

**NOTICE TO BUYER: SELLER-PROCURED INSPECTION REPORT**

The following notice is given with respect to the Purchase and Sale Agreement dated \_\_\_\_\_ between \_\_\_\_\_ ("Buyer") and Ashok Chowdhry Karishma Singh Chowdhry ("Seller") concerning 17804 Ne 136th St Redmond WA 98052 ("the Property").

Seller has given or is giving Buyer the following Inspection Report(s) concerning the Property (check all that apply):

- ☒ Whole House Inspection  
☐ Sewer Inspection  
☐ Pest Inspection  
☐ Other: \_\_\_\_\_

The Inspection Report(s) are intended to be a part of any Seller Disclosure Statement (NWMLS Form 17) that is provided in this transaction, whether or not the two documents are attached to each other. The Inspection Report(s) were procured by Seller and are provided for informational and disclosure purposes only. The Inspection Report(s) are not intended to constitute a warranty, either express or implied, about the condition of the Property. Buyer is advised to procure their own inspections from professional inspectors chosen by Buyer or hire the inspectors that prepared the Inspection Report(s). Buyer has the opportunity to inspect the Property to Buyer's satisfaction.

Authentisign  
Ashok Chowdhry 09/14/2021  
9/14/2021 10:40:15 PM PDT  
Seller DATE

Authentisign  
Karishma 09/14/2021  
9/14/2021 8:17:37 PM PDT  
Seller DATE

**Buyer's Acknowledgment of Receipt**

The undersigned Buyer acknowledges receipt of the foregoing Notice and the above-referenced Inspection Report(s).

\_\_\_\_\_  
Buyer DATE

\_\_\_\_\_  
Buyer DATE

**Ashok Chowdhry & Karishma Singh Chowdhry**  
**17804 NE 136<sup>th</sup> Street**  
**Redmond, WA 98052**

**Per the seller, the following items listed on the pre-sale inspection summary dated (Sep 21, 2021), are being corrected by the seller as part of preparation for sale in good faith.**

**1) The following actions items have been completed by seller as of (Sep 29, 2021)**

**GARAGE**

6.3 GARAGE DOOR OPENER (Sensors) – The sensors are moved to 6" from the floor.

6.4 FIRE SEPARATION - Patched the voids with a fire retardant caulk.

6.5 PASSAGE DOOR – Self closing hinge has been corrected.

**ELECTRICAL SYSTEM**

7.8 SERVICE PANEL – Replaced the missing screws

7.10 WIRING – Secured all loose cables at 4' intervals using approved cable staples.

7.11 RECEPTACLES – Changed the polarity of the receptacles in the family room. Tightened the loose receptables throughout the home.

7.12 GFCI RECEPTACLES – Installed the GFCI receptacle in garage and replaced in the lower bathroom.

7.14 LUMINARIES – Replaced all non-working bulbs.

**AIR CONDITIONER/ HEAT PUMP**

9.2 CONDENSER – Relevelled the outdoor condensing unit.

**KITCHEN**

11.8 AIR GAP – Replaced

**BATHROOMS MASTER BEDROOM BATHROOM**

12.17 TOILET – Repaired

**BATHROOMS MASTER BEDROOM BATHROOM**

12.19 DRAINS, TRAPS AND TRAP ARMS – Slow drains are fixed

**PLUMBING SYSTEM**

14.2 MAIN WATER SHUTOFF VALVE – Not added but shutoff valve is at the water main.

14.9 HOSE BIBBS AND EXTERIOR SUPPLY PIPES – Replaced worn valve.

**ROOF**

4.5 GAS APPLIANCE VENTS – Repaired

**ATTIC**

5.3 MECHANICAL VENTILATION SYSTEMS - Replaced the plastic duct with 4" aluminum duct.

**KITCHEN**

11.1 COUNTERTOPS – Calked the gaps

**INSULATION**

18.1 ATTIC INSULATION – Repaired

**STRUCTURE**

19.8 CEILING – Contractor verified that framing connections are secure and adequate

**2) The Seller will correct the following items will be corrected by closing:**

15.8 WINDOWS – The living windows will be replaced by November 10<sup>th</sup>, 2021 (the delay is due to availability of glass from the supplier)

**3) If requested in the Purchase and Sale Agreement, the Seller will consider the following corrections by closing:**

**WATER HEATER**

10.12 ELEVATION ABOVE GARAGE FLOOR – Elevate the water heater to at least 18” above the garage floor.

September 23, 2021

**Mr. & Mrs. Ashok & Karishma Chowdhry**  
**17804 NE 136th St.**  
**Redmond, WA.**

**Re: 17804 NE 136th St.**  
**Redmond, WA.**

Dear Ashok & Karishma;

At your request, a visual inspection of the above referenced property was conducted on 09/21/2021. We have inspected the major structural components, plumbing, heating and electrical systems for signs of significant non-performance, excessive or unusual wear and general state of repair.

Clark Inspections inspectors, inspect all homes and buildings according to the stringent professional standards and code of ethics set forth by the American Society of Home Inspectors (ASHI). The ASHI standards are designed to identify and disclose to the client certain conditions of the major systems as these conditions exist at the time of the inspection. These standards are designed for a visual inspection of the readily accessible areas of the included system. A copy of these standards will be provided upon request or can be obtained by calling the ASHI automatic "Information-On-Demand" phone number at 1-800-743-2744

Home or building inspections performed under these standards should not be construed as a compliance inspection of any governmental or non-governmental codes or regulations. Inspections performed under these standards are essentially visual; are based on the experience and opinion of the inspector; and are not intended to be technically exhaustive. Inspections performed under these standards are not meant to be warranties nor guarantees of adequacy of performance of the structures, systems, or their component parts.

This inspection does not include an inspection for construction or other materials which might be hazardous to your health. It is possible that such materials may be present and not noted in this report.

This inspection does not include the testing or inspection of security systems, intercoms, communication systems, video, or sprinkler systems. These items are highly specialized and individualistic. Clark Inspections recommends that you have the seller and/or real estate agent/broker demonstrate the operation and serviceability of these systems to you prior to the closing of the sale.

Mechanical equipment is inspected for operability only and may contain undisclosed defects which may significantly impair it's usefulness.

Defects are examined and a determination is made on how a particular defect will affect interrelated building parts and whether immediate repairs are required.

Since all buildings have defects, it is important to know and understand what they are and how they affect the house and property. Some of the defects mentioned in this report may be quite typical, and found in other homes of comparable age and price. Some however, may not. We make our best attempt to distinguish this for you in both verbal and written reports.

## REPORT SUMMARY

The comments in this report are categorized. General information is given on the type of materials and construction methods. Specific information is given pertaining to the condition of a component and applicable repair and maintenance work that may be required.

Statements, representations, or conclusions offered by the inspector are the considered opinion of the inspector, but these statements, representations, or conclusions do not constitute an expressed or implied warranty of any kind. Neither the inspector nor Clark Inspections Inc. shall be liable for any direct, special, incidental, or consequential damages under an circumstances whatsoever, whether arising in tort, negligence, or contract, nor for any loss, claim, expense, or damage caused by or arising out of his or its inspection of a structure, nor will the inspector or Clark Inspections Inc. indemnify or hold others harmless for any loss, claim, expense, or damage arising out of his or its inspection of a structure.

## ACTION ITEMS, SIGNIFICANT DEFECTS AND/OR HEALTH AND SAFETY ISSUES

Non-operational (Action) items, safety or health issues, areas with limited viewing for proper inspection and components that do not serve their intended function (Significant Defects) are listed here. These items will likely require further evaluation and repair by licensed tradespeople.

**Please Read entire report**

### BUILDING SITE

#### 2.5 PATIO

The patio has settled differentially. This was probably caused by inadequate preparation of the soil prior to the placement of the concrete sections. This condition can be repaired by pressure grouting the sunken sections of the patio or by removing and replacing them. The patio remains functional despite this condition. However, the raised edges of the concrete can be a trip hazard for some people. Repairs should be made as necessary. Minor cracks can be sealed to minimize moisture entry and further settlement of the concrete sections.



### GARAGE

#### ATTACHED GARAGE

#### 6.2 OVERHEAD GARAGE DOORS

Safeties are cables run through the center of the garage door springs that prevent broken springs from becoming projectiles that can cause injury. There are no safeties installed. The installation of safeties is recommended.



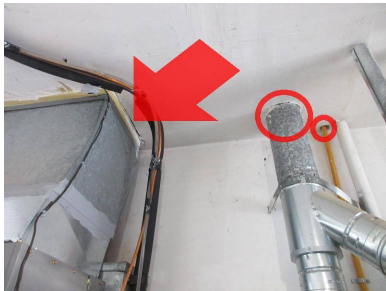
### 6.3 GARAGE DOOR OPENER

The Photo-eye beam was installed to high above the floor of the garage to adequately offer protection for small children and/or pets. We recommend that the photo-eye be lowered to within 4-6" of the floor.



### 6.4 FIRE SEPARATION

There are voids in the fire resistive barrier between the living space and garage that will allow flames to penetrate. The gypsum barrier slows the spread of a fire from the garage to the structure and/or living space. Patching the voids with a fire retardant caulk is recommended.



### 6.5 PASSAGE DOOR

The self closing hinge has been disabled and therefore the door is no longer part of the fire rated assembly between the living space and garage. Resetting the self closing hinge spring is recommended.

## ELECTRICAL SYSTEM

### 7.8 SERVICE PANEL

Screws that secure the panel cover to the panel box are missing. This is a potential hazard. Missing screws should be replaced with the original style blunt end screws.



### 7.10 WIRING

Loose electrical cables were observed in the attic. Loose cables are vulnerable to damage. All loose cables should be secured at 4' intervals using approved cable staples.



#### **7.11 RECEPTACLES**

The polarity is reversed in receptacles in the family room. Reversed polarity means that the hot and neutral wires are reversed at the back of the receptacle. This defect is a shock hazard and can damage some electronic equipment. All receptacles exhibiting reversed polarity should be rewired.

There are several loose receptacles throughout the home. This is a potential shock and a fire hazard. All loose receptacles should be repaired as necessary.

#### **7.12 GFCI RECEPTACLES**

The installation of additional GFCI protection in the garage receptacles is recommended.

