermittent *alert* signal, a secondary general alarm signal will sound. This alarm signal gives a clear indication that complete evacuation of the building is required.

Your Fire Safety Plan must indicate if you have a single stage or two stage fire alarm system, whether or not you have a voice communication system, your monitoring company (if applicable) and also the location of the system's annunciator or fire alarm control panel.

☐ ***Automatic Sprinkler Systems***

An automatic sprinkler system is a series of underground and overhead piping designed in accordance with fire protection engineering standards. The system is connected to a water supply such as a storage tank or municipal water supply.

The system includes a controlling valve, a series of sprinkler heads and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area. The most common types of systems are wet-pipe systems and dry-pipe systems.

Your Fire Safety Plan must identify the type of system(s) in the building and the areas served by them. The location of sprinkler system control valves should be indicated on the appropriate floor plan.

☐ ***Standpipe and Hose Systems***

A standpipe system is an arrangement of piping, valves and hose outlets installed in a building or structure in such a manner that water can be discharged through a hose and nozzle for extinguishment of fire. The system is connected to a water supply which permits an adequate supply of water to the hose outlets.

Your Fire Safety Plan must indicate if there is standpipe and hose systems in the building. It should also indicate the location of the main control valve.

☐ ***Fire Pumps***

Fire pumps are used to ensure that adequate water pressures and flows required for fire fighting by means of automatic sprinklers, standpipes and hose systems are available.

Your Fire Safety Plan should indicate the different types of fire protection equipment (i.e. sprinkler system, standpipe system etc.) that the fire pump serves. The location of the fire pump should be indicated on the appropriate floor plan.

☐ ***Fire Department Access (Fire Lanes, Access Panels and Windows, etc.)***

Fire Department access allows fire fighters and their equipment to gain access to the building. Vehicles parked in a fire lane, excessive vegetation, snow and other forms of obstructions to access routes, fire hydrants and Fire Department connections are not permitted by the Manitoba Fire Code. Maintaining Fire Department access is an ongoing matter. In addition, access into a building may require special consideration. This may include access with a key from a lock box, or other preplanning.

Describe Fire Department access to your building.

☐ ***Exits***

An exit is that part of egress that leads from the floor area it serves to a public thoroughfare or to an approved open space. Walls, floors, doors or other means provide a protected path

which is necessary for occupants to proceed to a place of refuge with reasonable safety. Vertical stair shafts accessed from above or below grade are protected from the remainder of the building provided the doors leading to the shaft are kept closed.
Each exit door will need to be identified on the floor plan.

☐ ***Emergency Generator***

In some buildings, emergency power is required to ensure the continued operation of fire and life safety equipment and systems in case of loss of normal hydro-electric power. *Describe the type of equipment (i.e. fire alarm system, emergency lighting, elevators, etc.) that the emergency generator serves. Describe the type of generator (gasoline, diesel, propane, natural gas) and the storage tank location if applicable and indicate on floor plan.*

☐ ***Emergency Lighting***

Emergency lighting ensures that exits, corridors and principal routes providing access to exits are illuminated in the event of a loss of power.
Describe generally the areas in which self-contained emergency lighting equipment is located. i.e. throughout entire building, only the hallways, etc. Indicate the location of the battery packs or each self-contained emergency lighting unit on the floor plan.

☐ ***Portable Fire Extinguishers***

Portable fire extinguishers are intended as a first aid measure to cope with fires of limited size. The basic types of fires are Classes A, B and C. Portable fire extinguishers are rated for the corresponding classes of fire they are effective on.
Indicate location of fire extinguishers on the floor plan. Include if there is a K class fire extinguisher in the kitchen.

☐ ***Water Supply***

The total water supply required for fire fighting purposes may be supplied from various sources such as a city fire hydrants or private fire hydrants, storage tanks (elevated or underground), lakes, rivers, wells, swimming pools or a combination of sources. Water supplies must be accessible to fire fighting equipment.
Describe what type of water supply is available for the building. This will be City fire hydrant for most properties.

☐ ***Special Extinguishing Systems***

Special extinguishing systems are used in locations where automatic sprinklers may not be the best solution to fire problems. The locations include areas that contain flammable and combustible liquids, food preparation equipment, and highly sensitive computer or electronic equipment. Special extinguishing systems include dry chemical, wet chemical, halogenated agents, carbon dioxide and foam systems. *Describe what kind of system you have and the location and indicate on floor plan.*

☐ ***Fire Dampers***

Fire damper means a closure consisting of a damper that is installed in an air distribution system or a wall or floor assembly and that is normally held open but designed to close automatically in the event of a fire in order to maintain the integrity of the fire separation. A log or floor plan should be kept of the location of the fire dampers in the building. ***See Appendix B*** (pg. 29) for more information.

☐ ***Fire Fighter Elevator***

Indicate if your building has a full service or partial service fire fighter elevator. See High Buildings (step 10) for more information.

☐ ***Heating, Ventilation & Air Conditioning***

List the heating systems in your building – boiler, furnace, unit heaters, or electric heat.

☐ ***Smoke Alarms***

A smoke alarm is a self-contained device designed to activate an audible alarm upon detection of fire and/or smoke. They may be battery operated (10 year lithium) or hard-wired and are required in buildings where there is sleeping. A smoke alarm is **not** part of a building's fire alarm system.

Indicate what type of smoke alarms your building has and the locations.

☐ ***Carbon Monoxide Alarms***

Carbon Monoxide (CO) alarms detect parts per million (ppm) concentrations of the odourless deadly gas often referred to as the *Silent Killer*. Refer to Manufacturer's instructions for installation locations.

Indicate if you have CO Alarms in your building and show the locations on the floor plan.

☐ ***High Buildings***

High buildings have additional requirements for the central alarm and control facility, elevators, venting and smoke control.

All elevators should be returned to and kept at street level in fire emergency situations. Subsection 3.2.6. of the Manitoba Building Code specifies detailed size, capacity and operational regulations for fire fighters elevators. For information on Fire Fighters Elevators and Partial Service Fire Fighters Elevators refer to: **Step 10: Additional Requirements for High Rise Buildings.**

Smoke control measures consist of special construction and equipment to limit the movement of smoke in a building. Additional information concerning smoke control measures, fire/smoke dampers and air balancing testing is available from fire inspectors.

