

## **FIRE PROTECTION SYSTEMS**

Fire protection systems, measures and equipment are all related to the safety of the occupants and the protection of the property.

As part of a building design and its intended use there are many features that are built in. For example, walls between areas are sheathed in drywall. The application of drywall to studs as part of a wall can carry a fire-resistance rating when built according to a standard. Likewise, a door and self-closing mechanism may also function as part of the fire separation as long as they are “listed” and have a fire-protection rating. This is why building permits are required when constructing a building.

During the planning stages of a building the process that happens in a building is identified and has to include safety measures for the occupants. In the case where the operation is commercial cooking, a hood and duct system along with suppression systems must be employed. These types of devices must be installed to a standard and be maintained accordingly.

In the case where a building’s use changes the same systems and equipment must be used specific to the activities. This is why a building permit is required for these circumstances. This is often referred to a change of use.

Once the building is occupied the systems and equipment must be maintained. If left unchecked each of these systems will not continue to function as designed. It is the application of the Ontario Fire Code that requires the regular check, inspection or testing of the fire protection systems, measures and equipment.

Below is a list of some of the systems, measures and equipment common to most retirement homes, care occupancies and care and treatment occupancies:

Smoke Alarms	Fire Alarm System	Commercial Cooking Suppression System
Fire safety Plan	Standpipes	Elevators
Exit Lights	Sprinkler Systems	Emergency Lighting
Portable Fire Extinguishers	Fire Drills	Doors and Walls
Fire Hose Cabinets	Commercial Cooking Hood	Records
	and more...	

The following pages are a schedule of maintenance common to most retirement homes, care occupancies and care and treatment occupancies. These requirements are for convenience only. For accurate information please refer to your approved fire safety plan.

It is important to note that if you have a fire safety plan it is a requirement that you know its contents....**Thoroughly!**

## MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT

The Ontario Fire Code requires that checks, inspections, and tests be made of fire protection equipment from time to time.

### DEFINITIONS:

**CHECK:** A visual observation to ensure that the device or system is in place and is not obviously damaged or obstructed

**TEST:** Operation of the device or system to ensure that it will perform in accordance with its intended operation or function

**INSPECT:** A physical examination to determine that the device or system will apparently perform in accordance with its intended function

**M - MAINTENANCE PERSONAL**

**S - SUPERVISORY STAFF**

**C - CONTRACTED OUT TO QUALIFIED PERSON(S)**

**O - OTHER (SPECIFY)**

**NOTE:** Records of all Tests and Inspections must be kept for a period of two (2) years and made available to the fire department upon request.

DAILY	DESCRIPTION/ITEM	REFERENCE	PERSON RESPONSIBLE
	1. Exit lights should be checked to ensure that they have not been damaged and that they are illuminated	2.7.3.2	M or S
	2. Fire Alarm System, AC Power lamp and Trouble Signal must be checked	6.3.2.2.	M or S
	3. Voice Communication System, AC Power Lamp and Signal must be checked	6.3.2.4.	M or S
	4. Temperature of Fire Pump Rooms must be checked	6.6.3.2	M or S
	5. Tank Heating equipment and Water Temperature must be checked for Fire Protection Water tanks	6.6.2.2 6.6.2.3	M or S

## **MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT**

<b>WEEKLY</b>	<b>DESCRIPTION/ITEM</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
1.	Check Hoods, Filters and Ducts in Ventilation Systems subject to the accumulation of combustible deposits	2.6.1.4	M or S
2.	Check the Sprinkler System control valves are open and properly supervised	6.5.3.1	M or S
3.	Check that Dry Pipe Sprinkler Air Pressure is being maintained	6.5.3.3	M or S
4.	Inspect valves controlling fire protection water supplies	6.6.1.2	M or S
5.	Check the water level and pressure for fire protection system pressure tanks	6.6.2.10	M or S
6.	Inspect relief valves on air and water supplies of Fire Protection tanks	6.6.2.11	M or S
7.	Check water level in Fire Pump Reservoirs	6.6.3.1	M or S
8.	Inspect and operate all fire pumps	6.6.3.3 6.6.3.4	M or S
9.	Check all components for emergency generator system and operate the generator set under at least 50% of the rated load for 30 minutes	6.7.1.1	M or S

## MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT

<b>MONTHLY</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
1.	Inspect all doors in Fire Separations	2.2.3.4	M or S
2.	Emergency Lighting System, Batteries, Units Lamps to be inspected and tested	2.7.3.3	M or S
3.	Conduct fire alarm drills in all Care and Care & Treatment Facilities	2.8.2.3	M or S
4.	Inspect all portable Fire Extinguishers	6.2.7.2	M or S
5.	Test the building fire alarm system and check all components including standby power batteries	6.3.2.2.(1)	M or S
6.	Test the Voice Communication Systems	6.3.2.3	M or S
7.	Inspect all Fire Hose Cabinets	6.4.2.1	M or S
8.	Test the Sprinkler System Alarm	6.5.5.2	M or S
9.	Inspect the water level in Gravity Tank Fire Protection Water Tanks	6.6.2.8	M or S
10.	Smoke alarms shall be maintained in operating condition	6.3.3.2.	M or S

## MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT

<b>EVERY 2 MONTHS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Test Sprinkler System Central Station Connections	6.5.5.7	M or S

<b>EVERY 3 MONTHS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Test Fire Fighter's Elevators for proper operation	7.2.2.1	M or S

<b>EVERY 6 MONTHS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Inspect fire protection systems for commercial cooking equipment	2.6.1.12 & 6.8.1.1	C
	2. Check and clean crankcase, breathers, governors and linkages on emergency generator sets	6.7.1.1	C
	3. Conduct inspection and maintenance of special extinguishing system	6.8.1	C
	4. Test gate valve supervisory switches and other sprinkler and fire protection system supervisory devices	6.5.5.7	M, S or C

## MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT

<b>ANNUALLY</b>	<b>DESCRIPTION/ITEM</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
1.	Inspect all Fire Dampers and Fire Stop Flaps	2.2.3.7	M, S or C
2.	Inspect all Chimneys, Flues and Flue pipes	2.6.1.5	M, S or C
3.	Inspect disconnect switches for mechanical air conditioning and ventilation systems	2.6.1.8	C
4.	Carry out Maintenance procedures for Fire Extinguishers	6.2.7.1	C
5.	Conduct a complete test of the building fire alarm system by qualified personnel	6.3.2.1	C
7.	Conduct a complete test of the building voice communication system by qualified personnel	6.3.2.3	C
8.	Inspect all standpipe hose valves	6.4.2.4	C
9.	Remove and re-rack all standpipe hose	6.4.2.5	C
10.	Inspect all exposed sprinkler system pipe hangers	6.5.3.2	C

## MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT

<b>ANNUALLY</b>	<b>DESCRIPTION/ITEM</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
11.	Check all sprinkler heads	6.5.3.2	C
12.	Inspect auxiliary drains (Drums Drips) and dry pipe sprinkler system (Each Fall)	6.5.4.1	C
13.	Inspect dry pipe valve water priming level	6.5.4.3	C
14.	Inspect and Lubricate Fire Department Connections	6.5.4.4	C
15.	Conduct sprinkler system alarm test using the hydraulically most remote test valve	6.5.5.3	C
16.	Conduct a dry pipe system trip test	6.5.5.4	C
17.	Conduct a main drain flow test of the Sprinkler system water supply	6.5.5.5	C
18.	Inspect Fire Protection Water supply tanks	6.6.2.1	C
19.	Conduct a Fire Pump Flow Test	6.6.3.5	C
20.	Inspect and flow test all fire hydrants	6.6.5.7	C
21.	Conduct general engine and generator maintenance and engine tune-ups for emergency generator sets	6.7.1.1	C
22.	Emergency lighting unit equipment duration test equal to design criteria	2.7.3.3	C
23.	Smoke alarms shall be maintained in operating condition	6.3.3.2.	M, S or C

## MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT

<b>EVERY 2 YEARS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Inspect all Fire Protection water tanks, connected to a non-potable water supply, for the accumulation of sediment	6.6.2.6	C
	2. Check valve adjustments and torque heads for emergency generator engines	6.7.1.1	C
<b>EVERY 3 YEARS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Clean and service injector nozzles and check valve adjustments for emergency generator diesel engines	6.7.1.1	C
<b>EVERY 5 YEARS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Hydrostatic test of dry standpipe system	6.4.3.6	C
	2. Inspect fire protection water tank, connected to a potable water supply, for accumulation of sediment	6.6.2.6	C
	3. Check insulation of generator windings	6.7.1.1	C



## **MAINTENANCE SCHEDULE FOR FIRE PROTECTION EQUIPMENT**

<b>EVERY 6 YEARS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Replace the extinguishing agent in dry chemical fire extinguishers	6.2.7.1	C
<b>EVERY 12 YEARS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Conduct Hydrostatic testing of dry chemical and vapourizing liquid fire extinguishers as required	6.2.7.1	C
<b>EVERY 15 YEARS</b>	<b>DESCRIPTION/ITEMS</b>	<b>REFERENCE</b>	<b>PERSON RESPONSIBLE</b>
	1. Inspect dry pipe sprinkler system for pipe obstructions. Flush the system when necessary	6.5.4.2	C

Not every facility will have all of these fire protection measures or equipment. This document is provided as a guide only and does not replace the requirements as set out in your approved fire safety plan.

It is important that a record be maintained for all tests and inspections for the review of a Chief Fire Official.