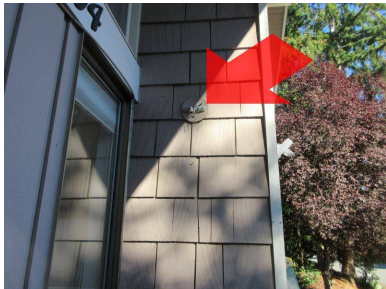
The GFCI receptacle in the lower bathroom does not trip when a ground fault is introduced. This is caused by an improperly wired or defective GFCI. Repair or replacement of this GFCI is recommended.

The installation of just one GFCI outlet for protection of each circuit is recommended.

#### **7.14 LUMINARIES**

There are several luminaries that are not working. Testing the luminaries with a voltage tester revealed that there is current to the luminaries. Light bulbs should be replaced in non-functional luminaries and then they should be tested for proper operation.

The exterior luminaire at the front porch is missing. A luminaire should be installed to provide proper lighting in this area.



### **AIR CONDITIONER/ HEAT PUMP**

#### **9.2 CONDENSER**

The pad supporting the outdoor condensing unit has settled, leaving it out of level. The connections can be stressed and accelerated wear of the bearings and other components may occur. The unit should be re-leveled.

### **WATER HEATER**

#### **10.12 ELEVATION ABOVE GARAGE FLOOR**

The water heater is not elevated above the garage floor in accordance with industry standards. This is a hazard. Elevating the water heater so that the burner is at least 18" above the garage floor prevents ignition of gasoline fumes.



#### 10.13 GENERAL COMMENTS

The water heater is nearing the end of its service life. The need for water heater replacement should be anticipated.

### KITCHEN

#### 11.8 AIR GAP

The dishwasher drain lacks an air gap. The dishwasher will function without one, but there is a risk of contamination of the inside of the dishwasher by waste water. The installation of an air gap is recommended or connection to the existing Johnson Tee that is installed in the kitchen wall. This air gap or Johnson Tee protects the dishwasher from contamination caused by a backflow of waste water.



The cap protruding on the exterior wall opposite the dishwasher is not drilled. This air gap protects the dishwasher from contamination caused by a backflow of waste water when in use. Drilling a 1/4" hole in the end of the cap will restore its function when connected to the dishwasher waste line.



### BATHROOMS

#### MASTER BEDROOM BATHROOM

#### 12.17 TOILET

The toilet is loose where it mounts to the floor. A loose toilet will eventually start to leak and will damage the flooring material, underlayment and subfloor. The most reliable fix for this condition is to remove the toilet and install a new wax seal. The toilet should then be securely mounted to the floor.

#### 12.19 DRAINS, TRAPS AND TRAP ARMS



The shower drain is slow. We recommend the trap be cleaned of grease, hair and/or sludge etc. and if this does not correct the problem we recommend the lines be "snaked" by a professional sewer cleaning service.

#### LOWER FLOOR HALLWAY BATHROOM

##### *12.26 BATHTUB*

The hydromassage tub pump and associated plumbing and electrical components were not accessible for inspection. Reportable conditions may exist in this normally accessible area. The installation of an access is recommended for inspection and servicing.

#### **PLUMBING SYSTEM**

##### *14.2 MAIN WATER SHUTOFF VALVE*

The location of the main water shutoff valve was not determined. You should query the seller as to the location of the valve.

When there is no shutoff valve inside the house, the water must be shutoff at the water meter. This could be inconvenient in an emergency. Consideration should be given to installing a water shutoff valve in the house.

##### *14.5 WATER PRESSURE*

The water pressure at 140 PSI is excessive. The normal range is 30-80 PSI. High water pressure can result in leaking valves, detached supply tubes, water hammer and is hard on solenoid valves. The installation of a pressure reduction valve is recommended.

##### *14.9 HOSE BIBBS AND EXTERIOR SUPPLY PIPES*

The hose bibb on the rear of the house is dripping. This is indicative of a worn valve. Replacement of the hose bibb is recommended.

#### **INTERIOR**

##### *15.3 STAIRS*

The railing ends in the stairwell does not return to the wall. This is a safety hazard. The installation of a continuous handrail should be considered as a safety upgrade.



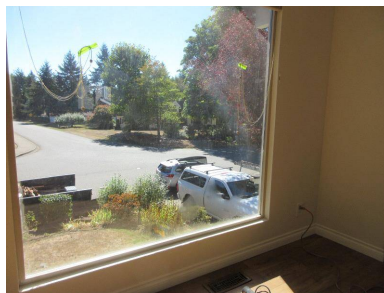
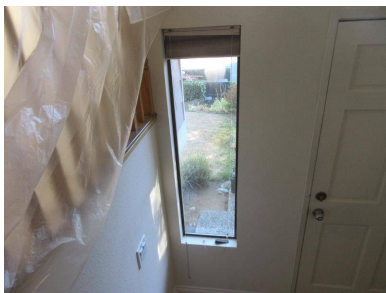
##### *15.5 WALLS AND CEILINGS*

There are notable signs of sagging at the hallway and vaulted ceiling juncture. Cracks in drywall that have been repaired and reoccur several months after the repairs have been completed are typically due to flexing of the wood framing. Installing post supports, modifying ceiling framing or applying strong ties to the framing connections would help minimize further movement.



### 15.8 WINDOWS

There is condensation or mineral deposits between the panes of glass in several of the insulated glass windows. This indicates failed seals. The glass assemblies should be replaced, which is the only method for correcting this deficiency.



### 15.9 SMOKE DETECTORS

There is a smoke detector in the hallway outside of the bedrooms. Additional smoke detectors should be installed inside the bedrooms near the door.

Smoke detectors are examined for location only. They are not tested. Smoke detector batteries should be replaced when you move in and every year thereafter. Once batteries have been replaced, the smoke detectors should be tested for proper operation.

**FOR MAXIMUM PROTECTION:** Use both Ionization and Photoelectric smoke alarms in every bedroom/hallway on every level of your home.

At least one carbon monoxide monitor should be installed for each floor. The best place to install the monitor is in an open area near the gas appliance.

## MAINTENANCE ITEMS AND/OR COMPONENTS NEARING THE END OF THEIR SERVICE LIFE

Any item that in the opinion of the inspector is nearing the end of its normal service life and/or conditions that need repair, maintenance and/or upgrades, but have not affected basic functions are listed herein.

### BUILDING SITE

#### 2.1 ROOF WATER DRAIN SYSTEM

The building lacks a roof water drain system. Roof water discharging on the ground adjacent to the foundation wall is one of the most common causes of water or moisture problems in ground floor occupancies, basements and crawlspaces. Overflowing gutters and clogged downspouts and scuppers also frequently cause or exacerbate moisture or water entry problems in crawlspaces and basements. Consideration should be given to installing a below grade drain system to divert roof water away from the foundation system. Consult with a drain systems specialist for additional information and cost estimates.

## 2.4 DRIVEWAY

The driveway has cracked and settled differentially. This was probably caused by inadequate preparation of the soil prior to the placement of the concrete. This condition can be repaired by pressure grouting the sunken portion of the driveway or by removing and replacing it. The driveway remains functional despite this condition.

Cracks were observed in the concrete surface of the driveway. Minor cracks can be sealed to minimize moisture entry and further settlement of the concrete. Minor cracks are common and do not affect the serviceability of the concrete.



## ROOF

### 4.5 GAS APPLIANCE VENTS

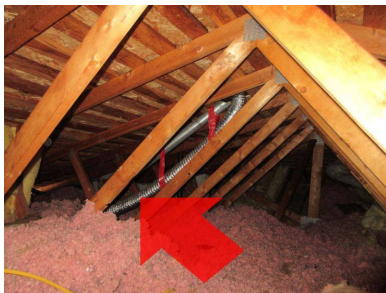
The storm collar is not sealed. This is allowing leakage to occur. Sealing the storm collar is recommended.



## ATTIC

### 5.3 MECHANICAL VENTILATION SYSTEMS

Flexible plastic duct is used to direct air from the vent fan to the exterior. This type of material is unreliable. Replacing the plastic duct with 4" smooth-wall sheet metal duct is recommended.



## AIR CONDITIONER/ HEAT PUMP

### 9.10 GENERAL COMMENTS

This type of air conditioner system should be serviced annually.

## KITCHEN

### 11.1 COUNTERTOPS

The backsplash caulking is cracked. Cracking of the caulk allows water to enter the gap and is difficult to clean. Caulking the cracks and/or gaps is recommended.

## BATHROOMS

### MASTER BEDROOM BATHROOM

#### 12.18 SINK

The sink does not have an overflow. Caution when filling the sink is advised to prevent flooding.

### LOWER FLOOR HALLWAY BATHROOM

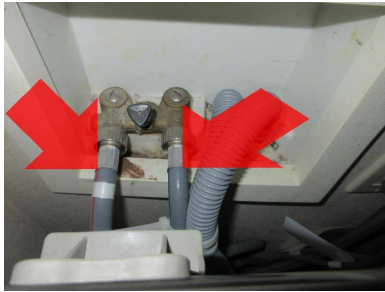
#### 12.30 SINK

The sink does not have an overflow. Caution when filling the sink is advised to prevent flooding.

## LAUNDRY ROOM

### 13.1 APPLIANCES

High pressure (steel braided) washer line connections is recommended.



## INTERIOR

### 15.6 DOORS

Doors equipped with hinge mounted door stops can damage the door skin, tear out hinge screws, and damage the door trim and frame. The removal and replacement with wall or floor mounted door stops is recommended.

### 15.7 CLOSET DOORS

Closet doors are missing in the hallway.



## INSULATION

### 18.1 ATTIC INSULATION

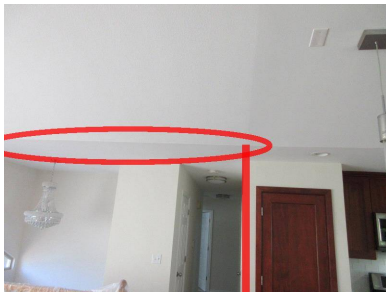
There is a large thermal bypass in the attic over the kitchen/dining and living areas. A thermal bypass is an opening between an insulated and uninsulated part of the house through which heated air can escape. As air is heated, it rises and pulls cool air in to the space to replace it. This condition will result in significant heat loss. Sealing up all thermal bypass routes is recommended.



