



Oregon Roof Consulting and Inspection

No-Nonsense Roofing Advice for Property Owners: Affordable ~ Thorough ~ Versatile ~ Capable

Serving the Portland Metro area and all of Oregon: (503) 654-4612

Oregon CCB: 199121 ~ WA Lic: OREGORC871MR

PO Box 220190, Milwaukie, OR 97222

Resume' ~ Track Record ~ Experience ~ Qualifications ~ History

Please note : I have 44 years of legitimate verifiable experience as a laborer / grunt / gopher for my brother's roofing business in the 60's, the better part of 3 decades as a roofing contractor, 6 years as an estimator / project manager for 2 large roofing companies and am now nearing the end of my 10th year as the owner / operator of Oregon Roof Consulting and Inspection. I have personally installed over 1,000 roofs and have done at least 14,000 roofing estimates back in the roofing days. Oregon Roof Consulting has participated in 5 courtroom hearings and 16 arbitration hearings in Oregon and Washington and 19 on site CCB mediation meetings in Oregon - all as an expert witness, so, we are somewhat familiar with the roofing trade.

I have done work for but not limited to : Homeowners; Businesses and corporations of all sizes; Insurance companies; Banks; Churches; Relocation companies; Roofing contractors; Investment groups; HOA's; Apartment complexes of all sizes; The State of Oregon; Multiple school districts including West Linn; David Douglas; and every elementary, middle, and high school in both Hood River and Wasco (The Dalles) counties; United States Coast Guard in Astoria; etc. I have done jobs all over Oregon and Washington; All over the San Francisco Bay Area including San Francisco, Oakland, Napa, Richmond, Alameda, Fremont, Pleasanton, Berkeley, Fresno, Sacramento and Reno Nevada. We have also helped with two shingle roofing projects on the remote South Pacific island of Rarotonga (Cook Islands). This is all on my website. See www.oregonroofconsulting.com

Thank you,

Owner of Oregon Roof Consulting & Inspection

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- Affordable ~ Thorough ~ Versatile ~ Capable
- Roofing in Oregon Since 1973
- Project Management & Monitoring
- Inspections ~ Certifications ~ Owner Advocacy

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Joe Sardotz, Owner Operator



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Roof Inspection for : Best Western Plus – Northwind Inn & Suites
Job Address : 16105 SW Pacific Highway ~ King City, Oregon 97224

I inspected this roof on October 14th 2021. I got on the roof. The roof is a new Certainteed 'Landmark' 30 year factory warranted asphalt laminated shingle. One layer over plywood. I do not know who installed this roof. Separate photo emails will be sent. Each photo email will be numbered to correspond to the numbered items on the summary report. The following items should be noted :

1. As always I check for proper fastening. I concentrated my search at shaded areas where shingles had not yet bonded. For the most part ridge shingles were loose and not bonded yet. I looked at approximately 500 shingle nails and about 80 ridge shingle nails. I looked at nailing at 8 different areas. As always I kept going until I was satisfied that a pattern has been established.
2. 85-90% of shingle nails are overdriven. Nails are not evenly spaced. I found shingles with no nail where a nail should be.
3. At least 90% of ridge shingle nails are overdriven. Nails are misplaced meaning too far from the shingle edges and too high up from the butt edge of succeeding ridge shingles. It's just as easy to put a nail 'here' as it is to put a nail 'there'. **See attached technical Bulletin regarding use of coil nailers**
4. Intake vents were installed near the gutters. These plastic vents have factory applied holes for nailing. These holes are slightly larger than the shaft of a shingle nail. This allows for expansion and contraction. I looked at about 30 of these vents and all were nailed through the flange and not the factory supplied nailing holes. Printed in large letters on every vent flange are the words " DO NOT ALLOW ANY FASTENERS TO PENETRATE FLANGE ".
5. Certainteed requires all pipe jacks and vents to be double sealed meaning sealant between the underside of the front of flanges and shingles underneath (and) sealant between the top of the upper part of the flanges and the underside of the lapping shingles. This wasn't done and pipe flashing fronts were loose and not nailed.

Conclusion : Odds are installers were paid 'piecework'. I always advise to hire companies that pay salary or hourly. Piecework encourages speed and speed compromises quality – every time. This is one of the worst nailing jobs I have ever seen. Things were done here that established, professional, legitimate, experienced roofers simply would not do. This situation is unfortunate for all parties involved.

