



**VINCE MEURLOTT P.E.
ENGINEERING AND INSPECTIONS**

596 Arvita Court, Fairbanks, Alaska 99712
907.378.4663, vmeurlott@gmail.com, meurlott.com

Date of Initial Inspection: September 21 & 25, 2022

Job: 750 Farmers Loop. Prelisting September 21, 2022

To: Seller: Janine Avner janine@avnerlaw.com

Listing Licensee: Marjorie Merry, Pruhs Real Estate Group

This engineer's report was prepared for you after my inspection with Noah Goslin assisting. For brevity positive merits of the building are not reported here. Disclosures were reviewed. Recommendations for correction are listed with some suggestions for reference following:

Smoke/CO Detection and Miscellaneous:

1. Ensure there are functioning smoke detectors in the hall adjacent to bedrooms or living areas on each story of the residence and in each bedroom with fresh batteries. Replace any smoke detectors that are more than ten years old.
2. Ensure there are functioning CO detectors in the hall adjacent to bedrooms or living areas on each story of the residence.
3. All the exposed wood in the entire under stair space is to be protected with sheetrock for fire resistance or install a smoke detector in that space.
4. Replace broken or cracked windows.

Attic/Roof:

5. Clean and maintain the gutters. Replace and missing downspouts/tailpieces/extensions to ensure that all water is directed away from the foundation.
6. Remove garage roof ridge cupola on top of the roof.
7. Install flashing on south porch roof where it intersects with the wall.
8. Remove moss from roof. Use a compound designed for that purpose. Do not use a power wash sprayer because it uses too much pressure.
9. Secure the loose turbine vents on top of the roof.
10. Recoat the flat or low slope roofs where they are "alligatored".
11. Have a licensed contractor evaluate the roof shingles for estimated useful life remaining and cost to replace.

Exterior:

12. Replace the rear exterior porch roof posts that are decayed at the bottom. Make them long enough to eliminate the short splice at the top. Secure them at the bottom and top.

Electrical:

13. Ensure all electric baseboard heaters in all the rooms work properly.
14. Install covers on boxes, receptacles and switches where they are missing.

15. Remove all extension cords and replace with proper wiring methods. Install electrical receptacle(s) or similar so that all permanent appliances, heat tapes or equipment can be plugged in directly to a receptacle. Garage and crawlspace.
16. Complete installation of the light under the stair.
17. Ensure that all circuit breakers in the panel are properly labeled. The label for each breaker should be numbered on the cover and correctly corresponds to the circuit referenced such that a user can quickly identify and disconnect power to the circuit.
18. Separate ground and neutral wires in panel. Bond ground wires directly to panel with a separate buss bar. Connect all neutral wires to isolated neutral bar. Bond the main ground to the panel.
19. Ground the main panel to the service, a ground rod or to the well with a #4 copper conductor. The ground rod should be 5/8" x 8' driven in the soil outside the drip line.
20. Replace the screws for the electrical panel cover with ones that have blunt ends to avoid possible damage to the insulation on the wires.
21. Provide gfcı protection for all exterior receptacles. Ensure the polarity and grounding are correct and the gfcı protection will trip with an independent testing device.
22. Provide gfcı protection for all kitchen receptacles within 6' of the sink. Ensure the polarity and grounding are correct and the gfcı protection will trip with an independent testing device.
23. Provide gfcı protection for all bathroom receptacles. Ensure the polarity and grounding are correct and the gfcı protection will trip with an independent testing device.
24. Provide gfcı protection for all garage receptacles except one that may be used for a freezer. Ensure the polarity and grounding are correct and the gfcı protection will trip with an independent testing device.
25. Ensure that light switches work properly. Label function if not clear, make them work or blank them off if they do not have a function.
26. Replace bulbs in light fixtures to ensure that all lights work properly.
27. Properly fasten light fixture above washer and dryer to ceiling.

