

Revised December 2018

## **PERMIT REQUIREMENTS**

A building permit is required when more than 100 square feet of roof covering is replaced. Permits can be obtained at the Building Inspection Division, City Hall, 37101 Newark Boulevard

## **PERMIT FEES**

Reroofing permit fees for single-family residential structures are based upon the number of inspections required. Reroofing permit fees for commercial, industrial, professional, and apartment buildings are based upon the valuation of the work or number of inspections required for the work.

## **ROOFING OVERLAYS**

Some composition and wood shingle roofs can be overlaid with new roofing materials without first removing the existing roofing provided the finished installation meets one of the following conditions:

- No more than two layers of lightweight composition shingles.
- No more than one layer of lightweight composition shingles and one layer of architectural grade dimensional composition shingles.
- No more than one layer of wood shingles overlaid by one layer of lightweight composition shingles.
- No more than one layer of lightweight composition or wood shingles overlaid by one layer of wood shakes.
- No more than two layers of wood shingles.

With some exceptions, other existing roofing materials shall be removed prior to installing a new roofing surface. Any exceptions would need to be approved by the Building Official.

## **INSTALLATION**

Roofing materials shall be installed as per the manufacturer's printed instructions and per Uniform Building Code Table 15-B-1 for composition shingles and 15-B-2 for wood shingles and shakes. Manufacturer's instructions shall be available at the site during inspections.

## **ROOF DECK AND NAILING**

When composition shingles are installed on a roof with wood shakes over the spaced sheathing, the spaced sheathing shall be covered with minimum 3/8" plywood or orientated strand board (OSB). Vertical plywood/ OSB joints shall fall over existing rafters whenever possible and shall be nailed with 8d box nails 6" on center at edges and 12" on center for field nailing. The minimum nailing pattern for nonstructural roof panel systems is shown in Figure "F." Other nailing patterns specified by the American Plywood Association can be used for structurally designed roof panel systems.

- ICBO listed staples may be used to fasten sheathing to the existing rafters. The minimum size staples allowed is 16 gauge, 2" long with either 7/16" or 1/2" crown. Staples should be installed so they can be seen by the inspectors. Staples not easily seen by the inspector will not be accepted.

Painting staple heads prior to loading them into a staple gun generally allows installed staples to be easily seen.

- Dry rot, broken, or termite damaged roof sheathing and framing members shall be removed and replaced.

### **PLYWOOD JOINT SPACING**

As shown in Figure “C” all plywood/ OSB joints shall be spaced 1/8”.

### **FLASHING**

Rusted, damaged, or improper flashing shall be replaced with new flashing that is compatible with the roof covering being installed. “Horizontal” valleys shall slope a minimum of 1/4” per foot and be made from 26 gauge galvanized sheet metal. Exposed edges of plywood shall be covered with sheet metal. See Figures “D” and “E” for sample flashing details at vertical surfaces.

### **ATTIC VENTILATION**

If the existing attic does not have venting that meets the current code standards, additional venting must be installed. The net free ventilating area shall not be less than 1/150 of the area of the space ventilated with 50 percent of the required vents in the upper portion of the roof and at least 3 feet above the lower eaves. See Table “A” for a simplified chart for determining area of vents required.

### **SPARK ARRESTORS**

Spark arrestors shall be installed on all fireplace chimneys.

### **ASSOCIATION RESTRICTIONS**

Some homeowner associations have restrictions on the type of roofing materials that can be used. These are not code related; however, you are encouraged to check deed restrictions to avoid problems.

### **INSPECTIONS**

- **1st** inspection is made only when the roof framing system must be strengthened because of the use of heavy clay or concrete roof tiles. This inspection occurs after remedial framing is complete but before the roof deck is installed.
- **2nd** inspection is made after the deck has been prepared but **before** the new roof covering is installed. The inspector will be looking for:
  - Dry rot, broken, or termite damaged wood has been removed and replaced.
  - Proposed roofing material is appropriate for the existing roof slope.
  - Existing flashing is acceptable.
  - New decking has been installed correctly which will include nailing and panel spacing.
  - Existing roof layers are acceptable to be overlaid for an overlay installation.
  - Clearances from heater flues to wood decking.
  - Existing BUR has been removed.
- **3rd** inspection is made after the roof installation is complete and the spark arrestor is installed. The permit applicant shall provide safe access to the roof during all scheduled inspections.