STEP 5 - PREPARING FLOOR PLANS

Prepare or acquire two sets of floor plans of the building(s). Floor plans should show each level of the building, unless different levels have the same layout. FLOOR PLANS MUST BE EASY TO READ AND CLEARLY IDENTIFIED.

A) Complete the first set of plans indicating the *emergency evacuation routes (main and alternate route)* from each floor level, *exits, and "meeting place"* outside the building. Have a "You Are Here" indicator on posted signs. ***See Appendix C(pg. 30)*** for sample.

B) Complete the second set of floor plans indicating *all fire protection systems, life safety equipment and utility controls or areas of special hazards complete with a legend on the floor plan.* Special hazards would include areas with chemicals, high fuel loads, compressed gasses,

high voltage areas, Halon extinguishing systems, CO2 systems and so forth. ***See Appendix D (pg. 31)*** for sample.

Be sure to include a legend of symbols and their use (refer to NFPA 170, "Standard for Fire Safety and Emergency Symbols") *OR make up your own symbols*.

Building features that should be identified include, but are not necessarily limited to, the following sample legend:

STEP 6 - IDENTIFY AND LIST THE HUMAN RESOURCES

Prepare a list of Human Resources. Your list should have two parts and included phone numbers.

The first part should include such people as the building owner, building manager, building engineer, security personnel, custodial or maintenance staff, supervisory staff or anyone else who may assist in the emergency evacuation of the building. Include phone numbers.

The second part of the list should include all persons or agencies responsible for the inspection, testing and maintenance of fire protection systems and life safety equipment in your building(s). List the company name, phone number, and the systems they service.

STEP 7 - IDENTIFYING RESPONSIBILITIES

This section may be copied in full.

Responsibilities of Owner

1) To ensure the building and facilities comply with the provisions of the Manitoba Fire Code.
2) To prepare a Fire Safety Plan in accordance with the requirements of the Manitoba Fire Code
3) To provide alternate measures for the safety of occupants during a shutdown of fire protection equipment.
4) To post and maintain a copy of the fire emergency evacuation procedures on each floor area.

- ***Additional information is available at: http://winnipeg.ca/FPS/FirePrevention/Regulations/Building_Owner_Responsibilities.stm***

Responsibilities of Supervisory Staff

The size of an organization and the number of personnel required to carry out the requirements of the Fire Safety Plan will depend on the size of the building, specific hazards, and the fire safety equipment provided. This may require designation of supervisory staff who must be instructed in the fire emergency procedures before they are given any responsibility for fire safety. Any keys or special devices needed to operate the fire alarm system or provide access to any fire protection systems or life safety equipment shall be readily available to on-duty supervisory staff**.** The Fire Safety Plan must also specify the names and phone numbers of your key holders in case access to the building is required after business hours.

Supervisory staff shall:

1) be trained in the fire emergency procedures described in the Fire Safety Plan before they are given any responsibility for fire safety,
2) be in charge of the approved Fire Safety Plan and the specific responsibilities of the personnel. (Your plan should specify the responsibilities given to individuals,
3) designate and train sufficient assistants to act in positions whenever and wherever an absence may occur,
4) educate and train all building personnel and occupants in the use of the existing fire safety equipment, and in the actions to be taken according to the approved Fire Safety Plan,
5) ensure that the provisions of the approved Fire Safety Plan are adhered to, updated and maintained at minimum, annually. Any fire safety procedures which apply to them shall be distributed to the occupants.
6) ensure that procedures are put in place in the event that a fire protection system is temporarily shut down, i.e. "fire watch" person, notify fire dispatch, etc.

   In the event of any shutdown of fire protection equipment or part thereof, the Winnipeg Fire Paramedic Service and the building occupants must be notified and instructions must be posted as to alternate provisions or actions to be taken in case of an emergency. These provisions and actions must be acceptable to the Winnipeg Fire Paramedic Service.

   An attempt to minimize the impact of the malfunctioning equipment must be indicated (e.g. whole portions of a sprinkler, fire alarm or standpipe system is placed out of service, service to remaining portions must be maintained) and where necessary, the use of watchmen, bull horns, walkie-talkies, etc. should be employed to notify concerned parties of emergency procedures. Directions for specific situations may be sought from the Winnipeg Fire Paramedic Service, Fire Prevention Branch. In all cases ***when a fire alarm system is out of service, hourly fire watch patrols must be implemented immediately***. Fire watch patrols may also be required in the event of a shutdown of other fire protection systems.

   Notify the Winnipeg Fire Paramedic Service by calling Fire Communications at 204-986-6366. The Winnipeg Fire Paramedic Service, Fire Prevention Branch must be called at 204-986-8200 (24 hours) when a fire protection system goes "out of service" as well as when a fire protection system has been repaired and restored "back in service".

Responsibilities of Building Occupants

1) **To be familiar with:**
   - the evacuation procedures as outlined in the Fire Safety Plan or as posted in the building,
   - the location of fire alarm system manual pull stations and exits,
   - the location of fire hose, portable fire extinguishers and other fire protection equipment,

- the correct municipal address of the building.

2) **To avoid fire hazards in the building by:**
   - not permitting the accumulation of combustible materials in and around buildings,
   - being aware of dangerous ignition sources, i.e.: combustibles left on stove elements, worn extension cords, oily rags, overheating equipment, careless smoking, careless cooking etc.
   - reporting burnt out bulbs in exit signs,
   - reporting fire or exit doors which are inoperable or wedged open,
   - ensuring that exit routes, stairwells, etc. are not used for storage or otherwise obstructed,
   - reporting to management, any fire hose and portable extinguishers or any other fire protection or life safety equipment which are not in good repair and ready for use,
   - ensuring that fire lanes are kept clear and accessible for Winnipeg Fire Paramedic Service and/or Paramedic use.

STEP 8 - DESIGNATING RESPONSIBILITY

This section may be copied in full but then you MUST specifically describe the responsibilities for each designated person in your building.

