Inspection report for the property at

76423 Football Road USA

This report is prepared exclusively for **Russell Wilson**
On: **2018-10-01**

Company Information

Orca Inspection Services LLC
Phone: (206) 713-5715
orcainspect@gmail.com
http://www.orcainspect.com

ICN #: 10359AR011
Inspected by: Dylan Chalk
WA State Pest License #: 65540
WA State Home Inspector #: 365

Overall, this is a quirky house on a great site. The house has had substantial updates over the years: updated roof, windows, heat pump, kitchen and bathrooms. Unfortunately, some of the recent work looks unreliable and requires repair or replacement, see especially the roof and wiring. In addition, the house has an old deck that was no well-constructed and is now quite old; the deck has also had non-standard additions and presents a safety hazard. On top of these larger items, there are a lot of items here, from an unusual enclosed carport space to rodent damage, to attic condensation to miscellaneous plumbing repairs. Overall, this house has some excellent updates and attributes, but it poses a level of risk that many houses do not present, due to years of non-standard and likely unpremeditated work. With houses like this, it can be difficult to accurately gauge when some repairs w d end.

The Scope and Purpose of a Home Inspection

ICN#: 10359AR011

Purchasing property involves risk

The purpose of a home inspection is to help reduce the risk associated with the purchase of a structure by providing a professional opinion about the overall condition of the structure. A home inspection is a limited visual inspection and it cannot eliminate this risk. Some homes present more risks than others. We cannot control this, but we try to help educate you about what we don't know during the inspection process. This is more difficult to convey in a report and one of many reasons why we recommend that you attend the inspection.

A home inspection is not an insurance policy

This report does not substitute for or serve as a warranty or guarantee of any kind. Home warranties can be purchased separately from insuring firms that provide this service.

A home inspection is visual and not destructive

The descriptions and observations in this report are based on a visual inspection of the structure. We inspect the aspects of the structure that can be viewed without dismantling, damaging or disfiguring the structure and without moving furniture and interior furnishings. Areas that are concealed, hidden or inaccessible to view are not covered by this inspection. Some systems cannot be tested during this inspection as testing risks damaging the building. For example, overflow drains on bathtubs are generally not tested because if they were found to be leaking they could damage the finishes below. Our procedures involve non-invasive investigation and non-destructive testing which will limit the scope of the inspection.

This is not an inspection for code compliance

This inspection and report are not intended for city / local code compliance. During the construction process structures are inspected for code compliance by municipal inspectors. Framing is open at this time and conditions can be fully viewed. Framing is not open during inspections of finished homes, and this limits the inspection. All houses fall out of code compliance shortly after they are built, as the codes continually change. National codes are augmented at least every three years for all of the varying disciplines. Municipalities can choose to adopt and phase in sections of the codes on their own timetables. There are generally no requirements to bring older homes into compliance unless substantial renovation is being done.

This is just our opinion

Construction techniques and standards vary. There is no one way to build a house or install a system in a house. The observations in this report are the opinions of the home inspector. Other inspectors and contractors are likely to have some differing opinions. You are welcome to seek opinions from other professionals.

The scope of this inspection

This inspection will include the following systems: exterior, roof, structure, drainage, foundation, attic, interior, plumbing, electrical and heating. The evaluation will be based on limited observations that are primarily visual and non-invasive. This inspection and report are not intended to be technically exhaustive.For more about the scope of a home inspection see: ASHI National Standards at http://www.homeinspector.org/Standards-of-Practice or Washington State Home Inspection Standards at http://app.leg.wa.gov/RCW/default.aspx?cite=18.280.030

Your expectations

The overall goal of a home inspection is to help ensure that your expectations are appropriate with the house you are proposing to buy. To this end we assist with discovery by showing and documenting observations during the home inspection. This should not be mistaken for a technically exhaustive inspection designed to uncover every defect with a building. Such inspections are available but they are generally cost-prohibitive to most homebuyers.

Your participation is requested

Your presence is requested during this inspection. A written report will not substitute for all the possible information that can be conveyed verbally by a shared visual observation of the conditions of the property.

How to Read This Report

Getting the Information to You

This report is designed to deliver important and technical information in a way that is easy for anyone to access and understand. If you are in a hurry, you can take a "Quick Look" at our summary page and quickly get critical information for important decision making. However, we strongly recommend that you take the time to read the full Report, which includes digital photographs, captions, diagrams, videos and hot links to additional information.

The best way to get the layers of information that are presented in this report is to read your report online. This will allow all you to expand your learning about your house. You will notice some words or series of words highlighted in blue and underlined – clicking on these will provide you with a link to additional information.

This report can also be printed on paper or to a PDF document.

Chapters and Sections

This report is divided into chapters that parcel the home into logical inspection components. Each chapter is broken into sections that relate to a specific system or component of the home. You can navigate between chapters with the click of a button on the left side margin.

Most sections will contain some descriptive information done in black font. Observation narrative, done in colored boxes, will be included if a system or component is found to be significantly deficient in some way or if we wish to provide helpful additional information about the system or the scope of

our inspection. If a system or component of the home was deemed to be in satisfactory or serviceable condition, there may be no narrative observation comments in that section.

Observation Labels

All narrative observations are colored, numbered and labeled to help you find, refer to, and understand the severity of the observation. Observation colors and labels used in this report are:

Major Concern: Repair items that may cost significant money to correct now or in the near future, or items that require immediate attention to prevent additional damage or eliminate safety hazards.

Repair Repair and maintenance items noted during inspection. Please note that some repair items can be expensive to correct such as re-finishing hardwood floors, but are considered simply repair items due to their cosmetic nature.

Improve Observations that are not necessarily defects, but which could be improved for safety, efficiency, or reliability reasons.

Monitor Items that should be watched to see if correction may be needed in the future.

Due Diligence Observation such as a buried oil tank that may require further investigation to determine the severity and / or urgency of repair.

Future Project A repair that may be deferred for some time but should be on the radar for repair or replacement in the near future.

Efficiency Denotes observations that are needed to make the home more energy efficient as well as to bring the home up to modern insulation standards. This category typically includes windows and insulation. Other items, such as lighting and appliances, are not inspected for their energy status.

Notes and Limitations Refers to aside information and /or any comments elaborating on descriptions of systems in the home or limitations to the home inspection.

WDO Denotes the presence of wood destroying organisms or conditions conducive to wood destroying organisms. Conducive conditions include but are not limited to, inadequate clearances, earth/wood contact, cellulose debris, inadequate ventilation, and excessive moisture. All observations with WDO are relevant to a WA State pest inspection.

Wood Destroying

This report includes a structural pest inspection embedded within the report. All observations in this report that begin with WDO are a part of a WA State Pest Inspection. Orca Inspection Services LLC employs Dylan Chalk, Licensed Structural Pest Inspector # 65540. Please note that most WDO observations are related to high moisture conditions that could be conducive to mold-like substances. Orca Inspection Services LLC is not a mold specialist and recommends consulting with an industrial hygienist or other mold remediation expert if concerned about mold or indoor air quality. Pest Inspection Standards in WA State - WAC 16-228-2045 - REQUIRES THAT A DIAGRAM / DRAWING BE PREPARED FOR WOOD DESTROYING ORGANISM (WDO) REPORTS. IF THE PHOTOS AND DESCRIPTIONS IN THIS REPORT ARE INADEQUATE, A DRAWING IS AVAILABLE UPON REQUEST.

Further Evaluation

Whenever further evaluation of a system or component is recommended or whenever due diligence is recommended, this further evaluation or investigation should be done by at least one licensed professional and qualified contractor prior to closing as there is a chance of hidden costs or problems associated with the system or component in question.

Summary Page

The Summary Page is designed as a bulleted overview of all the observations noted during inspection. This helpful overview is not a substitution for reading the entire inspection report. The entire report must be read to get a complete understanding of this inspection report as the Summary Page does not include photographs or photo captions.

Moisture Meter Testing

Where moisture meter testing is indicated in this report a Protimiter Survey Master Dual Function was used.

Quick Look

Major Concerns

⚠ (PWDO-1) **Pests and Wood Destroying Organisms:** Extensive rodent contamination was noted in the crawl space below the house and in the attic above the house. Hire a rodent control specialist to eliminate and seal all openings and set and monitor traps. Once all rodents have been sealed out all contaminated insulation and construction materials should be remediated. On-going baiting and trapping as well as control of vegetation and elimination of food sources on the exterior of the home are often needed to prevent rodent problems / infestations. Keeping all trees pruned 6 feet off the house is recommended.

⚠ (E-11) **Electrical:** Overall, numerous red flags were noted in the branch and finish wiring system indicating unreliable and incomplete wiring practices. I recommend additional inspection and repair of the wiring system by a licensed electrical contractor. This should be considered urgent for safety reasons. Examples of red flags and defects found during inspection are in this chapter.

⚠ (MB-1) **Master Bathroom:** The master bath shower pan is not sloped to drain and is allowing some standing water. This may not be cost effective to repair but it is not done correctly and could lead to some standing water and premature failure. All plumbing fixtures should be sloped to drain. Hire a qualified plumber to evaluate and repair as possible.

⚠ (RA-1) **Roof/Attic:** The roofing material on this home is done in an architectural grade composition shingle. These shingles are often rated as 30 years shingles, though I find in practice 18-22 years is more realistic depending on the quality of the installation, the amount of exposure and the pitch of the roof. The roof looks to be done as an overlay, meaning there is another layer of shingles below the existing layer. In general, overlays have less predictable service life. They can suffer from inadequate nailing and inadequate flashings if not carefully installed. These can lead to premature leaks, nail pops and failure. They tend to break down more quickly as well, due to heat build-up and the shingles will often cup and prevent water from shedding reliably. This can create leaks even the the field of the roof. During inspection, red flags were found that indicate active failure as well as cupping shingles and poor installation techniques. I recommend additional inspection of the roof by a licensed roofing contractor. Repair or replace as recommended. Given the visible condition of the installation, I would expect the need for a complete roof tear off and replacement. Examples of specific observations noted during inspection include:

- Shingles cupping - could hold water
- Clearly two layers of roof and no drip edge flashing.
- I am concerned that quality roofers will not repair this roof as the cupping shingles can allow water to move sideways on the roof.
- Water can easily run behind this valley.
- A few localized damaged shingles
- The valley detail is super unreliable.
- Active leaks and water damage around the porch skylight
- Water damage at eaves by SW skylight

- No drip edge flashing installed - these are now required

⚠ **(RA-5) Roof/Attic:** Roughly 30% of the attic decking was noted to be covered in dark stains / mold-like substances - see both of the east side wings - toward the carport and above the studio. This indicates the attic has experienced seasonal condensation problems. This is generally caused by heat migration into the attic during cold weather resulting in condensation when the roof sheathing reaches dew point. I recommend hiring a mold remediation specialist to further evaluate this condition and implement repairs as recommended. The way to control this problem involves a four-pronged approach:
1. Control relative humidity inside the house
2. Be sure all fans running through the attic are properly terminating to the exterior.
3. Ensure adequate air barriers between the house and the attic (stop air leaks in the ceiling by sealing around can lights, fans and other penetrations) and
4. Be sure the roof cavity is ventilated correctly. (Please note that correctly does not necessarily mean more ventilation. Too much ventilation can exacerbate this problem.)
As a general rule, standards recommend keeping indoor relative humidity below 55% in cold weather to prevent condensing surfaces. Two companies that do mold remediation work are:

