# Residential Re-Roof

This tip sheet reflects code requirements of the 2021 International Residential Code (IRC) with Washington State Amendments.

Please verify the following before calling for a re-roof inspection.

This checklist is intended for use to prepare for an inspection. This is only a general list and is not intended to address all possible conditions. References are to the 2021 International Residential Code (sections are designated as R).

## Inspections

☐ Depending on the jurisdiction, typically the building inspector performs two to three site inspections for re-roofs, which include: pre-inspection, nailing or progress inspection, and final. (R109.1.5)

## Nailing or In-Progress Inspection

☐ Where the existing roofing material is being completely removed and replaced, and the underlying sheathing is being replaced or added over skip sheathing, a nailing inspection is required prior to any roofing materials being placed.

☐ Where an additional layer of roofing material is placed over an existing layer, an in-progress inspection is required.

- Exception: Bellevue does not require an in-progress inspection for overlays.

## Final

☐ Final inspection shall be scheduled when all the work is complete.

## Permits and Plans

☐ Permits are required for residential re-roof overlays in **Snoqualmie**. (Overlays occur when new roofing is installed over existing roofing.)

☐ Permits and approved plans are required for residential re-roof involving structural elements, including, but not limited to: additions or modifications, roof sheathing, skylights, change of roof pitch, addition or relocation of mechanical units, or installation of heavier materials than were previously installed.

☐ Job address is posted in a visible location. (R319.1)

☐ Permit and approved plans (when required) are on site and accessible to the inspector. (R105.7, R106.1.1, R106.3.1)

☐ Permit information is correct (address, permit number, description of work, etc.).

## General Re-Roof Requirements

- ☐ New roof coverings shall not be installed without first removing all existing layers of roof coverings when any of the following conditions exist: (1) the existing roofing is water soaked or is degraded to such a point that it cannot provide an acceptable base to the additional roofing, (2) where the existing roof covering is wood shake, slate, clay, or cement tile, and (3) where the existing roof has two or more applications. (R908.3.1.1)
- ☐ When the application of new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface is to be covered with gypsum board, mineral fiber, glass fiber or other approved material and securely fastened in place. (R908.4)
- ☐ Flashings must be reconstructed in accordance with approved manufacturer's installation instructions. (R908.6)
- ☐ Structural framework must be capable of supporting additional dead loads. (Pre-inspection required for structural rafter/truss dimensions and spans.) (R908.2)
- ☐ Contact the jurisdiction having authority for any other types of roof overlays.

## Roof Slope

- ☐ The minimum roof slope for asphalt shingles is 2:12. Roof slopes between 2:12 and up to 4:12 require double underlayment, as detailed in IRC Table R905.1.1(2). See special installation requirements of manufacturer and IRC. (R905.2.2)
- ☐ The minimum roof slope for clay and concrete tiles is 2-1/2:12. Roof slopes between 2-1/2:12 and up to 4:12 require double underlayment as detailed in IRC Table 905.1.1(2). See special installation requirements of manufacturer and IRC. (R905.3)
- ☐ The minimum roof slope for metal roof shingles is 3:12. See special installation requirements from the manufacturer and IRC. (R905.4)
- ☐ The minimum roof slope for mineral surfaced rolled roofing is 1:12. See special installation requirements from the manufacturer and IRC. (R905.5)
- ☐ The minimum roof slope for slate and slate-type shingles is 4:12. See special installation requirements from the manufacturer and IRC. (R905.6)
- ☐ The minimum roof slope for wood shingles is 3:12. See special installation requirements from the manufacturer and IRC. (R905.7)
- ☐ The minimum roof slope for wood shakes is 3:12. See special installation requirements of manufacturer and IRC. (R905.8)
- ☐ The minimum roof slope for lapped, non-soldered-seam metal roof panels is 3:12. See special installation requirements from the manufacturer and IRC. (R905.10)

- ☐ The minimum roof slope for standing-seam roof systems is 1/4:12. See special installation requirements from the manufacturer and IRC. (R905.10)
- ☐ The minimum roof slope for modified bitumen roofing is 1/4:12. See special installation requirements from the manufacturer and IRC. (R905.11)
- ☐ See sections R905.12 - R905.17 for other types of roofing applications.

## Roof Drainage

- ☐ Roofs shall be sloped as required for drainage unless designed for water accumulation.
- ☐ Unless sloped to drain over roof edges, roof drains are installed at each low point of the roof. Roof drains size and discharged per the Uniform Plumbing Code. (R903.4, WA Amendment)
- ☐ Overflow drains sized the same as the roof drains and installed with the inlet line 2 inches above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having minimum opening height of 4 inches installed in the adjacent parapet walls with the inlet line 2 inches above the low point of the adjacent roof. (R903.4.1 WA Amendment)
- ☐ Overflow drains discharge to an approved location and not connected to the roof drain lines. (R903.4.1)

## Plywood or Oriented Strand Board (OSB) Sheathing

- ☐ Check for rot or delamination of existing sheathing or framing.
- ☐ Correct span rating based on spacing of rafters or trusses. (R803.2.2, APA E30)
- ☐ Sheathing less than 1/2-inch thickness placed over rafters which are spaced more than 20 inches on center require plywood clips or blocked edges. Typically, 7/16-inch OSB with a span rating of 24/16 is used and will not require clips. (IRC Table R503.2.1.1(1)
- ☐ Sheathing exposed to weather (underside of eaves) must have exterior grade glue (marked as “Exposure 1”). (R803.2.1.1)
- ☐ Minimum prescriptive nailing is 8d common nails (i.e., 0.131 inches by 2-1/2 inches) at 6 inches on center at supported edges and 12 inches on center in the field. Edge nail pattern also applies over gable ends and diaphragm boundaries. (IRC Table R602.3 (1) for nails; IRC Table R602.3 (2) for staples)
- ☐ Sheathing cut into widths less than 24 inches require solid blocking at all panel edges. (NDS 4.2.7)
- ☐ Fastener’s heads or crowns must not penetrate the outer veneer of plywood. (NDS 4.2.6.3)
- ☐ Sheathing gapped 1/8 inch at edges. (APA E30)

## Ventilation of Attic or Rafter Bays

- ☐ Cross ventilation is provided in all attics. (R806)
- ☐ The aggregate area of openings shall be 1/150 of the area of the attic. (R806.2 with exceptions)
- ☐ When 40% and not more than 50% of openings are in the upper portion no more than 3 feet below the ridge or highest point of the space, the above ratios can be reduced to 1/300. (R806.2)
- ☐ Where eave or cornice vents are installed, insulation shall not block the free flow of air. Not less than a 1-inch air space shall be provided between the insulation and roof sheathing and at the location of the vent. (R806.3)

## Final Inspection

- ☐ Proper installation of roof covering. Fasteners are installed as required for the type of roofing material and per manufacturer's instructions. (R905)
- ☐ Flashings to cover all exposed sheathing edges. Proper flashings & counter flashings at chimneys, skylights, roof-to-wall transitions, as required for the type of roofing material and manufacturer's installation instructions. (R905)