## STRUCTURE

### 19.8 CEILING

There are notable signs of sagging at the hallway and vaulted ceiling juncture. Installing post supports, modifying ceiling framing or applying strong ties to the framing connections would help minimize further movement.



Several of these items will likely require further evaluation and repair by licensed tradespeople. Other minor items are also noted in the report and could be mentioned but none of them affect the habitability of the house.

Thank you for selecting our firm to do your home inspection. If you have any questions regarding the inspection report or the home, please feel free to call us.

Sincerely,

Terry Clark  
206-660-9200  
Clark Inspections Inc.

# **Confidential Inspection Report**

**17804 NE 136th St.  
Redmond, WA 98052**

**September 21, 2021**

**Prepared for: Ashok & Karishma Chowdhry**

<p><b>This report is the exclusive property of the inspection company and the client whose name appears herewith and its use by any unauthorized persons is prohibited.</b></p>
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9/23/2021

**Mr. & Mrs. Ashok & Karishma Chowdhry  
17804 NE 136th St.  
Redmond,WA**

Dear Ashok & Karishma,

Thank you for inviting Clark Inspections to inspect for you. We appreciate having the opportunity to perform this home inspection and are happy to help with all of your inspection needs. Enclosed is our report for the property located at;

**17804 NE 136th St.**

We have inspected the major structural components, plumbing, heating, and electrical systems for signs of significant non-performance, excessive or unusual wear and general state of repair.

This inspection report is designed to be easy to understand. Please take time to review it carefully. If you have any questions regarding this inspection, or receive information from another building inspection professional, contractor, or tradesperson, that is in conflict with this report, or any major defect in your home or building that was not described in your verbal or written reports, please call our office immediately. We are happy to answer any questions you may have.

Thank you for the opportunity to be of service.

Sincerely,

Terry Clark

Clark Inspections



## GENERAL INFORMATION

### CLIENT & SITE INFORMATION:

#### 1.1 DATE OF INSPECTION:

9/21/2021.

#### 1.2 INSPECTOR'S NAME:

Terry Clark.

#### 1.3 CLIENT NAME:

Mr. & Mrs. Ashok & Karishma Chowdhry.

#### 1.4 MAILING ADDRESS:

17804 NE 136th St.  
Redmond WA.

#### 1.5 CLIENT E-MAIL ADDRESS

ashok.chowdhry@gmail.com; [karishmasingh79@gmail.com](mailto:karishmasingh79@gmail.com).

#### 1.6 ADDRESS OF PROPERTY INSPECTED

17804 NE 136th St.  
Redmond WA.



South elevation



Northwest elevation

### CLIMATIC CONDITIONS:

#### 1.7 WEATHER:

Partly Cloudy.

#### 1.8 APPROXIMATE OUTSIDE TEMPERATURE:

70 degrees.

**BUILDING CHARACTERISTICS:****1.9 MAIN ENTRY FACES:**

South.

**1.10 ESTIMATED AGE OF BUILDING:**

The building is approximately 39 years old.

**1.11 BUILDING TYPE:**

Two story single family residence.

**1.12 SPACE BELOW GRADE:**

Slab on grade, Ground floor living area & Garage.

**SCOPE, PURPOSE AND LIMITATIONS****1.13 RESIDENTIAL**

The purpose of this inspection was to discover and evaluate major defects, deficiencies and deferred maintenance found in the main components of the house and in the building site immediately around the building inspected. A major defect or deficiency is a system or component that in the judgment of the inspector, would cost in excess of \$500.00 to repair or replace, is not performing it's intended function, or adversely affects the habitability of the dwelling or building. Defects are examined and a determination is made on how a particular defect will affect interrelated building parts and whether immediate repairs are required.

The major components in this report are categorized. General information is given on the type of materials and construction methods. Specific information is given pertaining to the condition of a component and applicable repair and maintenance work that may be required.

Since all buildings have defects, it is important to know and understand what they are and how they affect the house and property. Some of the defects mentioned in this report may be quite typical, and found in other homes of comparable age and price. Some, however, may not. We make our best attempt to distinguish this for you in both the verbal and written reports.

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Mechanical equipment is inspected for operability only and may contain undisclosed defects which may significantly impair it's usefulness.

Statements, representations, or conclusions offered by the inspector and/or by Clark Inspections are based solely upon a

visual examination of the exposed areas of the structure inspected. Areas of the structure which are not exposed to the naked eye cannot be inspected, and no conclusions, representations, or statements offered by the inspector are intended to relate to areas not exposed to view. Hidden defects could have a significant impact on the visually based conclusions, statements, and representations made by the inspector.

Statements, representations, or conclusions offered by the inspector are the considered opinion of the inspector, but these statements, representations, or conclusions do not constitute an expressed or implied warranty of any kind. Neither the inspector nor Clark Inspections shall be liable for any direct, special, incidental, or consequential damages under any circumstances whatsoever, whether arising in tort, negligence, or contract, nor for any loss, claim, expense, or damage caused by or arising out of his or its inspection of a structure, nor will the inspector or Clark Inspections indemnify or hold others harmless for any loss, claim, expense, or damage arising out of his or its inspection of a structure.

If you receive information from another building inspection professional, contractor or trades person that is in conflict with ours, or if you discover a major defect in your home or building that was not described in your verbal or written reports, please call us immediately.

#### **GENERAL COMMENTS**

#### **1.14 RECOMMENDATIONS**

Certain building designs and/or building site topography may not qualify for earthquake insurance. Each company has its own underwriting policies. You should check with your insurance agent to determine whether or not your insurance company will write an earthquake policy on this property.

There may be information pertinent to this property which is a matter of public record. A search of public records is not within the scope of this inspection. We recommend you review all applicable public records that pertain to this property.

We make no representations as to the extent of presence of code violations, nor do we warrant the legal use of this building. This information can be obtained from the local building and/or zoning department.

#### **1.15 BUILDING CODES**

A code is a system of rules and procedures, the purpose of which is to provide minimum standards to safeguard life, health, and property by regulating certain aspects of building design, construction, use and maintenance. Local codes are usually based on model codes. A community may amend or adopt only parts of a model code. These local codes may not always be the latest version of the model code. Code enforcement is nearly always a local government responsibility and is handled in several ways depending on the type of code and community involved. All model codes and most local codes, grant the code compliance inspector or building official the right to interpret the code to suit special situations. This makes the building official the final authority, not the code book.

Answering the question "Does this meet code?" depends on the building's age, when remodels and upgrades were performed and which codes if any are enforced. This information may not be readily available to the home inspector. Private inspectors usually can determine if an item complies with applicable national model codes, if they know when the work was done and what code was applicable at that time. Local municipalities adopt and enforce national model codes at their discretion. Private building inspectors are typically not permitted to perform code compliance inspections. Code compliance inspections are typically performed by the local code enforcement official. Private building inspectors check to determine whether or not an item performs its intended function or is in need of repair.

Code enforcement usually is a local question and subject to the interpretation by the building code enforcement official. Most communities do not require an existing building to meet "code" prior to sale.

Specific code questions can be referred to the local building official. however, you must realize that if city inspectors check a building, they have the authority to require corrections of any violation. Private building inspectors act solely in an advisory capacity. Their objective reports are a tremendous benefit to anyone purchasing or selling real estate.

## BUILDING SITE

The evaluation of the building site and grounds includes grading, roof water and surface drainage systems, fencing, gates, walkways, curbs, driveways, patios, and retaining walls connected to or directly adjacent the structure. These items are visually examined for proper function, excessive or unusual wear and general state of repair. Components or portions of components may not be visible because of soil, vegetation, storage of personal effects and/or the nature of construction. In such cases these items are considered inaccessible and are not inspected. Lawn irrigation systems, fountains, and low voltage decorative garden lights are not included in this inspection.

*The following components were inspected:*

### 2.1 ROOF WATER DRAIN SYSTEM

The building lacks a roof water drain system. Roof water discharging on the ground adjacent to the foundation wall is one of the most common causes of water or moisture problems in ground floor occupancies, basements and crawlspaces. Overflowing gutters and clogged downspouts and scuppers also frequently cause or exacerbate moisture or water entry problems in crawlspaces and basements. Consideration should be given to installing a below grade drain system to divert roof water away from the foundation system. Consult with a drain systems specialist for additional information and cost estimates.

### 2.2 GRADING

The building site is well drained. The finish grade slopes away from the house. No evidence of recent building site flooding, drainage or soil stability problems was observed.

### 2.3 VEGETATION

Dense shrubbery and trees planted too close to the building can damage siding and the roof overhang and interfere with drainage and air movement, thus promoting fungus growth and accelerated deterioration of exterior finishes and wood. Trees and shrubs in contact with the building also provide carpenter ants with a route into walls or attics. Trees and shrubs should be trimmed back, where required. When landscaping, trees and shrubs should be planted back away from the building so that they have room to grow.

### 2.4 DRIVEWAY

The driveway has cracked and settled differentially. This was probably caused by inadequate preparation of the soil prior to the placement of the concrete. This condition can be repaired by pressure grouting the sunken portion of the driveway or by removing and replacing it. The driveway remains functional despite this condition.

Cracks were observed in the concrete surface of the driveway. Minor cracks can be sealed to minimize moisture entry and further settlement of the concrete. Minor cracks are common and do not affect the serviceability of the concrete.

One or more of the wooden dividers separating the concrete driveway sections were infested by wood destroying organisms and have deteriorated to a point where they are becoming a trip hazard. Replacement with mortar is recommended.



### 2.5 PATIO

The patio has settled differentially. This was probably caused by inadequate preparation of the soil prior to the placement of the concrete sections. This condition can be repaired by pressure grouting the sunken sections of the patio or by removing and replacing them. The patio remains functional despite this condition. However, the raised edges of the concrete can be a trip hazard for some people. Repairs should be made as necessary. Minor cracks can be sealed to minimize moisture entry and further settlement of the concrete sections.



## 2.6 WALKWAY

There are minor cracks in the walkway, however, they do not affect its functionality and it remains in serviceable condition.

Many legal and public works departments have defined a trip hazard as an irregularity in a walking surface exceeding one inch (1") in height. All walking surfaces should maintain, free of a vertical surface change of 3/4" or more, in the interest of public and personal safety.

