

Home Safety Assessment Guide

The Home Safety Assessment (HSA) Guide provides supporting information and resources for assessors conducting Home Safety Assessments (HSAs).

In this guide, basic information on what to look for, and why, are provided, along with possible recommendations and resources for the home occupant(s).

CIVIC ADDRESS

General - During a large-scale emergency, external response agencies may be serving the community and a visible address system will play a key role in these situations.

Civic Address System - A civic address system provides a permanent and unique address for each building in a community. It clearly identifies where a property is located and helps emergency responders and other service providers readily find homes.

Address Fixtures - it is important to have the house numbers properly secured, easy to see, and free from the cover of shrubbery. Locate the numbers in a lighted area, ensure the numbers are a very different colour from the background they are on, and ideally use reflective numbers so they are easy to see in a power outage.

Address Sight Line - If there is any shrubbery close to the numbers, recommend that the shrubs be maintained and cut back regularly through the growing months of spring, summer and fall.

Rural / Remote Communities - Some communities may not understand the importance of, or support, an address mapping system and what it may provide. If the community does not utilize a mapping system, direct a recommendation to the Band Administration not the home occupant.

EXTERIOR FUEL TANK OR GAS METER

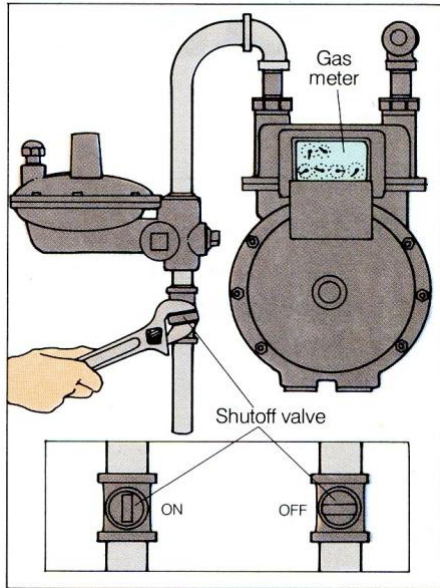
General - During a large-scale emergency, external response agencies may be serving the community. Having visible, working gas shut-off valves will play a key role in these response scenarios.

Shut Off valves - In the event of an emergency, large or small, safety response agencies may want to turn off the utilities for the safety of any or all residents, as well as the responders in the area.

It is important to keep shrubbery, wood piles, garbage cans and other debris from blocking the visibility of any gas valves. It would be good practice to regularly maintain and trim back any shrubbery away from utility shutoff valves throughout the growing months of spring, summer and fall.

Natural gas shut off valves are located on the side of a house where the gas meter is located (see left picture below).

GAS SHUTOFF VALVE



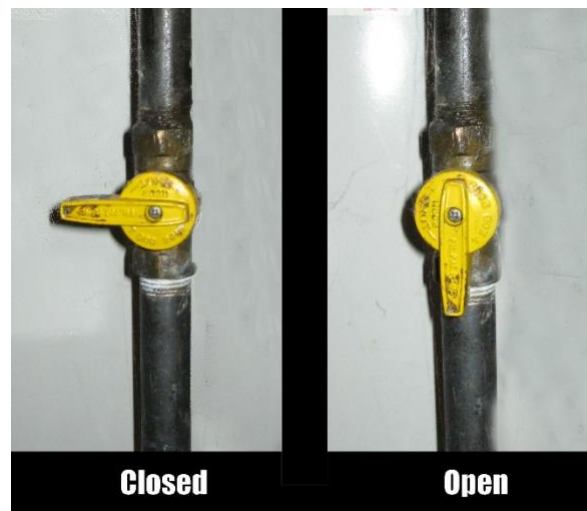
Propane tanks may have several different locations for the shut off valve. Some of these are on the tank, where the gas line enters the house and/or where the connection of the gas line meets the heating appliance (see picture below).



