



## BPG Inspection Services



**1355 Stark Strasse  
Ann Arbor MI 48105**

Client(s): Kahn  
Inspection Date: 5/17/2019  
Inspector: Rick Bowling, LIC #

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<b>Date:</b> 5/17/2019	<b>Time:</b> 01:00:00 PM	<b>Report ID:</b> 755342
<b>Property:</b> 1355 Stark Strasse, Ann Arbor, MI 48105		<b>Prepared By:</b> Rick Bowling

## General Information

### Scope

This inspection is a non-invasive examination of readily accessible systems and components as outlined in the Standards of Practice of the American Society of Home Inspectors (ASHI) or your specific state standards. In compliance, our reports are subject to the Definitions, Scope, Limitations, Exceptions, and Exclusions as outlined in the Standards of Practice. A copy of the Standards of Practice may be obtained from your inspector or from the web site identified in our Inspection Agreement.

In general, home inspections include a visual examination of readily accessible systems and components to help identify material defects - as they exist at the time of the inspection. This is **not** a technically exhaustive inspection and will not necessarily list all minor home maintenance or repair items. Latent, inaccessible, or concealed defects are excluded from this inspection. Inspectors do not move furniture, appliances, personal items, or other materials that may limit his/her inspection. We do **not** report on cosmetic or aesthetic issues. Unless otherwise stated, this is **not** a code inspection. We did **not** test for environmental hazards or the presence of any potentially harmful substance.

### Use of Reports

If the inspection is performed in connection with the sale, exchange or transfer of the property, copies of the report may be provided to the principals in the transaction and their agents. However, the report is for your sole information and benefit. We do not intend for anyone but the person(s) listed on this report to benefit, directly or indirectly, from this agreement and inspection report. Our contractual relationship is only to the person(s) purchasing our report/service.

### Inspection Agreement and 90 Day Guarantee

BY ACCEPTANCE OF OUR INSPECTION REPORT, YOU ARE AGREEING TO THE TERMS OF OUR INSPECTION AGREEMENT. A copy of this agreement was made available immediately after scheduling your inspection and prior to the beginning of your inspection. In addition, a copy is included on our website with your final inspection report. You should review the liability limitations and terms of the agreement carefully before accepting your inspection report. Should you discover a defect for which we may be liable to you, you must notify us and give us a reasonable opportunity to re-inspect the property before you repair the defect.

We understand the serious nature of real estate transactions and attempt to take reasonable actions to provide value and protect our clients. We provide a limited 90-day guarantee on most of the major components that were inspected. A full explanation of our 90 day guarantee is included on our website with your final inspection report. A more comprehensive one-year home warranty is available if ordered within 30 days of your inspection. As a BPG client you can receive a discounted rate and plan details by calling us at 800-285-3001.

A part of many real estate transactions are contingencies limiting the time available for follow up inspections, repair work, or further inquiries. We are not responsible for any investigations that are not completed prior to the end of the contingency period.

### Report Definitions

The following definitions of comment descriptions represent this inspection report.

Inspected: The item was visually observed and appears to be functioning as intended unless otherwise noted.

Not Inspected: The item was not inspected (reason for non-inspection should be noted):

Not Present: The item was not found or is not present.

Action Item: The item is not functioning as intended or needs repair or further evaluation.



Consideration Item: The item should be monitored and repair/replacement should be considered. (Includes definitions, helpful tips, recommended upgrades, conditions requiring repair due to normal wear, and conditions that have not significantly affected usability or function - but may if left unattended).

<b>Style of Home:</b> One story single family dwelling	<b>Age Of Structure:</b> 22 years	<b>Age Determination:</b> Reported when appointment booked
<b>Items Reported as Structure Viewed From:</b> Street	<b>Attendees:</b> Client's agent	<b>Weather:</b> Cloudy
<b>Temperature:</b> 68 degrees	<b>Soil Condition:</b> Wet--there has been recent heavy rain	<b>Lot Topography:</b> Sloped
<b>Standards of Practice:</b> American Society of Home Inspectors	<b>Radon Test Performed:</b> Yes--see separate report	<b>Environmental Review:</b> Radon only--no other environmental review
<b>Building Status:</b> Vacant, Belongings present		

**1. Introductory Notes**

**Inspection Items**

**CLIENT ADVICE**

-  ♦ Any deficiency discussed in this report should be carefully considered by the client and reviewed with the real estate agent as appropriate. Because a report of a deficiency is often based on the experience of the inspector using visual clues, it should be understood more extensive problems can be present which can be more costly to resolve than simply correcting the visible symptoms. Further, it is beyond the scope of this inspection to list every instance of similar deficiencies. The inspector's notation of any given deficiency should be interpreted such that additional similar defects may be present or more extensive. Any reported deficiency may require additional investigation to better determine the number of similar defects and related problems in order to make an informed decision.
  - SUGGESTION: Consult with your inspector and/or agent to gain a comfort level about any defect cited in this report. As needed, consult an appropriate contractor who can provide a detailed list of deficiency locations, specifications and costs of repairs BEFORE closing escrow.
-  ♦ Please read the inspection report's "Action Summary" for a detailed description of conditions that need immediate attention, and details on repairs that are likely to be costly. Also, please read the report's "Considerations Summary" for a list of definitions, helpful tips, recommended upgrades, items that should be monitored, non-critical conditions requiring repair that arise due to normal wear and tear and the passage of time and conditions that have not significantly affected usability or function - but may if left unattended.

**INSPECTION SCOPE**

- ♦ The purpose of this inspection was to evaluate the building for function, operation and condition of its systems and components. The inspection does not include any attempt to find or list cosmetic flaws. You, the client, are the final judge of aesthetic issues. The presence of furnishings, personal items and decorations in occupied structures limits the scope of the inspection. For instance, the placement of furniture prevents access to every electrical receptacle. The presence or extent of building code or zoning violations is not the subject of this inspection nor is it included in this report. No information is offered on the legal use, or possible uses of the building or property. Information with regard to these issues may be available from the appropriate building and/or zoning agency. Important information about this property may be a matter of public record. However, a search of public records is not in the scope of this inspection. We recommend the buyer review all appropriate public records if this information is desired. We recommend that the buyer conduct a thorough pre-closing walkthrough inspection before closing escrow.

**PICTURES**

- ◆ Photographs have been provided as *examples* of some of the issues identified in this report but are not meant to represent every defect or every instance of a given defect that has been found. The full report should be consulted for further information.

**WALK THROUGH INFORMATION**

- ◆ During your final walk-through inspection you will have the opportunity to check the home for a final time. Things can change after the original inspection and issues may become apparent once belongings have been removed. Obtain from the owner any available operating manuals for equipment, along with any warranties that are available. You should operate kitchen equipment, plumbing fixtures, heating and air conditioning systems (warning: a/c units should not be started below 65 degrees F), and any other equipment that is included as part of the purchase. It is also important to check for any signs of water penetration problems in the house (interior and in the attic). If the owner has agreed to any repair work, the documentation for this work should be obtained.  
 --Suggestion: Use the attached Final Walk Through Checklist in conjunction with this report as a guide to your walk through.

**CONCLUDING REMARKS**

- 📷 ◆ While we make an effort to identify existing as well as potential problems, it is not possible for anyone to predict future performance of all the systems and appliances in a building any more that your Doctor can tell you when you might get a cold or suffer appendicitis.  
 - SUGGESTION: Budget annually for unforeseen repairs and the purchase of a comprehensive home warranty policy.

**2. Exterior**

Our inspection of the building exterior included a visual examination. Items are examined for defects, excessive wear, and general state of repair. Exterior wood components are randomly probed. We do not probe everywhere. Varying degrees of exterior deterioration could exist in any component. Vegetation, including trees, is examined only to the extent that it is affecting the structure.

**Styles & Materials**

<b>Exterior Wall Cladding:</b> Brick veneer	<b>Trim Material:</b> Wood	<b>Driveway Surface:</b> Asphalt
<b>Walkway Surface:</b> Brick pavers	<b>Deck/Porch/Patio(s) at Structure:</b> Open porch Wood deck Patio Screened porch	<b>Patio Surface:</b> Concrete on grade
<b>Faucets/HoseBibs:</b> Frost free style (winterization still advised during cold weather)	<b>Examples of Accessory Items Not Reviewed:</b> Barbecue(s) Yard lights	

**Inspection Items**

**EXTERIOR PHOTO(S)**










**SIDING/WALL COVERING**

 ♦ Some thin cracking in the masonry needs sealing.