## 2.7 FENCES AND GATES

The fences are properly installed and are performing their intended function. The gates are properly installed and are performing their intended function.

# BUILDING EXTERIOR

The evaluation of the building exterior includes the paint, stain, siding, windows, doors, flashing, trim, fascia, eaves, soffits, decks, porches, balconies and railings. These items are visually examined for proper function, excessive or unusual wear and general state of repair. Components or portions of components may not be visible because of soil, vegetation, storage of personal effects and/or the nature of construction. In such cases these items are considered inaccessible and are not inspected.

*The following components were inspected:*

## 3.1 PRIMARY EXTERIOR WALL CLADDING

Cedar lap siding is used as an exterior wall cladding. Cedar is a wood that is durable and moderately resistant to decay. Maintaining the finish on the exposed siding will maximize its service life. The existing siding has been properly installed and is functioning as intended. New siding installation was in progress for the south elevation of the house at the time of the inspection.

## 3.2 SECONDARY EXTERIOR WALL CLADDING

Cedar channel siding is also used as an exterior wall cladding. Cedar is a wood that is durable and moderately resistant to decay. Maintaining the finish on the exposed siding will maximize its service life. The siding shows minor wear and deterioration typically caused when the exterior finish is not maintained. The deterioration is cosmetic and does not affect the function of the siding. No action is indicated.

## 3.3 PEST CONTROL

Good building practice requires that foundation walls or pier footings supporting wood frame construction, extend at least 8" above the finish grade with at least a 6" clearance between the top of the soil and the bottom of the wood finish materials. Soil in direct contact with wood creates a hospitable environment for wood destroying organisms. These minimum standards should be maintained throughout the building exterior.

## 3.4 SOFFITS AND OVERHANGS

The building has adequate overhangs. Overhangs protect the exterior walls, windows, doors, siding and exterior finish from the ravages of direct rain fall. Buildings with adequately sized overhangs will generally require less frequent exterior maintenance and are less likely to suffer from moisture related problems on the exterior walls.

## 3.5 GUTTERS AND DOWNSPOUTS

Roof runoff is collected and channeled into the downspouts by aluminum gutters fastened to the rafter tails. The gutters and downspouts are properly installed and are performing their intended function. Gutters should be cleaned regularly to prevent

clogging and overflow. The downspouts are properly installed and are functioning as intended.

### **3.6 PAINT**

The exterior paint and caulking is in good condition and is functioning as intended. Paint protects the wood from cupping, checking, warping and rot.

### **3.7 DECK**

The deck is constructed from a combination of pressure treated fir and cedar. The deck is well constructed and is performing its intended function. Untreated wood (fir or cedar) will eventually rot. Annual treatments of the deck with a good quality wood preservative/water repellent will prevent cupping, checking and rotting of the wood and will maximize its service life. Do not use paint on exposed deck surfaces as it will peel and become difficult to maintain. Paint also traps moisture in the wood and will accelerate deterioration.

### **3.8 DECK RAILINGS**

The deck railings are well constructed and are performing their intended function.

### **3.9 STAIRS**

The deck stairs are properly constructed and are performing their intended function.

### **3.10 PORCH**

The front porch is in good condition.

### **3.11 EXTERIOR DOORS**

The exterior doors are properly installed and are functioning as intended.

## **ROOF**

We evaluate the condition of the roof system by inspecting the roofing material, skylights, flashings, penetrations and roof water drainage system for damage and deterioration. If we observe conditions such as damage, deterioration, defects in materials or workmanship, these items will be noted in your report. We may also offer opinions concerning repair and replacement. Opinions stated herein concerning the condition of the roof and roof service life are based on the condition of the roof system at the time of the inspection. These opinions do not constitute a warranty that the roof is, or will remain, free of leaks. All roof systems require annual maintenance and occasional repair. Failure to perform routine roof maintenance will usually result in leaks and accelerated deterioration of the roofing material. Our estimate of the life expectancy of the roof is based on the assumption that the roof will be properly repaired and maintained during that period.

*The following components were inspected:*

### **4.1 GENERAL INFORMATION**

The roofing material is asphalt composition shingles. The slope or pitch of the roof is medium. Metal gutters are used to collect the roof water drainage. The roofing material was just recently installed. Installation of new roofing for the lower south elevation of the roof was in progress at the time of the inspection.

### **4.2 INSPECTION METHOD**

The inspection of this roof was conducted from the roof surface. The inspector walked on the roof and made a visual inspection of the components listed below.

### **4.3 SKYLIGHTS**

The skylight is properly installed and there was no evidence of leakage underneath.

### **4.4 CHIMNEYS**

The visible portion of the metal, factory-built chimney is properly installed and in good condition.

### **4.5 GAS APPLIANCE VENTS**

The visible portion of the gas appliance type B vent is properly installed and in serviceable condition.

The storm collar is not sealed. This is allowing leakage to occur. Sealing the storm collar is recommended.



#### 4.6 FLASHINGS

Metal flashings are used to seal around chimneys, vents and roof to wall intersections. The flashings are properly installed and are performing their intended function.

#### 4.7 GENERAL COMMENTS

The roofing material was properly installed and is in like new condition. With proper care and maintenance this roof should remain serviceable for up to 25 more years.

### ATTIC

The attic contains the roof framing and serves as a raceway for components of the plumbing, electrical and mechanical systems. There are often heating ducts, bathroom vent ducts, electrical wiring, chimneys and gas appliance vents in the attic. We examine the visible portions of the various systems and components for proper function, excessive or unusual wear, general state of repair, roof leakage, attic venting and misguided improvements. When low clearance and/or deep insulation prohibit walking in an unfinished attic, inspection will be performed from the access opening only.

*The following components were inspected:*

#### 5.1 ACCESS

The attic access is located in the hallway.

#### 5.2 VENTILATION

The attic is adequately vented.

#### 5.3 MECHANICAL VENTILATION SYSTEMS

Flexible plastic duct is used to direct air from the vent fan to the exterior. This type of material is unreliable. Replacing the plastic duct with 4" smooth-wall sheet metal duct is recommended.



#### 5.4 PEST CONTROL

The first step in preventing rodents from entering the attic is to seal all possible entry points using wire mesh, caulking, wood, stainless steel wool, or aerosol foam. Careful work sealing cracks, holes and gaps over 1/4" in size will discourage activity.



## GARAGE

The garage often contains major components of the plumbing, heating and electrical systems. These components are discussed under their respective headings. Components that were tested and/or inspected in the garage and reported here include the garage floor, overhead door(s), automatic openers and fire resistive barriers.

*ATTACHED GARAGE - The following components were inspected:*

### 6.1 GARAGE FLOOR

There are small shrinkage cracks visible in the concrete, however, there is no vertical displacement of any portion of the slab. Shrinkage cracks are common in garage floors and are not considered a structural defect. The garage floor is properly installed and is functioning as intended.

### 6.2 OVERHEAD GARAGE DOORS

The garage is fitted with a pair of roll-up doors. The garage doors are properly installed and are performing their intended function.

Safeties are cables run through the center of the garage door springs that prevent broken springs from becoming projectiles that can cause injury. There are no safeties installed. The installation of safeties is recommended.



### 6.3 GARAGE DOOR OPENER

The garage door openers were tested and were functional. The auto stop reverse safety switches were functioning as intended.

The Photo-eye beam was installed too high above the floor of the garage to adequately offer protection for small children and/or pets. We recommend that the photo-eye be lowered to within 4-6" of the floor.



### 6.4 FIRE SEPARATION

There are voids in the fire resistive barrier between the living space and garage that will allow flames to penetrate. The gypsum barrier slows the spread of a fire from the garage to the structure and/or living space. Patching the voids with a fire retardant caulk is recommended.





### 6.5 PASSAGE DOOR

The self closing hinge has been disabled and therefore the door is no longer part of the fire rated assembly between the living space and garage. Resetting the self closing hinge spring is recommended.

### 6.6 RECEPTACLES

There are unprotected receptacles in the garage. The installation of GFCI protection for all of the garage receptacles is recommended.

## ELECTRICAL SYSTEM

An electrical system consists of the service, distribution, wiring and convenience outlets (switches, lights and receptacles). Our examination of the electrical system includes the exposed and accessible wiring, service panels, subpanels, overcurrent protection devices, light fixtures and all accessible wall receptacles. We look for adverse conditions such as improper installation of aluminum wiring, lack of grounding, overfusing, exposed wiring, open-air wire splices, reversed polarity and defective GFCIs. The hidden nature of the electrical wiring prevents inspection of every length of wire. Telephone, video, audio, security system and other low voltage wiring is not included in this inspection. We recommend you have the seller demonstrate the serviceability of these systems to you.

*The following components were inspected:*

### 7.1 ELECTRICAL SYSTEM SPECIFICATIONS

The voltage is 120/240 single phase three wire service. The power is delivered to this building via an underground service lateral. The amperage rating of this service is 200. Copper wire is used throughout the building. Non-metallic sheathed cable (Romex) is the type of wiring used throughout the house. The grounding of the service is provided by two driven rods.

### 7.2 UNDERGROUND SERVICE LATERAL

The underground service lateral was not visible for inspection. However, there was 120/240 volt power to the building which suggests that it is functioning as intended.

### 7.3 SERVICE PANEL LOCATION

The service panel is located in the garage.

### 7.4 MAIN DISCONNECT LOCATION

The main disconnect is an integral part of the service panel. The ampacity of the main disconnect is 200 amps.

### 7.5 SERVICE ENTRANCE CONDUCTORS/CABLES/RACEWAYS

The service entrance conductors are 4/0 aluminum and have an ampacity of 200 amps. The service entrance conductors are properly installed and in serviceable condition.

### 7.6 SERVICE AMPACITY

The capacity of the electrical service is 200 amps. A 200 amp service is adequate for this house with the existing electrical equipment. There is also room to add additional circuits if necessary.

### 7.7 SERVICE GROUNDING AND BONDING

The service grounding electrode conductor attachment point was not visible for inspection. The adequacy of the service ground was not determined. The evaluation of this connection may require removal of finish materials and is beyond the scope of this inspection.

### 7.8 SERVICE PANEL

The electrical service panel is properly installed and in serviceable condition except where noted below.

