HomeTech Property Inspection Service

Property Inspection Report





920 Pelton Ave, Santa Cruz, CA 95060 Inspection prepared for: Jo Green Real Estate Agent: No Agent -

Date of Inspection: 2/11/2020 Time: 9:00 AM Size: 2500 202002111

Inspector: Bob Williams ASHI Certified Inspector #206818 165 Windsong Way, Watsonville, CA 95076 Phone: (831) 335-2090

Email: bob@homtech.com

Inspection and Site Details

1. Residence Type/Style

Single Family Home

2. Garage

Attached - 1 Car Garage

3. Orientation Of Building

Looking At Front Door

4. Attending Inspection

Inspector Only

5. Occupancy

Vacant

6. Weather Conditions

Dry Weather

7. Recent Weather Conditions

Relatively Dry Weather

8. Main Water Shutoff Location

Back Of House

9. Main Gas Shutoff Location

Right Side Of House

10. Main Electric Panel Location

In The utility room

11. Additional Client Information

• Evidence Of Addition/Remodel: Evidence of additions and/or remodeling was evident. Confirmation should be obtained from the owner, or in their absence, the local building department, that all necessary permits for construction or remodeling were obtained. If future work or repair involves municipal inspection, it may be necessary to have previously installed nonconforming work brought into compliance with current requirements before the permit can be "signed off" by the local jurisdiction. Evaluation of permits, identifying the extent of modifications and code compliance are beyond the scope of this inspection.

Scope Of Inspection

Dear Client,

Thank you for choosing HomeTech Property Inspection Service to perform your home inspection. This report is a general guide and provides you with some objective information to help you make your own evaluation of the overall condition of the home and is not intended to reflect the value of the property, or to make any representation as to the advisability of purchase. Not all improvements will be identified during this inspection. Unexpected repairs should still be anticipated. This inspection is not a guarantee or warranty of any kind.

This Property Inspection Report contains observations of those systems and components that, in the professional judgement of the inspector, are not functioning properly, significantly deficient, unsafe, or are near the end of their service lives. If the cause for the deficiency is not readily apparent, the suspected cause or reason why the system or component is at or near end of expected service life is reported, and recommendations for correction or monitoring are made as appropriate.

The report is effectively a snapshot of the house, recording the conditions on a given date and time. Home inspectors cannot predict future behavior, and as such, we cannot be responsible for things that occur after the inspection. If conditions change, we are available to revisit the property and update our report.

HomeTech Property Inspection Service cannot control the interpretation and use of this report by third parties and will not assume any legal responsibility of any such use or interpretation as many "on-site" discussions of observed conditions are verbally communicated during the course of our inspection on the date of this report. Therefore, it is requested that buyers and/or sellers, if so authorized by our clients, who enter into a ratified sales contract for purchase and/or sale of this property call HomeTech Property Inspection Service for a personal "on-site" consultation of the conditions described within this report. Failure to comply with this request will relieve and hold harmless HomeTech Property Inspection Service of any responsibility or legal liability to the buyers in contract due to lack of understanding or possible misinterpretation of the disclosed conditions contained within this report.

The inspector's observations regarding evidence of pests or wood destroying organisms are not a substitute for inspection by a licensed pest control operator or exterminator. Your inspector reports current visible conditions only and cannot render an opinion regarding their cause or remediation. We recommend that any "Repair" comments made in this report be addressed prior to the close of escrow.

We recommend that the purchaser conduct a thorough pre-closing walkthrough inspection prior to the close of escrow after the personal belongings have been removed. If conditions are found that were not visible at the time of the inspection, the client should notify HomeTech Property Inspection Service immediately.

Again, thanks very much for the opportunity of conducting this inspection for you. We are available to you throughout the entire real estate transaction process. Should you have any questions, please call or email us.

Bob Williams HomeTech

Understanding The Report

USE OF PHOTOS AND VIDEO:

Your report includes many photographs which help to clarify where the inspector went, what was looked at, and the condition of a system or component at the time of the inspection. Some of the pictures may be of deficiencies or problem areas, these are to help you better understand what is documented in this report and may allow you see areas or items that you normally would not see. A pictured issue does not necessarily mean that the issue was limited to that area only, but may be a representation of a condition that is in multiple places. Not all areas of deficiencies or conditions will be supported with photos. To view videos in the report the PDF needs to be downloaded and viewed with a full PDF reader such as Adobe.

HomeTech Property Inspection Service endeavors to perform all inspections in substantial compliance with the Standards of Practice of the American Society of Home Inspectors® (ASHI). As such, we inspect the readily accessible, visually observable, installed systems and components of a home as designated in the ASHI® Standards—except as may be noted in the "Limitations of Inspection" sections within this report. A copy of the ASHI® Standards of Practice is available at: http://building-inspections.com/ASHI%20Standards.htm. These standards define the scope of a home inspection. Clients sometimes assume that a home inspection will include many things that are beyond the scope. We encourage you to read the ASHI Standards of Practice so that you clearly understand what things are included in the home inspection and report.

TEXT COLOR SIGNIFICANCE:

BLACK text is general information and descriptions of the systems and components installed at the property.

BLUE text are observations and information regarding the condition of the systems and components of the home. These include comments of deficiencies which should be addressed; or comments which further expand on a significant deficiency; or comments of recommendations, routine maintenance, tips, and other relevant resource information. Limitations that may have restricted the inspection associated with an area will be listed here.

RED text are comments of significant deficient components or conditions which need attention, repair, or replacement, conditions that are unsafe and could result in significant physical injury and items required by local jurisdictions for the sale of real estate property. These comments are also duplicated in the Report Summary page(s).

GREEN text denotes general/descriptive comments on the systems and components installed at the property. Limitations, if any, that restricted the inspection, associated with each area, are listed here as well.

Structure

In accordance with the ASHI© Standards of Practice pertaining to Structural Components, this report describes the foundation, floor, wall, ceiling and roof structures and the method used to inspect any accessible under floor crawlspace areas. Inspectors are required to inspect and probe the structural components of the home, including the foundation and framing, where deterioration is suspected or where clear indications of possible deterioration exist. Probing is not done when doing so will damage finished surfaces or when no deterioration is visible or presumed to exist. Inspectors are NOT required to offer an opinion as to the structural adequacy of any structural systems or components or provide architectural services or an engineering or structural analysis of any kind. Many structural components are inaccessible because they are buried below grade or behind finishes. Therefore, much of the structural inspection is performed by identifying resultant symptoms of movement, damage and deterioration. Where there are no visible symptoms, conditions requiring further review or repair may go undetected and identification will not be possible. Engineering or architectural services such as calculation of structural capacities, adequacy, or integrity are not part of a home inspection.