**TRIM** [Inspected]



**DOORS (Exterior)** [Inspected]

**GRADING, DRAINAGE, AND RETAINING WALLS (With respect to their effect on the condition of the building)**

- ⏏ ♦ We suggest regrading as needed to assure all water drains away from the foundation without covering siding. Controlling water around the foundation is the single biggest factor in reducing the chances for water infiltration into the structure. Nearly every structure we inspect has room for improvement.

**DRIVEWAYS/WALKS/PATIOS LEADING TO ENTRANCE(S)**

- ⏏ ♦ We suggest filling cracks to help extend the life of the pavement.



**DECKS, BALCONIES, STOOPS, STEPS, AREAWAYS, PORCHES, PATIO/ COVER AND APPLICABLE RAILINGS**

- ⏏ ♦ The deck is partially supported by attachment through the brick veneer wall. This is a common practice that has been approved by many building departments until recently. In many cases this performs as intended. However, this type of attachment has been found to be prone to concealed water intrusion. Also, since brick veneer is non-structural, there is increased risk of the brick coming loose. This is particularly a concern for tall and or large decks as well as decks where groups are entertained. We suggest having sealed and resupported as needed.

The decking is also supported by a type of beam connection that may be prone to failure. Wood joists are fastened on each side of posts. This relies on the fasteners for support rather than the lumber. We suggest having resupported to help assure proper performance and reduce the risk of damage.



- ✘ ♦ Rusted fasteners should be replaced.



- ✘ ♦ The screened room lacks an adequate fall barrier. Have corrected as needed.



**FAUCETS** [Inspected]

**LAWN SPRINKLER** [Not Inspected]

- ☑ ♦ Review of sprinkler systems is beyond the scope of this inspection. An outside sprinkler system should be properly winterized to prevent damage to the underground components.  
- SUGGESTION: Verify with the seller that the system has been properly winterized and obtain disclosure as to system function.

**OTHER INFORMATION**

- ☑ ♦ We suggest caulking/sealing the exterior as needed to help shed water and to maximize energy efficiency. Pay attention to all openings and gaps as well as old caulk that has deteriorated.



**3. Roofing**

Our inspection of the readily accessible roof system included a visual examination to determine damage or material deterioration. We walk on the roof only when it is safe to do so and is not likely to damage the roof materials. We look for evidence of roof system leaks and damage. We cannot predict when or if a roof might leak in the future.

**Styles & Materials**

<b>Viewed roof covering from:</b> Ladder Binoculars	<b>Roof-Type:</b> Combination gable and hip	<b>Roof Slope:</b> Steep
<b>Roof Covering--Pitched:</b> Laminated composition shingles	<b>Valley Style:</b> Closed cut	<b>Estimated roof covering age:</b> Newer; we suggest obtaining installation paperwork and warranty as applicable
<b>Gutters/Roof Drainage:</b> Metal gutters and downspouts		

**Inspection Items**

**ROOF PHOTO(S)**

**CLIENT INFORMATION**

- ◆ All roof systems require annual (or even more frequent) maintenance. Failure to perform routine roof maintenance will usually result in leaks and accelerated deterioration of the roof covering and flashings. Any estimate of remaining life expectancy must be based on the assumption that the roof will be conscientiously maintained. Our inspection of the roof surface, attic and interior spaces should not be interpreted as a certification that this roof is, or will be free of leaks. Key components that are vital in making a roof system work are concealed from view and cannot be verified without destructive testing, which is beyond the scope of this inspection.

**ROOF COVERINGS** [Inspected]

- ◆ Mineral loss is minimal and the shingles are flexible. The shingles lay flat and where checked were adhered well. Except as noted, the visible roof surface shows normal wear for its age and type and appears to be in serviceable condition.

**FLASHINGS** [Inspected]

**VALLEYS**

- ◆ Debris in valleys and gutters should be cleaned to reduce risk of leaks.



- ❖ The valley shingles were not all trimmed according to roofing specifications. The upper corner of each end shingle should be trimmed on a 45 degree angle to direct water into the valley and discourage water flow under the shingle surface. In many cases, no leaks occur, but as a precaution, we advise having corrected to help shed water.



#### ROOF DRAINAGE SYSTEMS/GUTTERS & DOWNSPOUTS

- ❖ We suggest extending downspout drainage well away from the foundation to reduce the chances of water intrusion into the structure.

#### OTHER INFORMATION

- ❖ Vegetation should be trimmed away from the roof as it can damage the roof surface and structure.



- ◆ Areas where the roof slopes towards the structure are prone to water intrusion and ice damming and should be monitored closely for leaks and maintenance as needed. Leaks might not be apparent except when actually occurring. Because of the nature of construction, important portions of the flashing are concealed from view



### SKYLIGHTS, SOLAR PANELS

- ◆ Step flashing visible around the roof window curb. Underlayment flashing can't be verified without removing shingles so could not be verified.



**4. Attic**

Our inspection of the readily accessible areas of the attic included a visual examination to determine any signs of defects, excessive wear, and general state of repair. When low clearance, framing design or obstructions, deep insulation and mechanical components prohibit walking safely in an unfinished attic, inspection is conducted from the available service platforms or access openings only.

**Styles & Materials**

<b>Attic Access:</b> Hatch	<b>Attic Insulation:</b> Rolled and blown fiberglass	<b>Attic Ventilation:</b> Ridge Vents Soffit Vents
<b>Attic Vapor Retarder:</b> Present as insulation backing	<b>Attic Moisture:</b> No signs of current water entry	<b>Roof Framing:</b> Engineered wood trusses
<b>Roof Decking/Sheathing:</b> Plywood	<b>Method used to observe attic:</b> Partial walk Access limited due to nature of construction	

**Inspection Items**

**Attic Photo(s)**





**CLIENT INFORMATION**

- ◆ When inspections are conducted shortly after or during periods of prolonged rain, active roof leaks can often be identified by dampness at the interior of the structure. See the General Information section of this report for weather conditions at the time of this inspection. Most inspections, however, are not conducted under wet weather conditions and in such cases we cannot determine whether a leak is active or not. Further, some leaks occur only

under severe or unusual wind driven conditions. Even during prolonged rain, an inspection may not reveal the exact circumstances under which water entry occurs.

**ATTIC INSULATION** [Inspected]

**ATTIC VENTILATION** [Inspected]

**ATTIC MOISTURE CONDITIONS** [Inspected]

**ROOF SHEATHING** [Inspected]

**ROOF FRAMING** [Inspected]

**5. Structure**

Our inspection of the structure included a visual examination of the exposed, readily accessible portions of the structure. These items were examined for visible defects, excessive wear, and general condition. Many structural components are inaccessible because they are buried below grade or are behind finished surfaces. Therefore, much of the inspection was performed by looking for visible symptoms of movement, damage and deterioration. Where there are no symptoms, conditions requiring further review or repair may go undetected and identification is not possible without destructive testing. We make no representations as to the internal conditions or stability of soils, concrete footings and foundations, except as exhibited by their performance. We cannot predict when or if foundations or roofs might leak in the future.

**Styles & Materials**

<b>Foundation type and material:</b> CMU masonry block	<b>Basement:</b> Mostly finished Ceiling and wall structure mostly concealed	<b>Access to foundation walls (interior):</b> The walls are mostly concealed by finish & belongings
<b>Exterior wall structure:</b> Framing not visible due to finish	<b>Ceiling structure for building:</b> Wood frame	<b>Columns or piers (basement/crawl Space):</b> Steel columns
<b>General floor structure:</b> Wood joists	<b>Beams/girders:</b> Metal Engineered wood	<b>Visible basement wall insulation:</b> Fiberglass at rim joists

**Inspection Items**

**Basement/lower level photo(s)**





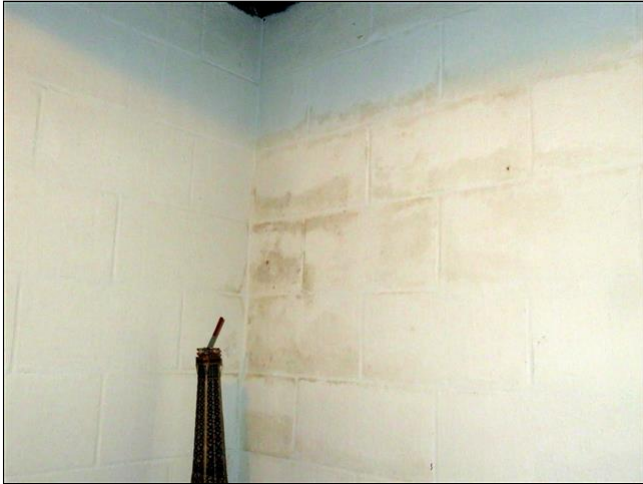






**BASEMENT/LOWER LEVEL/FOUNDATION MOISTURE CONDITIONS**

- ❌ ♦ Some water stains noted on the foundation wall in the train room as well as at the ceiling under the front porch where mold was also found. We advise having reviewed and corrected as needed.