Designate appropriate staff to:

1) **Notify the Winnipeg Fire Paramedic Service** of the emergency condition i.e.: ensure the fire alarm system has been activated and call 9-1-1 even if the fire alarm system is monitored. When a building's fire alarm system is monitored and an alarm has been activated, an outside contracting agency, typically called a central station, receives the alarm and initiates an emergency response by calling the Winnipeg Fire Paramedic Service and representatives of the building.
2) **Sound the fire alarm**. These procedures should also include training of authorized personnel for silencing fire alarm and alert signals under specified conditions. If special keys or devices are required to operate the alarm system, they should be readily available to supervisory staff on duty. Such persons should have a working knowledge of the fire alarm system and how it is reset. The procedure laid down for the occupants to follow at the sound of an alarm will vary slightly, depending on the type of fire alarm system with which the building is equipped, i.e.: single stage or two stage system,
3) **Instruct occupants** on the procedures to be followed when the fire alarm system's audible/visual signalling devices sound/flash and supervise the evacuation of the building occupants. This may be accomplished by training and designating Fire Wardens or other key personnel to perform duties in fire prevention and emergency evacuation. In such a case, your Fire Safety Plan would include a list of the individuals who have been designated as Fire Wardens (or their alternates) along with their respective responsibilities. You may have to designate Fire Wardens and other fire safety responsibilities to different individuals who work during different times of the day.

4) **Check areas** of the building which may be of concern during an evacuation procedure. This would include areas such as washrooms, storerooms, laundry rooms and so forth.
5) **Assist or provide special provisions** for the evacuation of disabled persons. Your Fire Safety Plan should specifically state the provisions and procedures to follow. Some occupants of a building may require special assistance during evacuation because cognitive or physical limitations make them unable to proceed independently to a place of safety. Fire safety for these persons will depend to a large extent on preplanning and on their awareness of the fire protection measures incorporated into the building. In some buildings, it may be appropriate to advise such occupants of these provisions by posted notices, handouts or other suitable means. In certain residential occupancies, such as hotels or motels, staff should be aware of rooms occupied by persons requiring special assistance during evacuation and should inform the responding Winnipeg Fire Paramedic Service of these locations.
6) **Meet the Winnipeg Fire Paramedic Service** to provide access and information to fire fighters.
7) **Ensure that the fire alarm system is *not silenced* until the cause of the alarm is verified and *not reset* until the Winnipeg Fire Paramedic Service has responded and the cause of the alarm has been investigated and determined.**
8) **Confine, control and extinguish the fire**. For example, in the event that a small fire cannot be extinguished with the use of a portable fire extinguisher or the smoke presents a hazard to the operator, then the door to the area should be closed to confine and contain the fire. Leave the fire area, activate the fire alarm system by pulling the nearest manual pull station, ensure the Winnipeg Fire Paramedic Service has been notified and wait outside for the firefighters to arrive on the scene.
9) **Conduct fire drills.** The purpose of fire drills is to ensure that the occupants and staff are totally familiar with emergency evacuation procedures, resulting in orderly evacuation with efficient use of exit facilities. Ideally, fire drills should begin with practices on each floor or area. The Voice Communication System should be used where available. Following each drill, all persons of delegated responsibility should attend a debriefing to report on their actions and the reactions of the occupants. Fire drills shall be held at intervals not greater than 12 months for the supervisory staff except as indicated otherwise in this document. A fire safety plan is of little value if it is not reviewed periodically so that all supervisory staff are familiar with their responsibilities. A fire drill, then, is at least a review of the Fire Safety Plan by supervisory staff. The extent to which non-supervisory staff participate in a fire drill should be worked out in cooperation with the Winnipeg Fire Paramedic Service. The decision as to whether all occupants should leave the building during a fire drill will depend on the nature of the occupancy. It may be necessary to hold additional fire drills outside normal working hours for the benefit of employees on afternoon or night shifts who should be as familiar with fire drill procedures as those who work during the day. If full scale fire drills are not possible during non-regular working hours, arrangements should be made so that night-shift supervisory staff can participate in fire drills conducted during the daytime.
10) **Oversee and arrange for the inspection**, testing and maintenance procedures of fire protection equipment and other building systems. Provide records (where required) of all testing procedures for examination by the Winnipeg Fire Paramedic Service.

STEP 9 - INSTRUCTIONS TO OCCUPANTS ON FIRE PROCEDURES

- Instructions to occupants on fire procedures will vary according to the nature of the occupancy, the hazards involved, the occupant load, the type of fire protection equipment, and so forth.
- Instructions to occupants on fire procedures **must be specific to your building.** This may be determined in co-operation with the Winnipeg Fire Paramedic Service.

In the Event of Discovering a Fire Occupants Will:

- Leave the fire area and take a key.
- Close and latch all doors behind you.
- Activate the fire alarm using a pull station to notify all building occupants.
- Telephone the Winnipeg Fire Paramedic Service, dial **9-1-1** (never assume this has been done!) Know and give the correct address and location of the fire.
- Use exit stairwells to leave the building immediately.
- Do **NOT** use elevators. They may fail to operate if power to the building is lost.
- Do not return until it is declared safe to do so by the Winnipeg Fire Paramedic Service.
- **If you are in a suite and a fire alarm is heard:**
- Before opening the door, feel the door knob for heat. If it's not hot, brace yourself against the door and open it slightly. If you feel air pressure or a hot draft, close the door quickly. If you find no fire or smoke in the corridor, take the room key, close the door behind you and leave by the nearest exit stairwell.
- If you encounter smoke in the corridor or stairwell, consider taking the corridor to the other side of the building where another stairwell may be clear, or return to your suite.
- **If you cannot leave your suite or have returned to it because of fire or heavy smoke, remain in your suite and:**
- Close the door.
- Unlock the door for possible entry by fire fighters.
- Dial **9-1-1** and tell the Winnipeg Fire Paramedic Service where you are; If possible, signal to fire fighters by waving a sheet or towel out a window to attract their attention.
- Seal all cracks where smoke can get in by using wet towels or sheets. Seal mail slots, transoms and central air conditioning outlets if necessary. (A roll of wide, strong masking tape or duct tape is useful.)
- Crouch low to the floor if smoke enters the room. More Oxygen is available near the floor and it is cooler.