- EnviroNix @ https://www.environix.com/ or
- Jose Tech @ http://www.josetechnologies.com

Observations noted during inspection include:

- This may be a persistent problem - note the white paint on the attic framing
- The attic spaces had a musty odor.
- I was unable to access above the main house attic - but it looked more clear in here

⚠ **(EG-4) Exterior/Garage:** Overall, numerous repairs are needed to the decking systems on this house to ensure safe and reliable performance. I recommend additional inspection and repair or replacement of these decks by a qualified general contractor. Given the extensive non-standard installations here, there is no way to properly repair this deck without rebuilding. You may be able to prolong the useful life of the decks by implementing temporary repairs, but this approach poses a safety risk. Examples of red flags and defects noted during inspection include:

- No ledger board - joist hangers nailed directly to the siding - this creates an unreliable connection between the deck and then house.
- Inadequate lateral support at the beam and the rim joist - see how the rim is just 1x material
- Signs of settlement at the lower deck and deck posts
- Wood decay at the base of some deck posts.
- Inadequate 4x4 posts, especially for such a heavy deck - supporting two decks and a roof
- Inadequate lateral support at the new deck
- Unreliable attachment of the new deck - this is a weak and non-standard connection.
- Wood decay and anobiid beetle damage in the wood beam below the lower deck
- Rotting non-treated beam below lower deck

Repairs

(PWDO-2) **Pests and Wood Destroying Organisms:** Anobiid beetle exit holes were noted in some of the wood around the house - see deck. This is common in older lumber that was often not properly kiln dried. No powdery frass was found during visual inspection and only a minor amount of damaged wood was found. Removal and replacement of damaged wood is recommended to eliminate a condition conducive to wood destroying organisms. Where exterior wood is damaged and cannot be easily removed, I recommend contacting a log home maintenance company. These companies often use Borate based finishes and treatments which can be effective for controlling exterior anobiid infestations. In this case, the proper long term repair is replacing this back deck, a significant upcoming expense.

(E-2) **Electrical:** An inadequate working clearance was noted for the electric load center. A 30 inch wide and 36 inch deep unobstructed working clearance is recommended for improved safety. Consult with a licensed electrician or general contractor to further evaluate this condition and relocate the panel or improve access as needed. You should be able to just remove the shelving here.

(E-4) **Electrical:** Several of the circuits at the bottom right side of the panel were shut off. I wonder if these were for older electric heaters that have been replaced by the heat pump?

(E-5) **Electrical:** Hire a licensed electrician to correct the double tapped neutrals in the sub-panel. This condition risks poorly protected circuits and as such is a latent fire hazard.

(E-6) **Electrical:** Non-metallic sheathed cable should not be installed with a plug into a receptacle - see wiring to the south sump pump. This wiring is designed to be hard wired with terminations inside listed junction boxes. The wiring should be repaired to eliminate this configuration.

(E-7) **Electrical:** The loose electrical junction box needs to be secured for improved safety - see above the main floor cooktop.

(E-8) **Electrical:** The exterior lighting on the SW corner of the building does not look weather proof - see corrosion on junction box. Have this further evaluated and repaired as recommended by a licensed electrical contractor.

(E-9) **Electrical:** The open electrical junction boxes need to be covered for improved safety - see both access points in the attic and in the crawl area in the basement.

(E-10) **Electrical:** The open electrical splice needs to be contained inside of a listed junction box - see behind fan in basement kitchen.

(E-12) **Electrical:** Reverse polarity was noted at the electrical receptacle at the exterior main floor deck and also at the kitchen bar. This is when the hot and the neutral have been wired backwards. This is a safety issue that should be corrected by a licensed electrician.

(E-13) **Electrical:** The missing cover plates should be installed to cover all access to wiring at switches and receptacles - see storage closet by electric panels. Please note that extension rings may be needed as the reveal between the outlets and switches and the wall finishes is not even.

(E-14) **Electrical:** The use of GFCI (Ground Fault Circuit Interruption) protection is inconsistent with modern minimum standards for safety - see receptacle in the family bath. GFCI protection is recommended for the electrical receptacles in the following locations: the two dedicated kitchen appliance circuits, all receptacles within 6 feet of a sink, bathrooms, exterior, garage, unfinished basements, laundry and all wet and damp locations. GFCI's protect

against electrocution by limiting the duration of an electrical shock. These are an important modern safety feature that have proven to save lives. Hire a licensed electrician to further evaluate and update GFCI protection for improved safety.

(E-15) **Electrical:** My receptacle tester is not fitting into the receptacle correctly indicating the receptacle may have something stuck inside - NE bedroom. This may require replacement. have this further evaluated and repaired by a licensed electrician.

(HCF-1) **Heating, Cooling and Fireplaces:** The furnace filter cover is sealed shut. This should be repaired to access and change the filter - the filter should be changed quarterly.

(HCF-2) **Heating, Cooling and Fireplaces:** Annual servicing is recommended for all heating and cooling equipment to ensure reliable performance. This house has an air-sourced heat pump system. The system was tested in heating mode during inspection and was operational. No recent service records were noted on the air handler, but this is a very new heat pump. I recommend keeping this heat pump on an annual service schedule. ***I would go ahead and service it now as the air filter needs to be repaired.***

(HCF-4) **Heating, Cooling and Fireplaces:** This home has an old un-listed wood stove. Since Jan. 1, 1992, all used solid fuel burning appliances in Washington State, such as wood stoves, offered for sale must be a listed appliance. An unlisted, used wood stove may not be reinstalled in a home in Washington. As this unit was already present in the home it should be considered grandfathered, however, old wood stoves such as this are generally less safe and emit higher pollution and they can impact home owners' insurance. If you wish to keep this unit and use it, I recommend additional inspection and evaluation by a qualified chimney sweep prior to use. Implement repairs or updates as recommended to ensure safe and reliable operation. During inspection I noted:

- Corrosion inside the wood stove firebox
- Cracked brick on the wood stove hearth
- Missing tile on the exterior of the wood stove

(P-3) **Plumbing:** The air admittance valve does not appear to be the correct type of vent - this is actually an auto-vent - see out by septic system as well as below the kitchen sink. This is a spring-loaded mechanical vent that is not recommended in residential construction. Have this further evaluated by a qualified plumber and repaired as recommended with a proper air admittance valve.

(P-4) **Plumbing:** The covers to the septic system do not appear to be adequately sealed. Have these pump access covers further evaluated and repaired as recommended by a qualified contractor.

(P-5) **Plumbing:** ***Testing of the plumbing system today, I noted the water was too hot - 155 degrees F!*** This is a scald hazard. To prevent scalding, standards recommend indoor hot water temperatures do not exceed 125 degrees. There is some evidence that hot water temperatures should be greater than 130 degrees to prevent Legionaries' disease from developing in the water heater. If this is a concern, you can heat the water in the tank to 140 degrees F and have a tempering valve installed at the hot water tank. Have this further evaluated and repaired by a licensed plumber or simply turn down the temperature as desired to eliminate a scald hazard.

- The thermostat covers were off at the time of inspection - this is a safety hazard

(P-6) **Plumbing:** Install listed seismic straps to restrain the water heater in the event of an earthquake; none were noted during inspection. Two straps should be located on the water heater: one on upper 1/3rd of tank and one at the lower 1/3rd.

(P-7) **Plumbing:** Corrugated waste pipe was used to drain this laundry sink. This in an unlisted plumbing product. Use smooth wall pipe only. Hire a licensed plumber to further evaluate and repair as needed.

(P-9) **Plumbing:** The current hoses that supply water to the clothes washer have some moderate corrosion - see basement. I recommend updating as soon as possible to insure reliable performance. For improved protection against accidental leaks at the clothes washing machine consider improving water supply connection hoses to a flood safe design.

(FB-1) **Family Bathroom:** The wrong set screw has been used for the mixing valve in the family bath. Repair as needed.

(BB-1) **Basement Bathroom:** The trap for the bathroom sink is not done using a listed plumbing product. Have this drain piping further evaluated and repaired by a licensed plumber.

(KL-1) **Kitchen - Lower:** The kitchen sink faucet is installed with the hot and the cold installed backwards. Repair for proper operation.

(KL-2) **Kitchen - Lower:** The microwave is installed close to the cooktop. Generally, a 24 inch clearance is recommended, though installation to the manufacturers minimum specifications is acceptable. Be sure this installation complies with manufacturers installation specifications or re-install for proper clearance above the cooktop as needed. Please note that most installations do meet manufacturer's specifications but can still be inconveniently close to the cooktop.

(I-1) **Interior:** The drywall / sheetrock finishes require some tune-up repair: See localized cracking at the living room ceiling by the propane wood stove. No red flags were found to indicate structural movement. Repair sheetrock blemishes as desired.

(I-2) **Interior:** The stairs to the basement are non-conforming stairs - see how steep they are. This will not be cost effective to fully correct. Use caution when navigating these steep stairs. Improvements could be made to the handrail system to improve the safety of the stairs - have the ends of the handrail return into the wall.

(I-3) **Interior:** A lost seal was noted in the glazing - south side half-round window. This has resulted in fogging between the panes of glass that cannot be cleaned without glazing repair or replacement. Hire a glazing specialist to further evaluate and repair or replace all glazing with lost seals.

(I-4) **Interior:** The master bedroom window is missing a proper lock - see how just a wood dowel is being used. Repair as needed for improved security.

(I-5) **Interior:** The ductwork for the bathroom fans is uninsulated in the attic space. This can cause condensation during cold weather and is less energy efficient. Replace these ducts with insulated ducts or insulate to R-8 or better.

(RA-4) **Roof/Attic:** The attic access hatch requires insulation and weather stripping to prevent heat loss and heat migration into the attic.

(RA-7) **Roof/Attic:** The attic insulation is rodent-damaged and incomplete. Remove all contaminated insulation and complete repairs to fans, wiring, ventilation.... Once repairs are complete re-insulate to modern standard or to best possible levels. Be sure to seal up all air leakage points during repairs and prior to insulating to modern standard be sure all rodent issues have been resolved and all projects like wiring and bath fans have been completed.

(RA-8) **Roof/Attic:** The screens that protect the gable vent openings are damaged and require repair to exclude birds and rodents and ensure proper ventilation. Use 1/4 inch wire mesh to seal-up openings from rodents and birds and make sure screens are not blocked by paint or other debris. Refrain from using tight-mesh window screen as this can obstruct air flow.

(RA-9) **Roof/Attic:** The attic and roof cavity ventilation look to be non-standard. Proper attic ventilation is important for the roofing materials to perform as intended and to reduce chances for condensation problems and heat build-up in the attic. One problem here is the use of ridge vents and gable vents. Most ridge vent manufacturers recommend ridge and soffit vents only to encourage convective ventilation across the roof decking; the gable wall vents can disrupt this convective air flow. At the time of inspection, red flags were found indicating that repairs could be needed to this roof cavity ventilation system.

(EG-2) **Exterior/Garage:** The exterior door is below the deck at the entry. This is a non-standard configuration that could present a safety hazard. Have this evaluated and repaired by a qualified general contractor.