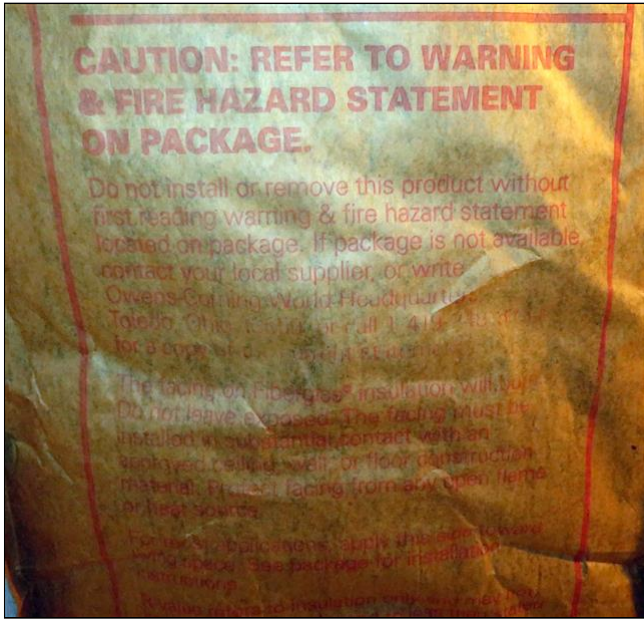


### Foundation walls

- ◆ Typical wall cracks were noted. This is a common occurrence in foundation walls. The cracks should be monitored for any signs of moisture intrusion and repaired if needed. Also, if you decide to finish an area with cracks, we recommend having repaired and waterproofed prior to installing finish as a preventative measure. If at any time the cracks grow in size, a qualified foundation contractor should evaluate and make repairs as needed.

### Insulation (lower level) [Inspected]

- ◆ The vapor retarder on some insulation is exposed, contrary to the manufacturer's instructions. The vapor barrier is flammable and should be covered and should face the heated space.




**Structural Beam Conditions** [Inspected]

**Structural Post & Column Conditions** [Inspected]

**Framing conditions** [Inspected]

**Limitations to Foundation/Floor Framing Inspection**

 ♦ Structural components mostly concealed due to finish and belongings.

**6. Chimneys & Fireplaces**

**Styles & Materials**

<b>CHIMNEY TYPE(S):</b> Masonry fireplace chimney	<b>FIREPLACE TYPE(S):</b> Masonry used with gas logs Factory built (manufactured) fireplace for gas log use only	<b>FLUE/CHIMNEY INSPECTION LIMITATIONS:</b> Height of chimney(s)
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**Inspection Items**

**Client Information**

- ♦ Chimneys are a common source of water infiltration, both at the roof and inside the structure. Maintaining the flashings and a proper weather cap will reduce the chances of a problem. Portions of the flashing and interior of the chimney are not visible during our inspection. The NFPA recommends having what is called a Level 2 inspection by a qualified chimney sweep, to include a camera scan of the interior of the chimney. A Level 2 inspection can identify problems not noted in our report. We agree with their recommendation. You can find a list of certified sweeps at [www.csia.org](http://www.csia.org)





### CHIMNEY CONDITION

- ❌ ♦ We suggest installing a spark arrestor and rain cap on the each chimney flue. This helps prevent water and pest intrusion.

We suggest trimming vegetation well away from the structure to provide free airflow, and proper draft and to reduce chances of damage and allow for routine observation and maintenance.

One of the gas fireplace vents has an active bird nest. Have the vents cleaned before use by a qualified fireplace specialist to reduce risk of carbon monoxide entering the structure.



### FIREPLACE CONDITION [Inspected]

#### GAS LOGS

- ❌ ♦ The pilot lit at the family room fireplace but the logs did not ignite using the provided switch in the fireplace. No remote was found. The fireplace in the great room started but turned off on its own.

## 7. Plumbing

Our inspection of the plumbing system included a visual examination to determine defects, excessive wear, leakage, and general state of repair. Plumbing leaks can be present but not evident in the course of a normal inspection. A sewer lateral test to determine the condition of the underground sewer lines is beyond the scope of this inspection. Our review of the plumbing system does not include landscape irrigation systems, water wells, on site and/or private water supply systems, water quality, off site community water supply systems or private (septic) waste disposal systems unless specifically noted.

**Styles & Materials**

<b>Water Source:</b> Public	<b>Main Water Shutoff Location:</b> Basement	<b>Fuel Shutoff Location:</b> Exterior gas meter
<b>Visible Water Supply Entry Pipe Material:</b> Copper	<b>Visible Water Distribution Material (inside structure):</b> Copper	<b>Water Heater Primary Fuel:</b> Natural gas
<b>Water Heater Manufacturer(s):</b> Bradford-White	<b>Water Heater Capacity:</b> 75 Gallon	<b>Water Heater Location:</b> Basement Spill pan suggested due to location near finished surfaces
<b>Water Heater Age:</b> New/almost new; we suggest obtaining installation paperwork and warranty as applicable.	<b>Visible Plumbing Waste Material:</b> Plastic	<b>Plumbing access:</b> Plumbing is mostly unexposed due to finish and belongings

**Inspection Items**

**CLIENT INFORMATION**

- ◆ Valves may leak when operated after a period of inactivity. For this reason, we did not test service valves during the inspection. Expect to find many of these difficult to operate or stuck in position.

During the inspection, we only operate the valves or faucets that are normally operated by the occupants in their daily use of the plumbing system. Be aware that we will not operate:

1. The main water supply shutoff (although we will report on its existence and location when accessible)
2. The temperature & pressure relief valve on the water heater (although we will note its existence and check its installation)
3. The water heater tank supply or drain valves
4. Any stop valves supplying water to plumbing fixtures
5. The laundry supply shutoff valves.

Any valve that is not operated on a daily basis may fail; that is, fail to turn, start leaking or dripping, when tested. If you want to know if seldom-used valves and faucets are functional, we encourage you to operate them in the presence of the seller, before escrow closing. If the seller is not available for this exercise, we recommend that you have a plumber present so that he can make any repairs or replacements.

Water system pressure tests are not within the scope of this inspection. Likewise, we cannot determine the function of underground drains. *You can reduce your risk by having a plumber snake the drains and perform a camera scan to help determine condition of these concealed areas.*

*Consider upgrading supply hoses at plumbing fixtures and laundry to burst resistant plumbing hoses, to reduce risk of damage due to a hose failure.*

**WATER HEATER [Inspected]**





**AHR CERTIFIED**  
www.ahrdirectory.org

BRADFORD WHITE CORPORATION (www.bradfordwhite.co  
200 LAFAYETTE STREET MIDDLEVILLE MI 49333 USA  
Model No: RG275H6N  
Serial No: SF41712970 D/N: -264  
Nom. Cap.: 75(US gal) Recovery: 73.7(gph)  
Input: 76000(Btu/hr) Type: NATURAL GAS

Gas Pressure Manifold : 4.0(InWC)  
Inlet Supply Max : 14.0(InWC)  
Inlet Supply Min : 5.0(InWC)

CLOSET INSTALLATION MINIMUM CLEARANCES IN INCHES  
4 FRONT 0 LEFT 12 TOP  
0 BACK 0 RIGHT 6 VENT CONNECTOR

CATEGORY I NATURAL DRAFT  
ANSI Z21.10.3-2015/CSA 4.3-2015  
Pressure: Test 300(psi), Working 150(psi)  
DOES NOT COMPLY W/JURISDICTIONS HAVING 14ng/J NOx REGS

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: Re. 34,534; B1 5,341,770; 4,416,221

- ✘ ◆ Corroded plumbing over the tank should be repaired to prevent leaks and further damage.



**WATER HEATER VENTS/FLUES/VENT CONNECTORS** [Inspected]

**MAIN WATER SHUT-OFF DEVICE**

- ☑ ◆ Corroded plumbing should be cleaned and checked for needed maintenance.



