

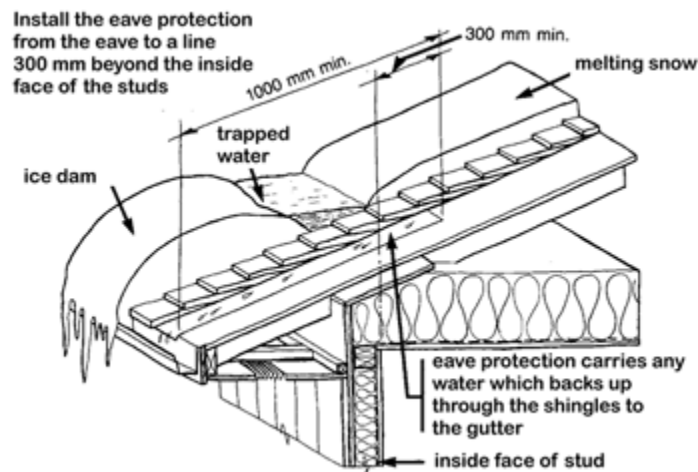
No. 10

1996-10-11

Revised:

PREVENTING PROBLEMS FROM ICE DAMS

Roof structures will sometimes fail due to the formation of ice dams. Ice dams are formed by the continuous melting and freezing of snow due to heat escaping from the house or by the backing up of frozen slush from the gutters. The melted water flows under the snow and freezes as it reaches the unheated soffit, thus creating the ice dam. When this occurs, water can be forced under the shingles and into the attic, causing damage to the home's ceilings, walls, insulation, gutters, eave and roof.



To reduce ice dam formation and prevent ice dam problems:

1. Keep the attic space cold by insulating it from the warm house interior, thus reducing or eliminating snow melt
2. Use high heel trusses, insulate to the outside of the plates, and install cardboard baffles to ensure ventilation at the eaves
3. Ensure that the outer edges of the gutters or eaves trough are lower than the slope line to allow snow and ice to slide clear. Also ensure gutters are free of debris

Reference: Canadian Mortgage and House Corporation, *Roofing and Flashing Problems*, publication NHA 6076.

Eave Protection requirements (NBC 9.26.5.1)

Materials for Eave Protection: (NBC 9.26.5.2)

- No. 15 asphalt-saturated felt laid in two plies lapped 480 mm and cemented together with lap cement

- Type M or S roll roofing laid with not less than 100 mm head and end laps cemented together with lap cement
- Glass fibre or polyester fibre coated base sheets, or
- Self-sealing composite membrane consisting of modified bituminous coated material

For proper application instructions, consult the manufacturer's recommendations.

The use of underlayment under shingles, though not mandatory, is highly recommended to provide a secondary protection in case of water penetration.

NOTE: Where icing conditions are severe, extending eave protection 1 m beyond the interior wall is recommended.

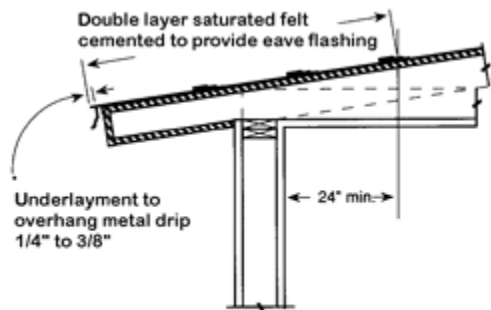


Figure A: Eaves flashing for low slope using asphalt saturated felt

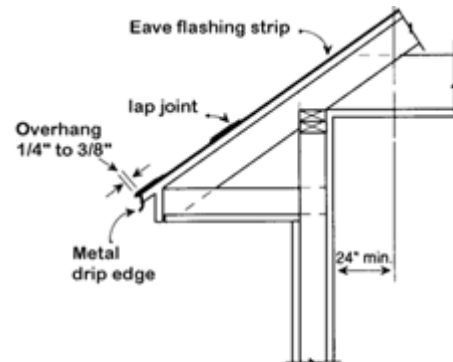


Figure B: Eaves flashing for normal slope using asphalt saturated felt

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Canadian Asphalt Shingle Manufacturers' Association