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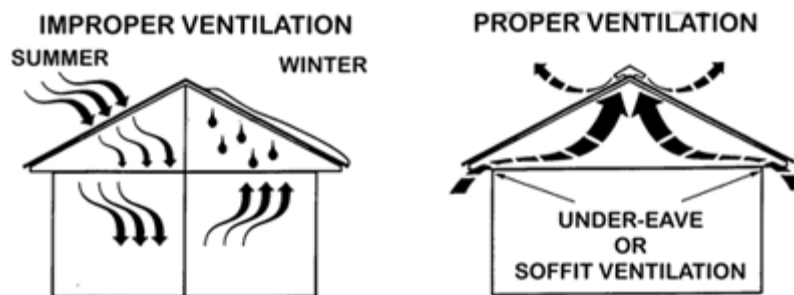
## PROPER VENTILATION FOR ASPHALT SHINGLE COVERED ROOFS

Although not usually recognized as a major design consideration, the proper ventilation of the attic area is an essential factor in gaining the maximum service life out of the building materials used in the roof assembly, in addition to improving heating and cooling costs. Overlooking this consideration may result in premature failure of the roofing system:

- Blistering, distortion, curling or accelerated ageing of the asphalt shingles
- Rotting of the wood structure, wet insulation due to condensation
- Buckling of the roof deck

In recent times, energy conservation measures have produced a situation where heat and moisture move into the attic and are retained there. Improved insulation and better weatherstripping are the two major factors bringing about this effect.

To correct this problem, one needs to provide proper ventilation to ensure free and unobstructed air movement beneath the roof surface.



The National Building Code requires that all roof and attic spaces above an insulated ceiling shall be ventilated with openings to the exterior to provide unobstructed vent areas of not less than 1 sq ft/300 sq ft of insulated ceiling area. For low slope roofs or those with cathedral ceilings, the ratio is 1 sq ft/150 sq ft. The vents shall be uniformly distributed on opposite sides of the building, in such a way that approximately 50% are near the lower part of the roof (inflow) and approximately 50% near the ridge (outflow).

Vent manufacturers should be consulted on the proper use of their products.

Please also refer to [CASMA Technical Bulletin no. 2](#), which addresses the special concerns relating to low slope and cathedral ceilings.

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