RE-ROOF REQUIREMENTS

BUILDING SERVICES DIVISION REQUIREMENTS

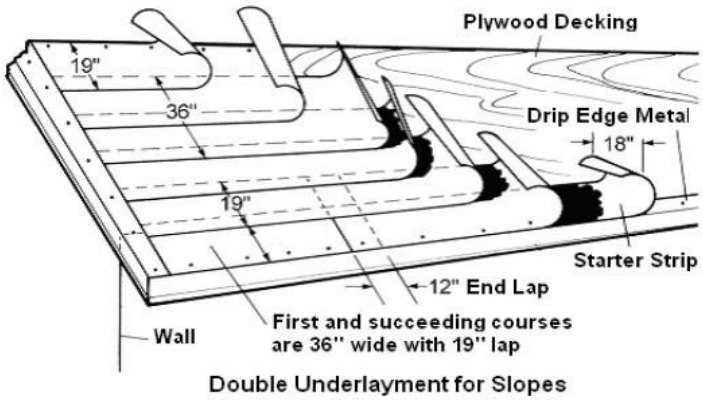
A permit is required for all re-roof installations and repairs of more than 100 square feet.

CODE REFERENCE:

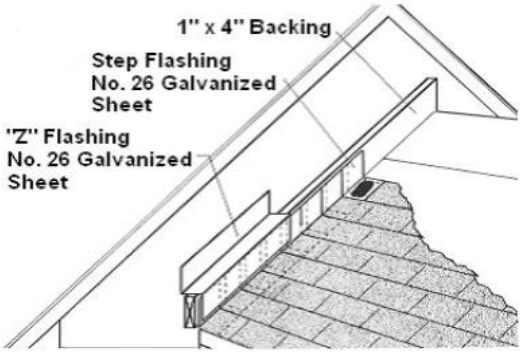
- 2022 California Building Code (CBC) Section 1507
- 2022 California Residential Code (CRC) Section R905

ROOF COVERINGS

- **Deck Requirements** – Asphalt shingles shall be fastened to solidly sheathed decks (CBC §1507.2.1 & CRC §R905.2.1).
- **Slope** – Asphalt shingles shall only be used on roof slopes of 2 units vertical in 12 units horizontal (17% slope) or greater. For roof slopes from 2 units vertical in 12 units horizontal (17% slope) up to 4 units vertical in 12 units horizontal (33% slope), double underlayment application is required in accordance with CBC §1507.2.2 & CRC §R905.2.2.
- **Underlayment** – Unless otherwise noted, required underlayment shall conform to ASTM D 226, Type I, ASTM D 4869, Type I, or ASTM D 6757 (CBC §1507.1.1, Table 1507.1.1(1) & CRC §R905.2.3).
- **Asphalt Shingles** – Asphalt shingles shall have self-seal strips or be interlocking and comply with ASTM D 3462. (CBC §1507.2.4 & CRC §R905.2.4).
- **Fasteners** – Fasteners for asphalt shingles shall be galvanized, stainless steel, aluminum or copper roofing nails, minimum 12 gage shank with a minimum 3/8 inch-diameter head, 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 nails shall penetrate through the sheathing. Fasteners shall comply with ASTM F 1667(CBC §1507.2.5 & CRC §R905.2.5).
- **Attachment** – Asphalt shingles shall have the minimum number of fasteners required by the manufacturer and CBC Section 1504.1. Asphalt shingles shall be secured to the roof with not less than 4 fasteners per strip shingle or 2 fasteners per individual shingles. Where the roof slope exceeds 21 units vertical in 12 units horizontal (175% slope), asphalt shingles shall be installed as required by the manufacturer. (CBC §1507.2.6 & CRC §R905.2.6).
- **Underlayment Application** – For roof slopes from 2 units vertical in 12 units horizontal (17% slope) and up to 4 units vertical in 12 units horizontal (33% slope), underlayment shall be 2 layers applied in the following manner. Apply a minimum 19-inch-wide 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, by 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 4 units vertical in 12 units horizontal (33%s 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 (CBC Table 1507.1.1(2) & CRC Table 905.1.1(2)).