### **CLAY OR CONCRETE TILE**

Because of the increase in weight of a clay or concrete tile roof, the existing roof framing may need to be strengthened to carry the new roofing.

- Existing framing is generally acceptable without additional strengthening for new lightweight concrete tile weighing less than six pounds per square foot.
- Framing members shall be sized per span tables shown in Table “B.”
- If the existing roof structure is factory built trusses and the new tile weighs six pounds or more

per square foot, the ability of the trusses to carry the additional load shall be confirmed in writing by a licensed architect or engineer.

## **METAL ROOFS OVER WOOD SHAKES**

Many manufacturers make a sheet metal roof which can be installed directly over an existing wood shake or shingle roof. Installation of these roofs results in an increase in height of between two and three inches, which complicates flashing. Generally the overall installation shall follow the manufacturer's printed instructions. A copy of those instructions shall be at the job site for the inspector's use. In addition the following special conditions apply:

- The use of surface mounted counter flashings on wood sidings is not code acceptable. See Figure "D" for an approved flashing detail.
- Existing flashings which must be distorted or overcut to work with the new roof system shall be replaced with new flashing installed correctly.
- 1-1/2" thick fiberglass insulation shall be placed on the existing roof and snug between the new sleepers. This is a code requirement and done to prevent rapid fire spread should there be a roof fire.
- At least three (3) inspections are required:
  - **1<sup>st</sup>** - Deck Inspection: Made after all stripping and sleepers are installed, plumbing vents extended to at least 6" above proposed new roof surface, flues extended at least 12" above proposed new roof surface, insulation installed, and existing roof vents opened up and/or new vents cut into the existing roof.
  - **2<sup>nd</sup>** - Roof Covering Inspection: Made after all roofing tiles are installed but before any counter flashing has been installed or caulked.
  - **3<sup>rd</sup>** - Final Inspection: Made after all counter flashing has been installed or caulked and spark arrestor installed on fireplace chimney (if any).

## **RAIN**

If the roof has been stripped and there is a threat of rain, you may install the underlayment to protect the building and its contents prior to obtaining a deck inspection. However, once there is no longer a threat of rain the inspection shall be conducted. The inspector will request the contractor to remove sample sections of the underlayment so spot inspections can be made. If any of the spot inspections indicate an improperly installed deck, the entire underlayment may have to be removed for a complete and thorough inspection.

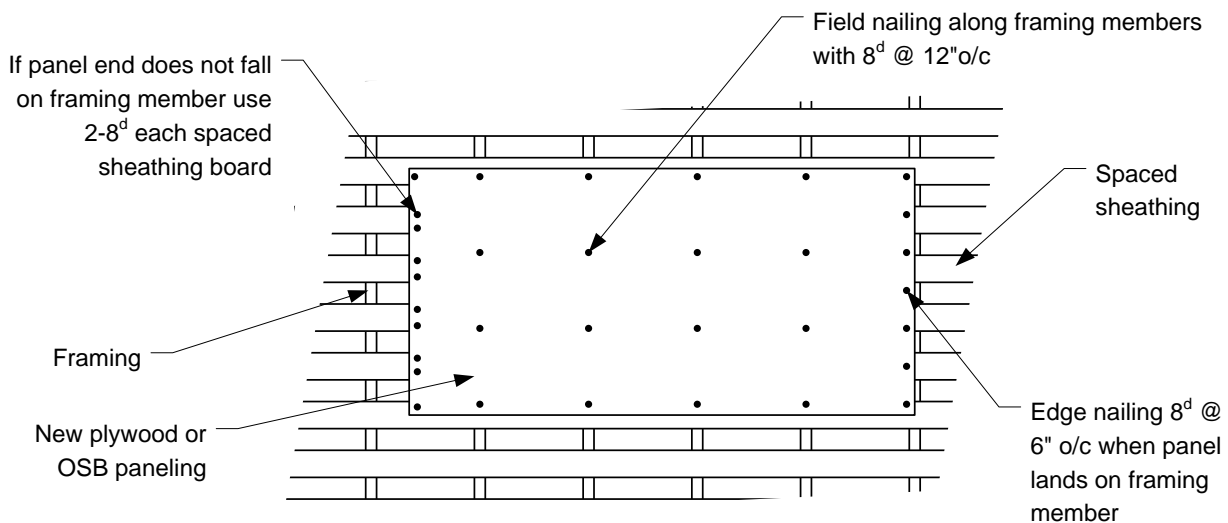
The standard for determining if there is a threat of rain is the web page for the National Weather Service three day forecast for either Fremont, Oakland, Mountain View, or San Jose.