- If possible, move to a balcony or most protected room and partially open the window for air (close the window if smoke comes in.)
- Wait to be rescued. Remain calm. Do not panic or jump.
- Listen for instructions or information which may be given by authorized personnel over loudspeakers.

At least one copy of the "Fire Emergency Procedures" shall be ***prominently posted*** on each floor area**.** ***You may choose a sample which follows and post in your building.***

Single Stage Fire Alarm System and **No Elevators**

IN CASE OF FIRE

UPON DISCOVERY OF FIRE

- Leave the Fire area immediately
- Close and latch all doors behind you
- Activate the fire alarm pull station to notify building occupants
- Leave the building immediately via the nearest exit
- Telephone the Winnipeg Fire Paramedic Service - DIAL 9-1-1

UPON HEARING FIRE ALARM

- LEAVE the BUILDING immediately via nearest exit
- Take your keys
- CLOSE and latch DOORS behind you – do not lock

IF YOU ENCOUNTER HEAVY SMOKE

- STAY in your suite IF you are UNABLE TO EXIT
- DIAL 9-1-1 and await further instructions

REMAIN CALM

WARNING

Tampering with any fire protection systems and equipment is a criminal offence subject to a heavy fine, imprisonment or both.
ISSUED BY THE FIRE & PARAMEDIC CHIEF.

Single Stage Fire Alarm System *with* Elevators

IN CASE OF FIRE

UPON DISCOVERY OF FIRE

- Leave the Fire area immediately
- Close and latch all doors behind you
- Activate the fire alarm pull station to notify building occupants
- Leave the building immediately via the nearest exit or stairwell exit
- Telephone the Winnipeg Fire Paramedic Service – DIAL 9-1-1

DO NOT USE ELEVATORS

UPON HEARING FIRE ALARM

- LEAVE the BUILDING immediately via nearest exit or stairwell exit
- Take your keys
- CLOSE and latch DOORS behind you – do not lock

IF YOU ENCOUNTER HEAVY SMOKE

- Return to or stay in your suite or office if you are unable to leave by an alternate exit.
- DIAL 9-1-1 and await further instructions

REMAIN CALM

WARNING

Tampering with any fire protection systems and equipment is a criminal offence subject to a heavy fine, imprisonment or both.

ISSUED BY THE FIRE & PARAMEDIC CHIEF.

Two-Stage Fire Alarm System

IN CASE OF FIRE

UPON DISCOVERY OF FIRE

- Leave the Fire area immediately
- Close and latch all doors behind you
- Activate the fire alarm pull station to notify building occupants
- Leave the building immediately via the nearest exit or stairwell exit
- Telephone the Winnipeg Fire Paramedic Service – DIAL 9-1-1

DO NOT USE ELEVATORS

UPON HEARING FIRE ALARM

INTERMITTENT SIGNAL-

- Stand by and prepare to leave the building

IF CONTINUOUS SIGNAL-

- LEAVE the BUILDING immediately via nearest exit or stairwell exit
- Take your keys
- CLOSE and latch DOORS behind you – do not lock

IF YOU ENCOUNTER HEAVY SMOKE

- Return to or stay in your suite or office if you are unable to leave by an alternate exit.
- DIAL 9-1-1 and await further instructions

REMAIN CALM

WARNING

Tampering with any fire protection systems and equipment is a criminal offence subject to a heavy fine, imprisonment or both.

ISSUED BY THE FIRE & PARAMEDIC CHIEF.

Red lettering on a white background is an effective colour combination for these signs.

STEP 10 - ADDITIONAL REQUIREMENTS FOR HIGH RISE BUILDINGS

(Within the scope of the Manitoba Building Code)

This applies to a building:

A) of Group A, D, E or F major occupancy classification that is more than
   (i) 36m high, measured between grade and the floor level of the top storey**,** or
   (ii) 18 m high, measured between grade and the floor level of the top storey**,** and in which the cumulative or total occupant load on or above any storey above grade, other than the first storey, divided by 1.8 times the width in metres of all exit stairs at that storey**,** exceeds 300,

B) containing a Group B major occupancy in which the floor level of the highest storey of that major occupancy is more than 18 m above grade**,**

C) containing a floor area or part of a floor area located above the third storey designed or intended as a Group B, Division 2 occupancy, and

D) containing a Group C major occupancy whose floor level is more than 18 m above grade.

Modern high rise buildings contain specialized equipment which is provided by the Manitoba Building Code to ensure safety to both occupants and fire fighters in the event of an emergency situation. In addition to fire equipment and life safety systems outlined in previous sections of this document, high rise buildings may contain fire fighter's elevators, smoke control systems or smoke removal systems.

Part 7 of the Manitoba Fire Code outlines testing and maintenance requirements when such equipment is installed. It is necessary to establish what equipment is installed and consequently what testing and maintenance procedures are required to ensure code compliance.

In addition to maintenance procedures, the fire safety plan must include specific fire fighting procedures for high rise buildings. These procedures must be prepared jointly by the Winnipeg Fire Paramedic Service and building owner/manager.

The following information is provided to ensure basic code compliance. This information will also assist the owner in understanding how specialized equipment was designed to operate and consequently proper maintenance and testing can be established.

Prior to developing procedures for your building, an audit of specialized equipment must be done.

THE FIRE SAFETY PLAN FOR HIGH BUILDINGS SHALL INCLUDE:

1 **Keys** - Keys for elevators, fire alarm and voice communications systems, locked stair doors, hose cabinets, ventilation systems, etc., must be provided for responding fire fighters. These keys must be located in a readily accessible location, acceptable to the Winnipeg Fire Paramedic Service. It is recommended that building owners/managers contact the Winnipeg Fire Paramedic Service regarding placement of required keys.

2) **Training** of supervisory staff in the use of the voice communication system,

3) **Procedures** for the use of elevators.