1. Foundation Type

Description: Concrete perimeter with slab on grade

2. Foundation Walls

Description: Poured Concrete

Observations:

• OK - The foundation walls were not visible, however, no evidence of non-performance was evident.

3. Floor Beams, Joists & Trusses

Description: Floor Framing Not Visible

Observations:

• The floor was noticeably sloped in the kitchen area. We recommend further evaluation and proposals for possible corrective work should be obtained from a licensed general contractor or structural engineer. Measurement and evaluation of floor slope and/or settlement is well beyond the scope of a home inspection.

4. Seismic Considerations

Observations:

• Anchor bolts are fasteners that connect the wood framing to the foundation. They limit the ability of the framing to move independently on the foundation in the event of seismic activity. Because of the design and/or configuration of the structure, we could not verify the presence or condition of anchor bolts. Typical residential construction requirements for the time period in which the home was built would have required some for of anchoring system be installed; however, this can only be verified with destructive testing which is beyond the scope of a home inspection.

5. Slab On Grade

Observations:

- Large cracks were observed in the concrete floor in the utility room. We recommend that a qualified licensed contractor be consulted for further evaluation and repair as necessary.
- There are gaps between the foundation and concrete slab floor along the wall where visible. These gaps appear to be part of the original construction and do not appear to be a result of structural movement.









6. Wall Structure

Description: Wood Frame: 2 X 4

Observations:

• OK - The exterior wall framing was not visible, however, no evidence of non-performance was evident.

7. Roof & Ceiling Structure

Description: Rafters Not Visible

Observations:

• OK - The ceiling joists and/or rafters were not visible, however, no evidence of non-performance was evident.

8. Limitations of Structure Inspection

• Because of the design and/or configuration of the structure, we could not verify the presence or condition of anchor bolts.

Roof

In accordance with the ASHI© Standards of Practice pertaining to Roofing, this report describes the roof coverings and the method used to inspect the roof. Inspectors are required to inspect the roof covering, roof drainage systems, flashings, skylights, chimneys and roof penetrations where visible and accessible. We evaluate the condition of the roof components by inspecting the surface materials, connections and penetrations, and drainage for damage and deterioration. We generally attempt to evaluate roofs by walking on the surface. If we are unable or unwilling to do this for any reason, we will indicate the method used to evaluate them. This assessment of the roof does not preclude the possibility of leakage. Leakage can develop at any time and may depend on rain intensity, wind direction, etc. Downspouts that terminate in subsurface drains are not visible and not water tested during the inspection. Thus, we cannot make any representations as to its effectiveness.

1. Method of Roof Inspection

• Walked on roof surface

2. Roof Covering

Description: Duro Last Single Ply Membrane Roofing

Age: This is a relatively new roof that should have many years of useful life remaining. Routine maintenance will keep it functional and maximize its service life.

Observations:

• OK - The roof covering and roof components were in generally good condition. No repair to roofing components is necessary at this time.

3. Flashings

Observations:

• OK - The accessible flashing was properly installed and in acceptable condition.

4. Plumbing & Appliance Vents

Observations:

• OK - The plumbing and appliance vents were in acceptable condition.

5. Chimney(s)

Description: Metal Chimney

Observations:

• The chimney(s) appears to be in serviceable condition. However, because of the height, configuration or possible damage to the rain cap, it could not be removed and the condition of the chimney flue liner could not be determined.

6. Roof Drainage System

Description: Built in eave • Downspouts discharge above grade **Observations:**

• OK - The gutters and downspouts were in acceptable condition and functioning as intended.

7. Limitations of Roofing Inspection

• Because of the height, configuration or possible damage to the rain cap of the chimney, it could not be removed for inspection of the chimney flue liner.

Exterior

In accordance with the ASHI© Standards of Practice pertaining to Exteriors, this report describes the exterior wall coverings and trim. Inspectors are required to inspect the exterior wall coverings, flashing, trim, all exterior doors, the stoops, steps porches and their associated railings, any attached decks and balconies and eaves, soffits and fascias accessible from ground level. Inspectors shall also inspect adjacent or entryway walkways, patios, and driveways; vegetation, grading, surface drainage, and retaining walls that are likely to adversely affect the building. Decks and retaining walls that are not connected to or immediately adjacent to the dwelling are not inspected. The inspection does not include an assessment of geological, geotechnical, or hydrological conditions, or environmental hazards. Screening, shutters, awnings, or similar seasonal accessories, recreational facilities, outbuildings, seawalls, break-walls, docks, erosion control and earth stabilization measures are not inspected. Drainage systems are not visible and not water tested during the inspection. Thus, we cannot make any representations as to their effectiveness.

1. General Comments About The Exterior

Observations:

• The exterior of the home has been neglected. Numerous areas were observed where significant lapses in maintenance were evident. Major repairs will be necessary to bring it up to acceptable standards.

2. Grading & Surface Drainage

Description: Level Grade

Observations:

• The patio in the front of the house appears to slope towards the house. This area should be monitored. If there is a problem with water entry into the crawl space area under the house or standing water adjacent to the house, resurfacing the patio adjacent to the house or installing a drain the length of the patio will be necessary.

3. Driveway

Description: Concrete • Asphalt

Observations:

- Large cracks were observed in the driveway. Filling these cracks with a suitable material will help to extend the useful life of the driveway.
- The asphalt driveway was in marginally acceptable condition, but had weathered to a point where repair and preventive maintenance was necessary to prevent rapid deterioration of the surface. A heavy coat of sealer to fill cracks and seal the surface will significantly slow deterioration.

4. Walkways

Description: Concrete

Observations:

• OK - The walkway was in generally good condition.

5. Fencing

Description: Wood **Observations:**

• Minor damage was observed to sections of fencing. These sections of fence should be repaired or replaced as necessary.

6. Siding

Description: Stucco • Wood Siding

Observations:

- Minor cracking was observed on the exterior stucco walls of the house. The small cracks can be scratched open, patched and sealed.
- Localized damage was observed to the stucco exterior walls on the right side of the house. Damage or deteriorated stucco should be repaired or replaced as necessary.
- Sections of the siding in the front of the house was embedded in or sitting directly on top of concrete and/or mortar. This is not an acceptable practice and can result in damage to the siding by moisture and wood destroying organisms. We recommend modification of the siding installation to eliminate direct contact between the wood and the concrete.