It is any Contractor's responsibility, obligation, and requirement to 1) Know how a roof system should be installed. 2) Install that roof system correctly.

**** The Oregon Residential Specialty Code R102.7.1 : 'Additions, alterations or repairs (excluding ordinary repairs) to any structure shall conform to the requirements for a new structure without requiring an existing structure to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.....'. R905.1 : 'Roof coverings shall be applied in accordance with the applicable provisions of this section and manufacturers installation instructions'. R903.1 : ' Roof Assemblies shall be designed and installed in accordance with this code and the approved manufacturers instructions such that the roof assembly shall serve to protect the building or structure '. R105.2 : 'Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in a manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction'. **** A permit may or may not be required in your area. To inquire call local building officials.****

Thank you,



Owner of Oregon Roof Consulting & Inspection

****This document carries no warranty or guarantee. It is an opinion based on industry standards, manufacturers specifications, local codes and my experience****

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Correct Fastening

8

PLIDGE SHINGLES / RIDGE VENT

YOUR OBJECTIVE:
To learn CertainTeed's recommended methods for fastening shingles.

GENERAL FASTENING GUIDELINES

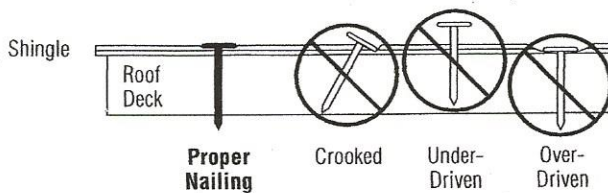


Figure 8-1: Fastening three-tab, strip-type shingles.

- ◆ Proper placement of fasteners is important for shingle performance and warranty protection. Ideally, placement of fasteners should be as specified according to the precise locations shown for each shingle. However, in practice some variation (dimensional tolerance) is acceptable.
- ◆ When fastening a typical three-tab, strip-type shingle, CertainTeed requires that at least four fasteners be used.
- ◆ Nails are strongly recommended instead of staples. (Nails **MUST** be used with Hatteras, LandMark TL, Presidential TL, Carriage House and Grand Manor shingles.)
- ◆ Nailing locations vary by shingle style and by roof slope. It is critical to fasten the shingles in the proper locations in order to achieve designed performance. Improperly fastened shingles may blow off or slip out of place. The use of asphalt roofing cement in small quarter-size dabs to hold the shingle down is required on most shingles when applied to steep slopes exceeding 21/12 (60 degrees). Consult individual shingle application instructions for details on the above, including fastening points.
- ◆ When fastening a heavier and thicker premium product, like Carriage House Shangle™ or Grand Manor Shangle®, CertainTeed requires longer nails.
- ◆ Nails with a barbed or rough shank are recommended. Smooth pneumatic nails are also acceptable.
- ◆ Nail shanks must be either 11- or 12-gauge.
- ◆ Nail head diameter must be at least 3/8".

- ◆ Nail shanks must be long enough to penetrate the roofing and then go 3/4" into solid wood, plywood or non-veneer wood decking, or through the thickness of the decking, whichever is less.
- ◆ Be sure fasteners are driven straight, with nail heads flush with the shingle surface and never cutting into the shingle (Figure 8-1).
- ◆ All nails must be corrosion resistant; for example, double-dipped galvanized steel, aluminum, copper, or stainless steel.
- ◆ To prevent shingle distortion, do not attempt to realign a shingle by shifting the free end after two fasteners are in place.
- ◆ Fasteners should not go into, above, or between the self-sealing strips (except for Hatteras and Highland Slate). If they do, the shingles may not seal properly and will be more likely to blow off.
- ◆ If a nail is underdriven, be sure that it is hammered down flush.
- ◆ Seal overdriven nails with asphalt roofing cement and install another nail nearby.
- ◆ Fasteners must not be exposed; i.e., visible on the finished roof.

ARE STAPLES ACCEPTABLE?

Both ARMA and CertainTeed **strongly recommend** that properly driven and applied roofing nails be used as the fastening system for asphalt shingles. Staples can perform acceptably if properly applied, but proper alignment and application is more difficult with staples than with nails, making shingle damage and blow-offs more likely. (Nails **MUST** be used for Hatteras®, Landmark™ TL, Presidential TL, Carriage House and Grand Manor shingles, plus in high-wind areas and to qualify for an increased wind warranty if available.

