



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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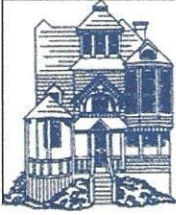
Phone: (503) 654-4612 Cell: (503) 952-6479

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Joe Sardotz, Owner Operator



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Roof Inspection for :

Job Address :

~ Portland, Oregon 97211

I inspected this roof on March 14th 2023. I met the owner. Looked in the attic and got on the roof. The roof is a 1 year old Pabco 'Premier' 30 year factory warranted asphalt laminated shingle in the black color. One layer over OSB over spaced sheathing. Roofer is licensed in Oregon with 'nonexempt' status. 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. Contractors are legally required to give potential clients 3 documents that are produced by the CCB (Construction Contractors Board). Notices about liens; Notice of procedure; Homeowner rights. These usually are sent with the bid/proposal/contract. According to the owner these were not provided.
2. Contractors are required to have their CCB license number on contracts as well as cards, website, truck lettering, etc. The contract had no license number. A relatively minor issue but none the less legally required.
3. The 'contract' says "hot dipped galvanized nails" would be used. I checked about 70 nails all over the roof and all were electro galv not hot dipped galv.
4. Roofing and flashing around all 4 skylights is incorrectly installed. Shingles are tight to the sides and back, there should be a 1/2"+- 'reveal' between shingles and flashings to allow for drainage. Nails in the step flashings are down low near the front edge – close to the side of the flashing, and all nails overdriven. This is the worst possible way to nail step flashings. Nails must be at the very top of the step flashing and not visible. All shingle manufacturers including Pabco and ARMA (American Roof Manufacturers Association) require this. Instructions-diagrams-specifications are all easily found online. At the east facing side in back there are three holes – 2 large – in the step flashings of one of the skylights. 2 holes are large enough to get a finger in. These holes are down at roof level. It's amazing no roofers noticed this.....or did they.
5. The pipe jacks used for the plumbing vent pipes are the entry level 'no-caulk' type. The rubber collars on these will fail long before the shingles do **If these get NO direct sunlight they will last. Best fix is to get new collars and slide them down pipes on to existing, or, use long lasting pipe jacks.

6. The membrane roofing on the upper front low slope dormer is incorrectly installed. With any membrane roof rake / gable edge and drip flashing must be 'sandwiched' between plies of roofing. This was not done. Flashings must be primed, this wasn't done. All membrane manufacturers require roof decks to be smooth, clean, and debris free. This was not done. Old roofing was noticed under rake edge flashing plus there are some bumps and humps indicating something under this membrane roofing.
 7. The 'selvage' at the edge of the last row of membrane is visible. It should not be visible. It should be covered by roofing. If the last row of membrane is going to spill out on to the granulated area then that area must be primed so the roofing will adhere.
 8. At most areas I was not able to lift shingles to check nailing. Once the sealant is activated the roof becomes 'monolithic' essentially becoming 'one'. However at some areas I could separate shingles to observe nails / nailing. Nearly all nails observed were overdriven. Nails must be driven straight, flush with shingle surface, placed properly.
 9. There is a pitch change in back. Code requires flashing at pitch changes. There is no flashing here.
 10. There are spots on the roof with caulking that appear to be covering dents, gouges, or mainly 'shiners' which are nail heads that are exposed.
-

Solar panel system :

I have never installed solar but run in to it quite a bit. I have consulted with state code specialists, building inspectors and 4 established, reputable solar contractors.

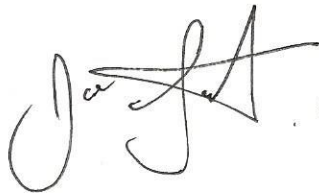
1. According to all I spoke with mounting brackets should be mounted to rafters. If there are no rafters available then the job should be "engineered" meaning a qualified professional engineer should scrutinize the job and provide documentation as to properly install / fasten mounting brackets. When looking in the attic I noticed 2 large screws only going through 7/16" thick OSB. It would be wise for the homeowner to look in to this by contacting a City Of Portland building official and / or solar experts. I would advise calling the manufacturer of this particular brand of solar. Codes mostly defer to manufacturers. If they say it's OK then it's OK.
2. According to the owner there is leaking at the upper middle back side. Near this area at the peak there are brackets on the roof that do not have sealant adequately applied. The mounting brackets on the upper front low slope dormer are completely exposed and the upper part of these brackets are exposed and not lapped by roofing. Sealant here appears to be inadequate.