(EG-3) **Exterior/Garage:** The exterior entry door is a primary egress door. This should have a minimum height of 78 inches. This is currently obstructed by a low roof in the front. This could be difficult to correct without re-framing the entry roof.

(G-2) **Grounds:** Eliminate wood /soil contact to reduce the chances for rot and pest damage and repair any hidden rot as needed - see N storage shed. Generally, a 6-inch clearance between soils and wood is recommended. This is often not realistic on older homes, but repairs should be made to get as much clearance as is possible and all contact with the soils should be eliminated.

(G-3) **Grounds:** The wood well for the septic pump on the south side is rotting and will require replacement / repair at some point soon.

(G-5) **Grounds:** The rotten stumps near the house should be removed from the yard to eliminate a condition conducive to wood destroying organisms. Eliminating conducive conditions near the home can help create a natural barrier between your home and wood destroying organisms.

(G-7) **Grounds:** A rotted post was noted at the east side of the carport. Replace this rotted post with pressure treated lumber.

Improves

(E-1) **Electrical:** AFCI (arc fault protection) is now required on all branch circuits supplying outlets or devices installed in residential dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, and similar rooms and areas. The goal of this protection is to reduce risks of electrical fires. Consult with a licensed electrician about improving circuit protection as desired.

Please note that if you add circuits to the existing system, they should comply with modern AFCI standards.

(P-8) Plumbing: A moisture alarm with water shut-off features is recommended under the washing machine to protect against accidental leaks in the supply hoses. Pans can be effective when there is a drain, but even these will not protect against a burst supply connector. A moisture alarm with automatic shut-off will. Watts is a brand I have seen installed: http://www.watts.com/pages/learnAbout/intelliflow.asp?catId

(K-1) Kitchen: A ductless exhaust fan was noted for the cook-top. Installation of a fan that ducts to the exterior is recommended to remove moist air to the exterior. Please note that if you switch to a gas range or cooktop in the future, a fan that vents to the exterior is still not required, but is more strongly recommended. Gas ovens produce carbon monoxide while running and should really have an exhaust vent to the exterior.

(RA-2) Roof/Attic: Plastic gutters were used for this building. As a general rule I find plastic gutter systems are unreliable and require constant maintenance to insure proper slope and to prevent leakage. Updating the plastic gutters is recommended for improved reliability and lower maintenance.

Monitors

(EG-1) Exterior/Garage: The exterior trim system here has been done as a picture framed or cap over trim, where the trim is not lead into the siding but laid over the top of the siding. This is a common practice, but is sub-standard. All points subject to moisture entry shall be appropriately flashed. There is not a commonly accepted flashing detail for the "cap over detail" that I am aware of. The risk here is water can collect behind the trim and could leak into the siding where nails from the trim penetrate the siding. I would be most concerned about the exposed trim details. Have this further evaluated and repaired as recommended by a qualified contractor. I found nothing urgent inside the house today to indicate a repair is needed at this time.

(G-1) Grounds: The grade of the driveway is slopping toward the building - see entry side of the house. Standards recommend a quarter inch / foot slope away from the building or better. Be sure to keep this catch basin clear at the entry driveway - this looks important for moving water around the building.

Due Diligences

(SB-1) Structure and Basement: This house has a studio space that appears to be an enclosed carport. I would inquire with the seller for any permits for this work. This may be an un-permitted structure. It has many non-standard features such as the door below the deck, inadequate clearance to grade and no soffit ventilation for the roof cavity. I recommend repairing the soffit venting. The rest of the non-standard configurations could be difficult tot correct.

(SB-2) Structure and Basement: A few water stains were noted in the basement . The basement was dry at the time of inspection. Inquire with the seller for any information regarding prior leaks or drainage issues. I tested these areas with a moisture meter during inspection - no elevated readings were found.

(E-3) **Electrical:** This home has a 30-amp transfer switch for a generator for back-up electric power supply. Generator systems are beyond the scope of this inspection. I recommend inquiring with the seller for more information regarding operation and maintenance of this system. Generators need to be run and serviced regularly to ensure reliable operation

(P-2) **Plumbing:**
Based on visible components, this property appears to have a ***private on-site septic system with some very unusual features - see the sumps on the south side of the property.*** These are specialty systems and are excluded from this inspection. Comments in this report related to this system are made as a courtesy only and are not meant to be a substitute for a full evaluation by a qualified specialist. Generally, septic tanks should be pumped and inspected every 3 years. Depending on the type of system and municipal regulations, inspection and maintenance may be required more frequently, often annually. I recommend:

- Investigating any information about this system's maintenance and repair history
- Reviewing any documentation available for this system
- Learning inspection and maintenance requirements for this system
- Hire a qualified specialist evaluate, perform maintenance and make repairs as needed

(G-4) **Grounds:** An arborist should be hired to further evaluate the large trees on the property and prune or remove as recommended. Whenever large trees are located near a house a higher level of maintenance should be expected to keep trees safe and healthy and to eliminate the risks of damage to the home or building materials and to eliminate rodent entry points. With larger trees such as firs pruning is recommended to eliminate the sail effect and reduce strain on these tress during high winds.

Efficiencies

(RA-6) **Roof/Attic:** The attic insulation could be improved to modern standards. Modern standards recommend R-49 on the floor and R-21 on walls. R-value is the measure of resistance to heat loss; the higher the R-value the better the insulation. During insulation repairs it is best practices to implement any air seal-up repairs to seal air leakage. Also, be sure you have completed any wiring or other projects that are needed in the attic. Then, hire an insulation contractor to improve thermal barriers.

Notes

(HCF-3) **Heating, Cooling and Fireplaces:** I tested the LP wood stove today. It was performing as intended.

(P-1) **Plumbing:** This shows the main water shut off in the crawl area.

(FB-2) **Family Bathroom:** During inspection today I operated all plumbing fixtures in bathrooms. I ran a moisture meter around toilets and tile shower enclosures to check for concealed leaks. I also sounded for loose finishes in shower and tub enclosures. I felt for loose waste pipe below sinks and where accessible and checked for leaks below sinks. I do not test bathtub overflow drains during inspection as this risks damaging finishes around the tub. I did not see any signs of previous leaks relating to the overflow during inspection today. I

recommend monitoring tubs while filling and ***avoid pushing water into the bathtub overflow***. Even well-installed overflow drains can leak as the gaskets that seal the overflow will dry out over time and may no longer provide a watertight seal. Monitor plumbing after moving into a new home as testing during inspection presents less stress on plumbing than daily use. Any defects uncovered during inspection are listed in this report.

(K-2) Kitchen: The oven was tested in bake mode and was working at the time of inspection.

(RA-3) Roof/Attic: I did not crawl the crawl space for the attic where there was no ramp or safe way to access the space. Crawling in the V of trusses or on top of framing risks damaging thermal barriers and ceiling finishes and is not a safe way to access an attic. This limited inspection of this space.

(EG-5) Exterior/Garage: This link contains an article about modern deck design code in WA State. State code now exceeds the minimum design requirements in the 2015 IRC. Residential decks must be designed to 60-pounds / sq/ft now.

(EG-6) Exterior/Garage: To see a prescriptive guide for residential wood deck construction click this link:

(EG-7) Exterior/Garage: It is odd the way there is a gap between the masonry chimneys and the siding. I see no signs of structural settlement with the chimneys - this seems to be just how they were done.

(G-6) Grounds: The storage closets in the carport were locked at the time of inspection and inaccessible.

Structure and Basement

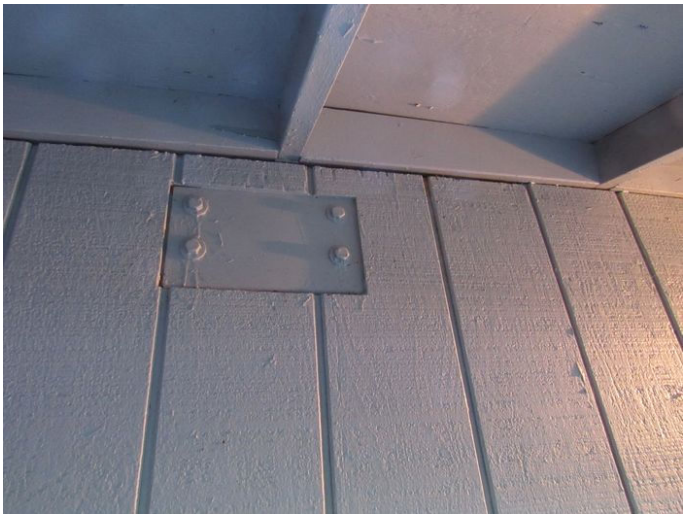
Foundation

% of Foundation Not Visible 80%
Evidence of Seismic Protection Some Signs
Building Configuration Basement
Foundation Description Poured concrete

Floor, Wall and Ceiling Framing

Wall Framing Not visible
Wall Insulation Not visible
Wall Sheathing Not visible
Floor Framing Not visible
Sub-Floor Material Not visible
Ceiling Framing Not visible

🔎 **(SB-1) Due Diligence:** This house has a studio space that appears to be an enclosed carport. I would inquire with the seller for any permits for this work. This may be an un-permitted structure. It has many non-standard features such as the door below the deck, inadequate clearance to grade and no soffit ventilation for the roof cavity. I recommend repairing the soffit venting. The rest of the non-standard configurations could be difficult tot correct.



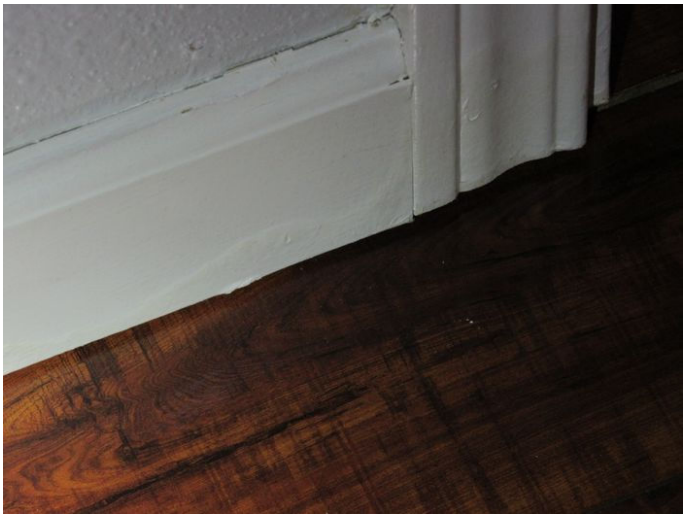
Basement

Full

Basement Moisture

Some signs

🔑 **(SB-2) Due Diligence:** A few water stains were noted in the basement . The basement was dry at the time of inspection. Inquire with the seller for any information regarding prior leaks or drainage issues. I tested these areas with a moisture meter during inspection - no elevated readings were found.



Water stain on the baseboard near the bedroom.

