

## Wood roofing materials in noncombustible buildings

In the installation of roofing, wood cant strips, roof curbs, nailing strips, and similar components may be used. Wood roofs defined as 'heavy timber construction' in the NBC are permitted in any noncombustible building two-storeys or less in height when the building is protected by a sprinkler system.

Roof sheathing and sheathing supports of wood are permitted in noncombustible buildings provided:

- they are installed above a concrete deck;
- the concealed space does not extend more than 1 m (39 in) above the deck;
- the concealed roof space is compartmented by fire blocks;
- openings through the concrete deck are located in noncombustible shafts;
- parapets are provided at the deck perimeter extending at least 150 mm (6 in) above the sheathing; and
- no building services are located on the roof other than those placed in noncombustible shafts.

The noncombustible parapets and shafts are required to prevent roof materials igniting from flames projecting from openings in the building face or roof deck.

Roof coverings have often been contributing factors in conflagrations. Most roof coverings, even today, are combustible by the very nature of the materials used to make them waterproof.

The objective of the NBC is to require that the risks associated with a roof covering be minimized for the type of building, its location and use.

The NBC permits roof coverings that meet a Class C rating to be used for any building regulated by Part 3, including any noncombustible building, regardless of height or area.

This C rating can be met easily using fire-retardant-treated wood (FRTW) shakes or shingles, asphalt shingles, or roll roofing.

In buildings that are required to be of noncombustible construction, the roof coverings must have a fire classification of Class A, B or C. In such cases, the use of FRTW shakes and shingles on sloped roofs is allowed.

Small assembly occupancy buildings not more than two-storeys in building height and less than 1000 m<sup>2</sup> (10,000 ft<sup>2</sup>) in building area do not require a classification for the roof covering. In these traditional cases, untreated wood shingles are acceptable if they are underlaid with a noncombustible material to reduce the potential for burn through.