## **SMOKE ALARMS & CARBON MONOXIDE DETECTORS**

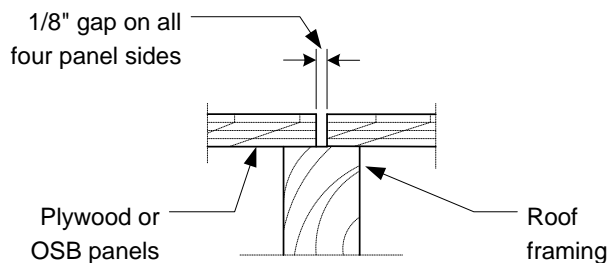
Sections R314 and R315 of the 2010 California Residential Code require the installation of both smoke and carbon monoxide detectors in all new dwelling units and in existing dwellings whenever alterations and/or additions exceed \$1,000 in construction valuation. Reroofs are considered as repairs to the exterior and entry into the home is not necessary. A self-certification form, which is given at the time of permit issuance and shall be presented to the Building Inspector at the time of final inspection and signed by the homeowner; certifies that smoke & carbon monoxide detectors are installed in the home and operational. Please note: the permit will not be signed off until this form is received by the Building Inspection Division. Please see self certification, City form B-184.

Table "A" SIMPLIFIED ATTIC VENTILATION TABLE	
This is a rough guide in determining the net free area of vents needed for roofs with attics. Because of bird screens and/or louvers in roof vents reduce the actual free area of vents the nominal gross area of vents must be reduced by 40 percent.	
Roof Area (square feet)	Total Free Vent Area Required (square inches)
500	480
1,000	960
1,500	1,440
2,000	1,920
2,500	2,400
Note 1. 3-1/2" x 22-1/2" eave vent between rafters = 60 si	
Note 2. 4" x 22-1/2" eyebrow roof vents = 70 si	
Note 3. 4 - 2" dia. holes per block in eave vents = 10 si	

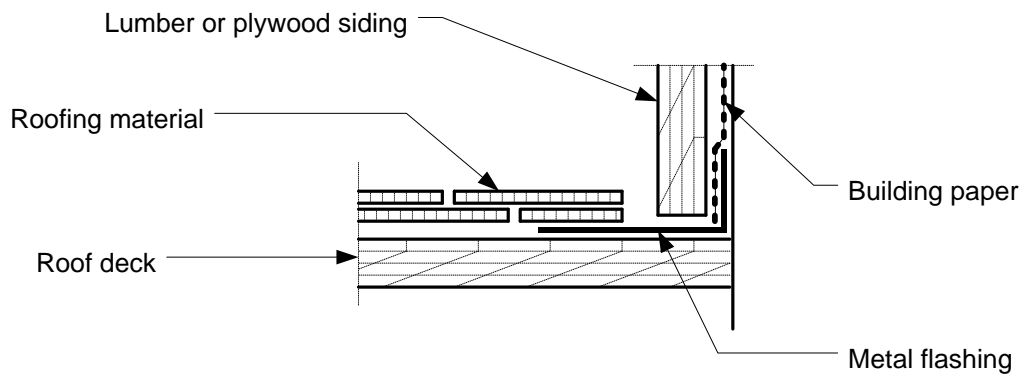
Table "B" MAXIMUM SPANS for ROOF RAFTERS		
Simplified table of allowable spans for sloped roof rafters over an attic with 4:12 slope or greater.		
Rafter Size and Spacing	Composition, wood shake, or lite concrete tile	Heavy clay or concrete tile (>6psf)
2 x 4 @ 12" o/c	10' - 6"	10' - 0"
2 x 4 @ 24" o/c	8' - 6"	7' - 0"
2 x 6 @ 12" o/c	17' - 0"	15' - 0"
2 x 6 @ 24" o/c	12' - 0"	10' - 6"
2 x 8 @ 12" o/c	20' - 0"	19' - 0"
2 x 8 @ 24" o/c	15' - 6"	13' - 6"
2 x 10 @ 12" o/c	27' - 6"	23' - 0"
2 x 10 @ 24" o/c	19' - 0"	16' - 6"