Water stains on the baseboard - laundry room

Pests and Wood Destroying Organisms

Pests and Rodents

Present

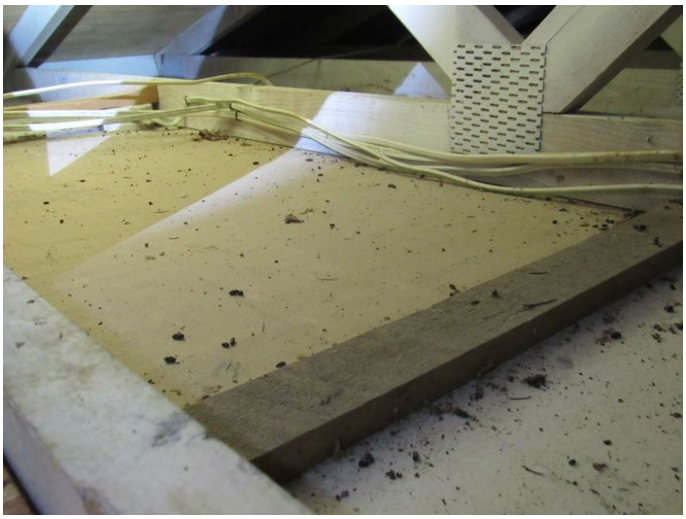
⚠ **(PWDO-1) Major Concern:** Extensive rodent contamination was noted in the crawl space below the house and in the attic above the house. Hire a rodent control specialist to eliminate and seal all openings and set and monitor traps. Once all rodents have been sealed out all contaminated insulation and construction materials should be remediated. On-going baiting and trapping as well as control of vegetation and elimination of food sources on the exterior of the home are often needed to prevent rodent problems / infestations. Keeping all trees pruned 6 feet off the house is recommended.

Burrowing holes noted in the insulation in the basement as well as a strong odor

Signs of past dead rodents in the basement

Dead rodent by access point in shop

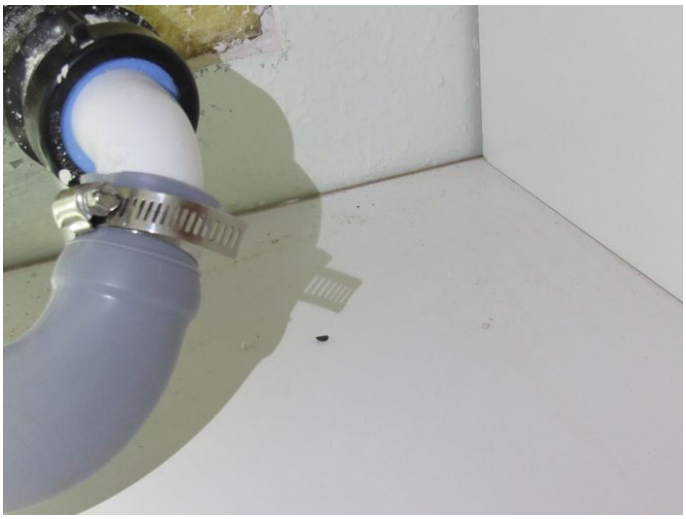
Note the burrowing holes in the attic insulation.



More burrowing holes

Debris from rodents and possible entry point here at the studio

Rodent feces above studio



A rodent dropping noted below the basement bath sink.

Wood Destroying Organisms

Visible Evidence of Active Wood Destroying Insects None noted
Visible Evidence of Inactive Wood Destroying Insects Present
Visible Evidence of Active Wood Decay and Fungi Present
Visible Evidence of Damage from Wood Destroying Organisms None noted
Visible Evidence of Conditions Conducive to Wood Destroying Organisms Present

(PWDO-2) Repair: Anobiid beetle exit holes were noted in some of the wood around the house - see deck. This is common in older lumber that was often not properly kiln dried. No powdery frass was found during visual inspection and only a minor amount of damaged wood was found. Removal and replacement of damaged wood is recommended to eliminate a condition conducive to wood destroying organisms. Where exterior wood is damaged and cannot be easily removed, I recommend contacting a log home maintenance company. These companies often use Borate based finishes and treatments which can be effective for controlling exterior anobiid infestations. In this case, the proper long term repair is replacing this back deck, a significant upcoming expense.

Electrical

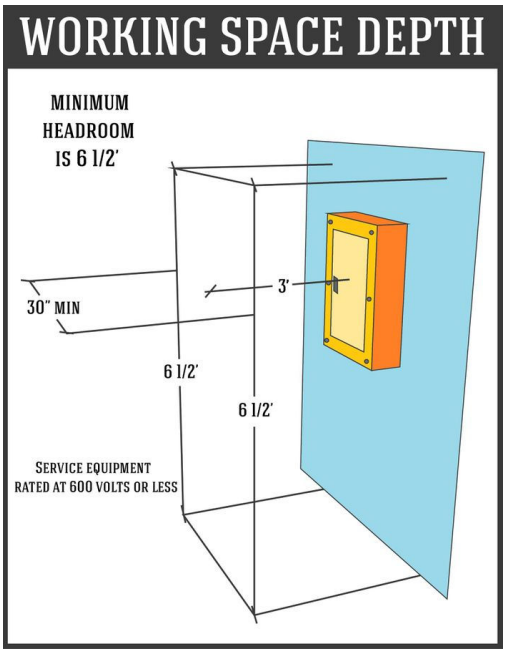
Service Equipment

Volts 120/240

Service Drop Underground
Meter Base Amperage 200
Service Entrance (SE) conductor Size Aluminum, 4/0, 200 amps
Main Panel Amperage 200 amps
Electric Service Amperage 200 amps
Main Electric Panel Location Off studio

(E-1) Improve: AFCI (arc fault protection) is now required on all branch circuits supplying outlets or devices installed in residential dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, and similar rooms and areas. The goal of this protection is to reduce risks of electrical fires. Consult with a licensed electrician about improving circuit protection as desired. Please note that if you add circuits to the existing system, they should comply with modern AFCI standards.

(E-2) Repair: An inadequate working clearance was noted for the electric load center. A 30 inch wide and 36 inch deep unobstructed working clearance is recommended for improved safety. Consult with a licensed electrician or general contractor to further evaluate this condition and relocate the panel or improve access as needed. You should be able to just remove the shelving here.



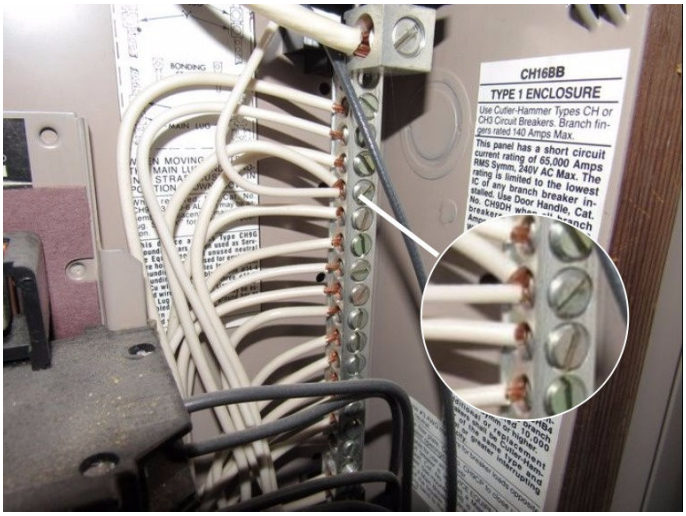
(E-3) Due Diligence: This home has a 30-amp transfer switch for a generator for back-up electric power supply. Generator systems are beyond the scope of this inspection. I recommend inquiring with the seller for more information regarding operation and maintenance of this system. Generators need to be run and serviced regularly to ensure reliable operation

(E-4) Repair: Several of the circuits at the bottom right side of the panel were shut off. I wonder if these were for older electric heaters that have been replaced by the heat pump?

Sub Panels

Sub-panel
Sub-panel Main Conductor Copper, #6, 60 amps
Sub--Panel Amperage 60
Sub-Panel Location Next to main panel

(E-5) Repair: Hire a licensed electrician to correct the double tapped neutrals in the sub-panel. This condition risks poorly protected circuits and as such is a latent fire hazard.

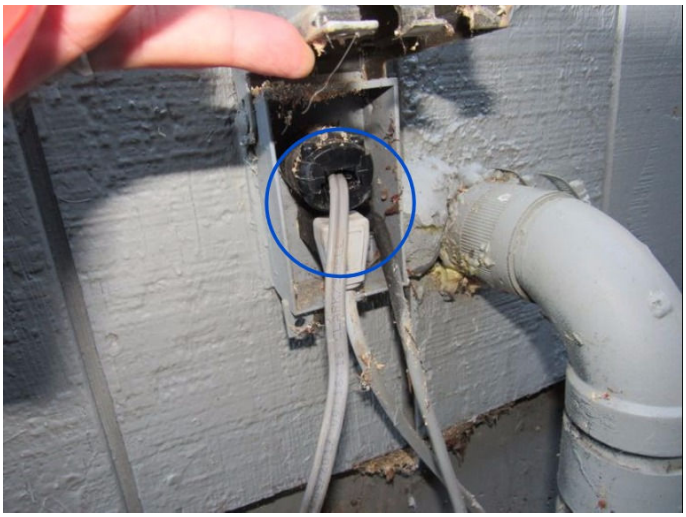


Double tapped neutral

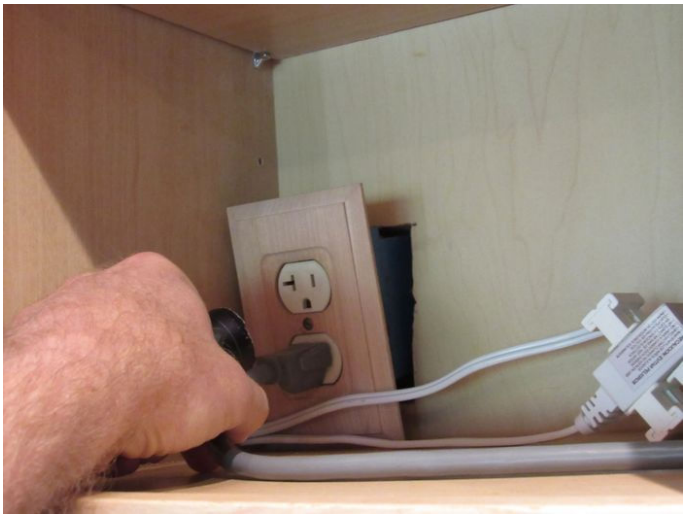
Branch Wiring

Wire Material Copper and Multi-strand Aluminum
Wiring Method Non-metallic sheathed cable

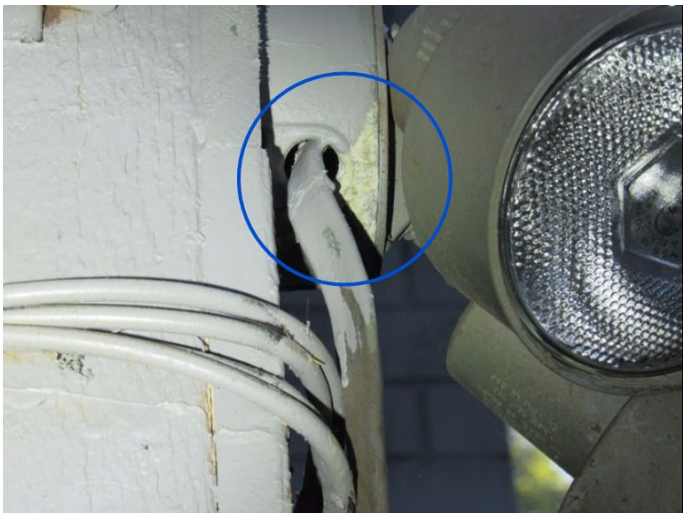
(E-6) Repair: Non-metallic sheathed cable should not be installed with a plug into a receptacle - see wiring to the south sump pump. This wiring is designed to be hard wired with terminations inside listed junction boxes. The wiring should be repaired to eliminate this configuration.