Plumbing:

28. Connect drain from dishwasher to an air gap device or attach the drain hose to the cabinet at least 2" above the connection to the drain off the kitchen sink.
29. Eliminate the "S" trap for the sink. Replace it with a proper "P" trap. If the plumbing vent to the roof is not correctly available, then install a good quality air admittance valve per the manufacturer's instructions. Downstairs bathroom.
30. Energize the exterior hose bibs. This often is simply turning on a valve on the inside. Usually, this a frost-free type that can be left on in the winter because it is designed to drain dry to the exterior if hoses and splitters are disconnected in the fall.
31. Secure loose hose bib on north side of building.
32. Secure loose toilet. Remove the toilet first and install a new wax ring. North bathroom. Master bath.
33. Clear slow draining vanity sink. Both sinks in Master.

Mechanical:

34. Service the oil stove in the living room. Technician to check all items needed for functionality and safety. Provide a receipt from a qualified technician.

35. Service the oil stove in the crawlspace. Technician to check all items needed for functionality and safety. Provide a receipt from a qualified technician
36. Clean and inspect the woodstove and chimney using a type II inspection. Provide a receipt from a qualified technician. Make any corrections necessary for safe use.
37. Vent dryer to the outside with smooth, metal duct. Do not use screws and keep the run short. Use aluminum tape to secure the joints.

Egress:

38. Install an egress window in each bedroom with the following minimums: Area - 5.7 s.f., width - 20", height - 24". Maximum sill height is 44" off the floor. The size of the opening that a person can fit through when the window is opened must meet all three minimums of area, width and height.
39. Ensure that the hardware for all opening windows is adjusted or replaced so that they open, close and latch shut easily from inside.
40. Install a 3'x3' landing outside the rear exterior doors to reduce the high step. You can split the difference between the sill and the concrete slab.

Garage:

41. Ensure there are two self closing hinges or other self closing mechanism on the door(s) from the living space into the garage. Adjust the door and hinges or other closing device so it closes and latches after each use.
42. Secure the step near the door into the house.
43. Repair gypsum wall board on the ceiling surfaces of garage.

Foundation:

44. Cure leak at the main drain where it enters the soil on the south side near the front door.
45. Plumb the 4x4 interior posts used to augment interior joist support where not vertical.
46. The north footing has been raised and supported by large bolts and steel brackets. Install concrete footings or cement pads between the gravel and the bottom of the footings every 4' to provide proper support to the footing at gaps between the gravel and footing.
47. Install support (typically staples) for all wires in the crawlspace every 4' minimum.

Additional information and/or suggestions for future reference follow:

The floor is sloping toward the garage at the west end of the home. There are some cracks in the drywall in the hall ceiling and wall due to the movement. You state the foundation was adjusted twice. I attribute this possible permafrost. Insulation in the floor to reduce heat loss to the soil is not necessary as uninsulated piping requires that it be heated. Normally a heated crawlspace develops a "thaw bulb" in about 20 years to melt permafrost below. Consolidation of thawed soils is made by surface water penetrating the subsurface soils and occasional earthquakes. Disclosure states construction in 1974. Given that the home is 48 years and withstood many earthquakes I believe that the consolidation of soils has already largely taken place. With the completion of additional supports listed in item #44 I believe that any future movement would be minimal if the gutters, downspouts and tail pieces are maintained to keep roof and surface water away from the foundation. **I would patch the drywall cracks and not try to level the home.**