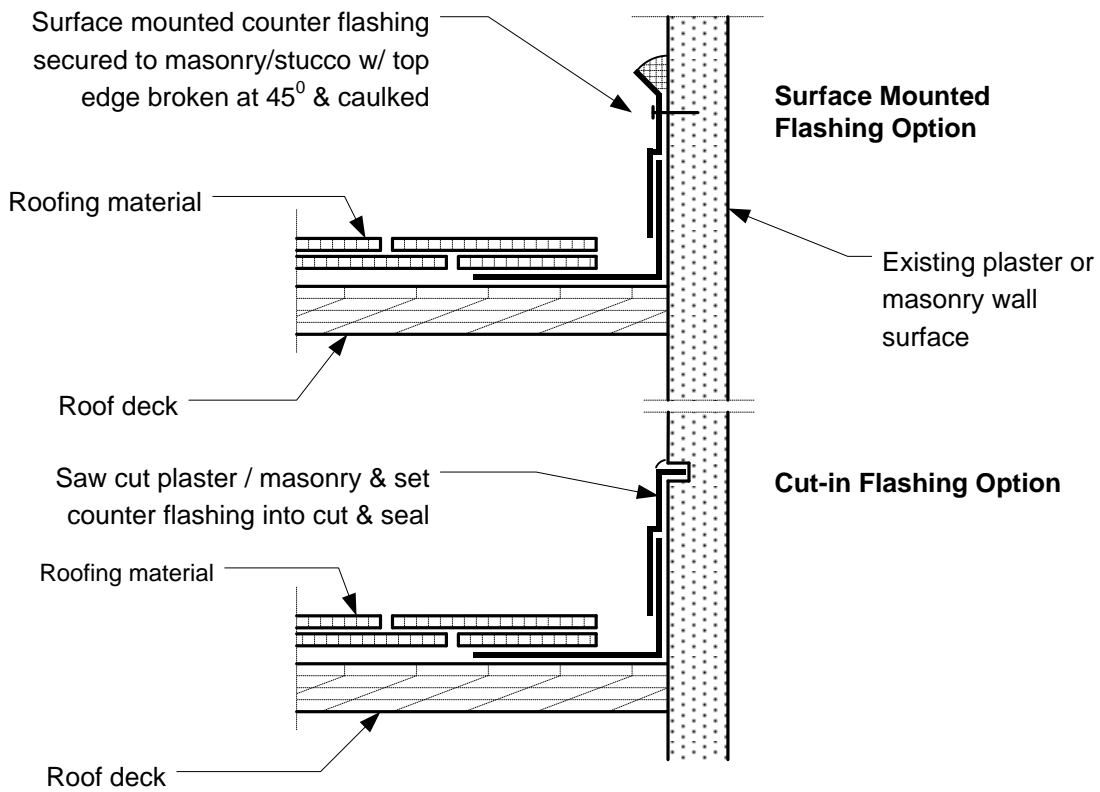
**Figure "F"**  
Nailing Patterns for Plywood Panels



**Figure "C"**  
Spacing Between Plywood Panels



**Figure "D"**  
**Flashing at Wood Siding**



**Figure "E"**  
**Optional Flashing at Masonry / Stucco**