Fire Fighters Elevator has a symbol indicated by a red fire fighter's helmet on a contrasting background and shall be used exclusively to identify fire fighter's elevators that comply with the Manitoba Building Code. This identification shall be located on the elevator entrance frame or adjacent to it at the emergency recall level and also inside the car adjacent to the in-car emergency switch. The identification on the entrance frame, or adjacent to it, shall be a minimum of 50mm in height and the identification in the car shall be a minimum of 10 mm in height. This applies to High Buildings built after 1973. Keys for the operation of fire fighters' elevators must be provided in lock boxes or break-glass boxes located in the elevator lobby and at the central alarm and control facility.

Fire Fighters Elevator - Partial Service is required in older residential buildings (High Division I buildings) which as per By-Law 4304/86 required upgrading of elevators for use by fire fighters. The requirements for upgrading of these elevators are not nearly as extensive as a new building built after 1973. Keys for the operation of fire fighters' elevators must be provided in lock boxes or break-glass boxes located in the elevator lobby and at the control facility. The fire fighters' elevator shall be identified by the words "fire fighters partial service" on the elevator entrance frame or adjacent to it.

4) **Actions** to be taken by supervisory staff in initiating any smoke control or other fire emergency systems installed in a building in the event of fire until the Winnipeg Fire Paramedic Service arrives,
5) **Instructions** to the supervisory staff and the Winnipeg Fire Paramedic Service for the operation of the systems referred to in Sentence 4, and
6) **Procedures** established to facilitate Winnipeg Fire Paramedic Service access to the building and fire location within the building**.**
7) **A copy** of the Fire Safety Plan shall be kept at the central alarm and control facility.
8) **Fire drills** shall be held at intervals not greater than 2 months.

STEP 11 - ADDITIONAL REQUIREMENTS FOR INDUSTRIAL BUILDINGS

Dangerous Goods

- Where dangerous goods are stored or handled, the fire safety plan must include the names, addresses and telephone numbers of persons to be contacted in case of fire during non-operating hours.
- Specify methods to control a fire emergency and to safely and efficiently recover radioactive materials.
- Provide names, addresses and telephone numbers of primary and alternate sources of expert radiation safety advice and assistance as well as the locations of sources of radiation survey instruments.
- Individual storage areas used for the indoor storage of dangerous goods must be clearly identified by posting placards conforming to the *Transportation of Dangerous Goods Regulations.*

Indoor Storage (General Requirements)

- Identify product classifications for each part of a building where different product classifications are stored.
- Identify the method of storage including:
    - Aisle widths for rack storage
    - Maximum permitted storage heights (must be posted with signs).
    - Maximum permitted size of *individual storage areas* (must be posted with signs).
- In buildings with sprinkler systems, identify the sprinkler system design criteria, inside and outside

hose allowances, and results of the benchmark sprinkler system main drain and water flow tests.

- When stored products include Group A plastics, rubber products, Level 2 or 3 aerosols, or dangerous goods, a record of their location shall be available in a location that is readily accessible to emergency responders.

Outdoor Storage (General Requirements)

- Identify the location and classification of products stored, namely:
    - Class III & IV commodities, group A, B, and C plastics,
    - Rubber tires,
    - Forest products, including lumber, timber and wood pallets,
    - Forest by-products,
    - Manufactured buildings,
    - Wrecked vehicles in salvage yards, and
    - Dangerous goods in packages or containers.
- Identify the method of storage, including the clear spaces required and the maximum permitted size of individual storage areas.
- Identify the location of fire alarm systems and fire fighting equipment.
- Identify the manner in which fire hazards are controlled in and around the outdoor storage area.
- Fire emergency procedures must be prominently posted at the outdoor storage site.

Rooms for Storage Tanks

- Placards identifying stored flammable/combustible liquids and the capacities of the storage tanks must be posted in a conspicuous location outside the room. That information must be included in the Fire Safety Plan.

Hot Works

- Hot Works are activities that involve open flames or the production of heat or sparks, including, without being limited to, cutting, welding, soldering, brazing, grinding, adhesive bonding, thermal spraying and thawing pipes. A Fire Safety Plan must include "hot works" safety measures for the prevention of fires as described in the Manitoba Fire Code.

Laboratories

- Laboratories must conform to the Fire Safety Plan requirements for Dangerous goods and Indoor Storage as identified above.
- Fire drills must be held at intervals not greater than 3 months.
- Personnel must be trained in the safe handling and use of dangerous goods and at least one person must be:
    - In responsible charge during operating hours,
    - Available to respond to a day-time or night-time emergency,
    - Trained in the correct procedures for the handling, storing and offering for transport, dangerous goods in accordance with all applicable regulations.
- A laboratory must be clearly designated as an area containing dangerous goods.
- Measures must be taken to prevent access by unauthorized persons.

STEP 12 - IDENTIFYING INSPECTION, TESTING AND MAINTENANCE REQUIREMENTS FOR FIRE PROTECTION SYSTEMS AND EQUIPMENT

To assist you in fulfilling your obligations, included is a list of the portions of the Manitoba Fire Code which requires checks, inspections and/or tests be made of equipment and facilities from time to time. It is suggested that you read over this list and perform or have performed the necessary checks, inspections and/or tests for the items which may apply to your property.

It is the building owner's responsibility to ensure that fire protection equipment and life safety systems are inspected, tested and maintained in accordance with the requirements of the Manitoba Fire Code. The attached schedules have been provided for the building owner's convenience ONLY.
For accurate reference, the Manitoba Fire Code should be consulted.

Definitions for key words are as follows:

CHECK	-	**Means visual observation to ensure the device or system is in place and is not obviously damaged or obstructed.**
INSPECT	-	**Means physical examination to determine that the device or system will apparently perform in accordance with its intended function.**
TEST	-	**Means operation of device or system to determine that it will perform in accordance with its intended operation or function.**

It is stated in the Manitoba Fire Code that records of all tests and corrective measures are required to be retained for a period of two years after they are made.
Select the general requirements and the checklists that apply to the fire protection equipment in your building.

