

Division Opinion

Inquiry: 2008-05

Subject: Existing Ice Barrier Protection

Code: 2006 International Residential Code
2006 International Building Code
2007 Minnesota State Building Code chapters 1305 and 1309

Submitted By: 10,000 Lakes Chapter of the International Code Council
Uniformity of Inspections Committee

Approved By: Thomas Anderson, State Building Official

Issue Date: Aug. 1, 2008

Question: Does existing ice and water protection (if originally applied as code specified) need to be replaced when re-roofing a structure?

Answer: Multiple layers of self-adhering polymer bitumen sheet material can be installed depending on the manufacturer's specific installation instructions and warranty limitations.

Discussion: The removal of the ice barrier will most likely damage to the decking material. The application of a second ice barrier is permitted by several manufacturers. Requiring the roofing contractor to remove the existing (single layer) ice barrier prior to re-roofing the home can result in potential damage to the roof deck and increase the project cost to the homeowner with limited benefit.

Some manufacturers offer the following guidelines:

If only one layer of ice barrier is in place...

- Remove the existing ice barrier if it is possible to pull it up without damaging the deck material.
- Remove the existing ice barrier if it is not smooth and laying flat.
- Remove the existing ice barrier if the deck is damaged or deteriorated.
- **Leave the existing ice barrier on the deck if it cannot be removed without damage to the deck.**
 - Install new ice barrier over the existing membrane on the roof deck.
 - To minimize any unevenness that may be visible through the new shingles, offset any laps in the new and existing ice barrier and **“feather in”** the new ice barrier by extending the new material a minimum of 8 inches past the old ice barrier.

If two or more layers of ice barrier are in place...

- If two or more layers of ice barrier are in place, all layers should be removed **if possible**.
 - To prevent a potential build-up of material resulting in a water stop where shingles are attempting to bridge three layers of ice barrier that could leak.
 - To prevent a potential build-up of material resulting in an uneven substrate that may be visible through the new shingles that could look unattractive and cause aesthetic complaints.
 - To allow the deck to be examined for damage and deterioration.

Can three or more layers of ice barrier ever be installed?

- If removal of the existing ice barrier cannot be accomplished without damaging the deck, then the **roofing contractor may choose** to either:
 - Replace the deck or
 - May attempt to “feather in” the new layer by extending the material a minimum of 8 inches past the existing material.
- Caution should be taken to avoid a build-up of material that can divert water resulting in a leak or create an unappealing visual effect. If either of these occurs, then all layers should be removed.
- **If two or more layers of ice barrier are in place, they may need to be removed for the roof to qualify for the manufacturer’s limited warranty.**

Background Information: Minnesota has historically required the installation of ice dam protection material to prevent a backup of water at the roof eaves. Terminologies have changed over the years (i.e. ice barrier, ice protection, ice dam membrane, ice dam protection...) in the model codes but the general requirements have remained the same. In areas subject to ice forming at the eaves, including Minnesota, have required either two-layers of underlayment cemented together (IRC R905.2.7.1, IBC 1507.2.8.2, UBC 1507.5 & Table 15-B-1) or a self-adhering polymer modified bitumen sheet used in lieu of normal underlayment.

Typically contractors, designers and roofing contractors have installed the self-adhering polymer modified bitumen option in Minnesota in lieu of cementing two-layers of underlayment for ice protection. The self-adhering material has been popular with the contractors for several years due to the convenience of installation as compared to the labor required to cement two-layers of underlayment together. Use of these materials has also provided convenient for the building inspection industry by eliminating the question of whether the underlayments were actually cemented together.