Conclusion : The factory applied sun activated sealant now used by manufacturers is very aggressive. Considering all of the shingles that will need to be separated in order to allow rework to be done rework will be nearly impossible. Renailing the entire roof with hot dipped galvanized nails will be impossible. Contract calls for hot dipped nails to be used. Hot dipped nails were not used. Situations like this are why it is a good idea to do it right the first time and abide by the contract that you write.

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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PABCO PREMIER®

LAMINATED FIBERGLASS SHINGLES

Nailing Instructions

General Instructions

PABCO® recommends the use of nails. The local building code may require nails. Use four nails per shingle for normal application, as shown on page 2.

Nails must be corrosion resistant. They are commonly galvanized or aluminum. Use 3/8" diameter heads, 11 or 12 gauge roofing nails. They must be long enough to penetrate through the roofing materials and at least 3/4" into the deck. If the deck is less than 3/4" thick, the nails must penetrate through the boards. Use 1" minimum nails for new construction. Applying these shingles over existing shingles will require longer nails. Nails may be hand driven standard roofing nails or pneumatically driven nails.

Nails must be driven flush with the shingle surface. Do not under drive or over drive the nails. Under driven nails may damage the overlaying shingle by tearing through that shingle as it settles down over the nail's head or if stepped upon. An under driven nail may hold the overlaying shingle up, providing an opportunity for wind damage. An over driven nail will tear through the shingle, allowing a path for water intrusion and reducing the shingle's resistance to wind damage. A nail that is driven at an angle may cause any or all of the problems from under driven and from over driven nails.

Nails must be properly positioned on the shingle. See the figures on page 2. The nail zone is indicated by a pair of paint lines on the face of the shingle spaced about 1/2" apart, about 6" up from the bottom edge of the shingle. If nails are placed below the nail zone, the nail heads may not be covered by the overlaying shingles. If nails are placed above the nail zone, the wind resistance of the shingles is reduced and damage may occur which allows an extra path for water intrusion. The indicated positions across the shingle are to assure the nails are not near the end-to-end joints of the overlaying shingles.

Special Applications

Steep Slope Application: On slopes greater than 21" per foot (Mansard type roofs), 6 nails are required. Shingles must be hand sealed when applied with asphalt roof cement complying with ASTM D4586 Type II. Apply 4 quarter sized spots equally spaced along the nail zone, above the exposed area of the shingle. See the figure on page 2 for nail and roof cement placement.

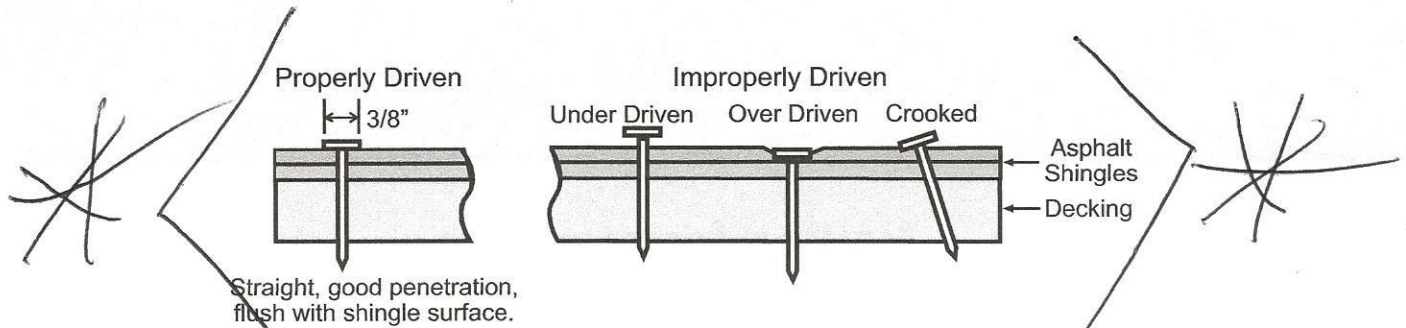
High Wind Application: For areas where local knowledge indicates exposure to high winds is likely (or where required by the building code), shingles must be applied with 6 nails and sealed to qualify for the wind damage warranty coverage. See the figure on page 2 for nail and roof cement placement. PABCO® shingles have self-sealing asphalt strips that must be subjected to heat and time to fully bond the shingles together. Direct warm sunlight can seal a roof in one day in hot climates. In other locations, the time needed to reach a fully sealed roof will be longer. If it is safe to allow the seal strip to bond the roof, that bond is generally stronger than a hand sealed roof. If it is not reasonable to wait for the seal strip bond, hand sealing (as detailed above) is appropriate.