The photo on the right shows the most commonly used gas shut off valve in North America. If the valve is perpendicular to the gas line, the valve will be in the shut off position (closed). When the valve is in the vertical position parallel to the gas line it is attached to, it is in the open position.

Propane shutoff valves may vary in size and appearance. However, they will work in the same way.

It is important to become familiar with the shutoff valves in your home.



ELECTICAL SERVICE ENTRY

General – The electrical service entry (the power line coming from the power pole to the house) should be securely attached to the pole and the house and kept free from any debris to ensure an electrical arc does not occur. If an electrical arc does occur, keep a minimum distance of 10 meters or 33 feet away until a power company has secured the unstable situation.

Wind or snowstorms can cause powerlines to become loose or even detached from the pole or house ground. If a power line does come down, for the safety of anyone in the area, they should keep a minimum distance of 10 meters or 33 feet to avoid a shock hazard or possibly even electrocution. Notifying the local power company of the situation is the best option.

If there are trees close to the power lines that require maintenance, **ALWAYS** check with local power companies for their regulations on safe distancing. As well, the local power companies may be the ones who are required to do the maintenance.

Example: In BC, BC Hydro works with Certified Utility Arborists to prune trees within 3 meters or 10 feet of distribution or neighborhood power lines. It is very important to keep a safe distance when performing any tasks near any power lines.

STEPS AND HANDRAILS

General - Maintaining walkways, stairs, and railings will allow safer passage for all who come and go from homes.

Walkways should remain clear of debris, wet leaves, snow, and ice to ensure the walkway is safe to walk on without slip or trip hazards.

Common types of walkways, such as concrete, pavement, paving stones, gravel, and dirt can develop issues such as cracks or holes. Cracks and holes that develop over time should be filled to ensure safe passage.

Stairs and handrails should be kept clear and be cleaned periodically throughout the year.

Wood stairs and handrails will require paint or stain to protect the wood from moisture. Moisture promotes wood decay.

When painting or staining stairs, a nonslip product should be used. Wood stairs and handrails will require extra screws or bolts as the wood will dry and shrink over time.

Stairs or handrails that have rot or have become loose are a safety hazard and should be repaired and/or replaced.

EXTERIOR OUTLETS

General - Exterior outlets are required by Canadian building code to be GFCI (Ground Fault Circuit Interrupter) and to have working protective covers on them.

*“The Canadian Electrical Code requires that a Class A GFCI be provided to protect all receptacles within 1.5 metres (5 feet) of a sink. In addition, in residential occupancies the code requires that all receptacles installed outdoors and within 2.5 metres (8 feet) of finished grade be protected by a Class A GFCI.”**

(* <https://www.electricalindustry.ca/latest-news/299-how-ground-fault-detection-and-protection-requirements-protect-people-and-equipment>)

Exterior power outlets require proper working covers that protect them from the weather. If moisture gets inside of the outlet it will lead to a corrosive state that weakens the electrical contacts causing the outlet to short out and possibly catch fire.

Exterior power outlets are also required to be a GFCI (Ground Fault Circuit Interrupter) with a built-in breaker. A GFCI is a fast-acting circuit breaker that shuts off the power when a ground-fault occurs (i.e. the flow of electricity surges). The GFCI works by comparing the amount of current flowing to and from equipment, power tools, or appliance being used.



If any occupants were comfortable in changing their exterior electrical outlets to GFCI outlets, there are many learning tools available on the internet. Here are examples that could be viewed:

https://www.youtube.com/results?search_query=how+to+install+an+exterior+gfc+outlet

For further information on GFCIs:

<https://www.electricalindustry.ca/latest-news/299-how-ground-fault-detection-and-protection-requirements-protect-people-and-equipment>

EXTERIOR DOORS

General - Having all Exterior doors working will give home occupants more options to escape if a fire occurs.

Exterior doors should never be blocked and should always be in good working condition.

In the event of an emergency, all occupants in the house may need to exit quickly and may not be able to use the main entrance as it may be blocked by a fire or some other kind of emergency situation.