**INTERIOR WATER SUPPLY AND DISTRIBUTION SYSTEMS AND FIXTURES** [Inspected]

**DRAIN, WASTE AND VENT SYSTEMS** [Inspected]

**FIRE SPRINKLERS** [Not Present]

**OTHER INFORMATION**

- Water was run extensively in fixtures during the inspection. Waste lines, gaskets and fittings dry out while a house is vacant. In some cases the operational checks made during a building inspection do not reveal leaks that may show up only after the home is returned to full use. Drain leaks may not become apparent in a wall or ceiling surface until several hours after the inspection, and because wastes can solidify the sewer lines may need cleaning once occupancy occurs. Your pre-closing walk through inspection becomes especially important in this regard in a vacant home. Remember to flush toilets several times and run sink and tub faucets for several minutes and then inspect adjacent walls and ceilings below bathrooms.

**8. Electrical**

Our inspection of the electrical system included a visual examination of readily accessible components including a random sampling of electrical devices to determine adverse conditions and improper wiring methods, grounding, bonding and overcurrent protection. Performing voltage tests, load calculations or determining the adequacy of the electrical system for future usage is outside the scope of this inspection. Telephone, video, audio, security system, landscape lighting, and other low voltage wiring was not included in this inspection unless specifically noted.

**Styles & Materials**

<b>Electrical Service Conductors:</b> Below ground service This is a 120/240 volt system	<b>Service Ampacity:</b> (2) 200 AMP service panels	<b>Circuit Protection Type:</b> Circuit breakers
<b>Visible 120 Volt Branch Circuit Wiring:</b> Copper	<b>Predominant Wiring Type(s):</b> Type NM (Romex)	<b>Main Panel Location:</b> Basement
<b>Main Disconnect Location:</b> Adjacent to the electric meter	<b>Panel manufacturer:</b> Square D	

**Inspection Items**

**CLIENT INFORMATION**

- Our inspectors test a random sample of receptacles, switches and fixtures. We typically test not less than one receptacle outlet per room and all outlets within 6 feet of a water source. Each and every wiring device will not be evaluated. Wiring devices blocked by furniture or personal goods will not be tested.

Testing the function of the main disconnect and individual breakers is not in the scope of this inspection.

*Electrical defects are considered to be safety concerns and all such defects should be corrected by a qualified licensed electrician.*

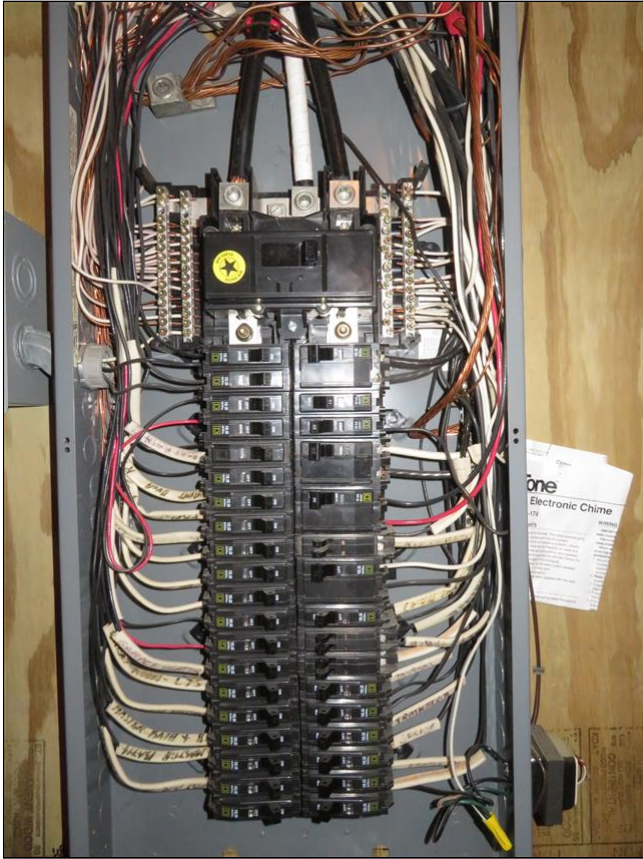
Evaluation of any low voltage wiring systems, including but not necessarily limited to telephone, security systems, data transfer lines, TV antenna and cables, alarm, intercom, and stereo systems is beyond the scope of this inspection. Have the seller demonstrate or a qualified technician evaluate the low voltage wiring as desired.

Please see the Electrical Addendum for additional important information and definitions of terms used in the report.



BREAKERS MAY ADVERSELY AFFECT NEGATIVELY THE SECURITY OF THE PROPERTY. USER SAFETY, IMPAIR RELIABILITY AND DETERIORATION. ANULAR LA GAR WILL VOID THE WARRANTY.

1	BASEMENT	STEAMER	0
	FREEZER		
3	LAUNDRY	STEAMER	4
	IRON		
5	FLOORS	Spine	6
7	FLOORS	Washer	8
9	LOWER LEVEL	AIR	10
	BATH	CONDITIONER	
11	UP	AIR	12
	FURNACE	CONDITIONER	
13	FOYER LIGHTS	Daylight	14
15	FOYER LIGHTS	Daylight	16
17	FURNACE	KITCHEN	18
	Room LIGHTS	OUTLETS	
19	OFFICE	AIR	20
		CONDITIONER	
21	OFFICE	AIR	22
		CONDITIONER	
23	OFFICE	MASTER BATH	24
		HEAT	
25	LANDSCAPE	Dining Room	26
	REAR	Outlets	
27	LANDSCAPE	Furnaces	28
	REAR	Door Openers	
29	GARAGE	DISPOSAL	30
	HEATER		
31	GREAT	ALARM	32
	Room	LOWER LEVEL	
33	GREAT ROOM	FURNACE	34
	MASTER BED	TRAW ROOM	
35	MASTER	LIGHTS / DE ARM	36
	BATH	GARAGE	
37	MASTER		38
	BATH	FAMILY ROOM	
39	MASTER		40
	BED ROOM	SUN ROOM	



THIS EQUIPMENT IS DESIGNED AND TESTED BY SQUARE D TO PERFORMANCE LEVELS WHICH EXCEED UNDERWRITERS LABORATORIES (UL) STANDARDS. USE OF OTHER INTERLOCK DEVICES OR BREAKERS MAY ADVERSELY AFFECT USER SAFETY. IMPAIR RELIABILITY AND WILL VOID THE WARRANTY.

QO	CAT	SER	TYPE	TO DIS FROM OFF MARK MAIN MATI CAPA DELA PRIN	MADE
1			DISHWASHER	OVEN	2
3			DINING ROOM	OVEN	4
			COVE LIGHTS		
5			COOK TOP	TIME CLOCKS	6
7			COOK TOP	JACUZZI	8
				TUB	
9			MASTER		10
			BATH OUTLETS		
11			REFRIGERATOR	LOWER LEVEL	12
				BATH 3 HEAT	
13			MICROWAVE	LOWER LEVEL	14
				BATH 2 HEAT	
15			KITCHEN		16
			OUTLETS		
17			KITCHEN	TRASH	18
			OUTLETS	COMPACTOR	
19			KITCHEN	MASTER BATH	20
			OUTLETS	LIGHTS	
21			LANDSCAPE		22
			LIGHTING		
23			LANDSCAPE	KIT-FAMILY	24
			LIGHTING	Room LIGHTS	
25			LOWER LEVEL	KITCHEN	26
			REC ROOM	LIGHTS	
27			LOWER LEVEL	LOWER LEVEL	28
			REC ROOM	BATH LIGHTS	
29			SMOKE	LOWER LEVEL	30
			DETECTORS	BED # 3	
31			DINING ROOM	LOWER LEVEL	32
			LIGHTS	HALL	
33			MASTER CLOSET	LOWER LEVEL	34
			ARC LIGHTS	BED # 2	
35			POWER ROOM	LOWER LEVEL	36
			LIGHTS	BED # 4	
37			NOOK LIGHTS	LOWER LEVEL	38
				REC ROOM	
39			NOOK LIGHTS	LOWER LEVEL	40
				REC ROOM	

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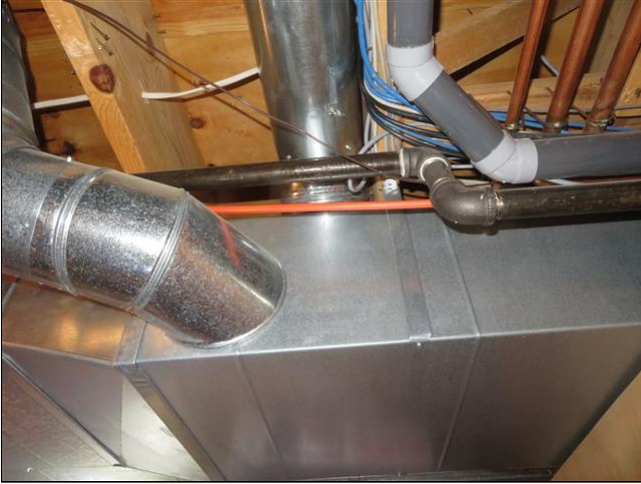
**SERVICE ENTRANCE CONDUCTORS/ELECTRIC METER/EXTERIOR DISCONNECT** [Inspected]**EXTERIOR, GARAGE & ATTIC ELECTRIC**

- ♦ The GFCI outlets at the porch and patio would not trip. GFCI's are an important and, fortunately, inexpensive safety device. Repair or replacement by a qualified person is needed.