Screws that secure the panel cover to the panel box are missing. This is a potential hazard. Missing screws should be replaced with the original style blunt end screws.

The circuits are labeled. The accuracy of the labeling was not verified. Do not assume the labeled circuit is off unless it has been checked with a voltage tester.



### 7.9 OVER CURRENT PROTECTION

Circuit breakers are used for over current protection. The circuit breakers are properly installed and the ampacity of the connected wires is compatible with that of the circuit breakers. The circuit breakers were not tested.

### 7.10 WIRING

The visible portions of the wiring are properly installed except where noted below.

Loose electrical cables were observed in the attic. Loose cables are vulnerable to damage. All loose cables should be secured at 4' intervals using approved cable staples.



### 7.11 RECEPTACLES

All of the readily accessible receptacles were tested. Testing revealed defects requiring repair. These defects are outlined below.

The polarity is reversed in receptacles in the family room. Reversed polarity means that the hot and neutral wires are reversed at the back of the receptacle. This defect is a shock hazard and can damage some electronic equipment. All receptacles exhibiting reversed polarity should be rewired.

There are several loose receptacles throughout the home. This is a potential shock and a fire hazard. All loose receptacles should be repaired as necessary.

### 7.12 GFCI RECEPTACLES

A ground fault circuit interrupter (GFCI) is a device that detects ground faults (current leakage to ground). It protects you from electrocution. GFCI protection is required for receptacles in bathrooms, kitchens, garages, unfinished basements, crawlspaces and at exterior receptacles.

The installation of additional GFCI protection in the garage receptacles is recommended.

The GFCI receptacle in the lower bathroom does not trip when a ground fault is introduced. This is caused by an improperly wired or defective GFCI. Repair or replacement of this GFCI is recommended.

The installation of just one GFCI outlet for protection of each circuit is recommended.

### 7.13 AFCI RECEPTACLES

AFCI protection is required for all 15 and 20 amp branch circuits to have protection from the entire branch circuit when that circuit has outlets in dwelling family homes, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas.

Replacement receptacles are now required to be arc-fault circuit interrupter (AFCI) protected. This means that if you are replacing an old outlet in an old home in a location that needs AFCI protection in a new home, the replacement outlet needs to be AFCI protected.

### 7.14 LUMINARIES

All of the accessible luminaries were tested and were found to be functional except where noted below.

There are several luminaries that are not working. Testing the luminaries with a voltage tester revealed that there is current to the luminaries. Light bulbs should be replaced in non-functional luminaries and then they should be tested for proper operation.

The exterior luminarie at the front porch is missing. A luminarie should be installed to provide proper lighting in this area.



### 7.15 SWITCHES

All of the accessible switches were tested and were found to be properly wired and functional.

### 7.16 CEILING FAN

Ceiling fans can fall from the ceiling if not properly installed. Verifying proper installation requires removal of the ceiling fan which is beyond the scope of this inspection. The fan should be installed on a special electrical box that is approved for use with a ceiling fan. The box should be securely fastened to the framing. The ceiling fans were tested and were functioning as intended.

## HEATING SYSTEM

A natural gas, propane or oil fired furnace or boiler consists of the self contained furnace or boiler, ducts or pipes for heated air or water distribution, thermostats for regulating the amount of heat and a vent system for removing the combustion gases from the building. The readily accessible portions of these items are examined for defects and are tested using normal operator controls. Most heating systems should be serviced annually by a qualified service technician. Failure to perform regular maintenance will affect the reliability of the heating system and will reduce service life.

*FORCED AIR HEATING SYSTEM - The following components were inspected:*

### 8.1 GENERAL INFORMATION

Heat is provided by a natural gas fired forced air furnace. The furnace is located in the garage. The furnace is approximately 17 years old. The input rating of the furnace is 66,000 BTU. This BTU rating is typical of a home of this size and age.

**8.2 GAS PIPING**

The gas pipe is properly installed and is performing its intended function.

**8.3 AUTOMATIC GAS VALVE**

The automatic gas valve or safety valve is designed to prevent the emission of fuel into the furnace if it does not detect heat for ignition. These valves are generally very reliable. The automatic gas valve was not tested.

**8.4 IGNITION**

The furnace uses an electronic hot surface ignition. This component was functioning as intended.

**8.5 BURNERS**

The gas burners are properly installed and are functioning as intended.

**8.6 COMBUSTION AIR**

The combustion air provides the oxygen for the fuel burning appliances. Combustion air also aids in the movement of combustion gases up the flue. Adequate ventilation around all fuel burning appliances is vital for their safe operation. The air can come from inside the house or from outside providing that the amount of air reaching the appliance is sufficient to maintain efficient combustion and draft. The combustion air supply is adequate.

**8.7 ELEVATION ABOVE GARAGE FLOOR**

The burners in the furnace are elevated at least 18" above the garage floor in accordance with industry standards. This elevation prevents ignition of gasoline fumes that might leak from cars, lawn mowers, gas cans, etc.

**8.8 HEAT EXCHANGER**

The heat exchanger is not visible without disassembling and removing it from the furnace. Cracks typically develop in heat exchangers after 10-20 years. Have your gas furnace technician check the heat exchanger during the next major service.

**8.9 DRAFT INDUCER**

The draft inducer pulls the combustion gases through the heat exchanger and pushes them up the vent connector into the flue. The draft inducer was functioning as intended.

**8.10 VENT**

The furnace uses a type B vent from the top of the furnace to the exterior. The visible portion of the B vent is properly installed and is functioning as intended.

**8.11 BLOWER**

The blower draws air from the return air ducts and pushes it over the heat exchanger where it is heated. The air is then pushed through the distribution ducts into the rooms. The blower was tested and was functioning as intended.

**8.12 AIR FILTER**

The air filter is located behind the return air grille in the hallway. The air filter should be cleaned or replaced at least 2-3 times during the heating season.

**8.13 DUCTS**

The ducts are constructed out of sheet metal. The ducts are properly installed and are performing their intended function. The ductwork was inaccessible and was not inspected except to determine that air flow was adequate at the accessible registers.

**8.14 THERMOSTAT**

The thermostat is properly installed and the unit responded to the basic controls. This is a programmable device with options for automatic temperature settings (up and down). Testing the automatic operations of this thermostat is beyond the scope of this inspection.

**8.15 GENERAL COMMENTS**

The furnace responded to the thermostats call for heat and all major components were functional. This type of furnace should be serviced annually.

## AIR CONDITIONER/ HEAT PUMP

Heat pump and air conditioning systems consist of the condenser located outside, the air handler or furnace on the inside, refrigerant lines, ducts, air filters, thermostat, condensate drains and condensate pump. These items are visually examined for proper function, excessive or unusual wear, and general state of repair. The heat pump or air conditioner is tested whenever possible. Air conditioning systems are not tested if the outside temperature is too cool for proper operation. Detailed testing of the many components of the heat pump or air conditioning equipment or predicting their life expectancy requires special equipment and training and is beyond the scope of this inspection.

Heat pumps are air conditioners designed to operate "in either direction". When heating, air is cooled and exhausted to the outside, while the "waste" heat is distributed through the living space by a blower and ducts. Heat pumps operate most efficiently in moderate to hot climates where winter temperatures are not extreme and where there is a need for air conditioning. Additional electric strip heaters are generally installed when winter capability is marginal. The cost of operating the supplemental strip heaters is significantly higher than operating the heat pump in its regular mode. Limiting changes of the temperature setting on the thermostat to two degrees will usually prevent the strip heater from coming on. Insulation, weather stripping and other energy saving steps can help minimize the need for the back-up capability.

Heat pumps and air conditioners are technically complex pieces of equipment. Detailed analysis of all components of the system is beyond the scope of this inspection. For greatest efficiency and service life, we recommend regular annual maintenance by an HVAC contractor.

*The following components were inspected.:*

### 9.1 GENERAL INFORMATION

Unit Type - Heat Pump, Age - The heat pump is approximately 3 years old, Location of condenser - The condenser is located on the west side of the house.

### 9.2 CONDENSER

The condenser contains all the equipment necessary to reclaim the refrigerant gas and convert it back to a liquid. It consists of a compressor, condenser, hot gas discharge line, condenser fan, electrical panel box, and some accessory components. The condenser was tested and was functioning as intended.

The pad supporting the outdoor condensing unit has settled, leaving it out of level. The connections can be stressed and accelerated wear of the bearings and other components may occur. The unit should be re-leveled.

The air conditioner condenser contains many different parts and pieces. Many of these pieces are quite heavy and a condenser can weigh several hundred pounds. The weight of the unit is mostly caused by the copper coil that runs along one or several sides of the AC unit. Copper is quite dense and weighs about 559 pounds per square foot. While only a fraction of this amount of copper is held inside the condenser, a little bit of the metal can add up to a lot of weight. This weight causes the side of the unit where the condenser coil is located to be heavy. If the unit is not level, then this uneven weight can cause the unit to sink into the ground. The unit can then tip or rip free from the coolant line that feeds into your home.

Also, if the condenser is not level, then the air conditioner will not work correctly. Specifically, the pump may not work the way it is supposed to. The condenser pump contains some oil that travels with the cooling fluid and then redeposits itself back into the pump. This helps to keep the device well lubricated. Sometimes the oil can separate from the coolant and pool in one area of the condenser. For example, a good deal of the oil can end up in the condenser coil. This is the case if the unit were tipped towards the coil. When this happens, the pump no longer has the lubrication it needs. The result is a pump that can wear out more quickly and also overheat.

One of the only ways to make sure that the condenser oil stays moves smoothly and mostly deposits in the compressor is to keep the unit upright and level.

### 9.3 REFRIGERANT LINES

The accessible refrigerant lines appear to be in good condition.

### 9.4 CONDENSATE PUMP-DRAIN

Air conditioners produce condensate water inside the furnace that must be collected and disposed of. A small vessel with an

automatic pump is installed to receive the condensate water and pump it out to the exterior of the house. This pump is properly installed and is functioning as intended.

#### **9.5 BLOWER**

The blower draws air from the return air ducts and pushes it over the AC coils where it is cooled. The air is then pushed through the distribution ducts into the rooms. The blower was tested and was functioning as intended.