- a. There may be some smoke and CO detectors in place already. They are listed in the report as a default even if present to ensure they are installed and have fresh batteries at the final as specified. Please note requirements carefully.
- b. The lower level floor joist are filled with fiberglass. There is chicken wire to keep the batts in place.
- c. The rim joist has been filled with spray foam to provide a good seal and additional insulation as well.
- d. Various joist have been augmented around the perimeter of the of the foundation. The work appears to be satisfactory.
- e. There is an oil heater in the crawlspace to keep pipes warm.
- f. There are some electric heaters in the crawlspace to keep pipes warm.
- g. There is an electric fan in the crawlspace to circulate the warm air but it may not be functional now.
- h. The roof framing consists of older premanufactured trusses. They are usually sufficient for our snow load.
- i. Cut the plumbing vents at the angle of the roof so they only extend 10" above the roof to reduce freezing during very cold temperatures.
- j. There appeared to be about 16" -21" of fiberglass in the attics where I measured. Each inch of insulation is worth about an (R-3). Energy consultants in Fairbanks recommend a total R-value of 50 or 60 for energy efficiency. R-60 would be about 20" deep.
- k. Styrofoam "proper vents" or baffles appeared to be in place to maintain ventilation over the attic insulation to ensure a "cold" roof above the exterior wall line.
- l. Seal the ceiling attic access in the garage. Just use the one at the gable end.
- m. Sauna heater works I tested it.
- n. Consider application to FNSB for the fireplace/woodstove change out program.
- o. Install handle to screen door on north end and proper hardware for door bolt assembly
- p. South entry double doors are very difficult to open. Adjust them.
- q. Adjust various interior doors and or strike plates to easily latch.
- r. Fill the deep "cracks" in the driveway pavement.
- s. Place the oil tank on pressure treated wood timbers and secure the feet to the timbers.

The inspection was limited to the portions of the building readily accessible. The report is intended to augment onsite discussions. The comments are based on observations at the inspection. This report may not address every concern that you or another engineer deem applicable. It does not typically address detached buildings, mildew, mold, radon, wells, septic systems, fuel tanks, leaked fuel, soils, environmental hazards (such as lead in paint or piping, asbestos) or right of way/zoning violations unless stated. Leaks may not be identified if not readily visible. I encourage the client to retain other professionals such as mechanical technicians or environmental testing specialists to evaluate concerns or areas not addressed by an engineering report. Please exercise due diligence to evaluate disclosures and other information available for this property. Please notify me immediately if you believe that I did not address your concerns.



September 25, 2022 is the date for this stamp.

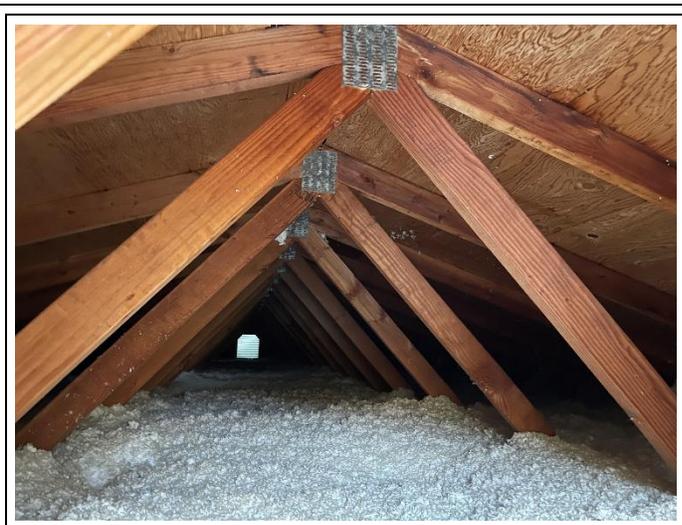
Thanks for the opportunity to serve you.

Please email vmeurlott@gmail.com,

or call me at (907) 378-4663 if you need clarification
or require reinspection.

Sincerely, Vince Meurlott, P.E.

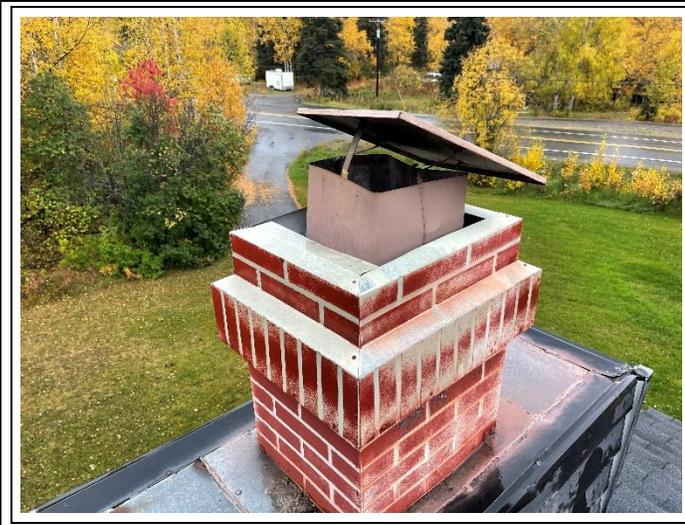






Cut plumbing vents so they only extend 10" above the roof. Add flashing where missing.