**INTERIOR LIVING SPACE ELECTRIC**

- ♦ Exposed wiring at the basement should be corrected as needed and protected from physical damage to help assure safe function.

We were unable to activate the fan/light in the master bedroom.




### KITCHEN ELECTRIC

-  ♦ Outlets under countertops can be a hazard when corded appliances are plugged in and dangle over the counter. We suggest covering the outlet or at least not using this outlet for any counter mounted appliance.



### BONDING/GROUNDING CONSIDERATIONS

-  ♦ The corrugated stainless steel tubing (CSST) should be bonded to the electrical service grounding electrode system. This is a fairly recent requirement in order to reduce the chances of a natural gas leak or fire. More information is available here <http://www.csstsafety.com/CSST-solution.html> or by searching the web for "CSST Bonding". In most cases, bonding is relatively easy to achieve.



#### GENERAL PANEL ENCLOSURE COMMENTS

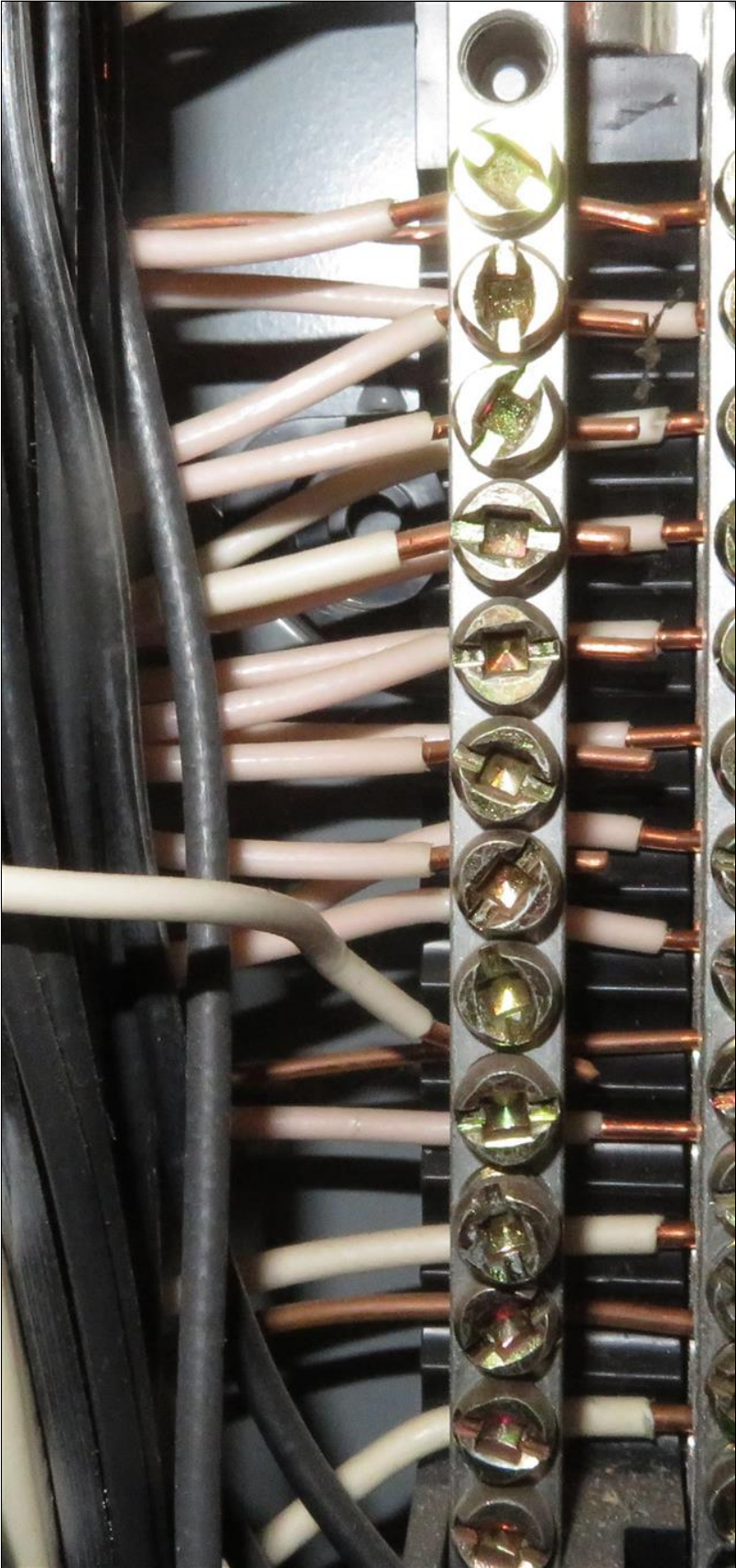
- ❏ Open knockouts should be appropriately sealed for safety and to help prevent pest intrusion. Plugs are typically widely available and inexpensive. Cut off wiring should be properly terminated with wire nuts.



#### SUBPANEL BRANCH CIRCUIT CONDUCTORS & OVERCURRENT DEVICES

- ❏ In the left basement service panel, some grounding wires have been improperly attached to the neutral bus. Have an electrician correct for safety. This is an easy but important repair.





**GENERAL ELECTRIC SYSTEM COMMENTS**

- ⚡ ♦ We suggest upgrading the electrical system to have GFCI protection at all currently recommended locations. See the Electrical Addendum for further information.
- ⚡ ♦ Back up generator system noted. We did not review this system. The listing agent asked that no attempt be made to start. We suggest verifying the system was installed under an approved municipal permit and that you obtain the maintenance history and schedule. Typically manufacturers advise annual service by a qualified electrical contractor. These units should also automatically cycle--typically on a weekly basis.

**9. Heating and Cooling**

Our inspection of the heating and cooling system included a visual examination of the system's major components to determine defects, excessive wear, and general state of repair. Weather permitting, our inspection of a heating or cooling system includes activating it via the thermostat and checking for appropriate temperature response. Our inspection does not include disassembly of the furnace; therefore heat exchangers are not included in the scope of this inspection. Ceiling fans are not typically inspected as they are not within the scope of the inspection.

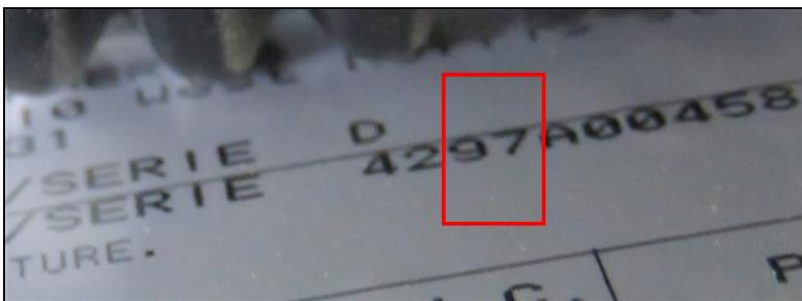
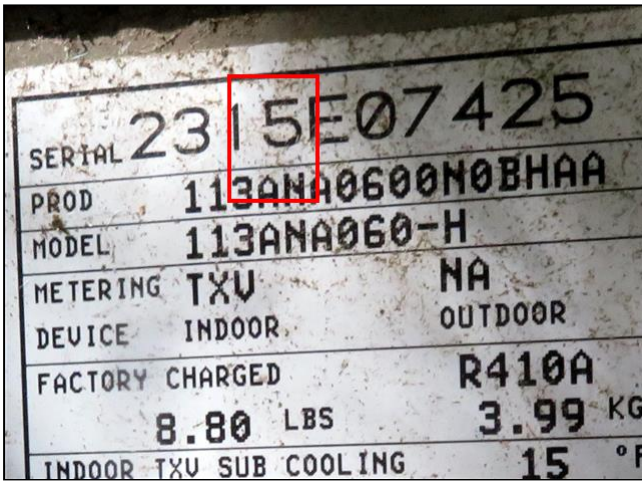
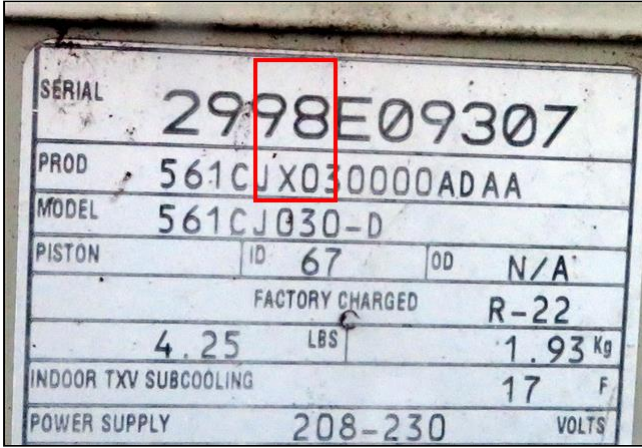
**Styles & Materials**