#### **9.6 AIR FILTER**

The air filter(s) is located behind the return air grille(s) in the stairwell. The air filter(s) should be cleaned or replaced at least 2-3 times during the heating season.

#### **9.7 DUCTS**

The ducts are constructed from sheet metal and flex duct. The ducts are properly installed and are performing their intended function.

#### **9.8 THERMOSTAT**

The thermostat is properly installed and the unit responded to the basic controls. This is a programmable device with options for automatic temperature settings (up and down). Testing the automatic operations of this thermostat is beyond the scope of this inspection.

#### **9.9 ELECTRICAL DISCONNECT**

An electrical disconnect is installed in back of the condenser.

#### **9.10 GENERAL COMMENTS**

Testing of the heat pump in the cooling mode revealed an air temperature differential of approximately 18-20 degrees. This is in the normal range and suggests that the heat pump is functioning as intended. The heat pump was also tested in the heating mode and functioned as intended. This test confirms that the reversing valve is functional. This type of air conditioner system should be serviced annually.

## **WATER HEATER**

Our review of water heaters includes the tank, gas and/or water connections, electrical connections, venting and safety valves. These items are examined for proper function, excessive or unusual wear, leakage and general state of repair. The hidden nature of piping and venting prevents inspection of every pipe, joint, vent and connection.

*The following components were inspected:*

#### **10.1 LOCATION OF UNIT**

The water heater is located in the garage.

#### **10.2 GENERAL INFORMATION**

The water heater fuel is natural gas. The capacity of the water heater is 75 gallons. The input rating of the burner is approximately 75,000 BTU. The water heater is approximately 18 years old. Water heaters of this type typically last about 10-15 years.

#### **10.3 PRESSURE RELIEF VALVE**

The pressure relief valve is properly installed. The valve was not tested, as this could cause the valve to leak.

#### **10.4 SHUTOFF VALVE**

The shutoff valve for the water supply to the water heater is properly installed and is functioning as intended.

#### **10.5 WATER CONNECTIONS AT TANK**

The water connections at the tank are properly installed and are performing their intended function.

#### **10.6 AUTOMATIC GAS VALVE**

The automatic gas valve or safety valve is designed to prevent the emission of fuel into the appliance if it does not detect heat for ignition. These valves are generally very reliable. The automatic gas valve was functioning as intended.

**10.7 BURNER**

The gas burner is properly installed and is functioning as intended.

**10.8 GAS PIPING**

The flex connector is properly installed and is performing its intended function.

**10.9 VENT**

The water heater uses a type B vent from the top of the draft hood to the exterior. The visible portion of the B vent is properly installed and is functioning as intended.

**10.10 COMBUSTION AIR**

The combustion air provides the oxygen for the fuel burning appliances. Combustion air also aids in the movement of combustion gases up the flue. Adequate ventilation around all fuel burning appliances is vital for their safe operation. The air can come from inside the house or from outside providing that the amount of air reaching the appliance is sufficient to maintain efficient combustion and draft. The combustion air supply is adequate.

**10.11 SEISMIC RESTRAINT**

The water heater is secured to the wall. This prevents it from falling over during an earthquake and rupturing gas and water lines.

**10.12 ELEVATION ABOVE GARAGE FLOOR**

The water heater is not elevated above the garage floor in accordance with industry standards. This is a hazard. Elevating the water heater so that the burner is at least 18" above the garage floor prevents ignition of gasoline fumes.

**10.13 GENERAL COMMENTS**

The water heater is nearing the end of its service life. The need for water heater replacement should be anticipated.

## KITCHEN

The kitchen was inspected for proper function of components, active leakage, excessive or unusual wear and general state of repair. We inspect built-in appliances using normal operating controls. This includes running the dishwasher, operating the garbage disposal and microwave and checking the burners or heating elements in the stove and oven. Accuracy and/or function of clocks, timers, temperature controls and self cleaning functions on ovens is beyond the scope of our testing procedure. Refrigerators are not tested or inspected unless specifically noted.

*The following components were inspected:*

**11.1 COUNTERTOPS**

The countertops are covered with slab granite. The counter tops are properly installed and are in good condition.

The backsplash caulking is cracked. Cracking of the caulk allows water to enter the gap and is difficult to clean. Caulking the cracks and/or gaps is recommended.

**11.2 CABINETS**

The finish on the kitchen cabinets is slightly worn. The cabinets are otherwise in good condition.

**11.3 FLOORING MATERIAL**

The floor is covered with ceramic tile. The floor is properly installed and is in good condition.

**11.4 VENTILATION**

Ventilation in the kitchen is provided by a fan built into the bottom of the microwave oven over the stove. The vent is ducted to the exterior. The vent fan is properly installed and is performing its intended function.

**11.5 SINK FAUCET**

The sink faucet is properly installed and is in good condition.

**11.6 SINK**

The kitchen sink is properly installed and is in good condition.

**11.7 DRAINS, TRAPS AND TRAP ARMS**

The sink drain is properly installed and is performing its intended function.

**11.8 AIR GAP**

The dishwasher drain lacks an air gap. The dishwasher will function without one, but there is a risk of contamination of the inside of the dishwasher by waste water. The installation of an air gap or connection to the existing Johnson Tee that is installed in the kitchen wall. This air gap or Johnson Tee protects the dishwasher from contamination caused by a backflow of waste water.

The cap protruding on the exterior wall opposite the dishwasher is not drilled. This air gap protects the dishwasher from contamination caused by a backflow of waste water when in use. Drilling a 1/4" hole in the end of the cap will restore its function when connected to the dishwasher waste line.

**11.9 OVEN**

The gas oven is functional. Gas ovens produce carbon monoxide when turned on. Always run the exhaust fan when baking or broiling.

**11.10 MICROWAVE**

The microwave oven was tested and was functioning as intended.

**11.11 COOKTOP**

The cooktop was tested and was functioning as intended.

**11.12 DISHWASHER**

The dishwasher was tested and was functioning as intended.

**11.13 GARBAGE DISPOSAL**

The garbage disposal was tested and was functioning as intended.

**11.14 REFRIGERATOR**

The refrigerator is functioning as intended.



## BATHROOMS

Our inspection of the bathrooms consists of testing of the plumbing fixtures for condition and function. Defects such as leaks, cracked or damaged sinks, tubs and toilets will be listed under the heading of the bathroom in which they were found. The bathroom floor, tub and shower walls are examined for water damage. Ventilation fans are tested for proper operation. Cabinets and countertops are examined for excessive wear and deterioration. Hydromassage tubs are tested and the pump and related equipment are examined when accessible.

### *BATHROOM*

#### **12.1 LOCATION**

Hallway.

#### **12.2 BATHTUB**

The bathtub is properly installed and is in good condition.

#### **12.3 TUB WALLS**

The tub walls are properly installed and are in good condition.

#### **12.4 FLOORING MATERIAL**

Manufactured flooring is used in the bathroom. This is a durable vinyl product. The flooring has been properly installed and is in good condition.

#### **12.5 TOILET**

The toilet was flushed and was functioning as intended.

#### **12.6 SINK**

The bathroom sink is properly installed and is in good condition.

#### **12.7 DRAINS, TRAPS AND TRAP ARMS**

The sink drain is properly installed and is performing its intended function.

#### **12.8 FAUCET FIXTURES**

The faucet fixture was tested and was functioning as intended.

#### **12.9 CABINETS**

The bathroom cabinet is properly installed and is in good condition.

#### **12.10 COUNTERTOP**

The countertop is a manufactured acrylic material. The countertop is properly installed and in good condition.

#### **12.11 VENTILATION**

Ventilation in this bathroom is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

#### **12.12 GFCI RECEPTACLES**

A ground fault circuit interrupter (GFCI) is a device that detects ground faults (current leakage to ground). It protects you from electrocution. GFCI protection is required for receptacles in bathrooms, kitchens, garages, unfinished basements, crawlspaces and at exterior receptacles. GFCI protected receptacles were found in this bathroom.

### *BATHROOM*

#### **12.13 LOCATION**

Master Bedroom.

#### **12.14 SHOWER**

The shower walls are properly installed and are in good condition. Most ceramic tile is applied directly over gypsum board rather than on a concrete board such as "Durock" or "Wonder Board". Where the tile is applied directly over the gypsum board, it is critical that the tile grout be maintained to prevent water intrusion behind the tile. Missing or cracked grout should

be repaired. Inside corners, and penetrations in the tile should be kept sealed with a high quality caulk.

The shower pan was tested by filling it with water and letting it stand for 20 minutes. There was no evidence of leakage underneath.

#### **12.15 GLASS ENCLOSURE**

The glass shower enclosure is labeled as tempered safety glass, is properly installed and in good condition.

#### **12.16 FLOORING MATERIAL**

The floor is covered with ceramic tile. The tile is properly installed and is in good condition.

#### **12.17 TOILET**

The toilet is loose where it mounts to the floor. A loose toilet will eventually start to leak and will damage the flooring material, underlayment and subfloor. The most reliable fix for this condition is to remove the toilet and install a new wax seal. The toilet should then be securely mounted to the floor.

#### **12.18 SINK**

The bathroom sink is properly installed and is in good condition.

The sink does not have an overflow. Caution when filling the sink is advised to prevent flooding.

#### **12.19 DRAINS, TRAPS AND TRAP ARMS**

The sink drain is properly installed and is performing its intended function

The shower drain is slow. We recommend the trap be cleaned of grease, hair and/or sludge etc. and if this does not correct the problem we recommend the lines be "snaked" by a professional sewer cleaning service.

#### **12.20 FAUCET FIXTURES**

The faucet fixtures were tested and were functioning as intended.

#### **12.21 CABINETS**

The bathroom cabinet is properly installed and is in good condition.

#### **12.22 COUNTERTOP**

The countertop is a manufactured acrylic material. The countertop is properly installed and in good condition.

#### **12.23 VENTILATION**

Ventilation in this bathroom is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

#### **12.24 GFCI RECEPTACLES**

GFCI protected receptacles were found in this bathroom.

The installation of just one GFCI outlet for protection of each circuit is recommended.

#### **BATHROOM**

#### **12.25 LOCATION**

Lower Floor, Hallway.

#### **12.26 BATHTUB**

The hydromassage tub was filled to the overflow. It was run for several minutes and functioned as intended.