7. Eaves & Soffits

Observations:

- Damage was observed on a section of the eave in the back of the house. The damaged sections of eave should be repaired or replaced as necessary. A qualified licensed pest control contractor should be consulted for further evaluation and correction.
- Evidence of mold/mildew was observed on the underside of the eaves. Mold/mildew can usually be removed with applications of a solution of household soap and water or household bleach and water prior to any repainting or refinishing. Use of a mildew resistant paint or a fungus resistant additive in the new paint will reduce the potential for return of the mildew condition.
- Rafter tail(s) are damaged on the right and left side of the house. The damaged sections of rafter tail should be repaired or replaced as necessary. A qualified licensed pest control contractor should be consulted for further evaluation and correction.
- A section of the fascia (boards nailed across the ends of the rafters at the eaves) is damaged in the front of the house. The damaged sections of fascia material should be repaired or replaced as necessary. A qualified licensed pest control contractor should be consulted for further evaluation and correction.















8. Caulking & Paint

Observations:

Portions of the finish on the eave were failing or unpainted, exposing the underlying surfaces. To improve appearance, preserve the wood and extend their useful life, these surfaces should be repainted.
Open joints and openings around wall penetrations in the siding may allow water to enter. Open joints and

• Open joints and openings around wall penetrations in the siding may allow water to enter. Open joints and openings in the siding should be closed with good quality caulk and then painted to help prevent water penetration and damage to the siding and underlying building elements.





9. Doors

Description: Solid Wood • Metal • Sliding Glass **Observations:**

- The exterior door on the right side of the house rubbed its frame, and/or dragged on its threshold. We recommend the door and/or frame be trimmed or adjusted as necessary to restore the proper operation of the door.
- The exterior door on the right side of the house is delaminating (coming apart). Delaminated or damaged doors should be repaired or replaced as necessary.
- The sliding glass door was installed with the sliding door panel on the exterior. With this installation, it may be possible to remove the door from the outside by lifting it off the track. For security purposes, we recommend that the doors that have been installed in reverse be removed and properly installed if possible, or modified as needed to provide adequate security.
- The screen for the sliding glass door is missing. The owner should be consulted regarding screens that may be in storage. If the screens are not in storage, they should be replaced to restore protection from flying insects to the interior of the house.
- The hardware for the sliding glass door is damaged or non-functional. The exterior door hardware should be re-aligned, adjusted or replaced to restore smooth, dependable operation.



10. Windows

Description: Exposed Aluminum • Painted Aluminum **Observations:**

• Window screens were missing. The owner should be consulted regarding any screens that may be in storage. If the screens are not in storage, they should be replaced to restore protection from flying insects to the interior of the house.

11. Patio & Porch

Description: Concrete

Observations:

• OK - The patio and/or porch were in generally good condition.

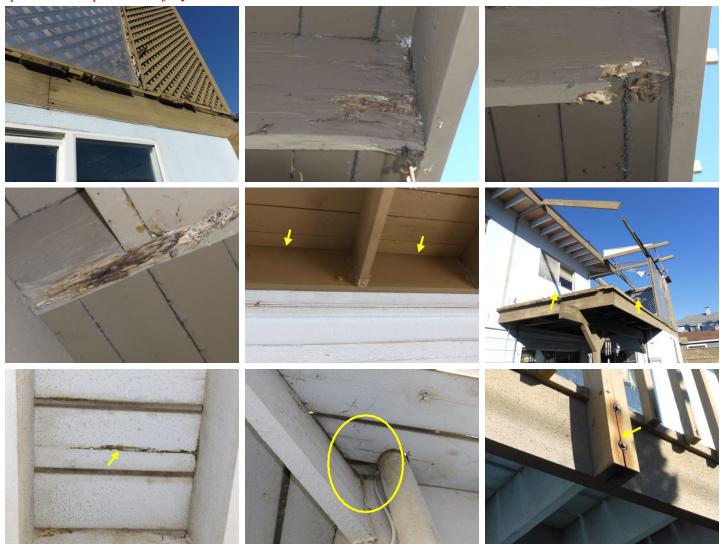
12. Deck & Balcony

Description:

• Redwood lumber

Observations:

- Moisture damage was observed on portions of the deck in the back of the house. All damaged materials should be removed and replaced with material treated to resist wood destroying organisms. A qualified licensed pest control contractor should be consulted for further evaluation and correction.
- The ledger board attached to the structure to support the deck was installed without flashing, creating a condition conducive to deterioration of the siding behind the ledger and possible water penetration into the dwelling. All ledger boards should be properly flashed to reduce the potential for deterioration of the deck and siding or water penetration into the dwelling.
- Moisture damage was observed on portions of the railing on the deck. All damaged materials should be removed and replaced with material treated to resist wood destroying organisms. A qualified licensed pest control contractor should be consulted for further evaluation and correction.
- The openings for the railing on the deck are too wide, which may allow a child to fall through. While this may have been acceptable at the time the deck was built, we recommend modification of the railing to eliminate safety hazards, especially for children and pets.
- The railing for the deck in the back of the house is loose. The railing should be reinforced or replaced to provide improved safety.
- There was a considerable amount of damage to the deck in the front and right side of the house, making it unsafe for use. We recommend that the deck be replaced.
- No railing was provided for the deck in the front of the house. A railing should be installed to reduce the potential for personal injury at this location.





13. Discretionary Improvements & General Information

- Safety glass etchings, which indicate tempered safety glass, were not observed in the glass of the sliding glass door. Current standards would require safety glazing in such installations; however, they do not require replacement in an existing structure. For improved safety, it may be wise to consider the installation of tempered glass.
- The height of the exterior railing for the deck/porch does not conform to current safety standards. Current standards require that a deck/porch railing be a minimum of 42" high. Although this may have not been required at the time of construction, we suggest upgrades for improved safety.

Electrical System

In accordance with the ASHI© Standards of Practice pertaining to Electrical Systems, this report describes the amperage and voltage rating of the service, the location of the main disconnect and any sub panel(s), the presence of solid conductor aluminum branch circuit wiring, the presence or absence of smoke detectors and wiring methods. Inspectors are required to inspect the viewable portions of the service drop from the utility to the house, the service entrance conductors, cables and raceways, the service equipment and main disconnects, the service grounding, the interior components of the service panels and sub panels, the conductors, the overcurrent protection devices (fuses or breakers), ground fault circuit interrupters and a representative number of installed lighting fixtures, switches and receptacles. All issues or concerns listed in this Electrical section should be construed as current and a potential personal safety or fire hazard. Repairs should be a priority, and should be made by a qualified, licensed electrician. We do not perform load calculations to determine of the supply meets the demand. The inspection does not include remote control devices, alarm systems and components, low voltage wiring systems and components, ancillary wiring systems, solar systems, back-up electrical systems and other components that are not part of the primary electrical power distribution.