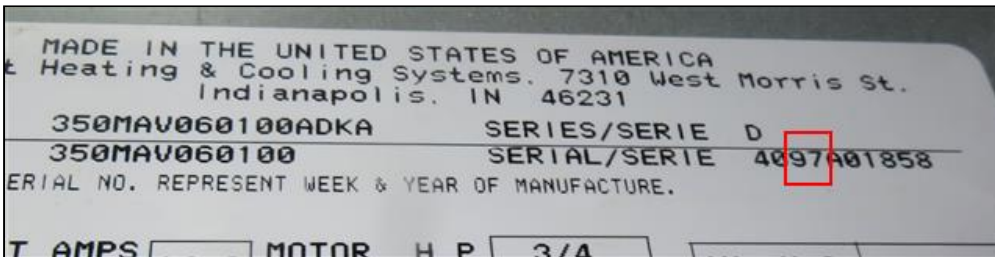
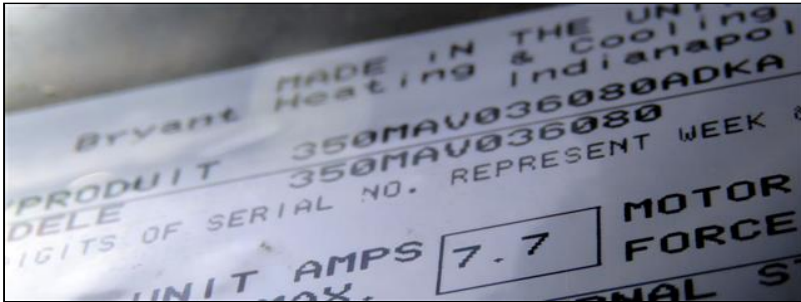
<b>Heat System Brand:</b> Bryant	<b>Number of Heat Systems:</b> Two : Also a direct vent wall heater in garage	<b>Energy Source:</b> Natural gas
<b>Heat Type:</b> Forced air high efficiency	<b>Heat System Location:</b> Basement	<b>Furnace/Boiler/Air Handler Age:</b> Greater than 20 years (beyond expected life)
<b>Filter Type:</b> Electronic air cleaner	<b>Number of central AC Units:</b> Two	<b>Cooling Equipment Type:</b> Split system with outside compressor(s)
<b>Central Air Brand:</b> Bryant	<b>Compressor/Heat Pump Location:</b> Rear	<b>Compressor Age:</b> 4 years 20 years (beyond expected life)
<b>Thermostat Location:</b> At each level		

**Inspection Items**

**Heating/Cooling System photos**







#### CLIENT INFORMATION

- ◆ Temperature permitting, inspection and evaluation of the condition of the cooling system was limited to visible components and their basic functions. We did not test amperage draw or refrigerant pressures.

A full technical evaluation of the condition of heating and cooling equipment requires extensive invasive testing that is beyond the scope of this inspection. Specialty systems, such as boilers and geothermal units should be separately evaluated by a qualified specialist. We suggest you inquire of the seller if any areas do not adequately heat or cool and obtain the paperwork for any recent repairs/evaluations.

If your air conditioning fails it might be subject to the following. On January 1, 2010, the Environmental Protection Agency placed into effect a ban on the manufacture of new HVAC systems using R-22 refrigerant. General phase out of R-22 refrigerant is currently estimated to be complete by the year 2020, at which time chemical manufacturers will no longer be able to produce R-22 to service existing air conditioners and heat pumps. Existing units using R-22 can continue to be serviced with R-22 but it is expected to gradually become expensive and difficult to obtain. New, high-energy efficient systems, will utilize new non-ozone-depleting refrigerants such as 410-A. 410-A cannot be utilized in older systems which previously used R-22 without making some substantial and costly changes to system components

**FORCED AIR FURNACE** [Inspected]

**COMBUSTION CHAMBER** [Inspected]

**BLOWER COMPARTMENT** [Inspected]

**FILTERS & DUCTWORK** [Inspected]

**VENTS/FLUES/VENT CONNECTORS** [Inspected]

**AIR CONDITIONER OPERATION** [Inspected]

- ◆ The air conditioners were activated to check the operation of the motors and the compressors, each of which appear to be in serviceable condition. A detailed review of the cooling capacity of an air conditioning system includes pressure testing and complex measurements and calculations which are beyond the scope of this inspection. As such, we do not determine or warrant the system's adequacy for cooling this structure. Such a review can be arranged for an additional fee.

**OUTSIDE AIR CONDITIONER COMPRESSOR NOTES**

- ☒ ♦ The air conditioner fins are dirty and should be cleaned to improve the unit's efficiency and reduce stress on the unit. (Typically this can be done with a garden hose on high pressure).

The insulation on the suction line is deteriorated at the outside unit. Missing insulation on a suction line can cause energy loss and condensation. New insulation should be installed. This is an easy repair.

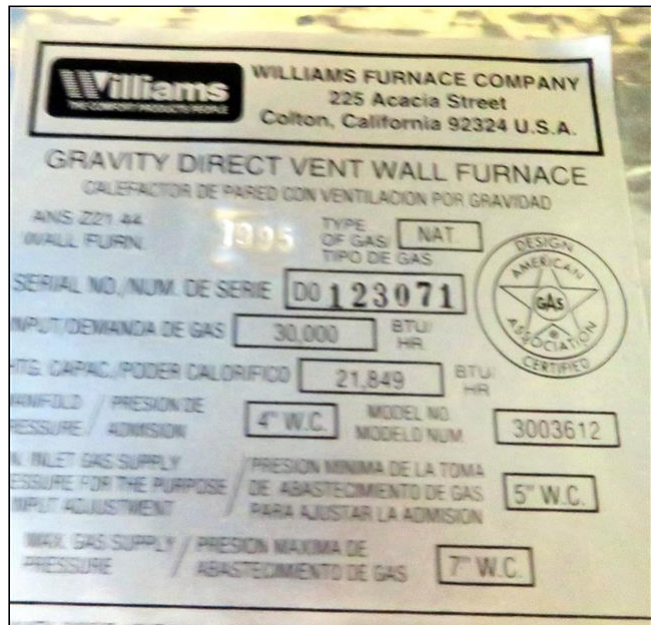
Vegetation should be trimmed at least two feet away from the exterior air conditioning unit(s) to avoid excess wear and increase efficiency.



**THERMOSTAT & DISCONNECTS** [Inspected]

**OTHER INFORMATION**

- ☒ ♦ The furnaces and one air conditioner are old and could require repair or replacement at any time.
- ☒ ♦ We were unable to light pilot on wall heater in garage and suggest having serviced by a qualified heating contractor.



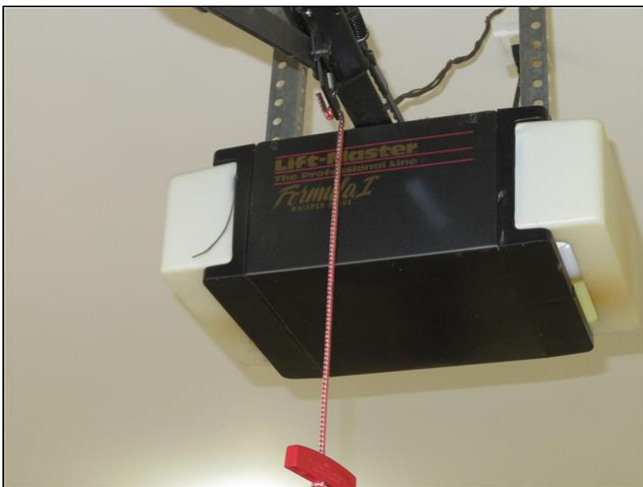
Our inspection of the garage included a visual examination of the readily accessible portions of the walls, ceilings, floors, vehicle and personnel doors, steps and stairways, fire resistive barriers, garage door openers and hardware if applicable.