Failure to follow proper cleaning and maintenance procedures for the hydromassage tub circulation system can result in the growth and transmission of infectious bacteria. The circulation system should be flushed regularly.

The hydromassage tub pump and associated plumbing and electrical components were not accessible for inspection. Reportable conditions may exist in this normally accessible area. The installation of an access is recommended for inspection

and servicing.

**12.27 TUB WALLS**

The tub walls are properly installed and are in good condition.

**12.28 FLOORING MATERIAL**

The floor is covered with ceramic tile. The tile is properly installed and is in good condition.

**12.29 TOILET**

The toilet was flushed and was functioning as intended.

**12.30 SINK**

The bathroom sink is properly installed and is in good condition.

The sink does not have an overflow. Caution when filling the sink is advised to prevent flooding.

**12.31 DRAINS, TRAPS AND TRAP ARMS**

The sink drain is properly installed and is performing its intended function.

**12.32 FAUCET FIXTURES**

The faucet fixtures were tested and were functioning as intended.

**12.33 CABINETS**

The bathroom cabinet is properly installed and is in good condition.

**12.34 COUNTERTOP**

The countertop is a manufactured acrylic material. The countertop is properly installed and in good condition.

**12.35 VENTILATION**

Ventilation in this bathroom is provided by a ceiling fan. This fan was operated and was found to be working satisfactorily.

**12.36 SUPPLEMENTAL HEAT**

The electric ceiling heater was tested and was functioning as intended.

**12.37 GFCI RECEPTACLES**

The GFCI receptacle in this bathroom does not trip when a ground fault is introduced. This is caused by a improperly wired or defective GFCI. Repair or replacement of this GFCI is recommended.

## LAUNDRY ROOM

Appliances are tested when present and when circumstances allow.

*The following components were inspected:*

**13.1 APPLIANCES**

The hookups for the washer are properly installed and in serviceable condition. The washer itself was operated through a partial cycle, however we did not confirm the complete operation of the cycle timer.

High pressure (steel braided) washer line connections is recommended.

The hookups for the dryer are properly installed and in serviceable condition. The dryer itself was operated through a partial cycle, however we did not confirm the complete operation of the cycle timer.



### 13.2 DRYER VENT

The visible portions of the dryer vent are properly installed and in serviceable condition. Dryer ducts should be cleaned annually as part of routine home maintenance. A dryer duct that is clogged with lint is a fire hazard.

## PLUMBING SYSTEM

A plumbing system consists of the water heater, domestic water supply lines, drain, waste and vent lines and gas lines. Inspection of the plumbing system is limited to the water heater, visible faucets, fixtures, valves, drains, traps, exposed pipes and fittings. These items are examined for proper function, excessive or unusual wear, leakage, and general state of repair. Valves are not tested except where specifically noted. The hidden nature of piping prevents inspection of every pipe and joint. A sewer lateral test, necessary to determine the condition of the underground sewer lines, is beyond the scope of this inspection. If desired, a qualified individual could be retained for such a test. Our review of the plumbing system does not include landscape irrigation systems, off site community water supply systems or private (septic) waste disposal systems. Review of these systems should be performed by qualified and licensed specialists prior to the close of escrow.

*The following components were inspected:*

### 14.1 PLUMBING SYSTEM SPECIFICATIONS

The building is on a public water supply system. The building is connected to the municipal sewer system. Copper tubing is used for the water supply piping. ABS plastic is used for the drain, waste and vent pipes.

### 14.2 MAIN WATER SHUTOFF VALVE

The location of the main water shutoff valve was not determined. You should query the seller as to the location of the valve.

When there is no shutoff valve inside the house, the water must be shutoff at the water meter. This could be inconvenient in an emergency. Consideration should be given to installing a water shutoff valve in the house.

### 14.3 MAIN WATER LINE

The main water line is buried underground and was not visible for inspection. The flow indicator on the water meter was checked with all the water shut off in the house. There was no movement of the flow indicator. This suggests that there are no leaks in the main water line. You should check the meter periodically (2-4 times a year) with all the water in the house shut off. Movement of the flow indicator on the meter means that there is a leak either inside the house or in the main line underground.

### 14.4 INTERIOR WATER SUPPLY PIPES

The visible portions of the copper water supply pipes are properly installed and functional. Copper is considered one of the most desirable materials for interior supply pipes and is expected to last the lifetime of the building.

### 14.5 WATER PRESSURE

The water pressure at 140 PSI is excessive. The normal range is 30-80 PSI. High water pressure can result in leaking valves, detached supply tubes, water hammer and is hard on solenoid valves. The installation of a pressure reduction valve is recommended.

A pressure reduction valve is used to reduce excessively high (i.e., above 80 PSI) water pressure coming in from the water main. It is normally installed inside the house in the main water line just downstream of the main shut off valve.

**14.6 DRAIN AND WASTE PIPES**

ABS plastic is used for drain, waste and vent pipes. All of the visible drain pipes were properly installed and functional. ABS is a durable, reliable material and should last the lifetime of the building. All drain, waste and vent pipes were stress tested by filling bathtubs and fixtures to the overflow and then draining them while simultaneously flushing the toilet and running the sinks and showers. No leaks were observed and all fixtures emptied in a reasonable amount of time with no fluctuation in the rate of flow down the drain. This is commonly referred to as "functional drainage".

**14.7 VENT PIPES**

The visible portions of the vent pipes are properly installed and are performing their intended function.

**14.8 FAUCET FIXTURES**

All faucet fixtures were tested and were functioning as intended.

**14.9 HOSE BIBBS AND EXTERIOR SUPPLY PIPES**

The hose bibbs on this building are the frost free type. These hose bibbs typically will not freeze as long as the hoses are removed. Failure to remove hoses during freezing weather could result in a cracked pipe and leakage.

The hose bibb on the rear of the house is dripping. This is indicative of a worn valve. Replacement of the hose bibb is recommended.

**14.10 GAS PIPING**

The visible portions of the gas piping were properly installed and are performing their intended function. There was no odor of gas leakage at the time of the inspection.

**14.11 GAS METER**

The gas meter is located on the west side of the building. The main gas shut off valve is installed on the high pressure line emanating out of the ground. This valve requires a wrench to open and close. Keeping a gas valve wrench or adjustable wrench accessible near the gas meter is recommended.

## INTERIOR

Our review of the interior includes inspection of walls, ceilings, floors, doors, windows, cabinetry, countertops, steps, stairways, balconies and railings. These features are examined for proper function, excessive wear and general state of repair. In some cases, all or portions of these components may not be visible because of furnishings and personal effects. In such cases these items are not inspected.

*The following items were inspected:*

**15.1 GENERAL COMMENTS**

The interior wall, floor, and ceiling surfaces were properly installed and generally in serviceable condition, taking into consideration normal wear and tear.

**15.2 FLOORS**

The lower level interior flooring is below the exterior grade. Floor and walls surfaces below grade are susceptible to moisture entry if exterior drainage is poor or if exterior concrete walls are not completely waterproofed. There were no signs of moisture entry visible at the time of the inspection. The seller should be queried to determine if moisture has ever entered the below grade living spaces during prolonged periods of heavy precipitation.

**15.3 STAIRS**

The stairs were used several times during the inspection. The stair components are properly installed with exceptions noted below.

The railing ends in the stairwell does not return to the wall. This is a safety hazard. The installation of a continuous handrail should be considered as a safety upgrade.



#### 15.4 GUARD RAILINGS

The guard railing is properly installed and is functioning as intended.

#### 15.5 WALLS AND CEILINGS

There are notable signs of sagging at the hallway and vaulted ceiling juncture. Cracks in drywall that have been repaired and reoccur several months after the repairs have been completed are typically due to flexing of the wood framing. Installing post supports, modifying ceiling framing or applying strong ties to the framing connections would help minimize further movement.

There are minor cracks in the walls and/or ceilings. This is a common condition with this type of construction and does not indicate a structural deficiency. Minor cracks can be repaired or painted over during routine maintenance. Minor cracks in drywall that reoccur several months after the repairs have been completed is due to seasonal movement of the structure caused by changes in humidity.



#### 15.6 DOORS

All of the doors were tested and were found to be functioning as intended.

Doors equipped with hinge mounted door stops can damage the door skin, tear out hinge screws, and damage the door trim and frame. The removal and replacement with wall or floor mounted door stops is recommended.

#### 15.7 CLOSET DOORS

All of the closet doors were tested and were found to be functioning as intended.

Closet doors are missing in the hallway.



#### 15.8 WINDOWS

The older window frames are constructed from aluminum and the newer window frames are constructed from PVC and both

have insulated glass in them. All of the windows were tested and/or inspected. The windows are in good condition and are functioning as intended except where noted below.

There is condensation or mineral deposits between the panes of glass in several of the insulated glass windows. This indicates failed seals. The glass assemblies should be replaced, which is the only method for correcting this deficiency.



### 15.9 SMOKE DETECTORS

There is a smoke detector in the hallway outside of the bedrooms. Additional smoke detectors should be installed inside the bedrooms near the door.

Smoke detectors are examined for location only. They are not tested. Smoke detector batteries should be replaced when you move in and every year thereafter. Once batteries have been replaced, the smoke detectors should be tested for proper operation.

Ionization technology is generally more sensitive than photoelectric technology at detecting small particles, which tend to be produced in greater amounts by flaming fires, which consume combustible materials rapidly and spread quickly. Sources of these fires may include paper burning in a wastebasket or a grease fire in the kitchen.

Photoelectric technology is generally more sensitive than ionization technology at detecting large particles, which tend to be produced in greater amounts by smoldering fires, which may smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning on couches or bedding.

**FOR MAXIMUM PROTECTION:** Use both Ionization and Photoelectric smoke alarms in every bedroom/hallway on every level of your home.

At least one carbon monoxide monitor should be installed for each floor. The best place to install the monitor is in an open area near the gas appliance.

### 15.10 DOOR BELL

The doorbell was functioning as intended.

## FIREPLACES, WOOD STOVES AND SPACE HEATERS

*The following components were inspected:*

### 16.1 METAL FIREPLACES

The visible portion of the metal fireplace was evaluated. The fireplace is in good condition and no defects or deficiencies were observed.