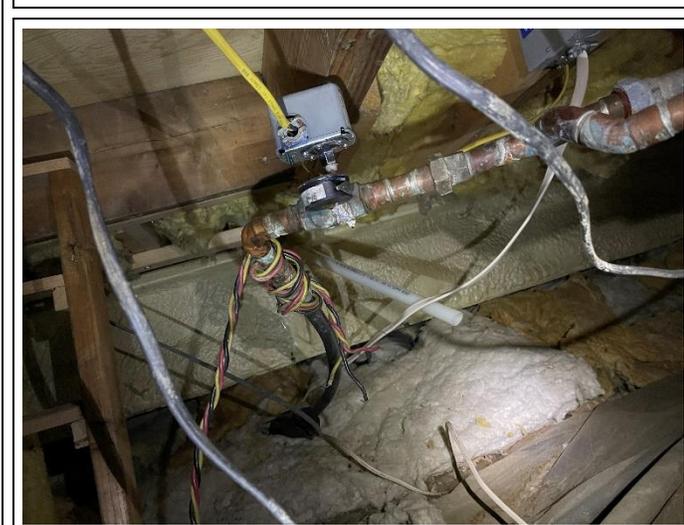








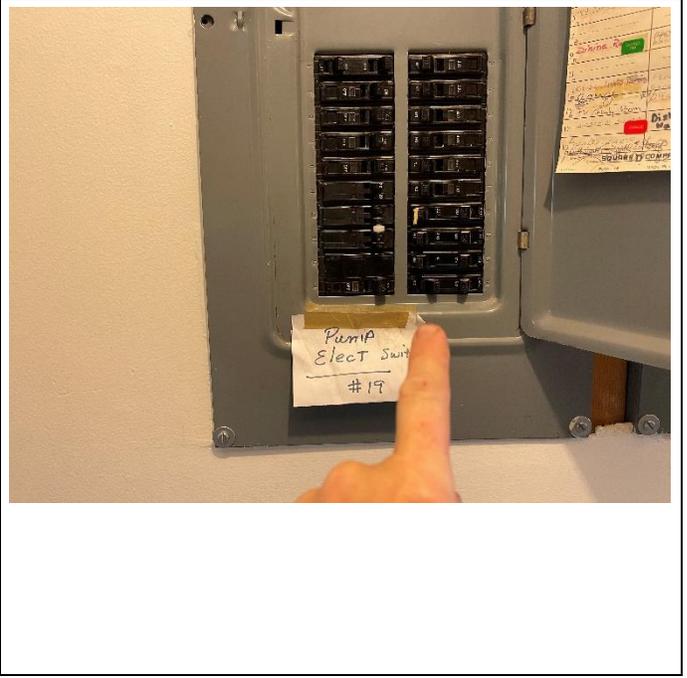
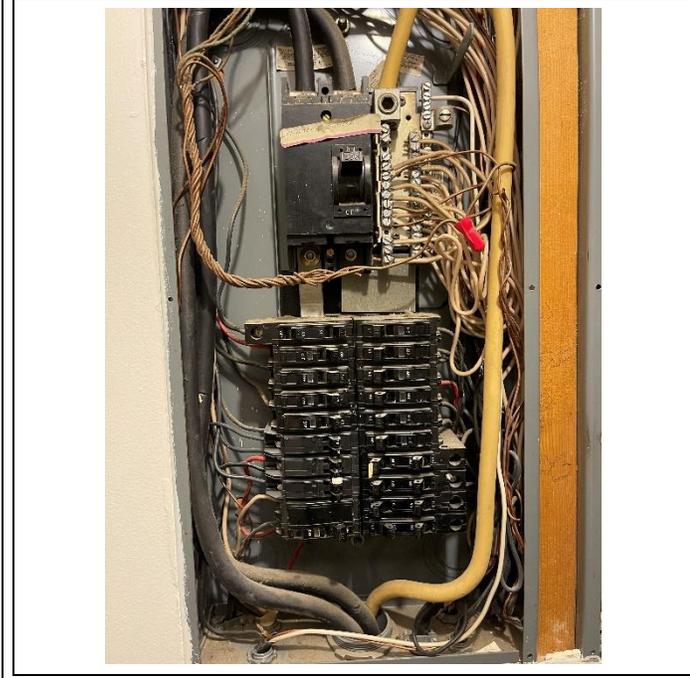
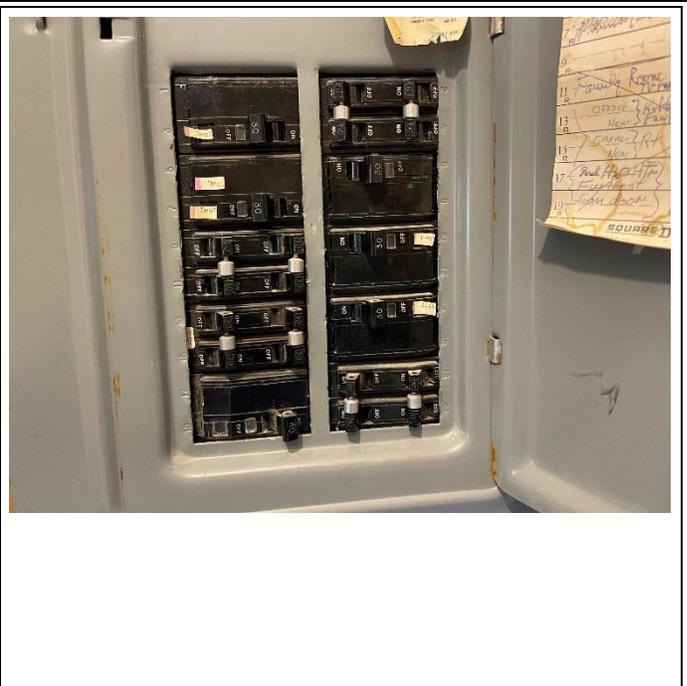
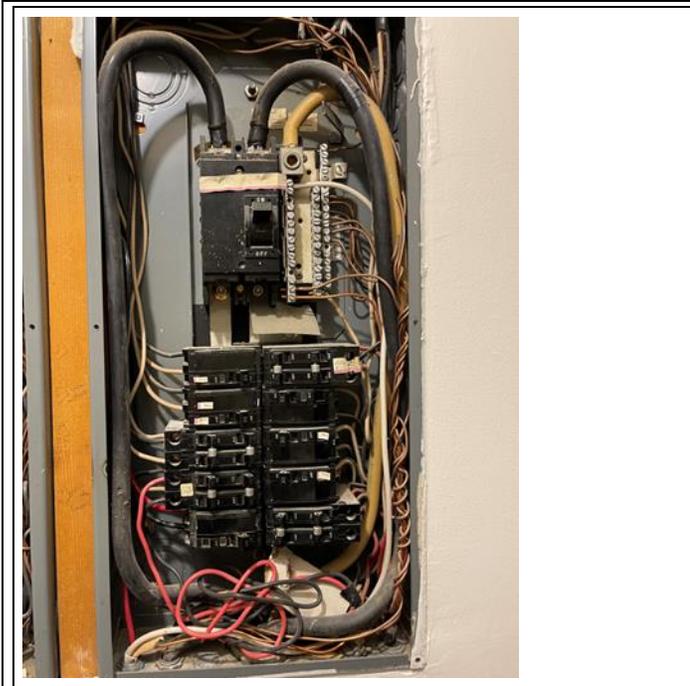
Plumb the 4x4 interior posts used to augment interior joist support





The north footing has been raised and supported by large bolts and steel brackets shown above. Fan and duct and heaters in crawlspace shown below.







Damage to garage ceiling



Attic access in garage ceiling



Dryer duct termination in garage



Step into garage to be secured.



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This is to acknowledge payment for the inspection and attached report. Thank you.

Amount paid: Check \$550.00