GENERAL REQUIREMENTS

Fire Department Access:

- Ensure streets, yards and private roadways that are provided for Fire Department access, are kept clear at all times.
- Ensure signs prohibiting parking in Fire Department access routes (Fire Lanes) are in place and are legible.
- Ensure access to Fire Department connections for sprinklers and standpipe systems are free from obstructions at all times.
- A lock box containing keys for entrance, the fire alarm panel, and other service rooms is not mandatory but very useful (and encouraged) if there is no supervisory person on-site to meet the Fire Department.

Water Supply Systems:

- Inspect all valves controlling water supplies to fire protection systems to ensure they the valve is wide open and sealed or locked in the open position, or are equipped with supervisory switches.

Laundry Equipment:

- Clean lint traps in laundry equipment after each use.

Carbon Monoxide Detection:

- Carbon Monoxide alarms shall be inspected, tested and maintained as per Manufacturer's instructions.

FIRE PROTECTION SYSTEMS & EQUIPMENT

FIRE ALARM SYSTEM

Daily

Check status of fire alarm a/c power indicator light and trouble indicator light.

Monthly

Test fire alarm system-including supervised and non-supervised systems (a non-supervised system is a fire alarm system without trouble monitoring capability). Testing is to be done on rotational basis if zoned. Test voice communication system to and from floor areas and central alarm and control facility. Inspect standby batteries. Confirm signals to Central Reporting Agency (if provided.) This test is to be conducted in conjunction with the fire alarm test and in direct communication with the appropriate agency.

Annually

Inspect and service all components of the fire alarm system.

Inspect and service all components of the voice communication systems. Inspect and service Central Reporting Agency's transmitting devices. Inspect and test all auxiliary devices connected to a fire alarm system. This may include fans, dampers, door holders, fire shutters, etc. Annual inspections shall be properly documented. Documentation, as per ULC-S536 shall be retained on site for Winnipeg Fire Paramedic Service examination if requested.

EMERGENCY LIGHTING (UNIT EQUIPMENT)

Monthly

Inspect unit equipment including pilot lights, terminal connections, clamps and batteries.

Test unit equipment.

Annually

Test unit equipment to ensure emergency lighting for duration required to design criteria under simulated power failure conditions.

After completion of annual test, check the charging conditions for voltage and current. The charging recovery period shall be tested to ensure proper function.

PORTABLE FIRE EXTINGUISHERS

Required
Recharge extinguishers after use, as indicated by inspection or when performing maintenance.
Each extinguisher shall have a tag showing maintenance, date, etc.
Monthly
Inspect all portable fire extinguishers.
Annually
Service and tag all portable fire extinguishers.
5 Years
Hydrostatically test carbon dioxide and water type extinguishers.
6 Years
Empty and service stored pressure type extinguishers.
12 Years
Hydrostatically test dry chemical and vaporizing liquid type extinguishers.

EMERGENCY GENERATOR

Monthly
Completely test emergency generator. Test shall simulate failure of normal hydro-electric power supply.
Operate generator under at least 30% of rated load capacity for 60 minutes.
Operate transfer switches under load. Inspect for proper operation, including ventilation systems, pumps, coolers and shutters. Monthly test to be logged and data recorded.
Annually
Operate the generator under full load for 2 hours (full load equals nameplate kilo watt rating of generator). Test to be conducted by qualified technician and report to be retained on site. Annual test to be logged and data recorded.

EXITS

As Required
Maintain means of egress, including corridors and stairways free of obstructions and in good repair.
Maintain lighting for exits and exit signs when building is occupied.
Monthly
Operate and inspect all doors in fire separations to ensure proper operation. Inspection to include fusible links, hardware and hold open and releasing devices when provided.
Inspect all doors in fire separations to ensure they are closed.

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SPECIAL EXTINGUISHING SYSTEMS

6 Months

Inspection, testing and maintenance procedures shall be conducted for the following systems:

a) Commercial Cooking Equipment (NFPA 96.).
b) Halon 1301 Fire Extinguishing Systems (NFPA 12A.)
c) Water Spray Fixed Systems for Fire Protection (NFPA 15.)
d) Deluge Foam-Water Sprinkler Systems and Foam-Water Spray Systems (NFPA 16.)
e) Dry Chemical Extinguishing Systems (NFPA 17.)
f) Wet Chemical Extinguishing Systems (NFPA 17A.)
g) Wetting Agents (NFPA 18.)

Annually

Inspection, testing and maintenance procedures shall be conducted for the following systems:

a) Low Expansion Foam and Combined Agent Systems (NFPA 11.)
b) Medium and High Expansion Foam Systems (NFPA 11A.)
c) Carbon Dioxide Extinguishing Systems (NFPA 12.)
d) Halon 1211 Fire Extinguishing Systems (NFPA 12B.).

SMOKE ALARMS

Annually

Inspect, test and maintain smoke alarms in conformance with the manufacturer's instructions.
Recommend battery replacement.

10 Years

Recommend replacement of smoke alarms after 10 years or as per manufacturer's instructions.

As Required

Replace "back-up" batteries in hard-wired smoke alarms.

HEATING, VENTILATION, AIR CONDITIONING, DUCTING AND CHIMNEYS:

As Required

Inspect hoods, filters and ducts subject to accumulations of combustible deposits and clean or replace as necessary.

Annually

Inspect fuel fired heating systems including appliances, chimneys and flue pipes.
Operate disconnect switches for mechanical air conditioning and ventilation systems.
Clean and inspect incinerator spark arresters.
Except in one or two-family dwellings, every fuel fired heating system shall be inspected annually by a person acceptable to the Winnipeg Fire Paramedic Service.

PRIVATE FIRE HYDRANTS

Annually
Flush all private hydrants with main valve and all outlet valves open fully until water runs clear.