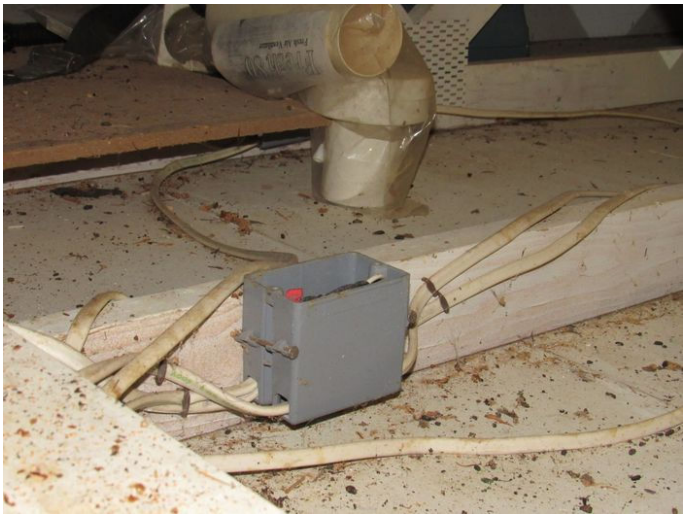
(E-7) Repair: The loose electrical junction box needs to be secured for improved safety - see above the main floor cooktop.

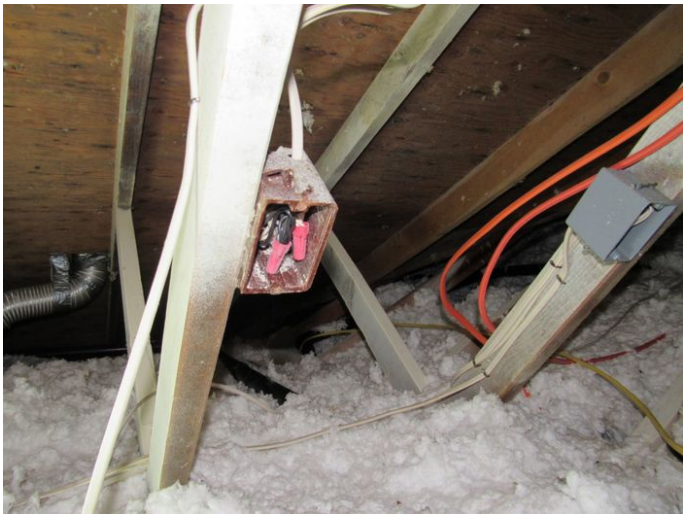


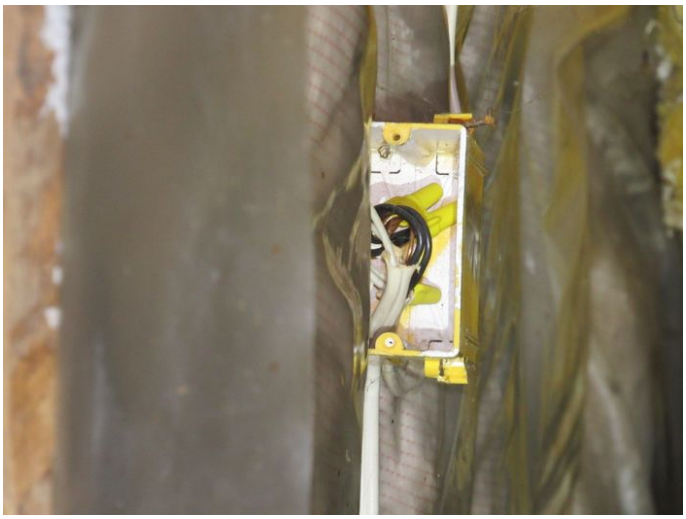
(E-8) Repair: The exterior lighting on the SW corner of the building does not look weather proof - see corrosion on junction box. Have this further evaluated and repaired as recommended by a licensed electrical contractor.



(E-9) Repair: The open electrical junction boxes need to be covered for improved safety - see both access points in the attic and in the crawl area in the basement.







This shows the open junction box in the basement.

(E-10) Repair: The open electrical splice needs to be contained inside of a listed junction box - see behind fan in basement kitchen.

(E-11) Major Concern: Overall, numerous red flags were noted in the branch and finish wiring system indicating unreliable and incomplete wiring practices. I recommend additional inspection and repair of the wiring system by a licensed electrical contractor. This should be considered urgent for safety reasons. Examples of red flags and defects found during inspection are in this chapter.

Receptacles and Fixtures

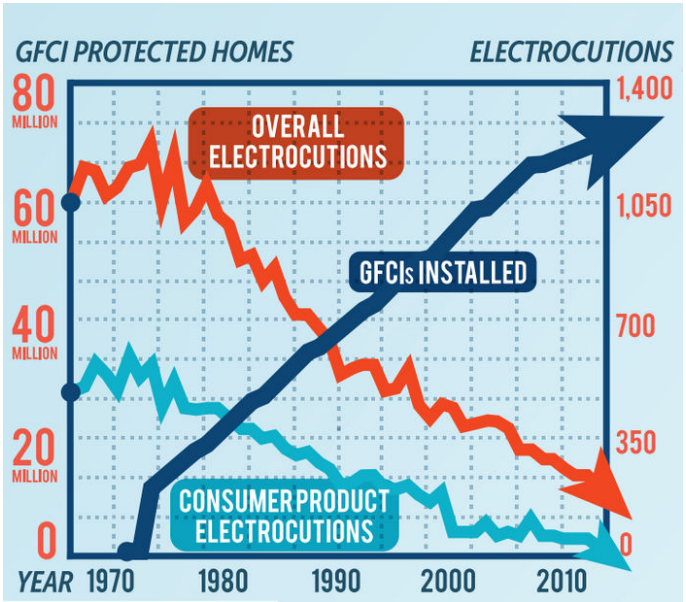
Inspection Method Random Testing

Outlets Three wire outlets

(E-12) Repair: Reverse polarity was noted at the electrical receptacle at the exterior main floor deck and also at the kitchen bar. This is when the hot and the neutral have been wired backwards. This is a safety issue that should be corrected by a licensed electrician.

(E-13) Repair: The missing cover plates should be installed to cover all access to wiring at switches and receptacles - see storage closet by electric panels. Please note that extension rings may be needed as the reveal between the outlets and switches and the wall finishes is not even.

(E-14) Repair: The use of GFCI (Ground Fault Circuit Interruption) protection is inconsistent with modern minimum standards for safety - see receptacle in the family bath. GFCI protection is recommended for the electrical receptacles in the following locations: the two dedicated kitchen appliance circuits, all receptacles within 6 feet of a sink, bathrooms, exterior, garage, unfinished basements, laundry and all wet and damp locations. GFCI's protect against electrocution by limiting the duration of an electrical shock. These are an important modern safety feature that have proven to save lives. Hire a licensed electrician to further evaluate and update GFCI protection for improved safety.



(E-15) Repair: My receptacle tester is not fitting into the receptacle correctly indicating the receptacle may have something stuck inside - NE bedroom. This may require replacement. have this further evaluated and repaired by a licensed electrician.

Smoke and Carbon Monoxide Detection Systems

Present

Grounding Electrode / Conductor

Could Not Confirm

Fuel Storage and Distribution

Oil Storage

None noted

Propane Storage

None noted

Gas Meter

None noted

Heating, Cooling and Fireplaces

Heating System

Energy Source Electricity
Heating Method Forced air furnace, Heat pump
Manufacturer Lennox
Capacity 3-ton
Age 2018
Last Service Record None
Filtration System no access

(HCF-1) Repair: The furnace filter cover is sealed shut. This should be repaired to access and change the filter - the filter should be changed quarterly.

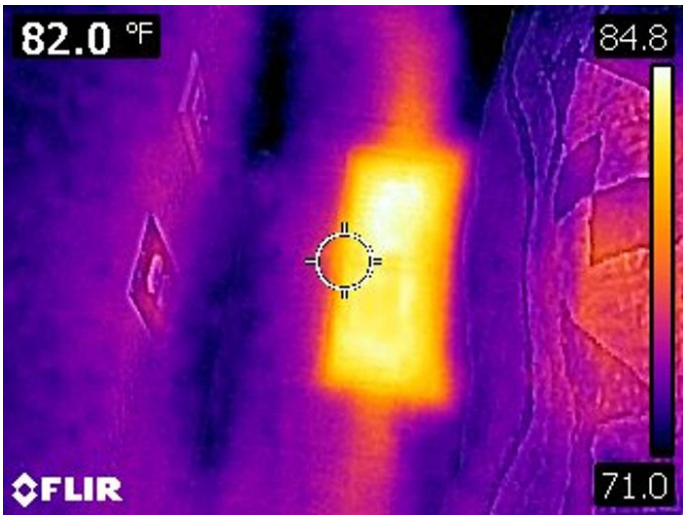
Cooling Systems / Heat Pumps

Present
Manufacturer Lennox
Energy Source Electric
Age 2018

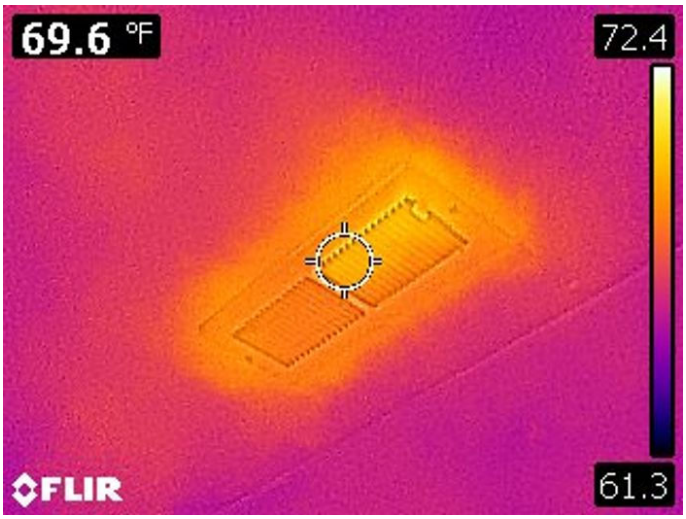
(HCF-2) Repair: Annual servicing is recommended for all heating and cooling equipment to ensure reliable performance. This house has an air-sourced heat pump system. The system was tested in heating mode during inspection and was operational. No recent service records were noted on the air handler, but this is a very new heat pump. I recommend keeping this

heat pump on an annual service schedule. ***I would go ahead and service it now as the air filter needs to be repaired.***

(This video is only viewable online.)



Thermal images show ducts warm during testing in heating mode.