SMOKE / CO DETECTORS

*** Note in Comment box on the assessment if the home has smoke detectors, CO detectors or both. Also note the installation date(s) and/or the expiry date(s) of each.**

General - Smoke/CO detectors will alert occupants of a fire or high CO levels with enough time in advance to escape.



Smoke/CO Detectors can save lives. They are designed to alert all occupants in a building in the event of a fire, smoke or carbon monoxide build up. The batteries should be tested twice a year. It is recommended the battery be replaced once a year even if they seem to be in good working condition.

It is also important to have at least one Smoke/CO detector on each level, located outside any bedroom or sleeping area, and not closer than 20 feet from a wood stove.

FIRE EXTINGUISHERS

General - Fire extinguishers are a home's first line of defence if a fire should occur. Each floor should have at least 1 Class ABC fire extinguisher.

"ABC Fire Extinguishers are very versatile. They are often the ideal choice being that they are able to put out many different types of fires. They use monoammonium phosphate which is a dry chemical that is able to quickly put out the fire. It is a pale yellow powder that is able to put out all three classes of fire; Class A for trash, wood and paper, Class B for liquids and gases, and Class C for energized electrical sources. The dry chemical smothers the fire. It can leave a residue once the fire has been put out so keep this in mind when choosing this type of extinguisher."

Source: Select Safety Sales

<https://www.selectsafetysales.com/c-139.aspx?searchEngineName=abc-fire-extinguishers>



Fire extinguishers require a minimal amount of maintenance. The following are recommended:

- Monthly visual inspection
- Have a professional inspect and maintain your fire extinguishers once a year
- Perform a six-year inspection on your fire extinguishers. The six-year inspection is like the yearly inspection except the inspector empties the contents, and takes apart and inspects all inner mechanical parts.

Source: <https://www.richfire.com/how-to-properly-maintain-your-fire-extinguisher>



If a fire extinguisher malfunctions even though the gauge needle is in the green, tip the extinguisher upside down and tap the bottom with something hard in order to loosen the chemical compounds inside as they are known to settle and compact over time. By tapping the bottom this will loosen and separate the compound so that your extinguisher functions properly.

DOORS AND WINDOWS

All doors and windows should be kept in working condition and clear of debris so that occupants have several options to exit or escape in the event of an emergency.

Windows located on a second floor or other upper levels will require the installation of an escape ladder system. Having a ladder that can be attached and used as an escape route from a house that is on fire can save lives.



[Link](#) to ladder



[Link](#) to ladder

STAIRCASE AND HANDRAILS

Staircases leading to upper or lower levels of a home should be kept free from debris and clutter. Handrails and stair treads should be secure and properly maintained.

Anyone using the staircase could trip or fall due to clutter that keeps them from being able to reach the handrail. Improperly maintained stair treads could result in occupants tripping or falling.

In the event of an emergency, responders entering the building could be injured by tripping or falling while going up or down a staircase.

PLUMBING

General - Plumbing leaks in a home are detrimental structurally, and health wise.

Mould causes serious respiratory issues such as asthma, memory loss, insomnia, anxiety, depression, trouble concentrating, and confusion.

For further information on mould and its effects on human health:

<https://www.medicalnewstoday.com/articles/323419>

<https://www.poison.org/articles/2011-oct/mold-101-effects-on-human-health>

Wood rot (i.e. soft rot that decays the wood tissues, or the decay of wood by a fungi that is present and attacks the wood having high moisture content) is caused by the prolonged presence of water or moisture in the wood.