SPRINKLER SYSTEMS

ITEM	ACTIVITY	FREQUENCY
Gauges (dry/pre-action/deluge)	Inspection	Weekly/Monthly
Control valves	Inspection	Weekly/Monthly
Alarm devices	Inspection	Quarterly
Gauges (wet systems)	Inspection	Monthly
Hydraulic name plate	Inspection	Quarterly
Buildings	Inspection	Annually (prior to freezing weather)
Hanger/seismic bracing	Inspection	Annually
Pipe and fittings	Inspection	Annually
Sprinklers	Inspection	Annually
Spare sprinklers	Inspection	Annually
Fire department connections	Inspection	Quarterly
Valves (all types)	Inspection	--
Alarm devices	Test	Quarterly/Semi-annually
Main drain	Test	Annually
Antifreeze solution	Test	Annually
Gauges	Test	5 years
Sprinklers – extra high temp.	Test	5 years
Sprinklers – fast response	Test	At 20 years and every 10 years thereafter
Sprinklers	Test	At 50 years and every 10 years thereafter
Valves (all types)	Maintenance	Annually or as needed
Obstruction investigation	Maintenance	5 years or as needed
Low point drains (dry system)	Maintenance	Annually prior to freezing and as needed

FIRE PUMPS

ITEM	ACTIVITY	FREQUENCY
Pump house, heating ventilating louvers	Inspection	Weekly
Fire pump system	Inspection	Weekly
Pump operation	----	----
No-flow condition	Test	Weekly
Flow condition	Test	Annually
Hydraulic	Maintenance	Annually
Mechanical transmission	Maintenance	Annually
Electrical system	Maintenance	Varies
Controller, various components	Maintenance	Varies
Motor	Maintenance	Annually
Diesel engine system, various components	**Maintenance**	**Varies**

STANDPIPE AND HOSE SYSTEMS

ITEM	ACTIVITY	FREQUENCY
Control valves	Inspection	Weekly/monthly
Pressure regulating devices	Inspection	Quarterly
Piping	Inspection	Quarterly
Hose connections	Inspection	Quarterly
Cabinet	Inspection	Annually
Hose	Inspection	Annually
Hose storage device	Inspection	Annually
Alarm device	Test	Quarterly
Hose nozzle	Test	Annually
Hose storage device	Test	Annually
Hose	Test	5 years/3years
Pressure control valve	Test	5 years
Pressure reducing valve	Test	5 years
Hydrostatic test	Test	5 years
Flow test	Test	5 years
Main drain test	Test	Annually
Hose connections	Maintenance	Annually
Valves (all types)	Maintenance	Annually/as needed

WATER STORAGE TANKS

ITEM	ACTIVITY	FREQUENCY
Condition of water in tank	Inspection	Monthly/quarterly*
Water temperature	Inspection	Daily/weekly*
Heating system	Inspection	Daily/weekly*
Control valves	Inspection	Weekly/monthly
Water – level	Inspection	Monthly/quarterly
Air pressure	Inspection	Monthly/quarterly
Tank – exterior	Inspection	Quarterly
Support structure	Inspection	Quarterly
Catwalks and ladders	Inspection	Quarterly
Surrounding area	Inspection	Quarterly
Hoops and grillage	Inspection	Annually
Painted/coated surfaces	Inspection	Annually
Expansion joints	Inspection	Annually
Interior	Inspection	5 years/3 years
Check valves	Inspection	5 years
Temperature alarms	Test	Monthly*
High temperature limit switches	Test	Monthly*
Water level alarms	Test	Semiannually
Level indicators	Test	5 years
Pressure gauges	Test	5 years
Water level	Maintenance	---
Drain silt	Maintenance	Semiannually
Control valves	Maintenance	Annually
Embankment – supported coated fabric (ESCF)	Maintenance	---
Check valves	Maintenance	---

*Cold weather

FIRE DAMPERS

Annually

Inspect fire dampers and fire stops to ensure that they are in place and are not obviously damaged or obstructed.

Every 4 Years

Test, inspect, & maintain fire dampers and fire stops one years after installation and every 4 years after, except for hospitals where the frequency shall be every 6 years.

HIGH BUILDINGS

As Required

Check for availability of keys for fire fighters' elevators, fire alarm system and other keys required in fire alarm control facility and box at elevator lobby. Check position of emergency recall key switch (auto position) for emergency recall on elevators. Check for correct position of emergency power key switch on elevators.

3 Months

High Rise Buildings (Central Alarm and Control Facility)

A) Test operation of switches for control of air moving fans.
B) Test operation of all hold open devices (release on fire alarm signal.)
C) Test operation of all electric door releases (release of locking device on fire alarm signal.)
D) Test operation of all pressurization fans (elevators, stairways, vestibules, etc., start on fire alarm signal.)
E) Test operation of all smoke removal fans, dampers, etc. (start/stop, open/close on fire alarm signal.)

High Rise Buildings (Elevators)

A) Test operation of recall key switch outside elevator shaft.
B) Test operation of in-car fire fighters' elevator key switch.
C) All tests shall be in conformance with the Manitoba Fire Code.

High Rise Buildings (Venting to Aid Fire Fighting)

A) Test operation of closures into smoke shafts from each floor area.
B) Test operation of closures opening to outdoors at top of smoke shaft.
C) Test operation of controls for air handling systems used for venting floor areas.

Annually

Inspect fire dampers and smoke dampers to ensure they are in place and not obviously damaged, rusted or blocked.

Verify operation of each fire damper and smoke damper and check and lubricate any parts as required.

2 Years

High Rise Buildings (Smoke Control Systems)

Test pressurized vestibules by pressure sensor to ensure movement of air is from vestibules to floor areas.

Test exit door pressures to ensure that force required to open doors does not exceed 133N (30 lb).

Test pressurized elevator shafts, by pressure sensor, to ensure movement of air is from elevator shaft to floor areas.

Test pressurized stair shafts, by pressure sensor, to ensure movement is from stair shaft to floor areas.

Inspect and test smoke control measures in accordance with Section 7.3 of the Manitoba Fire Code.

APPENDIX A

Sample – Fire Protection Systems & Equipment (photos optional)

Fire Alarm System

The fire alarm system is a single stage system located at the front entrance of the building. It is monitored by _____.

Emergency Lighting Units

Emergency lighting units are located in the hallways and stairwells only.

Sprinkler System

The sprinkler system is a wet system which covers the whole building. The main control valve is in the basement mechanical room.

Standpipe

The standpipe is located in the north stairwell.

