

HOFFMAN ESTATES RESIDENTIAL ROOFING CODE CLARIFICATION

Hoffman Estates has adopted the 2009 International Residential Code which states:

1. REQUIREMENTS FOR ROOF COVERINGS

R905.2.7.1 Ice protection. In areas where there has been a history of ice forming along the eaves...an ice barrier that consists of a least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the eave's edge to a point at least 24 inches (610 mm) inside the exterior wall line of the building.

Exception: Detached accessory structures that contain no conditioned floor area.

2. R905.2.8.2 Valleys. Valley linings shall be installed in accordance with manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:

- a. For open valley (valley lining exposed) lined with metal, the valley lining shall be at least 24 inches wide and of any of the corrosion-resistant metals in Table R905.2.8.2.
- b. For open valleys, valley lining of two plies of mineral surface roll roofing, complying with ASTM D 249, shall be permitted. The bottom layer shall be 18 inches and the top layer a minimum of 36 inches wide.
- c. For closed valleys (valley covered with shingles, valley lining of one ply of smooth roll roofing complying with ASTM D 224 Type II or Type III and at least 36 inches wide or valley lining as described in Items 1 and 2 above shall be permitted. Specialty underlayment complying with ASTM D 1970 may be used in lieu of the lining material.

3. R905.2.3 Underlayment. Unless otherwise noted, required underlayment shall conform with ASTM D 226, Type I, or ASTM D 4869, Type I.

R905.2.7 Underlayment application. For roof slopes from two units vertical in 12 units horizontal, up to four units vertical in 12 units horizontal underlayment shall be two layers applied in the following manner. Apply a 19-inch strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches, and fastened sufficiently to hold in place. For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches, fastened sufficiently to hold in place. End laps shall be offset by 6 feet.

4. ROOF VENTILATION

R806.1 Ventilation required. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilating openings

shall be provided with corrosion-resistant wire mesh, with 1/8 inch minimum to 1/4 inch maximum openings.

R806.2 Minimum area. The total net free ventilating area shall not be less than 1 to 150 of the area of the space ventilated except that the total area is permitted to be reduced to 1 to 300, provided at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1 to 300 when a vapor barrier having a transmission rate not exceeding 1 perm is installed on the warm side of the ceiling.

5. DRIP EDGE

Drip edge is not required by code, however it can be required by the construction technique used at the gable ends of the roof. Also, some shingle manufacturers may require it. Simply stated, if the home has drip edge it must be replaced if removed upon re-shingling.

CLARIFICATIONS:

1. Hoffman Estates' average daily temperature in January is 21degrees and therefore requires ice protection. Ice and Water Shield is a named brand self-adhering sheet. Only 1 layer is required. However, 2 rows may be required on homes that have greater than 12-inch overhangs to bring it past the inside wall 24 inches as required.
2. Valley lining or flashing must be installed per manufacturer's requirements or 1 of the 3 options detailed above. Typical manufacturer instructions include wording such as this: ...A closed-cut valley can be used as an alternative and is applied as follows: Lay a 36"-wide valley liner of self adhered membrane underlayment or equivalent. A 36"-wide minimum 50-lb. smooth surface roll roofing can also be used as a valley liner...
3. Type I underlayment is required by the code section above. Type I is 15# felt. No. 15 felt underlayment is required to be overlapped 19 inches for roofs under 4/12 pitch. A single layer of 30# felt is not a substitute for this requirement.
4. For example if a roof vent has 50 square inches of free ventilation then it would require approximately 1 vent for every 200 square foot of attic space and the equivalent ventilation in the soffits.