PABCO® Roofing Products
Exceptional People. Remarkable Products.®

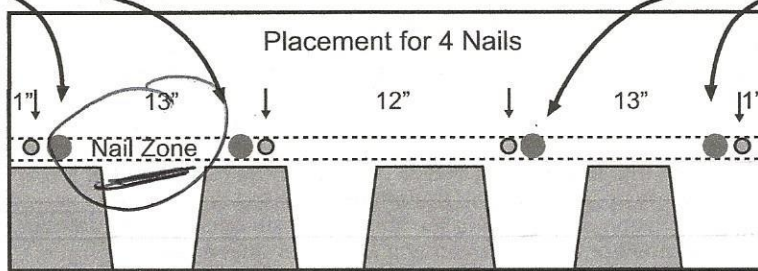
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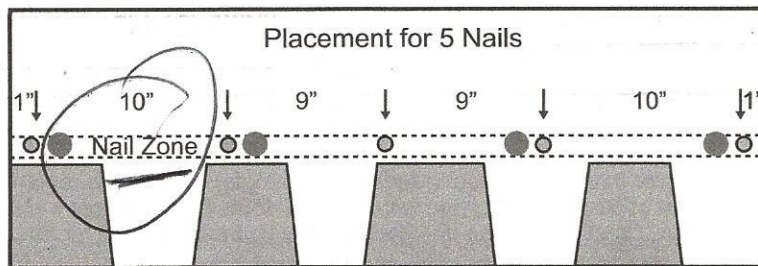


Hand Seal Roof Cement

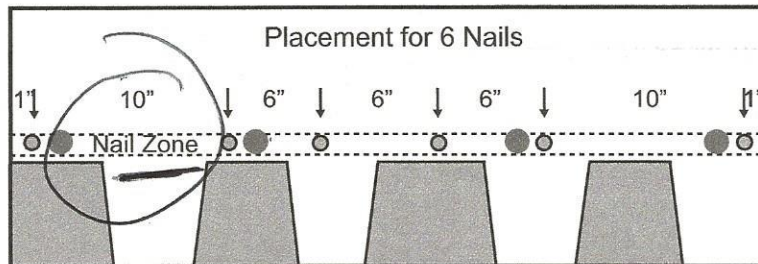
Hand Seal Roof Cement



● = Hand Seal Roof Cement



○ = Nail



The PABCO® Limited Shingle Warranty

PABCO warrants that our shingles are free from manufacturing defects that adversely affect their performance. PABCO is not responsible for failures of any roof system that are not directly attributable to a PABCO product. See the PABCO Limited Shingle Warranty for details, limits, and conditions.



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~ Suggested Installation Specs For Asphalt Composition Shingles ~

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

1. Tear off old roof always. Do not overlay. If roof deck is plywood and over 30 years old then renail entire deck with 6d or 7d ring shank nails. Replace any warped, rotted, damaged, or delaminating plywood. If deck is individual boards then install 1/2" plywood over boards.
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 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

Oregon Roof Consulting and Inspection

INVOICE

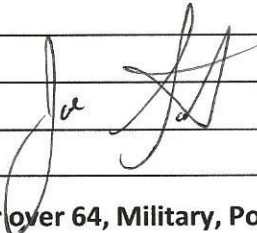
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DATE: MARCH 15TH / 2023
INVOICE # : 5029

TO :
PORTLAND, OREGON 97211

FOR :
ROOF INSPECTION | ASSESSMENT
PROVIDE TEXT & PHOTO DOCUMENTATION

DESCRIPTION	HOURS	RATE	AMOUNT
Roof Inspection Onsite & Office Time up to 2 hours is \$275 (Minimum charge). \$125 per additional hour after that.	3.5		\$460.00
Driving Time : First & last 15 minutes of driving time is free after that it's \$80.00 per hour			N / C
If any further advice / help needed via phone or email please call. No charge it's part of the service			
Thank You ! 			
**Deduct 10% for over 64, Military, Police, Firemen or paramedic			
Any offered discounts not valid on (30 Day) past due accounts			
		TOTAL	\$460.00

Make all checks payable to Oregon Roof Consulting and Inspection and / or Joe Sardotz. Total due upon receipt of invoice. Deduct 7% for prompt payment (1 week).**After 30 days this will be past due and the file will be turned over to collections**

****Do not combine discounts – 1 discount per job / invoice **** **THANK YOU FOR YOUR BUSINESS !**