**Styles & Materials**

<b>Type of garage:</b> Attached garage	<b>Garage Door Type:</b> Sectional Two doors	<b>Door Opener(s):</b> Liftmaster There are two openers
<b>Garage Ceiling Finish:</b> Drywall or plaster covered	<b>Interior Garage Wall Finish:</b> Drywall/Plaster	<b>Garage Floor:</b> Concrete
<b>Garage Windows:</b> Casement		

**Inspection Items**

**Garage photos**



**GARAGE CEILINGS** [Inspected]

**GARAGE WALLS (INCLUDING FIRE/FUME SEPARATION in ATTACHED GARAGES)** [Inspected]

**GARAGE FLOOR** [Inspected]

**GARAGE DOOR(S)** [Inspected]

**GARAGE DOOR OPENER(S)** [Inspected]

**OCCUPANT DOOR FROM GARAGE TO INSIDE HOME** [Inspected]

**PEDESTRIAN DOOR INTO GARAGE** [Inspected]

**11. Interiors**

Our inspection of the interior included a visual examination for structural and safety deficiencies. Please note that only a representative sample of accessible components was inspected.

**Styles & Materials**

<b>Interior Access:</b> Area rugs and standard amount of belongings limited access	<b>Ceiling Material(s):</b> Drywall/plaster	<b>Wall Material(s):</b> Drywall/plaster
<b>Floor Covering(s):</b> Carpet Tile Wood Area rugs	<b>Window Material:</b> Wood	<b>Window Type/Design:</b> Fixed Casement
<b>Framing:</b> Wall and ceiling framing concealed by finish		

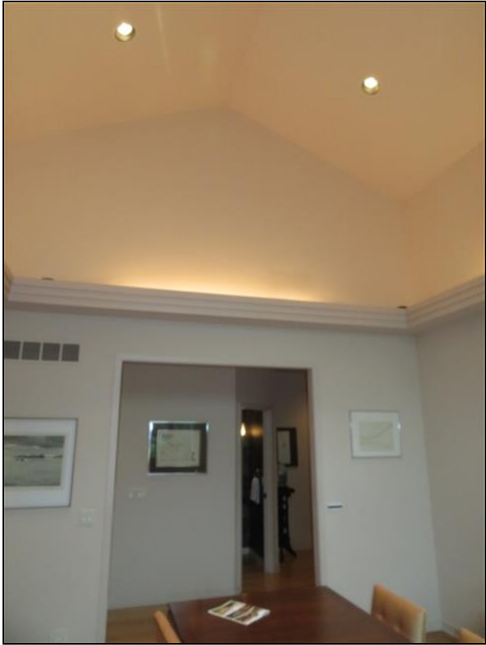
**Inspection Items**

**INTERIOR PHOTO(S)**











#### GENERAL COMMENTS ABOUT THE INTERIOR

- ◆ Cosmetic flaws are present in all buildings. Except as noted as a courtesy, we made no attempt to report on cosmetic issues such as nail pops, minor cracks, carpet tears, and other flooring flaws etc.

#### WINDOWS (REPRESENTATIVE NUMBER) [Inspected]

- ◆ There is no safety glass label visible at the windows by the entry door. If the glass can not be verified as safety glass we advise having upgraded as a safety enhancement.



**WALLS** [Inspected]

**CEILINGS**

- ♦ Water stains are visible on the basement ceiling, under the master suite. We suggest having the source of water determined and repairs made as needed. Note that the steam unit was not tested during the inspection as the breaker was shut off.



**DOORS (REPRESENTATIVE NUMBER)** [Inspected]

**SKYLIGHTS**

- ♦ No stains visible at the skylight(s).

**FLOORS**

- ♦ Some thin tile cracking noted and areas of cosmetic damage at wood floors.



**STEPS, STAIRWAYS, BALCONIES AND RAILINGS** [Inspected]

**SMOKE DETECTORS**

- ◆ The detectors are older in this structure. Experts recommend that smoke detectors be replaced every ten years and that they be installed in and outside all sleeping areas, on each level of the structure, in accordance with industry standards. Interconnected detectors are preferred so that if one sounds, the others sound. We suggest upgrading as needed prior to occupancy

**CARBON MONOXIDE DETECTORS**

- ◆ Experts advise the installation of carbon monoxide detectors in all structures. These detectors have limited useful lifespans so we suggest you acquire new detector(s) and install upon occupancy in accordance with manufacturer specifications. Regular testing should follow.

**12. Kitchen**

Our inspection of the kitchen included a visual examination of the readily accessible components to determine defects, excessive wear, and general state of repair. We tested basic, major built-in appliances using normal operating controls. Accuracy and/or function of clocks, timers, temperature controls and self cleaning functions on ovens is beyond the scope of our testing procedure. Refrigerators or other appliances were not tested or inspected unless specifically noted.

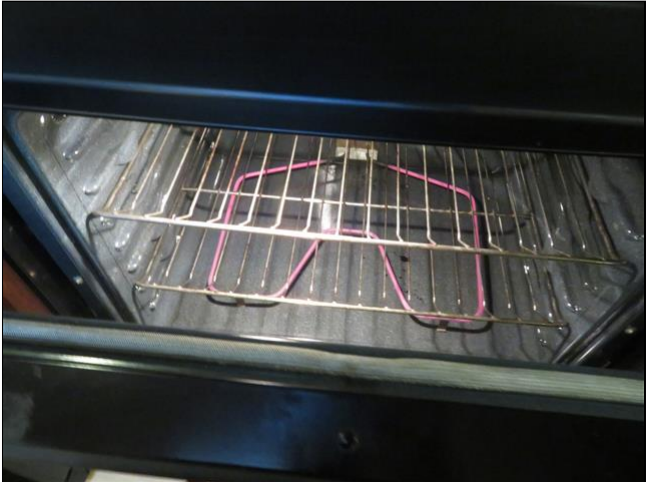
**Styles & Materials**

<b>Built In Dishwasher:</b> GENERAL ELECTRIC	<b>Exhaust/Range Hood:</b> Exhaust fan built into the range	<b>Disposer Brand:</b> INSINK ERATOR (ISE)
<b>Built in Microwave:</b> GENERAL ELECTRIC	<b>Counter Mounted Cooktop:</b> VIKING	<b>Built In Oven(s):</b> GENERAL ELECTRIC
<b>Refrigerator:</b> GENERAL ELECTRIC	<b>Trash Compactors:</b> KITCHEN AIDE	<b>Estimated appliance age:</b> 10 or more years--could require repair or replacement at any time

**Inspection Items**

**KITCHEN PHOTO(s)**







**CLIENT INFORMATION**

- ◆ Inspecting appliances is beyond the scope of the ASHI Standards of Practice. As a courtesy to the client, we checked basic function of the listed appliances only.

Note that some realtors as well as local utility providers and private contractors offer annual service contracts covering gas or electric appliances.

- SUGGESTION: Consult with your agent and/or the utility provider regarding cost, scope of coverage and the availability of such programs. You agent may offer a full home warranty. If not, one is available from our office at 800.285.3001.

All appliances should be checked during your final walk through.

**SINK(s)** [Inspected]

**CABINETS**

- ✘ ◆ One door needs repair.
- ⬆ ◆ Some misalignment noted.

**COUNTERTOP** [Inspected]

- ⬆ ◆ Gap needs sealing.



**BUILT IN DISHWASHER** [Inspected]


**RANGES/OVENS/COOKTOPS** [Inspected]

**RANGE HOOD/EXHAUST** [Inspected]

**WASTE DISPOSER** [Inspected]

**BUILT IN MICROWAVE** [Inspected]

**REFRIGERATOR** [Inspected]

 ♦ Water and icemaker function not checked.

**TRASH COMPACTOR** [Inspected]

**13. Bathrooms**

Our inspection of the bathrooms included a visual examination to determine if there were any active leaks, water damage, deterioration to floors and walls, proper function of components, excessive or unusual wear and general state of repair. Bathroom fixtures are run simultaneously to check for adequate water pressure and volume. Unusual bath features like steam generators or saunas are not inspected unless specifically discussed in this report.