Dampness penetration leading to timber defects



Interior mould caused by leaks

For further information on plumbing leaks:

<https://www.angieslist.com/articles/signs-hidden-water-leak-your-bathroom.htm>

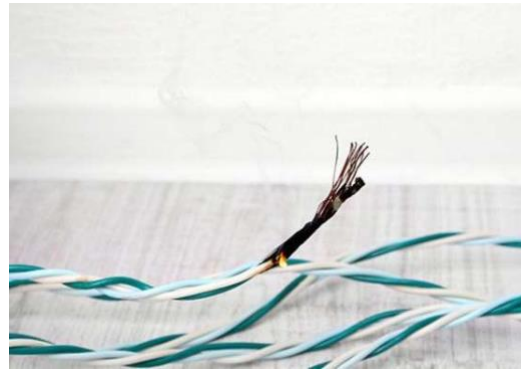
ELECTRICAL

General – During an emergency, external response agencies may be serving the community and may be required to turn off the power to any and every home. GFCI receptacles properly installed and proper wiring in the home will save lives.

Electrical Panel - Every home has an electrical panel. Every electrical panel should be kept clear of obstructions and debris to ensure clear access by safety responding agencies in the case of an emergency.



Electrical panel blocked by storage



Frayed wires

For information on labeling an electrical panel:

<https://kbelectricpa.com/labeling-your-electrical-panel-why-its-important/>

Aluminum Wiring – Aluminum wiring is a major safety concern. It was used in many areas of Canada in the mid 1960's through the mid 1970's. Aluminum wiring is a much weaker conductor compared to copper wiring.

As electricity travels through wiring it heats the wires. Copper, being a denser metal compound, disperses the heat quicker than aluminum.

For further information on aluminum wiring:

<https://www.canadianhomeinspection.com/home-reference-library/electrical/aluminum-wiring/#:~:text=Aluminum%20wiring%20was%20used%20extensively%20in%20Canada%20from,or%20copper.%20Others%20have%20a%20combination%20of%20both>

HEATING SYSTEMS (Furnaces)

General - Keeping household heating systems clean, along with regular maintenance, will keep the heaters working efficiently and reduce malfunctions and breakdowns. All heating systems (furnaces) require maintenance:

- Air filters should be changed 1 to 2 times a year. This will cut down on the amount of dust that will be in the air you breath.
- The recommended increments for cleaning the furnace ducts is every 3 to 5 years. If the heating system needs cleaning more than once a year, there may be a problem with the system that is allowing dirt to infiltrate the components.

Maintenance tips for gas furnaces:

<https://www.airductors.net/article5/>

BASEBOARDS AND SPACE HEATERS

General - Keeping household heating systems clean, along with regular maintenance, will keep the heaters working efficiently and reduce malfunctions and breakdowns.

Baseboard heaters should be cleaned twice a year. Dust build up can cause reduced efficiency. When dust clogs the heater fins they are unable to radiate heat effectively which can lead to over use that can eventually cause damage to the units, not to mention high electrical bills.



Information on cleaning baseboard heaters:

<https://www.thespruce.com/dirty-things-in-your-home-to-clean-now-3017376>

WOOD STOVE

Wood Heat:

Refer to “Wood Heat Guide”

HOME SAFETY PLAN

General – Having a Home Safety Plan and reviewing it with all the people living in the home will save lives should a fire or other emergency take place.

A reliable safety plan should consist of at least the following elements:

- A basic drawing of the home's floor plan showing all interior and exterior doors, windows, and staircases
- Look for all possible escape routes and consider all alternate routes
 - There should be 2 ways out of every room – especially sleeping areas
- Keep an escape ladder handy if there is a second floor or high windows
- Decide who will be responsible for helping children, seniors, people with disabilities and others who require assistance
- Set-up a safe meeting place where everyone will gather at the edge of the property near or at the street where safety responders will be approaching from
 - Ensure everyone knows they should not go back into the home for any reason (possessions, pets, etc.)
- Review the safety plan and practice it at least once a year
- Review smoke and fire safety basics:
 - If a door is hot, do not open it
 - If there is smoke in the house, crawl to the exit. Smoke rises so the air will be more oxygen rich close to the floor
- Keep the fire escape plan in plain view in the kitchen or whichever room people are together the most