Caution: Check your local Building Code for applicable fastener requirements.

Here Are Some Tips

In a roof-over, you need to expose step-flashing before installing the second layer of shingles. If the second layer is just cut around the object, and the apron flashing is not brought out on top of the new shingles, then the original step flashing drains onto the apron and down between the layers. After several years, the deck is saturated and rotting. Opening up the flashing the right way is a "pain," but it must be done. Thanks to Tim Mosber from Lima, OH. Tim recently repaired the bottom corners of 8 dormers on his parent's roof where the flashing was "shingled-over" ... no wonder he sent us this tip!

5. Apply an additional row of shingles over the metal flashing strip, trimmed to match the vertical width of the metal flashing strip on the shingle surface. Fasten shingles with face nails sealed over with a small dab of roofing cement.
6. Next, if there is siding, bring it down over the vertical part of the step flashing to serve as cap flashing. Do not nail the siding into the vertical flashing.

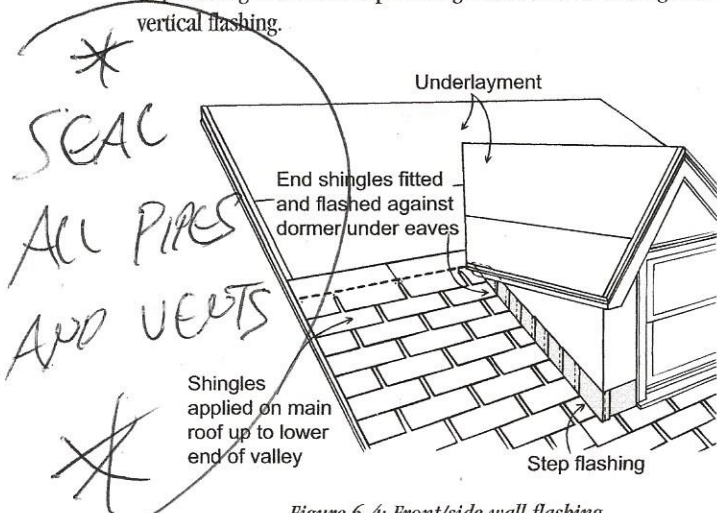


Figure 6-4: Front/side wall flashing.

7. If the vertical front wall meets a sidewall, as in dormer construction, cut the front flashing so that it extends at least 7" around the corner. Then continue up the sidewall with step flashing as described earlier. A good quality caulk, or asphalt roofing cement, may be useful to fully seal behind corner joints, if they will not be soldered.

SOIL STACKS AND VENT PIPES

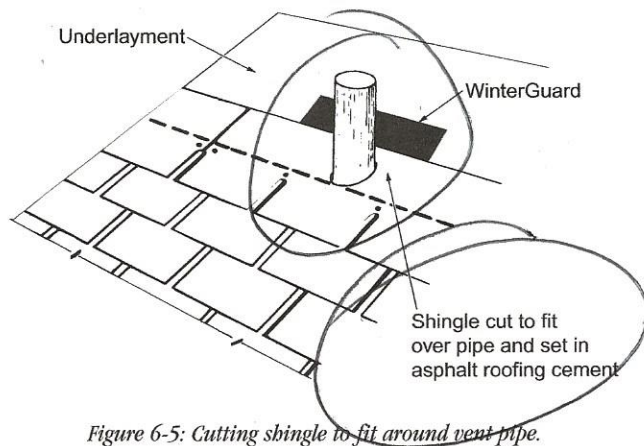


Figure 6-5: Cutting shingle to fit around vent pipe.

Practically all homes have circular vent pipes or ventilators projecting through the roof. Before installing the flashing, bring the shingles up to the vent pipe. Then cut a hole in the shingle that will go over the pipe and install the shingle, setting it in asphalt plastic cement. Next, place a preformed flashing flange, sized to fit snugly over the pipe, over the vent pipe and set it in asphalt roofing cement. Be sure the flange is seated squarely on the roof.