1. Service Drop

Description: Overhead stranded cable

Observations:

• OK - The overhead electrical service drop was in acceptable condition.

2. Main Panel

Description:

Main Panel Rating: 150 amps Main Service Rating: 100 amps

• Breakers

Number of 110 circuits: 9
Number of 220 circuits: 2
Location: In the utility room

Observations:

• The circuitry in the main service panel was partially labeled. Each circuit should be identified, allowing individuals unfamiliar with the equipment to properly operate it. We recommend accurately labeling the circuits by actually operating the breakers.

• Circuits within the main distribution panel that are doubled up (referred to as "double taps") should be separated. This "double tapping" prevents a positive connection for all the wires at the terminal. Correction of "double tapping" requires reconfiguration of all of the affected circuitry so that a single wire connects to each circuit breaker terminal. We recommend repair by a qualified licensed electrician.

• The neutral/grounding terminal strip in the main distribution panel was not properly bonded to the panel. We recommend that the terminal strip be bonded to the panel by connecting a bonding jumper from the neutral terminal strip to the panel.

• A breaker in the main panel was tripped at the time of the inspection. We do not reset tripped breakers as they may have been tripped for a reason that we do not know. The circuit for this breaker could not be tested. We recommend that you consult with the owner as to the past history of this circuit and breaker, and any reason why the breaker was tripped.







3. Service Grounding

Description: Copper • Water Pipe Connection

Observations:

• OK - The electrical service is properly grounded

4. Sub Panel

Location & Description:

• Located: Bedroom

• Breakers

Number of 110 Circuits: 11Number of 220 Circuits: 2

Observations:

• The circuitry in the auxiliary panel was partially labeled. Each circuit should be identified, allowing individuals unfamiliar with the equipment to properly operate it. We recommend accurately labeling the circuits by actually operating the breakers.

• The grounding conductors and the neutral conductors in the auxiliary panel were connected together inside the panel. This was an improper connection. The grounding conductors should be connected to an appropriate ground terminal strip which is bonded to the enclosure, but the neutral conductors should be connected to a separate neutral terminal strip which is isolated (insulated) from the enclosure. We recommend that a qualified licensed electrician make the appropriate corrections.

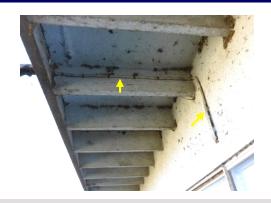


5. Distribution Wiring

Description: Copper • Non-metallic sheathed cable "Romex" • Fabric Covered **Observations:**

- There is unprotected wiring to the light in the back of the house, exposed to possible damage. Even if the individual conductors are insulated, wiring should not be exposed. For improved safety, it is recommended that exposed wiring be protected from damage according to the standard trade practice.
- An extension cord was utilized as permanent wiring to the light in the front of the house. Extension cords should not be used as permanent wiring as they are easy to overload and can be damaged easily. We recommended that the extension cords be replaced with proper circuitry.
- An extension cord was utilized as permanent wiring to the garage door opener. Extension cords should not be used as permanent wiring as they are easy to overload and can be damaged easily. We recommended that the extension cords be replaced with proper circuitry.
- The extension/appliance cord in the front of the house passes through a wall or ceiling. Extension/appliance cords cannot pass through a wall or ceiling as they are easy to overload and can be damaged easily. The extension cord should be removed and replaced with proper circuitry to ensure that the installation conforms to standard trade practices.





6. Receptacles

Description: Grounded **Observations:**

- The cover plate for a receptacle in several locations of the house was missing. All missing cover plates should be replaced with a new cover plate to restore proper protection for those who will be using the device by reducing the risk of hazardous shocks.
- The exterior weatherproof cover plate for a receptacle in the back of the house was damaged. We recommend the damaged cover plate be replaced an appropriate, exterior rated, water-resistant cover be installed to reduce the chance of moisture penetration and eliminate the safety hazard.
- A receptacle in the master bedroom closet and in the living room is loose. All loose receptacles should be properly secured or replaced as necessary.
- A receptacle in the front of the house is inoperative. All inoperative receptacles and their circuits should be investigated by a qualified licensed electrical contractor and repaired as necessary.
- Ungrounded 3-prong receptacle(s) in the back of the house should be repaired. Grounded outlets were provided in the rest of the dwelling. In this case, a ground wire may be present in the electrical box and simply needs to be connected. We recommend that a qualified licensed contractor be consulted for further evaluation and repairs as necessary.









7. GFCI - Ground Fault Circuit Interrupter

GFCI (ground fault circuit interrupter) protection is presently required (including receptacles in bathrooms, kitchens, garages, basements, crawl spaces, Jacuzzi, whirlpool and pool equipment, and on the exterior). GFCI protection is a modern safety feature designed to help prevent shock, particularly in wet locations. GFCI breakers and receptacles function to de-energize a circuit or a portion of a circuit when the potential for a shock exists. GFCI protection is inexpensive and can provide a substantially increased margin of safety:

Locations: Exterior • Bathroom(s)

Observations:

• OK - All GFCI (Ground Fault Circuit Interrupter) receptacles that were located were tested and responded properly to testing.

8. Lighting & Switches

Observations:

- The light in many locations of the house is inoperative. Bulbs in inoperative lights should be replaced. If the bulbs are not blown, the circuit and light fixture should be investigated and repaired as necessary.
- The decorative glass or globe was missing from the light fixture in several locations of the house. We recommend it be replaced to restore protection to the hot light bulb(s) in the fixture.

9. Discretionary Improvements & General Information

- The Federal Pacific Company manufactured the electrical distribution panel. Federal Pacific panels and circuit breakers have not been manufactured for some time, and some Federal Pacific circuit breakers have been known to fail to trip at their rated amperage. A recommendation to replace the main panel should be anticipated, if significant remodeling or updating is contemplated.
- Water filters, regulators, water heaters, water softeners or other such equipment installed in the water pipe system prevent the water pipe from being properly bonded to the main service panel because it interrupts the continuity to ground. We recommend that a bonding jumper (wires or other metal that are designed to connect pieces of equipment) be installed. This will restore the continuity of the grounding system.
- AFCI (arc fault circuit interrupter) protection is presently required for bedrooms, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways and other similar rooms. AFCI protection is a modern safety feature designed to offer an extra level of protection against electrical fire. The circuits did not have AFCI protection as currently required. Although AFCI protection was not required when this dwelling was built, we recommend that AFCI protection be installed at all required locations as an upgrade.
- We recommend upgrading of unprotected receptacles in areas where GFCI protection is presently required (including receptacles in bathrooms, kitchens, garages, basements, crawl spaces, Jacuzzi, whirlpool and pool equipment, and on the exterior). GFCI (ground fault circuit interrupter) protection is a modern safety feature designed to help prevent shock, particularly in wet locations. GFCI breakers and receptacles function to de-energize a circuit or a portion of a circuit when the potential for a shock exists. GFCI protection is inexpensive and can provide a substantially increased margin of safety:

Heating System

In accordance with the ASHI© Standards of Practice pertaining to Heating (HVAC) systems, this report describes the energy source and the distinguishing characteristics of the heating system. Inspectors are required to open readily openable access panels and visually inspect the installed heating equipment and associated vent systems, flues and chimneys and distribution systems. The heating system inspection is general and not technically exhaustive. An evaluation of the furnace heat exchanger is beyond the scope of this inspection. The inspector will test the heating using the thermostat and/or other normal controls. The adequacy of heat supply or distribution balance is not inspected. We highly recommend that a standard, seasonal or yearly, Service and Maintenance Contract with an HVAC contractor be obtained.

1. Forced Air Heating System

Location: In The utility room

Description:

• Forced air furnaces operate by heating a stream of air over a gas-fired heat exchanger that is moved by a blower through a system of ducts.

• Manufacturer: Day & Night

- BTUs: 135,000 • BTUs: Unknown
- The heating system is old and may be approaching the end of its useful life. Annual inspections and ongoing maintenance will be critical to the performance of the heating system.

Observations:

- The heater cabinet front cover was missing. We recommend that the cover be replaced.
- The thermostat for the heating system was not located or not provided, preventing a complete inspection of the heater. However, the heater was old and the heat exchanger was rusted with a buildup of soot and debris. We recommend a qualified heating technician be consulted for further evaluation and repairs or replacement as necessary.



2. Energy Source

Energy Source: Natural Gas

Observations:

- OK The gas supply piping installation included a 90-degree shutoff valve in the vicinity of the heating plant for service personnel and emergency use. The valve was not operated, but this age and style of valve is normally found to be operable by hand and generally trouble free.
- The gas supply connection to the heater was rigid. Upgrading with a flexible supply connector could help limit damage in the event of a major earthquake.

3. Combustion Air

Observations:

• OK - Combustion air provides the oxygen for fuel burning appliances. Adequate ventilation for the heating system is vital for their safe operation. Years ago, the air could come from inside or outside the building, however, modern standards call for combustion air to come from the outside, only. The combustion air supply was adequate.

4. Venting, Flue(s), and Chimney(s)

Description: Metal single wall and metal double wall (type "B") vent pipe **Observations:**

• OK - The visible sections of the heater's venting system were functioning as designed and in generally good condition.

5. Heating Distribution

Description: Ductwork

Observations:

• OK - The visible supply and return air ductwork was properly installed and in acceptable condition.

6. Discretionary Improvements & General Information

• A sediment trap was not installed by the gas valve of the heater. Sediment traps capture debris in the gas line and help keep burners clean. We recommend that a sediment trap be installed between the flexible gas connector and heater.

Plumbing System

In accordance with the ASHI© Standards of Practice pertaining to Plumbing systems, this report describes the water supply, drain, waste and vent piping materials and the water heating equipment, energy source and location of the main water and main fuel shut-off valves, when readily viewable or known. Inspectors are required to inspect the interior water supply and distribution systems, all fixtures and faucets, the drain waste and vent systems (including all fixtures for conveying waste) and drainage sumps, sump pumps and associated piping. Water conditioning systems, fire and lawn sprinkler systems, private waste disposal systems, spa and swimming pool equipment and solar water heating equipment are not inspected. Water shutoff valves, other than fixture faucets and hose bibs attached to the building, are not tested. It is advised to have any underground drain/sewer lines examined by a specialist with a camera to determine their actual condition. Testing water pressure is beyond the scope of a home inspection and is given as a courtesy for your information. The water pressure range will vary depending on the time of day and amount of usage at the home on that day. Determining adequate sizing for the water supply and waste pipe system is beyond the scope of a home inspection.

1. Water Supply Source

Source: Public municipal water supply

2. Main Water Shutoff

Description: Copper • Size: 3/4" **Shut Off Location:** Back of the house

Observations:

• The main water supply pipe is imbedded directly in concrete. Direct contact with concrete can cause damage from seismic movement or settlement. To help protect the pipe from damage, we recommend that this section of pipe be properly protected by a sleeve or wrap where it passes through a concrete.



3. Water Flow and Pressure

Water Pressure: Water Pressure: 110 PSI

Observations:

• As the static water pressure of the supply plumbing system exceeds 80 pounds per square inch (psi), it would be wise to install a pressure regulator. Excessive pressure can result in damage to valves, seals and washers in fixtures and appliances.

4. Exterior Hose Bibs

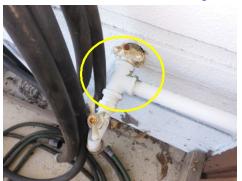
Observations:

• OK - The hose bibs were in generally good condition.

5. Interior Supply Piping

Description: Readily visible water supply pipes are: • Copper **Observations:**

- Copper/galvanized steel pipe connections were observed on the left side of the house. These dissimilar metals cause an electronic reaction that causes premature deterioration of the pipe. We recommend that a six (6) inch brass connector be installed at all these connections to prevent premature deterioration of the pipe.
- Polyvinyl chloride (PVC) plastic piping was inappropriately installed in the domestic water supply system in the front of the house. We recommend replacing all inappropriate supply piping using new material installed in conformance with present industry standards.







6. Faucets & Angle Stops

Observations:

• There is a leak at the base of the faucet in the upstairs bathroom sink, allowing water to drop into the cabinet below. Continued leaking can cause damage to the cabinet shelf. All leaks should be repaired. Sometimes, simply tighten the packing nut will stop the leak, other times a new washer or "rebuild kit" will be necessary.

7. Drains, Traps & Vents

Observations:

• The drain connection is leaking at the kitchen sink. A qualified licensed plumbing contractor should repair the leaking drain connection.



8. Waste System

Description: Public sewage disposal system

9. Waste Pipes

Description: Readily visible waste system pipes are: • Cast Iron • Galvanized Steel **Observations:**

• OK - The exposed and accessible portions of the waste piping system were in generally good condition.

10. Fuel Supply

Fuel Type: Natural Gas

Shut Off Location: Back of the house

Observations:

• OK - The gas meter was in generally good condition.