### 16.2 DAMPERS

The fireplace damper is functioning as intended. A fireplace damper that is left open when the fireplace is not being used allows huge quantities of heated air to escape up the chimney. Keeping your fireplace damper closed will result in a significant reduction in heating costs.

### 16.3 WOOD STOVE

The visible portions of the wood stove, smoke pipe and chimney are properly installed and are performing their intended function. It is essential that combustible materials be kept a minimum of 36" away from the wood stove when it is in operation.



## ENVIRONMENTAL ISSUES

Environmental issues include but are not limited to carbon monoxide, radon, asbestos, lead paint, lead contamination, toxic waste, formaldehyde, electromagnetic radiation, buried fuel oil tanks, ground water contamination and soil contamination. The absence of a statement on any of the environmental issues listed above does not necessarily mean that they are not present. We make reference to these substances only when we recognize them during the normal inspection process. Most of the toxic substances listed above cannot be identified without laboratory testing. If further study or analysis seems prudent, the advice and services of the appropriate specialists are advised.

*The following items may exist in this building:*

### 17.1 CARBON MONOXIDE

Many of us encounter CO regularly and never know it because it's invisible and odorless. That's why victims of CO poisoning often have no warning that they are in danger... until it's too late. Symptoms include headache, nausea, chronic fatigue, confusion and dizziness. Extreme exposure can even cause a coma or death.

Carbon monoxide is a product of incomplete (poor) combustion. It's a direct and cumulative poison. When combined with blood hemoglobin, CO replaces oxygen in the blood until it completely overcomes the body. Death from CO occurs suddenly. The victim inhaling the toxic concentration of the gas becomes helpless before realizing that danger exists.

According to the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) (Ventilation Standard 62- 89), a concentration of no more than 9 parts per million (ppm) (0.0009%), of CO is permissible in residential living spaces. In addition, the Occupational Safety and Health Administration (OSHA) has set an eight-hour work place maximum of 35 ppm. And in flue gas, the Environmental Protection Agency (EPA) and the American Gas Association (AGA) have established the maximum allowable concentration of CO at 400 ppm (See charts).

To ensure safe and efficient combustion, it is imperative that all gas burning appliances be inspected and serviced regularly (once a year) if used in normal service conditions).

### 17.2 FORMALDEHYDE

Formaldehyde, a colorless gas with a pungent odor, is so commonly used today that virtually everyone is likely to be exposed to at least small amounts of it, and a significant number of people are developing symptoms due to exposure to large amounts of formaldehyde in their homes or workplaces. It was an integral component of the urea formaldehyde foam insulation (UFFI) that was installed in more than five hundred thousand homes in the 1970's. (The use of formaldehyde in insulation was banned by the Consumer Product Safety Commission in 1982, but this ruling was overturned by a federal court in 1983.) In addition, it is present in a large variety of consumer products. It is a major part of the resins used as glue in particle board, plywood, and other pressed wood products used extensively in the construction of homes and furniture. Some cosmetics, paper towels, upholstery, permanent press fabrics, carpets, milk, toilet seats, pesticides, and explosives contain it too. Formaldehyde is also present in the exhaust from combustion appliances and in tobacco smoke.

The most common symptoms of excessive formaldehyde exposure are burning eyes, itching, shortness of breath, tightness in the chest, coughing, headaches, nausea, and asthma attacks. Large amounts of the gas have produced cancer in laboratory animals, and government policy assumes that any substance that can cause cancer in animals may also cause it in humans.

People who live in homes that have been "tightened" for maximum energy conservation are most likely to suffer from the effects of formaldehyde gas. The formaldehyde gas seeps from the walls, furniture, carpet, etc. into the air, building up to high levels in the "tightened" home, which can be irritating, particularly to sensitive people.



To minimize your exposure to formaldehyde, ventilate your home - in good weather, open the windows to provide a constant supply of fresh air. Some methods of heat recovery, such as heat recovery ventilators (also known as air-to-air heat exchangers), are available that can ventilate the home while also conserving energy.

You can seal exposed, raw surfaces of particle board and plywood with oil enamel, varnish, wallpaper, or vinyl floor coverings. If you have UFFI insulation, make certain it is completely sealed in the walls or, as a last resort, have it removed.

### 17.3 ASBESTOS

Asbestos is a naturally occurring mineral fiber that has been used in more than 3,000 different construction materials and manufactured products. It is commonly found in heating system insulation, decorative spray-on ceiling treatments, vinyl flooring, cement shake siding and a variety of additional materials. Some asbestos-containing materials were still being installed into the late 1980s.

The asbestos content of different materials varies according to the product and how it is used. Among those materials with higher concentrations of asbestos are insulating products on heating systems and the backing on sheet vinyl flooring. However, an uncontrolled disturbance of any asbestos-containing material in any concentration may be dangerous to your health!

Why is it a problem? Breathing asbestos fibers could kill you. When disturbed, asbestos breaks down into fibers up to 1,200 times thinner than a human hair. When inhaled, they become trapped in lung tissues. Medical research tells us that up to 30 years after inhalation, asbestos fibers can cause lung cancer or mesothelioma, a related terminal cancer of the tissue lining the chest cavity.

Because asbestos is a naturally occurring mineral and has been so widely used in manufactured products, including automobile brake linings, it can be found almost everywhere. Trace amounts are in the air we breathe every day. Most of us have asbestos fibers in our lungs.

On the other hand, there's no known safe level of asbestos exposure. That's why medical, environmental health and regulatory organizations stress the need to protect health by minimizing exposure to airborne asbestos fibers. This is particularly true when asbestos fibers accumulate at elevated levels. Elevated levels result from uncontrolled disturbances and removal of asbestos-containing materials.

How do I know if it's asbestos? Don't guess! Look for asbestos markings on the product or track the product back to its manufacturer or supplier. If these approaches don't work, submit a small sample for laboratory analysis. Cost is minimal. Laboratories are listed in the yellow pages under "Asbestos - Consulting and Testing." Ask a laboratory technician to instruct you how to safely take a sample. If you decide not to check for asbestos in a suspected material, you should assume it contains asbestos and treat it accordingly.

## INSULATION

Insulation, weatherstripping, dampers, storm windows, insulated glass and set-back thermostats are features that help reduce heat loss and increase the comfort and thermal efficiency of your home. We examine these items and identify approximate R values for insulation. When appropriate, we offer suggestions for upgrading. Our review of insulation is based upon a random sampling of accessible areas and does not constitute a warranty that all such areas are uniformly insulated or are insulated to current standards.

*The following items were inspected:*

### 18.1 ATTIC INSULATION

The attic is insulated with blown in fiberglass insulation. The approximate R value of this insulation is 30. This provides good resistance to heat transfer.

There is a large thermal bypass in the attic over the kitchen/dining and living areas. A thermal bypass is an opening between an insulated and uninsulated part of the house through which heated air can escape. As air is heated, it rises and pulls cool air in to the space to replace it. This condition will result in significant heat loss. Sealing up all thermal bypass routes is recommended.



## 18.2 WALL INSULATION

The walls are insulated with fiberglass batt insulation. The 2x4 walls suggest that it is 3-1/2" R-11 fiberglass.

# STRUCTURE

The structural elements of most residential buildings include a foundation, footings, floor, wall, ceiling and roof framing. The visible portions of these items are examined for proper function, wear, deterioration or signs of non-performance. Some structural components or portions of them are inaccessible because they are buried below grade or hidden behind finished surfaces. Therefore, much of the structural inspection is performed by identifying resultant symptoms of movement, damage and deterioration. Where there are no visible symptoms, components or conditions requiring repair may go undetected and identification will not be possible. We make no representations as to the internal conditions or stabilities of soils, concrete footings and foundations, except as exhibited by their performance.

*The following components were inspected:*

## 19.1 GENERAL INFORMATION

The foundation is constructed from poured in place concrete. A perimeter foundation wall supports the exterior walls of the building. Interior load bearing components are supported by pier footings and/or continuous spread footings. The lower floor is a concrete slab. The upper floors are constructed out of wood joists. The subflooring is plywood. The stud walls are constructed from 2 X 4 dimensional lumber. The exterior wall sheathing is plywood. The roof structure is constructed out of manufactured trusses. The roof sheathing is oriented strand board (OSB) installed over a layer of open sheathing.

## 19.2 FOUNDATION

The foundation is constructed in a manner typical of buildings of this type and age. There are minor shrinkage cracks in the foundation. Shrinkage cracks are common in poured concrete foundation walls. They do not affect the performance of the foundation. No action is indicated.

## 19.3 MUDSILL

The mudsill is typically a 2x4 or 2x6 member that is laid flat directly on the top of or cast into the top of the foundation wall. The mudsill is usually bolted to the foundation wall and serves as a base for the rest of the floor framing. In this building, the mudsill is inaccessible and cannot be evaluated. There was no evidence present that would suggest that there are defects in this component.

## 19.4 ANCHOR BOLTS

Anchor bolts are bolts that are cast into the top of the concrete foundation and retain the mudsill. Anchor bolts primary function in this area, is to prevent the building from being displaced from its foundation during an earthquake. Anchor bolts have grown in diameter over the years as have the nuts and washers that retain the mudsill. Generally speaking, the newer the building, the better resistance it will have to seismic activity. Due to the design of this building, anchor bolts are not visible and could not be evaluated.

## 19.5 FLOOR JOISTS

The floor joists are covered with finished surfaces and therefore were not visible for inspection. There was no evidence present suggesting that defects or deficiencies are present.

## 19.6 SUBFLOORING

The subfloor was covered with insulation and finished surfaces and was not visible for inspection. There was no evidence

present suggesting that defects or deficiencies are present.

#### **19.7 WALLS**

The walls are covered with finished surfaces and therefore were not visible for inspection. No evidence of defects or deficiencies was observed.

#### **19.8 CEILING**

There are notable signs of sagging at the hallway and vaulted ceiling juncture. Installing post supports, modifying ceiling framing or applying strong ties to the framing connections would help minimize further movement.



#### **19.9 ROOF STRUCTURE**

The roof structure is constructed from factory-built, engineered trusses. The trusses are installed in a manner consistent with buildings of this type and are performing their intended function. No defects or deficiencies were observed.

#### **19.10 ROOF SHEATHING**

The roof sheathing is installed in a manner consistent with buildings of this type and is performing its intended function. No defects or deficiencies were observed.