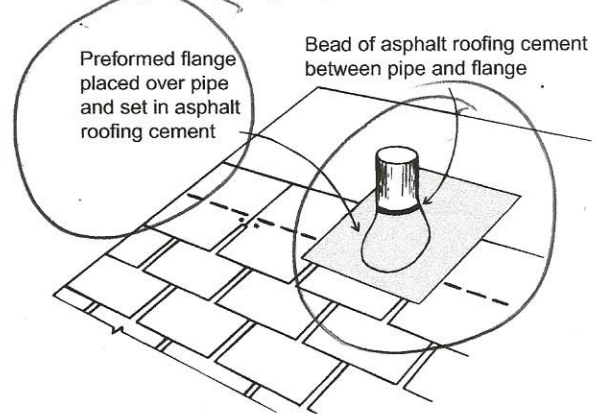


Figure 6-6: Placement of flange over vent pipe.

After the flashing is in place, continue applying the shingles. Cut the shingles in the succeeding courses to fit around the pipe, and embed them in asphalt roofing cement where they overlap the flashing flange. The completed installation should appear as shown in Figure 6-7, with the lower part of the flange overlapping the lower shingles, and the side and upper shingles overlapping the flange.

Follow the same procedure where a ventilator or exhaust stack is located. If the ventilator, exhaust stack, or soil pipe is near a ridge, bring the shingles up to the protrusion from both sides and bend the flashing flange over the ridge to lie in both roof planes, overlapping the roof shingles at all points. Ridge shingles are then positioned to cover the flange. Embed the ridge shingles in asphalt roofing cement where they overlap the flange.

Flexible neoprene boots are also commonly used to flash around vent pipes.

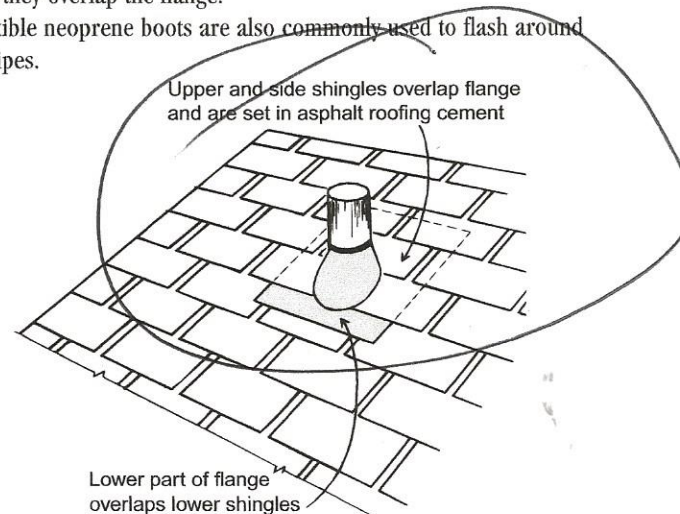


Figure 6-7: Applying shingles around flange.



TECHNICAL BULLETIN

PROPER USE OF PNEUMATIC COIL NAILERS

SUPERSEDES PREVIOUS BULLETINS

Issue Description:

The proper use of pneumatic coil nailers for the installation of asphalt shingles.

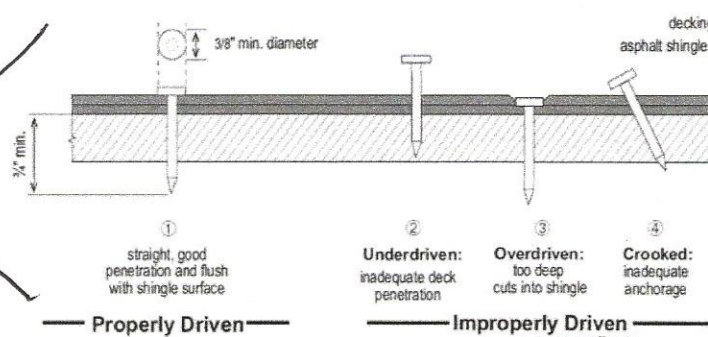
Recommendations:

Proper setup and use of pneumatic coil nailers is critical for correct installation of Owens Corning® asphalt shingles. Improper use of pneumatic coil nailers may lead to shingle damage and/or shingle failures during a high-wind event. Ensuring proper nail gun setup will:

- Prevent over-driving the nails, which can cause the nail head to blow through the shingle.
- Prevent under-driving the nails, which can prevent shingles from laying flat and sealing properly.