Heating / Cooling Distribution Systems

Heat Source in Each Room Present
Distribution Method Ductwork

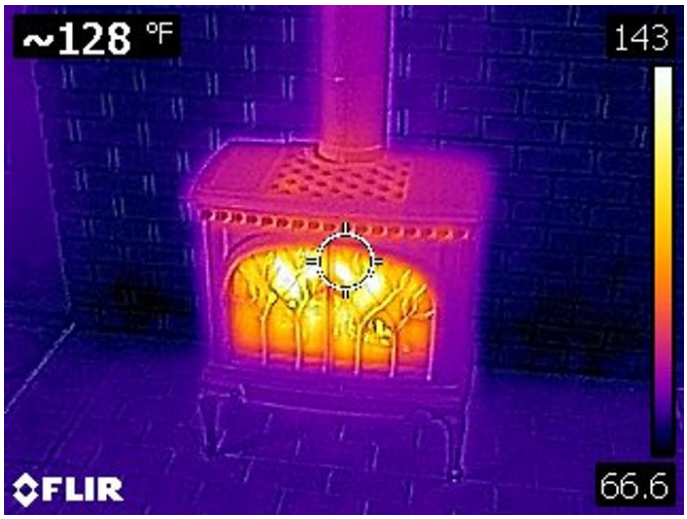
Additional Heat Sources

None noted

Gas Fireplaces

Present
Fireplace Types Propane wood stove

(HCF-3) Note: I tested the LP wood stove today. It was performing as intended.



Solid Fuel Fireplaces

Present

Fireplace Types Wood stove

(HCF-4) Repair: This home has an old un-listed wood stove. Since Jan. 1, 1992, all used solid fuel burning appliances in Washington State, such as wood stoves, offered for sale must be a listed appliance. An unlisted, used wood stove may not be reinstalled in a home in Washington. As this unit was already present in the home it should be considered grandfathered, however, old wood stoves such as this are generally less safe and emit higher pollution and they can impact home owners' insurance. If you wish to keep this unit and use it, I recommend additional inspection and evaluation by a qualified chimney sweep prior to use. Implement repairs or updates as recommended to ensure safe and reliable operation. During inspection I noted:

- Corrosion inside the wood stove firebox
- Cracked brick on the wood stove hearth
- Missing tile on the exterior of the wood stove

Corrosion inside the wood stove firebox

Cracked brick on the wood stove hearth

Missing tile on the exterior of the wood stove

Plumbing

Water Service Supply

Pipe Material Copper
Well or Public Supply Public water
Water Pressure 50 PSI
Pressure Reducing Valve None noted

Main Water Shut-off Location Basement / crawl space

📌 **(P-1) Note:** This shows the main water shut off in the crawl area.

Distribution Pipe

Pipe Insulation Present
Supply Pipe Materials Copper
Functional Flow Average

Waste Pipe and Discharge

Discharge Type Septic system
Waste and Vent Pipe Materials ABS plastic

🔑 **(P-2) Due Diligence:**

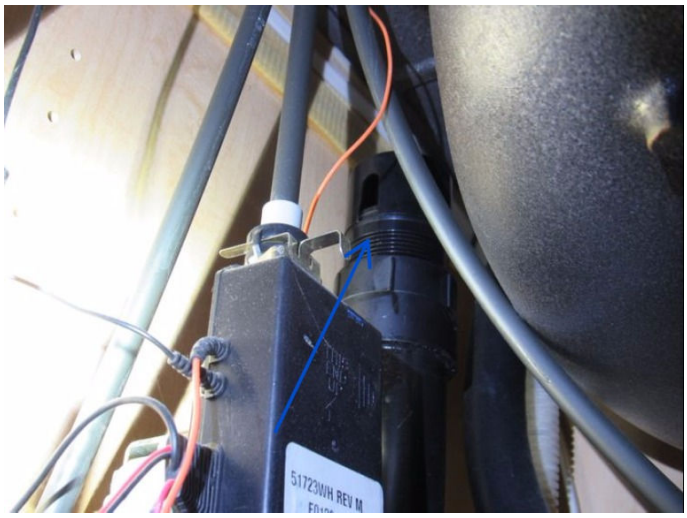
Based on visible components, this property appears to have a ***private on-site septic system with some very unusual features - see the sumps on the south side of the property.*** These are specialty systems and are excluded from this inspection. Comments in this report related to this system are made as a courtesy only and are not meant to be a substitute for a full evaluation by a qualified specialist. Generally, septic tanks should be pumped and inspected every 3 years. Depending on the type of system and municipal regulations, inspection and maintenance may be required more frequently, often annually. I recommend:

- Investigating any information about this system's maintenance and repair history
- Reviewing any documentation available for this system
- Learning inspection and maintenance requirements for this system

- Hire a qualified specialist evaluate, perform maintenance and make repairs as needed

(This video is only viewable online.)

(P-3) Repair: The air admittance valve does not appear to be the correct type of vent - this is actually an auto-vent - see out by septic system as well as below the kitchen sink. This is a spring-loaded mechanical vent that is not recommended in residential construction. Have this further evaluated by a qualified plumber and repaired as recommended with a proper air admittance valve.



(P-4) Repair: The covers to the septic system do not appear to be adequately sealed. Have these pump access covers further evaluated and repaired as recommended by a qualified contractor.

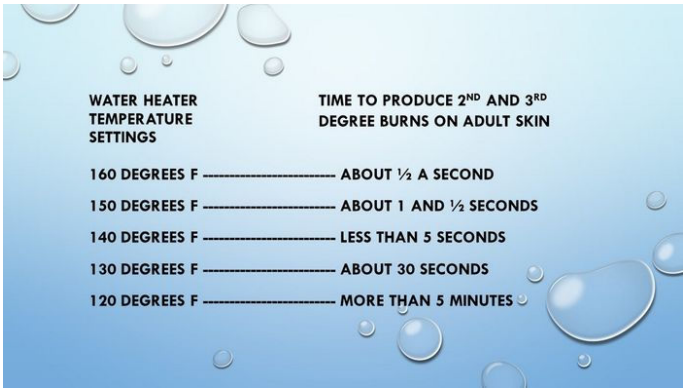
Water Heater

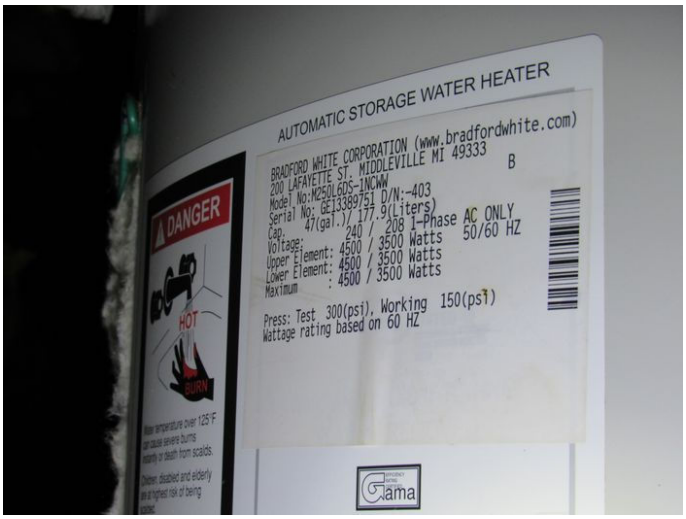
System Type Tank
Manufacturer Bradford-White
Water Temperature 155 degrees F

Size 47 Gal.
Age 2010
Energy Source Electricity
Temperature Pressure Relief Value Present - Not Tested

(P-5) Repair: ***Testing of the plumbing system today, I noted the water was too hot - 155 degrees F!*** This is a scald hazard. To prevent scalding, standards recommend indoor hot water temperatures do not exceed 125 degrees. There is some evidence that hot water temperatures should be greater than 130 degrees to prevent Legionaries' disease from developing in the water heater. If this is a concern, you can heat the water in the tank to 140 degrees F and have a tempering valve installed at the hot water tank. Have this further evaluated and repaired by a licensed plumber or simply turn down the temperature as desired to eliminate a scald hazard.

- The thermostat covers were off at the time of inspection - this is a safety hazard





The thermostat covers were off at the time of inspection - this is a safety hazard

(P-6) Repair: Install listed seismic straps to restrain the water heater in the event of an earthquake; none were noted during inspection. Two straps should be located on the water heater: one on upper 1/3rd of tank and one at the lower 1/3rd.

Exterior Hose Bibs

Operating

Additional Sinks

Tested

(P-7) Repair: Corrugated waste pipe was used to drain this laundry sink. This in an unlisted plumbing product. Use smooth wall pipe only. Hire a licensed plumber to further evaluate and repair as needed.

Sewage Ejector Pumps

None noted

Sump Pumps and Drains

Floor Drain Present
Sump Pumps None noted

Washer

Tested, Tested

(P-8) Improve: A moisture alarm with water shut-off features is recommended under the washing machine to protect against accidental leaks in the supply hoses. Pans can be effective when there is a drain, but even these will not protect against a burst supply connector. A moisture alarm with automatic shut-off will. Watts is a brand I have seen installed: http://www.watts.com/pages/learnAbout/intelliflow.asp?catId

(P-9) Repair: The current hoses that supply water to the clothes washer have some moderate corrosion - see basement. I recommend updating as soon as possible to insure reliable performance. For improved protection against accidental leaks at the clothes washing machine consider improving water supply connection hoses to a flood safe design.

Dryer

Tested, Tested

Power Source Electric

Duct to Exterior Ducted

Additional Plumbing

None noted

Family Bathroom

Sinks and Cabinets

Tested

Toilet

Tested

Bathtub / Shower

Tested

(FB-1) Repair: The wrong set screw has been used for the mixing valve in the family bath. Repair as needed.

Bathroom Ventilation

Type Fan and window

General Bath Condition

Standard

📌 **(FB-2) Note:** During inspection today I operated all plumbing fixtures in bathrooms. I ran a moisture meter around toilets and tile shower enclosures to check for concealed leaks. I also sounded for loose finishes in shower and tub enclosures. I felt for loose waste pipe below sinks and where accessible and checked for leaks below sinks. I do not test bathtub overflow drains during inspection as this risks damaging finishes around the tub. I did not see any signs of previous leaks relating to the overflow during inspection today. I recommend monitoring tubs while filling and ***avoid pushing water into the bathtub overflow***. Even well-installed overflow drains can leak as the gaskets that seal the overflow will dry out over time and may no longer provide a watertight seal. Monitor plumbing after moving into a new home as testing during inspection presents less stress on plumbing than daily use. Any defects uncovered during inspection are listed in this report.

Master Bathroom

Sinks and Cabinets

Tested

Toilet

Tested

Bathtub / Shower

Tested

⚠ **(MB-1) Major Concern:** The master bath shower pan is not sloped to drain and is allowing some standing water. This may not be cost effective to repair but it is not done correctly and could lead to some standing water and premature failure. All plumbing fixtures should be sloped to drain. Hire a qualified plumber to evaluate and repair as possible.

Bathroom Ventilation

Type Fan and window

General Bath Condition

Standard

Basement Bathroom

Sinks and Cabinets

Tested

(BB-1) Repair: The trap for the bathroom sink is not done using a listed plumbing product. Have this drain piping further evaluated and repaired by a licensed plumber.

