

MIND your business



Institute for Catastrophic
Loss Reduction

Building resilient communities

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Make your business wildfire ready

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No one thing prevents wildfire risk completely – the solution requires a system. Research has shown there are clear steps you can take to give your commercial building a much better chance of surviving an encounter with wildfire. This guide provides four sets of steps that are grouped to provide the most impact for the time and cost involved. Get started today and be wildfire ready.

Start here

Install a roof that is rated Class A, based on testing to ASTM E108 or UL 790

Low- and steep-sloped roofs are rated from Class A to Class C, with Class A providing the most fire protection. Some are unrated, (e.g., wood shake roof). If you are considering replacing your roof, re-roof with a Class A-rated roofing material.

- Flat/low-sloped roofs with stone-ballasted single ply membranes or loose gravel surfaced built-up typically meet Class A. Many other flat roof systems are Class A, but documentation is needed to confirm the rating (or have a discussion with a licensed roofing contractor).
- Steep-sloped roofs with asphalt shingles, clay, slate, and concrete tile roofs are Class A fire-rated. Metal is another good option.
- Any openings between the roof covering and roof deck at the roof edge and/or ridge should be plugged using a non-combustible material (i.e., bird-stop).

Clear debris from gutters and roof

- Incorporate a procedure into a routine maintenance plan for the building(s).
- Recommended at every season change and after any storm or high-wind event.

Create a buffer around your building (0 to 1.5 metre non-combustible zone)

Pay special attention to the 1.5 metres immediately surrounding your building. This area should be designed and maintained to keep fire or embers from igniting materials and spreading fire to your building.

- Install hard surfaces around the building, such as a concrete, brick or asphalt walkway or parking area, or use non-combustible mulch products or rocks.
- While best practice is to have no vegetation, choosing limited use of FireSmart™ recommended vegetation will keep your risk low.
- Remove dead vegetation and implement a maintenance strategy to keep the area clear of all debris.
- Remove branches that may overhang your roof or gutters.
- Do not store combustible items – such as wooden pallets, propane tanks, paper or cardboard bales, and flammable liquids – in this zone.

Remove items under a raised deck, balcony, or attached wood walkways

To prevent ignition and fire spread to your building, do not use these areas as long-term storage.

- Do not store combustible items under decks, balconies or other building attachments.
- It is best practice to store items long-term either indoors or at least 10 metres from the building if possible.
- If you have a multi-family business (condos/stratas, apartments, hotels or public/affordable housing), ask tenants/staff to move all items from their balconies and patios indoors on very high fire danger days.

Add or upgrade your vent screens

Flying embers can enter your building through vents in your roof, walls, or beneath the building.

- Make sure vents have a metal screen $\frac{1}{8}$ inch or about 3 millimetres or finer to block embers from entering and igniting your building. Be sure to check screens periodically and remove accumulated debris, birds nests, etc.
- Install spark arrestors with $\frac{1}{2}$ inch or about 13 millimetre mesh screening at the outlet of all chimneys.



Class A commercial roof.

Keep going

Once you've addressed the critical actions, keep going with these low-cost steps that further reduce your risk.

Go beyond the 0 to 1.5 metre building ignition zone

Embers can easily start fires in and around your building and can collect in these areas.

- Remove dead material from vegetation, including ground cover, dead shrubs and tree branches, using a regular maintenance schedule.
- If planting vegetation, create islands or groupings of greenery in parking lots that will result in a discontinuous path of vegetation, thereby making it difficult for the fire to burn directly to the building.
- Trim upper branches of trees so that they are at least 3 metres away from branches of neighbouring tree crowns.
- Trim the bottom of trees so that all branches are at least 2 metres from the ground and at least three times higher than any shrubs nearby.

Provide non-combustible gutter cover devices for gutters

If the roof slope allows, gutter cover devices should be installed so that they are parallel to the plane of the roof slope (with steeper-sloped roofs, this may not be possible).

Replace combustible fencing or gates attached to the building

Help stop fire spreading from the fence to your building.

- If you have fencing (with or without gates) attached to your building that is made of combustible materials such as wood or plastic, replace at least the first 5 feet, or 1.5 metres, closest to the building with metal or other non-combustible options. If your eave is low, potential flames from a burning fence can reach your eave.
- If possible, choose fencing and gates with vertical rails or chain links instead of solid fences/gates to allow embers to pass through rather than accumulate.



When attached to buildings, flammable fencing can cause fire spread and ignition of structures.

Provide proper building identification

Building identification should be provided at each vehicle access entrance and should be visible from all directions of travel.

- Signage should be made from non-combustible materials.
- Street numbers should be at least 4 inches or 10 centimetres high, reflective, and applied on a contrasting background.



If you have a low elevation combustible walkway or deck (attachment), enclose this area

- If your combustible attachment sits less than 4 feet or 1.2 metres above the ground, enclose it with a non-combustible siding product or use 1/8 inch or 3 millimetre or finer mesh around the combustible walkway or deck perimeter. This will keep debris out and keep embers from collecting underneath.
- Be sure the enclosed space is adequately ventilated to minimize the chance of water-related damage (i.e. fungal decay, fastener corrosion, etc.).

Level up!

When time and budget allow, these next steps will address additional vulnerable areas of your property.

Move small structures and combustibles away from the building

- Make sure small structures like sheds, garbage containment and other outbuildings are located at least 10 metres away from your main building. If they can't be moved, consider retrofitting or enclose them with non-combustible materials. Structures within 10 metres of your main building should be maintained just like the 0 to 1.5 metre non-combustible zone.



Garbage containment areas should be built with non-flammable materials and be located at least 10m from the building.

- High-piled storage of combustible material should not exceed 3 metres in height and should be located a minimum of 15 metres from the building.
- Outdoor storage of large quantities of combustible and flammable liquids should be located more than 15 metres away from the building or stored in detached non-combustible buildings.
- Liquid Petroleum tanks (such as propane) should be located at least 15 metres from the building and other structures on the property.

Replace combustible walkway, balcony, decks or stairs with a non-combustible /fire-resistant material

When constructing a new building attachment, use metal joists and a non-combustible walking surface like metal or lightweight concrete. If you cannot find these materials in your area, use plastic composite or hardwood instead of medium/low density wood such as redwood and cedar.

Enclose eaves

If your building has open eaves, box them in, enclose them or install non-combustible soffit. If fire reaches the area below an open eave, heat can build up and ignite exposed materials. Embers can also circulate here, increasing the chance they will enter your building if vents don't have screens.

Go the last mile!

Consider these final actions for reducing your risk.

Upgrade to tempered insulating glass

Replace single-pane windows with tempered insulating glass windows, especially for first-floor windows on a multi-story building.

Replace your building's exterior wall cladding and exterior doors

If you have combustible siding like un-treated wood or vinyl, the best practice is to replace it with a non-combustible material like metal, concrete or brick.

Improve site access and firefighting capabilities

Entrances and driveways should be at least 12 feet or 3.6 metres wide with at least 13.5 feet or 4 metres of vertical clearance between roadway and vegetation. The angle of approach and departure should be designed to allow for emergency vehicle access without damaging the equipment when entering or leaving the driveway.



Adapted from 'Be Wildfire Ready: A guide to help you protect your property from wildfire' by the Insurance Institute for Business & Home Safety (IBHS) with sincere thanks.

Institute for Catastrophic Loss Reduction

Mission

To reduce the loss of life and property caused by severe weather and earthquakes through the identification and support of sustained actions that improve society's capacity to adapt to, anticipate, mitigate, withstand and recover from natural disasters.

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