11. Interior Fuel Piping

Description: Readily visible fuel system pipes are: • Black iron pipe **Observations:**

• OK - The exposed and accessible portions of the gas piping were in generally good condition.

12. Discretionary Improvements & General Information

- To reduce the risk of contamination of supply water, installation of anti-siphon devices on exterior hose bibs should be considered.
- The washing machine standpipe was smaller than the 2 inch diameter now required. Many washing machines will have no problems, but newer machines may discharge more water than the existing standpipe can handle. Upgrading to a larger diameter pipe may become necessary.
- A meter wrench could not be located in the vicinity of the gas meter as recommended in areas subject to seismic activity. A proper wrench should be chained to the meter to provide a convenient means for shutoff in an emergency. The valve can be turned 90 degrees in either direction to shut the gas supply off.
- The location of the gas meter renders it accessible to possible damage. We recommend that the gas meter be better protected against mechanical damage with a barrier such as a steel post (known as a bollard).

13. Limitations of Plumbing Inspection

• Most of the plumbing system was not accessible for inspection because the crawl space area was not accessible or the type of construction rendered the plumbing system inaccessible for inspection.

Water Heating System

In accordance with the ASHI© Standards of Practice pertaining to Water Heating systems, this report describes the water heating equipment (vent systems, flues and chimneys of water heaters or boiler equipment), fuel storage and distributions systems for water heaters and/or boiler equipment.

1. Water Heater

Location: In the utility room

Description:

Energy Source: GasCapacity: 50 Gallons

• Age: 14 years

• The water heating system is old and may be approaching the end of its useful life. Annual inspections and ongoing maintenance will be critical to the performance of the heating system.

Observations:

• OK - The water heater was in generally good condition.

2. Water Connections

Observations:

- OK The water heater was equipped with a cold water supply shutoff valve. The valve was not operated during this inspection, however, it should be "exercised" periodically so that it will remain functional when the need arises.
- OK The cold water inlet and hot water outlet connections were properly installed and in acceptable condition.

3. Temperature Pressure & Relief Valve

The temperature and pressure relief valve is an important safety feature and should not be altered or tampered with. TPRs are designed to automatically release water in the event that pressure or temperature in the water tank exceeds safe levels. Testing the operation of this valve is not within the scope of a home inspection.

Observations:

• OK - The TPR valve and discharge pipe were installed. No adverse conditions were observed.

4. Fuel Supply

Observations:

- OK The gas supply piping included a 90-degree shutoff valve in the vicinity of the water heater for service personnel and emergency use. The valve was not operated, but this age and style of valve is normally found to be operable by hand and generally trouble free.
- OK The gas connector was an approved flexible type in acceptable condition.

5. Combustion Air

Observations:

• OK - Combustion air provides the oxygen for fuel burning appliances. Adequate ventilation for the water heating system is vital for their safe operation. Years ago, the air could come from inside or outside the building, however, modern standards call for combustion air to come from the outside, only. The combustion air supply was adequate.

6. Exhaust Vent

Description: Metal single wall and metal double wall (type "B") vent pipe **Observations:**

• The vent connections for the water heater were not properly connected. The vent connector should have at least 3 screws at each connection to keep the connections secure.



7. Seismic & Other Considerations

California requires water heaters in seismic zones to be anchored or strapped to a fixed surface to resist lateral movement during seismic activity; and if located in a garage, present standards require that the water heater be elevated to provide a minimum of eighteen inches of clearance between any open flame and any level, or floor where combustibles or their fumes could be stored, or might collect. This configuration helps prevent ignition of fumes from spilled flammable liquids.

Observations:

• OK - The water heater tank had been properly secured. This will help prevent water heater movement and possible gas leakage, limit damage and provide a source of usable domestic water in the event of a major earthquake.

8. Discretionary Improvements & General Information

• A sediment trap was not installed by the gas valve of the water heater. Sediment traps capture debris in the gas line and help keep burners clean. We recommend that a sediment trap be installed between the flexible gas connector and water heater.

Interior

In accordance with the ASHI© Standards of Practice pertaining to Interiors, inspectors are required to inspect walls, ceilings and floors, steps, stairways and railings, installed countertops and a representative number of installed cabinets, and representative number of doors and windows. Window treatments, central vacuum systems, household appliances, recreational facilities, wallpaper and other finish treatments are not inspected. Testing smoke and carbon monoxide detectors is beyond the scope of a home inspection; therefore, they are not tested. Determining the condition of the coating and hermetic seal in dual glazed windows is beyond the scope of a home inspection. If the home is occupied, the possessions of the owner necessarily conceal some areas/items. These are exempt from inspection. All reasonable attempt is made to more closely inspect behind the owner's possessions if any hint of a problem is found or suspected. We strongly recommend making a careful examination of the interior areas of the home when it is emptied at the final walkthrough.

1. General Comments About The Interior

Observations:

• Wear and tear was evident throughout the house, the type generally resulting from age and deferred maintenance. We have made no attempt to list all cosmetic flaws and suggest that most of these deficiencies could be addressed by routine maintenance upgrading.

2. Floor Surfaces

Materials: Carpet • Vinyl/Resilient • Ceramic tile *Observations:*

• The carpet floor covering was damaged. The floor covering in this area should be replaced.





3. Walls

Materials: Drywall • Paneling Observations:

• There is a hole in the wall in several locations of the house. We recommend that any holes in the walls be repaired and restored to its original finish.





4. Ceilings

Materials: Drywall • Panelboard

Observations:

- Minor cracks were observed on the surface of the ceiling in the living room. This type of cracking in this material is common and does not indicate a structural deficiency. These cracks can be patched with a resilient material and finished in the course of routine maintenance.
- The surface of the ceiling was stained in the utility room and upper right bedroom. The source of leakage should be identified and repairs undertaken as necessary. The existing stained, damaged surface should be refinished to restore its appearance.
- Patching was observed on the ceiling in the family room. Inquiries should be made of the owner and/or occupant, who may have further knowledge regarding the history of any repairs done in this area.
- There is a hole in the ceiling in the utility room. We recommend that any holes in the ceiling be repaired and restored to its original finish.











5. Windows

Description: Sliders • Fixed Pane • Single Pane • Double Glazed **Observations:**

- The windows are in mild disrepair. This is a common condition that does not necessitate immediate major repair. Trimming and adjustment, hardware improvements and glazing repairs would be logical long term improvements. In practice, improvements are usually made on an as needed basis only. The most important factor is that the window exteriors are well-maintained to avoid rot or water infiltration.
- The window(s) in the garage showed evidence that they have lost their seal. This has resulted in condensation or fogging developing between the panes of glass. While a breached seal does not usually affect the thermal insulation value of the window unit, the fogging and condensation between the panes of glass cannot be removed without replacing the window.
- The window in the master bathroom had a BB hole in the windowpane. We recommend that the damaged windowpane be replaced for improved safety and to restore full function to each window.
- The window in the back bedroom and in the stairway had a cracked windowpane. We recommend that the cracked windowpane be replaced for improved safety and to restore full function to each window.