Key Considerations:

- Use regulated compressed air and never apply more air pressure than is necessary to properly drive the fasteners.
- Most pneumatic coil nailers operate at optimum efficiency when the pressure is set between 80 and 95 psi.
- Most coil nailers are equipped with a depth adjustment knob. Adjust the settings for the nail heads to be driven flush.
- The startup and cutout pressures on the compressor should be set to maintain optimum operating pressure in the compressor tank at all times.
- Air hose length and diameter should be considered when setting psi at regulator.
- Operating more than one coil nail gun from a single compressor may affect how well the fasteners penetrate the shingles.
- Use corrosion resistant 11 or 12-gauge nails with a minimum 3/8-inch diameter heads, complying with ASTM F1667.
- Unusually cold or hot temperatures may require additional tuning of the compressor for optimum nail driving performance.
- Always read and be familiar with the operating instructions for the compressor and nail gun.
- When using pneumatic coil nailers, **always ensure that the nail is driven flat and flush with the shingle.**
- **Any shingle into which an overdriven fastener has been installed must be repaired by either replacing the shingle or covering the fastener with asphalt roofing cement and installing an additional fastener within 1-inch of the overdriven fastener.**



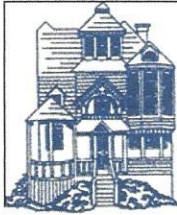
Please contact 419-248-6557 for additional information.
Email: gettech@owenscorning.com

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~ Suggested Installation Specs For Asphalt Composition Shingles ~

**** Always hire a contractor that pays employees salary/hourly not piecework****

For : Best Western Plus Northwind Inn & Suites ~ King City, Oregon 97224

1. Tear off old roof always. Do not overlay. If roof deck is plywood and over 25 years old then renail entire deck with 6d or 7d ring shank nails. Replace any warped, rotted, damaged, or delaminating plywood.
2. If installing new plywood use 4-ply CDX. Use AC or CCPTS plywood at open overhangs if any. Hot dipped ring shank galvanized nails are preferred over 'N' type staples.
3. Use Safeguard (hybrid) or 30# organic felt or Malarkey UDL as underlayment.
4. Use Malarkey or Certainteed shingles. The Malarkey 'Legacy' is the best overall value. 50 year solid warranty, high wind resistance, excellent granular adhesion, high impact, algae block. Use hot dipped galvanized nails. Do not use electro-galv nails!
5. Install 24" type 'W' metal valleys. There must be sealant between the valley metal and lapping shingles. Upper corners of the valley shingles must be cut at a 45 degree angle in order to divert water toward the center of the valley.
6. Use painted metal attic vents or better yet continuous ridge vent. Be certain nails used for the ridge shingles on top of the ridge vent are long enough to penetrate all roof materials and at least 3/4" into the roof deck. Utility vents must be attached to a stem-baffle-flapper type vent. Metal not plastic.
7. Use 2-pc lead pipe flashings or high quality 'Ultimate' silicone pipe flashings for all plumbing vent pipes. Do not use rubber 'no-caulk' flashings as they do not last.
8. All protrusion fixtures / components (vents, pipe jacks, skylite and chimney flashings and all step flashings / tin shingles should be double sealed with highest quality sealant.
9. Use large T-metal or D-metal at all rake edges and have a bleeder / starter strip that extends past this metal by 1/2" +/- . Cut shingles even with this bleeder / starter strip.
10. Use a 'kickout' flashing at the bottom of all sidewalls if any.
11. In high wind areas use 6 nails per full shingle preferably ring shank nails. All shingle nails must be driven straight with heads flush with shingle surface and never cutting in to the shingle. ****This is crucial****. Roofing staples are not allowed. ** Have roofer put on bid that fastening will be to shingle manufacturer specs.
12. Do not install roofing materials in extremely hot or cold weather.
13. If you want to know the size of your roof call EagleView Technologies in Bothell Washington. 866-659-8439. They specialize in aerial satellite computer measuring. Ask for a 'quicksquares' report which is 18\$ or a 'Full Report' which is many pages and is \$55.
14. Above average roofers are : Gonzalez Eagle Roofing; CC&L; West Coast Roofing LLC (Canby); Aylwin Construction. For metal roofing call Gerry Fridlund at Skybright Metal Roofing – 971-344-5424. ****I receive no commission from anyone I recommend****.

Thank You,

Owner of Oregon Roof Consulting & Inspection