Toilet

Tested

Bathtub / Shower

Tested

Bathroom Ventilation

Type Bath fan

General Bath Condition

Standard

Kitchen

Sinks and Faucets

Tested

Cabinets and Countertops

Countertop Material Slab Surface
Cabinet Material Wood laminate

Ventilation Method

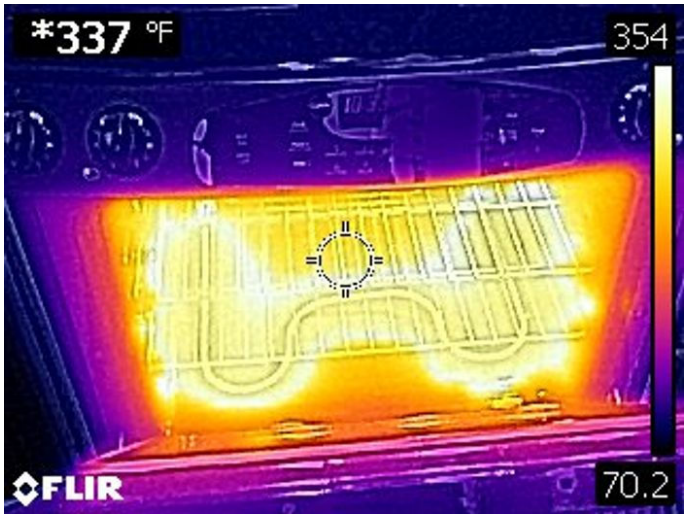
Ductless fan

(K-1) Improve: A ductless exhaust fan was noted for the cook-top. Installation of a fan that ducts to the exterior is recommended to remove moist air to the exterior. Please note that if you switch to a gas range or cooktop in the future, a fan that vents to the exterior is still not required, but is more strongly recommended. Gas ovens produce carbon monoxide while running and should really have an exhaust vent to the exterior.

Appliances

Refrigerator Operating
Dishwasher Operated
Dishwasher Air Gap Present
Range/ Oven /Cook-tops Electric
Disposer None noted

(K-2) Note: The oven was tested in bake mode and was working at the time of inspection.



General Kitchen Condition

Standard

Kitchen - Lower

Sinks and Faucets

Tested

(KL-1) Repair: The kitchen sink faucet is installed with the hot and the cold installed backwards. Repair for proper operation.

Cabinets and Countertops

Countertop Material Plastic laminate
Cabinet Material Wood laminate

Ventilation Method

Fan ducted to exterior

(KL-2) Repair: The microwave is installed close to the cooktop. Generally, a 24 inch clearance is recommended, though installation to the manufacturers minimum specifications is acceptable. Be sure this installation complies with manufacturers installation specifications or re-install for proper clearance above the cooktop as needed. Please note that most

installations do meet manufacturer's specifications but can still be inconveniently close to the cooktop.

Appliances

Refrigerator Operating
Dishwasher None noted
Dishwasher Air Gap None noted

General Kitchen Condition

Standard

Interior

Floors

Floor Materials Tile, Bamboo, Carpet, Hardwood
Floor Settlement None noted

Walls, Ceilings, Trim and Closets

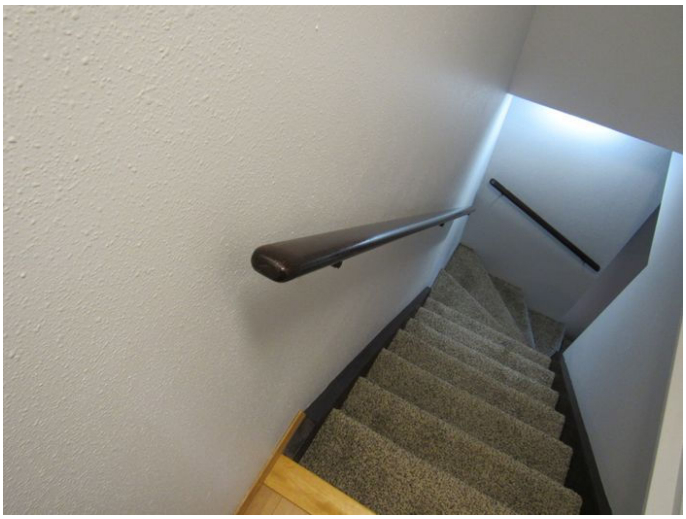
Wall and Ceiling Materials Drywall

(I-1) Repair: The drywall / sheetrock finishes require some tune-up repair: See localized cracking at the living room ceiling by the propane wood stove. No red flags were found to indicate structural movement. Repair sheetrock blemishes as desired.

Stairs and Railings

Non-standard

(I-2) Repair: The stairs to the basement are non-conforming stairs - see how steep they are. This will not be cost effective to fully correct. Use caution when navigating these steep stairs. Improvements could be made to the handrail system to improve the safety of the stairs - have the ends of the handrail return into the wall.



Interior Doors

Solid and Hollow Core

Windows

Window Glazing Double pane
Interior Window Frame Vinyl
Window Styles Sliding, Single hung, Fixed pane

(I-3) Repair: A lost seal was noted in the glazing - south side half-round window. This has resulted in fogging between the panes of glass that cannot be cleaned without glazing repair or replacement. Hire a glazing specialist to further evaluate and repair or replace all glazing with lost seals.

(I-4) Repair: The master bedroom window is missing a proper lock - see how just a wood dowel is being used. Repair as needed for improved security.

Mechanical Ventilation

Bath Fan Ducting Non-standard
Kitchen Fan Ducting Ductwork not visible, Ductless fan

(I-5) Repair: The ductwork for the bathroom fans is uninsulated in the attic space. This can cause condensation during cold weather and is less energy efficient. Replace these ducts with insulated ducts or insulate to R-8 or better.

Roof/Attic

Roof Materials

Method of Roof Inspection Walked on roof
Roof Style Gable
Roof Materials Architectural grade composition shingle
Approximate Age of Roof New

(RA-1) Major Concern: The roofing material on this home is done in an architectural grade composition shingle. These shingles are often rated as 30 years shingles, though I find in practice 18-22 years is more realistic depending on the quality of the installation, the amount of exposure and the pitch of the roof. The roof looks to be done as an overlay, meaning there is another layer of shingles below the existing layer. In general, overlays have less predictable service life. They can suffer from inadequate nailing and inadequate flashings if not carefully installed. These can lead to premature leaks, nail pops and failure. They tend to break down more quickly as well, due to heat build-up and the shingles will often cup and prevent water from shedding reliably. This can create leaks even the the field of the roof. During inspection, red flags were found that indicate active failure as well as cupping shingles and poor installation techniques. I recommend additional inspection of the roof by a licensed roofing contractor. Repair or replace as recommended. Given the visible condition of the installation, I

would expect the need for a complete roof tear off and replacement. Examples of specific observations noted during inspection include:

- Shingles cupping - could hold water
- Clearly two layers of roof and no drip edge flashing.
- I am concerned that quality roofers will not repair this roof as the cupping shingles can allow water to move sideways on the roof.
- Water can easily run behind this valley.
- A few localized damaged shingles
- The valley detail is super unreliable.
- Active leaks and water damage around the porch skylight
- Water damage at eaves by SW skylight
- No drip edge flashing installed - these are now required

Shingles cupping - could hold water

Water can easily run behind this valley.

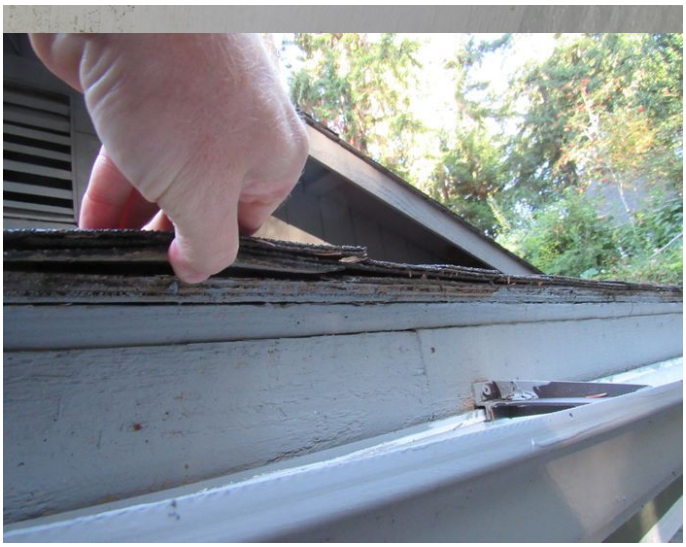
A few localized damaged shingles

Active leaks and water damage around the porch skylight

The valley detail is super unreliable.

(This video is only viewable online.)

Water damage at eaves by SW skylight



No drip edge flashing installed - these are now required

Skylights

Home made

Gutters and Downspouts

Plastic

(RA-2) Improve: Plastic gutters were used for this building. As a general rule I find plastic gutter systems are unreliable and require constant maintenance to insure proper slope and to prevent leakage. Updating the plastic gutters is recommended for improved reliability and lower maintenance.

Attic Access

Viewed at access

(RA-3) Note: I did not crawl the crawl space for the attic where there was no ramp or safe way to access the space. Crawling in the V of trusses or on top of framing risks damaging thermal barriers and ceiling finishes and is not a safe way to access an attic. This limited inspection of this space.

(RA-4) Repair: The attic access hatch requires insulation and weather stripping to prevent heat loss and heat migration into the attic.

Roof Framing and Sheathing

Rafters Truss
Sheathing Plywood

⚠ **(RA-5) Major Concern:** Roughly 30% of the attic decking was noted to be covered in dark stains / mold-like substances - see both of the east side wings - toward the carport and above the studio. This indicates the attic has experienced seasonal condensation problems. This is generally caused by heat migration into the attic during cold weather resulting in condensation when the roof sheathing reaches dew point. I recommend hiring a mold remediation specialist to further evaluate this condition and implement repairs as recommended. The way to control this problem involves a four-pronged approach:
1. Control relative humidity inside the house
2. Be sure all fans running through the attic are properly terminating to the exterior.
3. Ensure adequate air barriers between the house and the attic (stop air leaks in the ceiling by sealing around can lights, fans and other penetrations) and
4. Be sure the roof cavity is ventilated correctly. (Please note that correctly does not necessarily mean more ventilation. Too much ventilation can exacerbate this problem.)
As a general rule, standards recommend keeping indoor relative humidity below 55% in cold weather to prevent condensing surfaces. Two companies that do mold remediation work are:

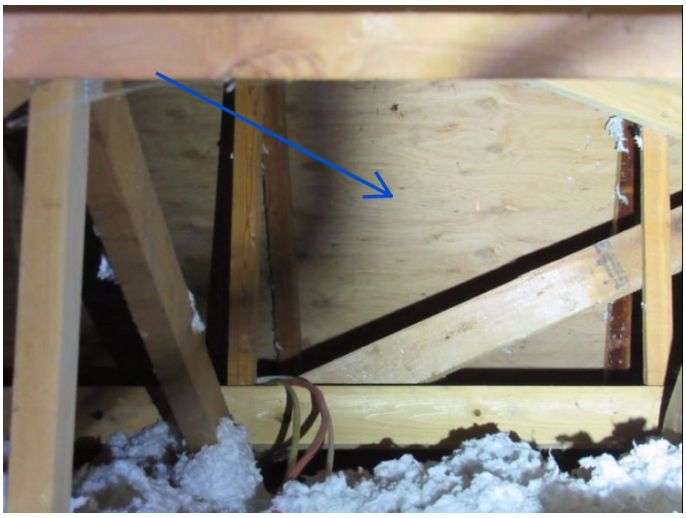
- EnviroNix @ https://www.environix.com/ or
- Jose Tech @ http://www.josetechnologies.com

Observations noted during inspection include:

- This may be a persistent problem - note the white paint on the attic framing
- The attic spaces had a musty odor.
- I was unable to access above the main house attic - but it looked more clear in here

This may be a persistent problem - note the white paint on the attic framing

The attic spaces had a musty odor.