6. Doors

Observations:

• The door in several locations of the house is damaged. We recommend that the door be repaired or replaced as necessary.







7. Factory Built Fireplace

Location: Living Room

Description: Components shared by most types of fireplaces include the interior, exterior and a fire burning area. Individual fireplaces may have a firebox, flue, damper, lintel, mantel, hearth, gas log and/or gas log lighter. There is a wide variety, and a number of different manufacturers of factory built fireplaces. We inspect the readily accessible fireplace components for signs of significant malfunction, excessive or unusual wear and general state of repair, but we cannot guarantee that any particular component is the one stipulated for use by the manufacturer. Portions of a fireplace are inaccessible for a home inspection.

Observations:

- There is no hearth extension outside the fireplace. The hearth extension should extend at least 16 inches in front of the fireplace opening and at least 8 inches beyond each side of the fireplace opening. We recommend installation of a conforming hearth extension for improved safety.
- The metal firebox for the fireplace was corroded and damaged. We recommend that a qualified licensed contractor be consulted to determine the extent of the damage and repair or replacement as necessary.







8. Smoke Detectors

Information: Smoke detectors are reliable, inexpensive, and are recommended by all local fire districts. We recommend installation of smoke detectors on all levels of the house, including basements, and in all bedrooms. Newer construction should have hard-wired smoke detectors operating on the household electrical current. They should be interconnected so that every smoke detector sounds regardless of the fire's location. Smoke detectors that are hard-wired should have battery backups in case of a power outage. We recommend that a schedule of maintenance and testing of the smoke detectors be arranged.

Locations: In the hallway • In the bedrooms

Observations:

• The smoke detector in the upper floor hallway is missing. We recommend that all missing smoke detectors be replaced.

9. Carbon Monoxide Detectors

Information: In May 2010, the state of California enacted a law requiring home owners to install carbon monoxide detectors in their homes. Although the bill was signed into law in 2010, California residents must have carbon monoxide detectors in their homes as of July 1, 2011. This timeline applies only to single-family homes that have appliances that burn fossil fuels or homes that have attached garages or fireplaces. A carbon monoxide alarm or detector shall be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms, on each story, in basements, inside bedrooms with a fireplace or gas burning appliance and shall be installed in accordance with manufacturer's installation instructions.

Locations: In the upper floor hallway

Observations:

• Carbon monoxide detectors had not been installed on some levels of this dwelling as required by current industry standards. A carbon monoxide alarm or detector shall be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms, on each story, in basements, inside bedrooms with a fireplace or gas burning appliance and shall be installed in accordance with manufacturer's installation instructions. We recommend that a carbon monoxide alarm be installed in these locations.

10. Washer & Dryer Hookups

Hookups:

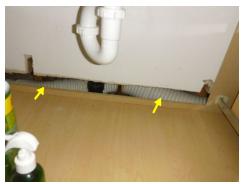
- 240 Volt Circuit For Dryer (circuit not tested)
- 120 Volt Circuit For Washer
- Waste Standpipe For Washer

Observations:

- A drain trap had not been installed on the laundry waste standpipe. This is considered a significant defect as it can allow venting of sewer gasses into the surrounding area. An approved drain trap should be installed by a qualified licensed plumbing contractor.
- The clothes dryer exhaust ducting was not made from an appropriate material for this location (it was a corrugated or "flexible" material). Use of an inappropriate material in this area could present a risk of fire from combustion of accumulated lint and debris. The duct from the clothes dryer vent requires a 4 inch diameter, smooth wall duct, no longer than 14 feet, with a hood damper at the exterior termination. A flexible vent (6 ft. maximum) may be used at the dryer connection only, but cannot go through underbuilding crawl spaces, floors or walls.
- A flexible vent connector was utilized for the dryer vent where it passed through a wall or floor. Flexible vent connectors are not approved for use in this application. The flexible vent connector should be replaced with materials that meet current industry standards.







11. Laundry Room Ventilation

Observations:

• There was no ventilation fan to serve the laundry area; however, industry standards at the time this dwelling was built probably did not require that one be installed. There was no evidence of past moisture or mildew problems in the area, and the addition of a vent fan would be considered optional.

12. Discretionary Improvements & General Information

• Because this laundry area was located in a finished area, consideration should be given to installation of a catch pan with an exterior routed drain line under the washing machine. This could help prevent damage to surrounding areas in the event of a leak or overflow.

Bathrooms

Bathrooms can consist of many features from whirlpool tubs and showers to toilets and bidets. Because of all the plumbing involved it is included here as a separate area. Fixtures and faucets, functional water flow, leaks, and cross connections are checked. Moisture in the air, water leaks, and deteriorated/poor caulking and grouting can cause mildew, wallpaper/paint to peel, and other problems. The inspector will identify as many issues as possible but some problems may be undetectable within the walls or under flooring. It is important to routinely maintain all bathroom grouting and caulking, because minor imperfections will result in water intrusion and unseen damage behind surfaces.

1. Sinks

Observations:

• The drain stopper for the sink in the master bathroom was not functioning properly or was missing. The drain stop should be repaired or replaced as necessary to restore full function to the sink.

2. Cabinets & Countertops

Observations:

• There were holes in the wallboard under the cabinet in the laundry bathroom. We recommend these holes be properly repaired to improve appearance and as security against intrusion from insects and rodent pests.



3. Shower(s)

Description: Surround is plastic/fiberglass • Shower doors are tempered **Observations:**

- The shower head in the master bathroom had been removed. A shower head should be installed for full use of the facilities as designed.
- The door for the shower enclosure in the master bathroom was in acceptable condition, but was in need of adjustment. We recommend adjustment to the door, door hardware and/or latching mechanism to restore full function of the door.

4. Toilets

Description: All toilets are low flow

Observations:

• The toilet in the upstairs bathroom is inoperative. The toilet flush valve and/or ballcock should be adjusted, repaired or replaced as necessary.

5. Exhaust Fan(s)

Observations:

• An exhaust fan was installed in the master bathroom, but it was not functional, or it had been intentionally disconnected. If the fan had been intentionally disconnected, it should be reconnected to assure proper ventilation of the bathroom. If the fan was not functional, we recommend that the fan be repaired or replaced as necessary.

