

**CITY OF NORTH CANTON, OHIO**  
**145 North Main St., North Canton, OH 44720-2587**  
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**RESIDENTIAL GUIDELINES FOR NEW ROOF**

**SECTION 905**  
**REQUIREMENTS FOR ROOF COVERINGS**

**905.1 Roof covering application.** Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions. Unless otherwise specified in this section, roof coverings shall be installed to resist the component and cladding loads specified in Table 301.2(2), adjusted for height and exposure in accordance with Table 301.2(3).

**905.2 Asphalt shingles.** The installation of asphalt shingles shall comply with the provisions of this section.

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**905.2.1 Sheathing requirements.** Asphalt shingles shall be fastened to solidly sheathed decks.

**905.2.2 Slope.** Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) up to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section 905.2.7.

**905.2.3 Underlayment.** Unless otherwise noted, required underlayment shall conform to ASTM D 226 Type I, ASTM D 4869 Type I, or ASTM D 6757.

Self-adhering polymer modified bitumen sheet shall comply with ASTM D 1970.

**905.2.4 Asphalt shingles.** Asphalt shingles shall comply with ASTM D 225 or D 3462.

**905.2.4.1 Wind resistance of asphalt shingles.** Asphalt shingles shall be tested in accordance with ASTM D 7158. Asphalt shingles shall meet the classification requirements of Table 905.2.4.1(1) for the appropriate maximum basic wind speed. Asphalt shingle packaging shall bear a label to indicate compliance with ASTM D 7158 and the required classification in Table 905.2.4.1(1).

**Exception:** Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D3161 and the required classification in Table 905.2.4.1(2).

**905.2.5 Fasteners.** Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12 gage [0.105 inch] shank with a minimum 3/8-inch diameter head, ASTM F 1667, of a length to penetrate through the roofing materials and a minimum of 3/4 inch into the roof sheathing. Where the roof sheathing is less than 3/4 inch thick, the fasteners shall penetrate through the sheathing. Fasteners shall comply with ASTM F 1667.

**905.2.6 Attachment.** Asphalt shingles shall have the minimum number of fasteners required by the manufacturer, but not less than four fasteners per 4101:8-9-01 7 strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal (21:12, 175 percent slope), shingles shall be installed as required by the manufacturer.

**905.2.7 Underlayment application.** For roof slopes from two units vertical in 12 units horizontal (17-percent slope), up to four units vertical in 12 units horizontal (33-percent slope), underlayment shall be two layers applied in the

following manner. Apply a 19-inch strip of underlayment felt parallel to 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. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. 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. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be offset by 6 feet.

**905.2.7.1 Ice barrier.** In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table 301.2(1), 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 lowest edges of all roof surfaces to a point at least 24 inches inside the exterior wall line of the building.

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

**905.2.7.2 Underlayment and high wind.** Underlayment applied in areas subject to high winds [above 110 mph per Figure 301.2(4)] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches on center.

**905.2.8 Flashing.** Flashing for asphalt shingles shall comply with this section.  
**905.2.8.1 Base and cap flashing.** Base and cap flashing shall be installed in accordance with manufacturer's installation instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch thickness or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet. Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch thickness.

**905.2.8.2 Valleys.** Valley linings shall be installed in accordance with the manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:  
1. For open valleys (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 905.2.8.2.  
2. For open valleys, valley lining of two plies of mineral surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches and the top layer a minimum of 36 inches wide.  
3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 and at least 36 inches wide or valley lining as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

**905.2.8.3 Sidewall flashing.** Flashing against a vertical sidewall shall be by the step-flashing method. The flashing shall be a minimum of 4 inches high and 4 inches wide. At the end of the vertical sidewall the step flashing shall be turned out in a manner that directs water away from the wall and onto the roof and/or gutter.

**905.2.8.4 Other flashing.** Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied according to the asphalt shingle manufacturer's printed instructions.

**I hereby do certify that all information given below is correct and accurate and has been included as part of the submitted plans, if required.**

\_\_\_\_\_  
PRINTED NAME (OWNER/APPLICANT)

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

ADDRESS OF PROJECT \_\_\_\_\_