Double Underlayment for Slopes
From 2 in 12 to Slopes of 4 in 12.
FIGURE 1



Wall to Roof Intersection/Step Flashing
CBC Section 1503.2.1
FIGURE 2

- **Valleys –** Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted: (CBC §1507.2.8.2 & CRC §R905.2.8.2).
  - For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least 24 inches (610 mm) wide and of any of the corrosion-resistant metals in CBC Table 1507.2.8.2 & CRC Table R905.2.8.2.
  - For open valleys, valley lining of 2 plies of mineral-surfaced roll roofing complying with ASTM D 3909 or ASTM D 6380 shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.
  - For closed valleys (valleys covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 and not less than 36 inches (914 mm) wide or types as described in Items above shall be permitted. Specialty underlayment shall comply with ASTM D 1970.

CBC Table 1507.2.9.2 & CRC Table R905.2.8.2
VALLEY LINING MATERIAL

Material	Minimum Thickness	Gage	Weight
Aluminum	0.024 in.	--	--
Cold-rolled copper	0.0216 in.	--	ASTM B 370, 16 oz. per square ft.
Copper	--	--	16 oz
Galvanized steel	0.0179 in.	26 (zinc-coated G90)	--
High-yield copper	0.0162 in.	--	ASTM B 370, 12 oz. per square ft.
Lead	--	--	2.5 pounds
Lead-coated copper	0.0216 in.	--	ASTM B 101,16 oz. per square ft.
Lead-coated high-yield copper	0.0162 in.	--	ASTM B 101, 12 oz. per square ft.
Painted terne	--	--	20 pounds
Stainless steel	--	28	--
Zinc alloy	0.027 in.	--	--

Note- change CBC- Table to 1507.2.8.2

- **Drip edge** – Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 2 inches (51 mm). Eave drip edges shall extend 1/4 inch below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) O.C. (CBC §1507.2.8.3 & CRC §R905.2.8.5).
- **Crickets and saddles** – A cricket or saddle shall be installed on the ridge side of any chimney or penetration greater than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or of the same material as the roof covering (CBC §1503.5).

REROOFING

Material and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of the 2022 CBC §1512 and CRC S908. Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

- **Recovering versus replacement** – New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions occur (CBC §1512.2.1.1 & CRC §R908.3.1)
  1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
  2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.
  3. Where the existing roof has two (2) or more applications of any type of roof covering.

PERMIT PROCESS

- If the roof pitch is to change, please contact the Planning Division to determine if a separate permit is required.

Building Permit Review

- Building permits for re-roofs are available at the Building Services Division during permit counter hours.

Building Permit Application Requirements

- ☐ A complete Building Permit Application
- ☐ An approval letter from the Homeowner's Association (if applicable).
- ☐ One (1) digital copy of the manufacturer's specifications.

Inspections

All re-roofs require three (3) inspections:

1. For a **Tear-Off Inspection**:
   You are required to call and request this inspection **after** you have:
   - Removed all the old roofing materials.
   - Made all needed repairs.
   - Replaced all damaged wood.
   - Before you start to cover the sheathing.

   ***DO NOT COVER THE SHEATHING WITHOUT APPROVAL.**

2. An **In-Progress Inspection**:
   - Is required when you have completed 25% to 35% of the roofing coverage.
   - Once you are up to this point, it is your responsibility to call for an in-progress inspection of your project.
   - During this inspection the building inspector will ensure the correct materials and code methods are being followed

   ***DO NOT GET AHEAD OF THIS PERCENTAGE. IF SOMETHING IS NOT CORRECT OR PER CODE; THAT IS HOW MUCH MORE YOU WILL HAVE TO REPAIR.**

3. A finalization of your roof project or **Re-roof Final** is required once you have:
   - Finished the roofing work completely.
   - Painted all unpainted wood.
   - Hung all rain gutters as needed or required.
   - Ensured all smoke detectors and CO2 devices are in place at the time of inspection.
   - You also have the option to provide with a smoke detector/ CO2 affidavit, so we do not enter the home.

*You are required to have a safe and secured ladder that extends a minimum of 24" above the roof line and tied-off (as required by OSHA requirements) and you are required to have all required documentation (plans and or job card) for your project at the time of your inspection for the building inspector. The building inspector will not perform the inspection and you are going to have to reschedule your inspection.

**All work requires the installation of listed/approved smoke alarms per the CA Residential Code. A *carbon monoxide alarm* is required when there is an attached garage or fuel burning appliance, alarm(s) installed in the adjoining hallway(s) of the bedrooms and on every level of a dwelling unit including basement. See *City of East Palo Alto Smoke Example of Location for Smoke & Carbon Monoxide Alarm Handout* for additional information. The affidavit shall be submitted prior to the final inspection.