Kitchen

Inspector is to observe and operate the basic functions of the following appliances: Permanently installed dishwasher(s), through its normal cycle; range, cook top, and permanently installed oven; trash compactor; garbage disposal; ventilation equipment or range hood and permanently installed microwave oven. Inspection of stand-alone freezers and refrigerators are outside the scope of this inspection. No opinion is offered as to the adequacy of dishwasher operation. Oven self or continuous cleaning operations, cooking functions, clocks, timing devices, lights and thermostat accuracy are not tested during this inspection. Appliances are not moved and the condition of any walls or flooring hidden by them cannot be judged.

1. Sinks

Observations:

• OK - The kitchen sink(s) were properly installed, fully functional and in generally good condition.

2. Cabinets & Countertops

Observations:

• OK - The kitchen cabinets and countertops were properly installed and in generally good condition.

3. Cooktop

Manufacturer:

Westinghouse

Observations:

• The wiring leading to the electric cooktop was installed in a substandard manner. We recommend that a qualified licensed electrician be consulted for further evaluation and repair.





4. Built In Oven

Manufacturer:

• General Electric

Observations:

• OK - The built in oven was turned on with the normal operating controls and was in satisfactory working condition.

5. Dishwasher

Manufacturer:

• Kenmore

Observations:

• The dishwasher lacks an air gap device. Air gaps are now standard equipment to assure a separation between supply and waste water. We recommend that one be installed to prevent water from being siphoned from the garbage disposal to the dishwasher.

6. Waste Disposer

Manufacturer:

• Kenmore

Observations:

• The wiring leading to the waste disposer is installed in a substandard manner. We recommend that a qualified licensed electrician be consulted for further evaluation and repair.





7. Exhaust Fan

Observations:

• No exhaust fan had been installed in this kitchen. While there may not be a requirement that a fan be installed, the lack of a fan could be an inconvenience. Ideally, a fan should be installed to divert smoke and grease away from the kitchen walls and ceiling.

Garage

Determining the heat resistance rating of the garage firewall is beyond the scope of this home inspection. Garage door openings are not standard, so you may wish to measure the opening to ensure that there is sufficient clearance to accommodate your vehicles. Garage doors, starting in 1992, were required to have an electronic beam installed across the garage door opening to automatically reverse the garage door if there was a blockage of the beam. This prevents the door from closing and damaging people, pets or objects that may be in the garage door opening when the door is operated. Prior to the above date, some garage doors had an automatic reverse feature that operated on pressure. If while descending, the door met resistant, it would automatically reverse and not continue to close. It is advised to have all garage doors upgraded with an electronic beam to ensure the safe operation of the door. Garage door(s) and automatic garage door operators are inspected for proper function and the operation of installed safety features. You may want to have any living space above the garage that was added after original construction evaluated by a structural engineer, as it may be vulnerable during seismic activity.

1. Garage Access

Access: The garage was only partially accessible for inspection because of the presence of stored materials. When access becomes available, the inaccessible areas should be carefully inspected.

2. Garage Structure

Observations:

• Pronounced floor cracks were noted in the garage. While this amount of cracking is unusual, this slab is not a structural component. These cracks are basically cosmetic considerations and action would be considered optional, unless they create a trip hazard. Large cracks that create a trip hazard should be repaired for improved safety. Persisting movement may result in the need for resurfacing the garage floor.

• Moisture damage was observed on the wall sheathing in the garage. Damaged wood should be repaired or replaced as necessary and the conditions that have promoted the damage should be remedied. A qualified licensed pest control contractor should be consulted for further evaluation and correction.





3. Garage Firewall

Observations:

• A proper fire separation is needed at wall and ceiling finishes of attached garages where they abut the interior of the house. These walls and ceilings serve as a fire break and reduce the potential of toxic automobile gasses entering the house. We recommend that a qualified licensed contractor install such a fire separation to meet current industry standards.



4. Garage Vehicle Door(s)

Description: Aluminum Roll Up Door **Observations:**

• OK - The garage door(s) was performing as designed and was in generally good condition.

5. Garage Door Opener(s)

Observations:

• The garage door opener failed to respond to normal operating controls. We recommend repair or replacement by a competent garage door opener mechanic to restore its proper function.

6. Limitations of Garage Inspection

• Some parts of the garage were inaccessible because of the presence of stored materials, and could not be inspected. When access becomes available, the inaccessible areas should be carefully inspected.

Report Summary

Structure		
Page 4 Item: 3	Floor Beams, Joists & Trusses	• The floor was noticeably sloped in the kitchen area. We recommend further evaluation and proposals for possible corrective work should be obtained from a licensed general contractor or structural engineer. Measurement and evaluation of floor slope and/or settlement is well beyond the scope of a home inspection.
Exterior		
Page 11 Item: 12	Deck & Balcony	 There was a considerable amount of damage to the deck in the front and right side of the house, making it unsafe for use. We recommend that the deck be replaced. No railing was provided for the deck in the front of the house. A railing should be installed to reduce the potential for personal injury at this location.
Heating System		
Page 17 Item: 1	Forced Air Heating System	• The thermostat for the heating system was not located or not provided, preventing a complete inspection of the heater. However, the heater was old and the heat exchanger was rusted with a buildup of soot and debris. We recommend a qualified heating technician be consulted for further evaluation and repairs or replacement as necessary.
Interior		
Page 26 Item: 7	Factory Built Fireplace	• The metal firebox for the fireplace was corroded and damaged. We recommend that a qualified licensed contractor be consulted to determine the extent of the damage and repair or replacement as necessary.
Page 27 Item: 9	Carbon Monoxide Detectors	• Carbon monoxide detectors had not been installed on some levels of this dwelling as required by current industry standards. A carbon monoxide alarm or detector shall be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms, on each story, in basements, inside bedrooms with a fireplace or gas burning appliance and shall be installed in accordance with manufacturer's installation instructions. We recommend that a carbon monoxide alarm be installed in these locations.
Garage		
Page 32 Item: 2	Garage Structure	• Moisture damage was observed on the wall sheathing in the garage. Damaged wood should be repaired or replaced as necessary and the conditions that have promoted the damage should be remedied. A qualified licensed pest control contractor should be consulted for further evaluation and correction.
Page 32 Item: 3	Garage Firewall	• A proper fire separation is needed at wall and ceiling finishes of attached garages where they abut the interior of the house. These walls and ceilings serve as a fire break and reduce the potential of toxic automobile gasses entering the house. We recommend that a qualified licensed contractor install such a fire separation to meet current industry standards.