Fire Extinguishers

Multipurpose fire extinguishers are located throughout the building. There is also a K-class fire extinguisher also in the kitchen.

APPENDIX B

Fire Dampers And Fire Stops Inspection & Maintenance Of Information

Fire Dampers are used to prevent transmission of flame where air ducts penetrate fire barriers. They can also be in air transfer openings in walls and partitions. There are two types of fire dampers, static and dynamic. Older HVAC (Heating, ventilation and air conditioning) systems were traditionally designed to automatically shut down in the event of a fire, allowing the fire dampers to close under "static" conditions. Newer "dynamic" smoke control systems require HVAC fans to remain in operation in order to pressurize areas adjacent to a smoke filled area to stop smoke migration above or below a fire floor, in a stairwell for escape, a safe refuge area, or to purge smoke to the outside of a building.

Smoke Dampers are installed in ducts and air transfer openings that are designed to resist the passage of air and smoke. They are installed to operate automatically and controlled by a smoke detection system. They are installed where ducts penetrate through smoke barriers, or at other locations within an engineered smoke control system. They can be used in HVAC systems where the fans are shut down in the event of a fire, and can also be used in smoke control systems designed to operate during a fire incident. They operate against air velocity and fan pressure.

Combination Fire/Smoke Dampers *are used at location that are designated as both fire barriers and smoke barriers to prevent the passage of both flame and smoke.*

The Manitoba Building Code requires a tight fitting access door for each fire damper to enable inspection of the damper and resetting of the release device.

The Inspection and servicing of fire dampers are to include:

- An inspection at intervals not greater than 12 months as per Manitoba Fire Code
- Access to be provided to allow inspection of each damper
- Inspect to ensure there is no obvious damage, no rusting or blockage, verify the operation and check and lubricate any parts as required.

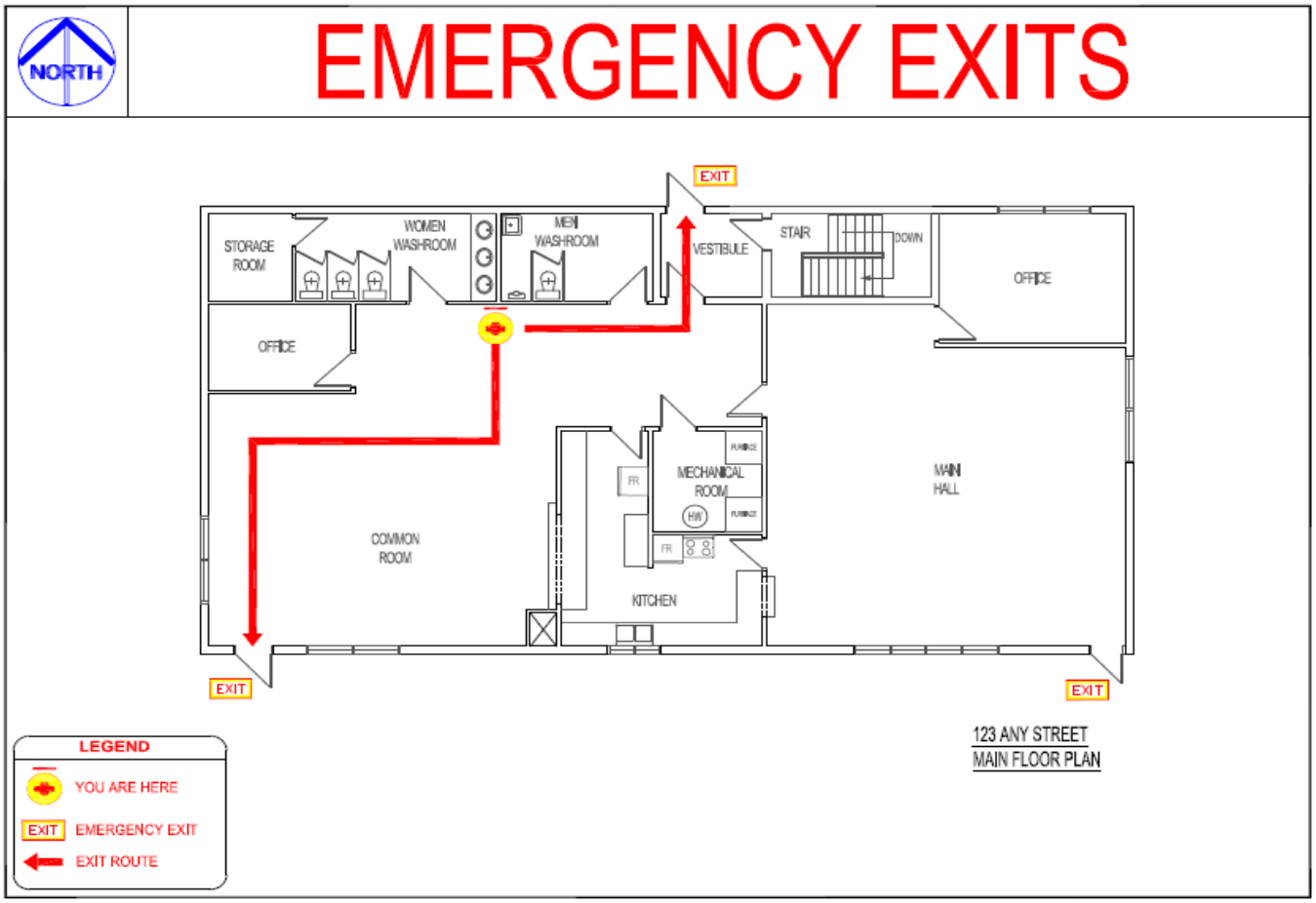
The Manitoba Fire Code and the Winnipeg Fire Prevention By-law do not require a person to be certified in order to carry out the inspection and maintenance of fire and smoke dampers. However it is strongly recommended that any person who inspects or services dampers is knowledgeable of their operation. Extreme caution must be exercised when testing any damper for operation as doing so can be very dangerous.





APPENDIX C

Sample – Emergency Exit Floor Plan



APPENDIX D

Sample – Fire Safety Equipment Floor Plan