I was unable to access above the main house attic - but it looked more clear in here

Attic Insulation

Insulation Type Fiberglass
Approximate Insulation R-Value on Attic Floor 30

(RA-6) Efficiency: The attic insulation could be improved to modern standards. Modern standards recommend R-49 on the floor and R-21 on walls. R-value is the measure of resistance to heat loss; the higher the R-value the better the insulation. During insulation repairs it is best practices to implement any air seal-up repairs to seal air leakage. Also, be sure you have completed any wiring or other projects that are needed in the attic. Then, hire an insulation contractor to improve thermal barriers.

(RA-7) Repair: The attic insulation is rodent-damaged and incomplete. Remove all contaminated insulation and complete repairs to fans, wiring, ventilation.... Once repairs are complete re-insulate to modern standard or to best possible levels. Be sure to seal up all air leakage points during repairs and prior to insulating to modern standard be sure all rodent issues have been resolved and all projects like wiring and bath fans have been completed.

Water stains noted on the skylight chamber - access point is inside the house. Could be from roof leakage or condensation.

Attic and Roof Cavity Ventilation

Attic Ventilation Method Soffit vents, Ridge vents

(RA-8) Repair: The screens that protect the gable vent openings are damaged and require repair to exclude birds and rodents and ensure proper ventilation. Use 1/4 inch wire mesh to seal-up openings from rodents and birds and make sure screens are not blocked by paint or other debris. Refrain from using tight-mesh window screen as this can obstruct air flow.

(RA-9) Repair: The attic and roof cavity ventilation look to be non-standard. Proper attic ventilation is important for the roofing materials to perform as intended and to reduce chances for condensation problems and heat build-up in the attic. One problem here is the use of ridge vents and gable vents. Most ridge vent manufacturers recommend ridge and soffit vents only to encourage convective ventilation across the roof decking; the gable wall vents can disrupt this convective air flow. At the time of inspection, red flags were found indicating that repairs could be needed to this roof cavity ventilation system.

Exterior/Garage

Siding and Trim

Trim Material Wood
Siding Material Plywood

(EG-1) Monitor: The exterior trim system here has been done as a picture framed or cap over trim, where the trim is not lead into the siding but laid over the top of the siding. This is a common practice, but is sub-standard. All points subject to moisture entry shall be appropriately flashed. There is not a commonly accepted flashing detail for the "cap over detail" that I am aware of. The risk here is water can collect behind the trim and could leak into the siding where nails from the trim penetrate the siding. I would be most concerned about the exposed trim details. Have this further evaluated and repaired as recommended by a qualified contractor. I found nothing urgent inside the house today to indicate a repair is needed at this time.

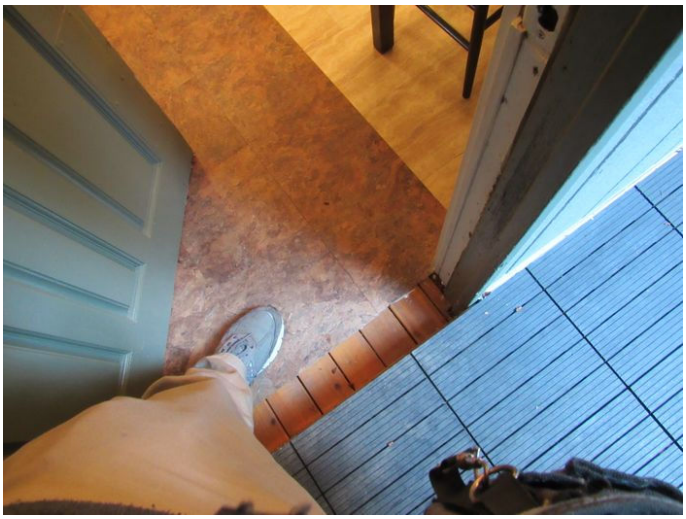
Eaves

Open rafters

Exterior Doors

Solid core, Glass panel doors

(EG-2) Repair: The exterior door is below the deck at the entry. This is a non-standard configuration that could present a safety hazard. Have this evaluated and repaired by a qualified general contractor.



(EG-3) Repair: The exterior entry door is a primary egress door. This should have a minimum height of 78 inches. This is currently obstructed by a low roof in the front. This could be difficult to correct without re-framing the entry roof.

Exterior Window Frames

Vinyl

Decks and Balconies

Present
Deck Structure Ground contact treated lumber, Non-treated lumber
Deck Ledger Board Non-standard
Guardrail Non-standard
Decking Material Softwood

⚠ **(EG-4) Major Concern:** Overall, numerous repairs are needed to the decking systems on this house to ensure safe and reliable performance. I recommend additional inspection and repair or replacement of these decks by a qualified general contractor. Given the extensive non-standard installations here, there is no way to properly repair this deck without rebuilding. You may be able to prolong the useful life of the decks by implementing temporary repairs, but this approach poses a safety risk. Examples of red flags and defects noted during inspection include:

- No ledger board - joist hangers nailed directly to the siding - this creates an unreliable connection between the deck and then house.
- Inadequate lateral support at the beam and the rim joist - see how the rim is just 1x material
- Signs of settlement at the lower deck and deck posts
- Wood decay at the base of some deck posts.
- Inadequate 4x4 posts, especially for such a heavy deck - supporting two decks and a roof
- Inadequate lateral support at the new deck

- Unreliable attachment of the new deck - this is a weak and non-standard connection.
- Wood decay and anobiid beetle damage in the wood beam below the lower deck
- Rotting non-treated beam below lower deck

No ledger board - joist hangers nailed directly to the siding - this creates an unreliable connection between the deck and then house.

Inadequate lateral support at the beam and the rim joist - see how the rim is just 1x material

Signs of settlement at the lower deck and deck posts

Wood decay at the base of some deck posts.

Inadequate 4x4 posts, especially for such a heavy deck - supporting two decks and a roof

Inadequate lateral support at the new deck

Unreliable attachment of the new deck - this is a weak and non-standard connection.

Wood decay and anobiid beetle damage in the wood beam below the lower deck

Rotting non-treated beam below lower deck

Under-sized footings and saddle for this large deck

Fungal rot and anobiid damage to framing and decking at lower deck

📌 **(EG-5) Note:** This link contains an article about modern deck design code in WA State. State code now exceeds the minimum design requirements in the 2015 IRC. Residential decks must be designed to 60-pounds / sq/ft now.

📌 **(EG-6) Note:** To see a prescriptive guide for residential wood deck construction click this link:

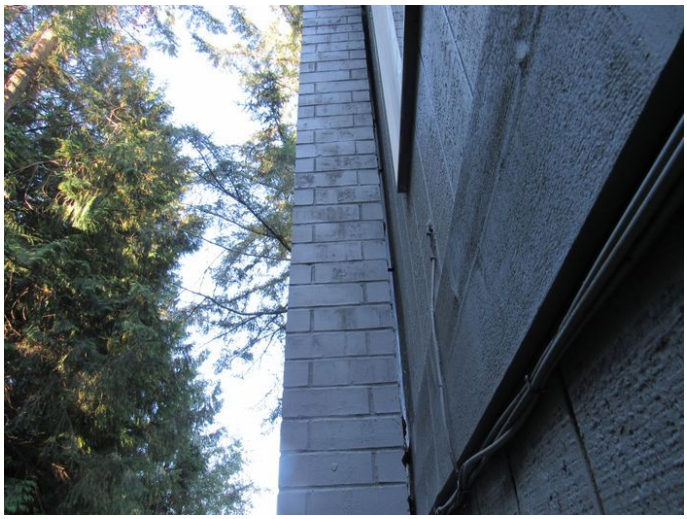
Porches

Present

Chimneys

Present
Chimney Material Masonry
Chimney Flue Liners Present, Not visible

📌 **(EG-7) Note:** It is odd the way there is a gap between the masonry chimneys and the siding. I see no signs of structural settlement with the chimneys - this seems to be just how they were done.



Garage

None noted

Grounds

Drainage and Lot Location

Clearance to Grade Standard
Downspout Discharge Below grade
Lot Description Moderate slope

(G-1) Monitor: The grade of the driveway is slopping toward the building - see entry side of the house. Standards recommend a quarter inch / foot slope away from the building or better. Be sure to keep this catch basin clear at the entry driveway - this looks important for moving water around the building.

(G-2) Repair: Eliminate wood /soil contact to reduce the chances for rot and pest damage and repair any hidden rot as needed - see N storage shed. Generally, a 6-inch clearance between soils and wood is recommended. This is often not realistic on older homes, but repairs should be made to get as much clearance as is possible and all contact with the soils should be eliminated.

Rodent entry points noted at N storage shed

Driveways/Walkways/Flatwork

Driveway Asphalt
Walkways Gravel
Patios None noted

Window and Stairwells

Present

(G-3) Repair: The wood well for the septic pump on the south side is rotting and will require replacement / repair at some point soon.

Grounds, Trees and Vegetation

Trees/Vegetation too near building No

🔎 **(G-4) Due Diligence:** An arborist should be hired to further evaluate the large trees on the property and prune or remove as recommended. Whenever large trees are located near a house a higher level of maintenance should be expected to keep trees safe and healthy and to eliminate the risks of damage to the home or building materials and to eliminate rodent entry points. With larger trees such as firs pruning is recommended to eliminate the sail effect and reduce strain on these tress during high winds.

(G-5) Repair: The rotten stumps near the house should be removed from the yard to eliminate a condition conducive to wood destroying organisms. Eliminating conducive conditions near the home can help create a natural barrier between your home and wood destroying organisms.

Retaining Walls

None noted

Exterior Stairs

Standard

Fences

None noted

Carport, Outbuildings and Other

Attached Carport

(G-6) Note: The storage closets in the carport were locked at the time of inspection and inaccessible.

(G-7) Repair: A rotted post was noted at the east side of the carport. Replace this rotted post with pressure treated lumber.

Receipt -- Single Family Inspection

Report #: 181001B
Inspection Date:

Property Inspected For Russell Wilson
76423 Football Road
USA

Inspection with digital report	$745.00
	$745.00
	PAID

Thank you for your business!

Orca Inspection Services LLC
C/O Dylan Chalk
5761 NE Tolo Rd
Bainbridge Island, WA , WA 98110
(206) 713-5715

Orca Inspection Services LLC
Phone: (206) 713-5715
orcainspect@gmail.com
http://www.orcainspect.com

Inspected by Dylan Chalk
WA State Pest License #: 65540
WA State Home Inspector #: 365