**Styles & Materials**

<b>Number of Bathrooms:</b> 3.5	<b>Bathrom Ventilation:</b> Fan(s) & window(s)	
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**Inspection Items**

**BATHROOM PHOTO(S)**

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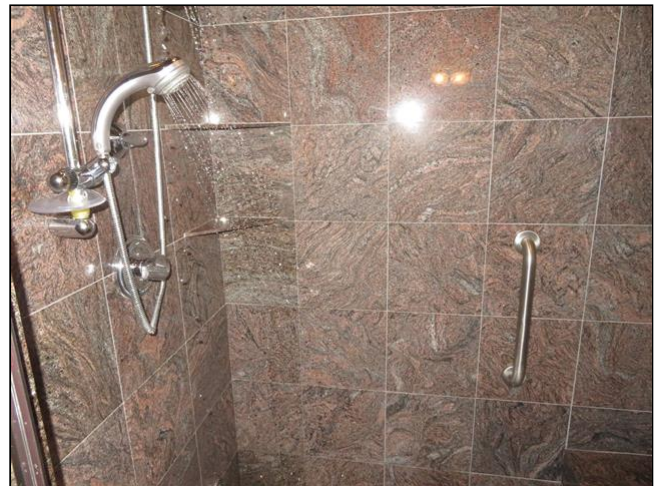












**WASH BASIN/SINK(S)** [Inspected]

**SHOWER WALLS**

- ♦ The shower diverter at one of the basement baths is difficult to operate and needs repair.

**SHOWER PAN(S)**

- ☒ ◆ Tiled shower pan(s) noted; we are unable to confirm the integrity of the concealed waterproofing liner. A definitive test for leaks in a tile shower base requires two to three inches of water left standing for up to 48 hours. There were no signs of current leaks, but this definitive test was not part of this inspection.

**BATHTUB(S)** [Inspected]**JETTED TUB**

- ☒ ◆ Pump operable but we were unable to turn off neck jets (they have their own switch). The jets can't be turned on without spraying water out of the tub until corrected. Have adjusted/repaired as needed.



- ☒ ◆ Access to the jetted tub pump is needed for maintenance purposes.

**BATHROOM VENTILATION** [Inspected]**TOILET(S)** [Inspected]**CABINETS/COUNTERTOP** [Inspected]**14. Laundry**

Testing of clothes washers, dryers, water valves and drains are not within the scope of this inspection. We inspect the general condition and accessibility of the visible water supply, drain and electric and/or gas connections and visible portions of the dryer vent. If present, laundry sink features will be inspected.

**Styles & Materials**


<b>Laundry Location:</b> First floor	<b>Clothes Washer:</b> LG	<b>Clothes Dryer:</b> LG
<b>Laundry tub:</b> Built in	<b>Dryer fuel:</b> 220/240 volt electric (behind appliance--not tested)	

Inspection Items

LAUNDRY PHOTO



CLOTHES WASHER HOOK UP

-  ♦ No water hammer device installed. If water hammer is experienced during use these plumbing devices will need to be installed for noise control and to help prevent leaks. This is typically an easy repair for a plumber.

LAUNDRY TUB [Inspected]

CLOTHES DRYER VENT [Inspected]

CLOTHES WASHER [Inspected]

CLOTHES DRYER [Inspected]

## 15. Additional Information

### Inspection Items

Water Intrusion Addendum



#### Water Intrusion and Mold Addendum

Where does the water go? Water is probably the number one nemesis of the building owner. Basement, wall and roof leaks, plumbing leaks and condensation are a constant possibility. When water is allowed to intrude or condense within the structure, the possibility of hidden damage, decay and/or mold exists.

In our report we tell you about conditions we see that can lead to water intrusion. We discuss the importance of proper grade, of monitoring and maintaining the roof, siding/trim & windows and of keeping the building envelope in good condition. If you keep your siding intact, if you maintain your roof and respond immediately to exterior, roof, attic, basement and crawl space maintenance issues, and if you keep water away from the foundation, you go a long way towards reducing the chances of water infiltration and the insidious problems water can cause. Further, it is vital to respond to plumbing leaks at once and to provide adequate attic, bathroom and crawl space ventilation.

When water problems are noted, immediate steps should be taken to identify the source(s) of intrusion and correct as needed.

#### A Word About Mold and Other Indoor Air Contaminants

Susceptibility to mold spores has become a hot topic and a controversial issue among home inspectors, lawyers, and experts in the field. Numerous companies have entered the very profitable business of delivering mold testing seminars and test results to the home inspection community. While it is understood that there is a relationship between mold and health, the fact is there are no acceptable or unacceptable levels of mold contamination set by the Center for Disease Control, the Environmental Protection Administration, or any other independent authoritative source. Further, there is no currently recognized standard for mold testing or interpretation of results. Without accepted thresholds, or a nationally recognized test standard, test results can be interpreted very differently depending on the test protocols and methodologies used as well as the tester/interpreter's personal opinion.

What do we know for sure? If you can see or smell mold, there is water, moisture or condensation that needs to be corrected. Some molds can cause health problems for some people. Any visible mold should be cleaned up or removed.

Our clients are very important to us and we believe that the testing and interpretation of mold spore counts should be left to the true experts in the field, such as immunologists and toxicologists. We do not want to mislead our clients. No matter how profitable the service, we are simply not capable of rendering sound opinions based on the level of expertise we currently have. That is why we specifically disclaim these issues in our agreement and do not inspect for or provide an opinion on the potential for, or the existence of mold or related damage in the structure.

If you have concerns about mold or other indoor air quality issues we recommend that you contact specialists in the field such as the CDC the EPA and other true experts. Be prepared to receive differing opinions from different experts. One thing that the experts agree on is the need to identify the source(s) of the mold—which is related to unwanted moisture—and to eliminate the source of moisture and to clean up or remove the mold. Please see a specialist for further advice.

For further information regarding the issues of mold and other indoor air contaminants we recommend that you start by visiting the Center for Disease Control at <http://www.cdc.gov> (insert "mold" in their search box) and the Environmental Protection Administration at <http://www.epa.gov/iaq/molds/moldguide.html> Other informative articles from a nationally recognized indoor air quality (IAQ) specialist can be found at [www.buildingscience.com](http://www.buildingscience.com) .

Don't have a computer? You can log onto these sites for free at almost any local library.

*Tips for limiting the chances of a mold problem-- Think: Clean. Dry. Well Ventilated*

Here's a few of the things you can do to reduce the risk that mold will become a problem in your home:

- Keep relative humidity low. Excessive condensation from humidifiers, for example, can cause mold to grow.
- Fix leaks immediately—whether they are plumbing or structural in nature.
- Consider getting an infrared insulation scan to find cold spots which need more insulation. Cold spots can allow moisture to condense on hidden surfaces within walls.
- Run bath fans when bathing or showering and long enough afterwards to remove all excess moisture.
- Install an exterior vented kitchen fan. Run the fan when cooking and long enough afterwards to remove excess moisture.
- Use ceiling fans to keep air circulating.
- Thoroughly dry any spills that occur, especially on carpeted surfaces.
- Be sure your dryer vents to the exterior. Clean the lint filter after every load. Clean the vent pipe regularly.
- Don't block heat registers or cold air returns. Allow air to circulate along walls, windows and inside closets. Avoid tightly packed storage against walls as this will restrict air flow and can lead to moisture buildup.
- Have your furnace and air conditioner cleaned and serviced annually.
- Consider a make-up air kit (if not already installed) for your furnace.
- When you replace your furnace and water heater, consider sealed combustion direct vent units.
- Avoid or limit use of ventless gas fireplaces as they can generate significant amounts of water vapor during operation. Have fireplaces and chimneys serviced annually.
- Remove visible moisture on windows and other surfaces.
- Run a dehumidifier in basements.
- Seal attic penetrations, such as wiring chases, plumbing vent chases and recessed lights. (**Caution:** Follow the manufacturer's instructions for recessed lights to avoid overheating).
- Fix water intrusion concerns listed in your inspection report, including roof, siding, grade at the foundation, and gutter and downspout issues as well as any reported signs of leaks.
- Keep gutters clean and well extended away from the home.
- Avoid using vinyl wallpaper—vinyl can hold moisture hidden in areas where mold can form.
- Keep your home clean.
- Don't store things in a damp basement. Provide plenty of ventilation around stored items even in a dry basement.
- Open windows in good weather.
- *Think: Clean. Dry. Well ventilated.*

*Now, let's review drainage at the foundation:*



We know that a high percentage of leaks can be prevented by the intelligent use of gutters & downspouts and by keeping the grade pitched away from the foundation (yet below siding, including brick).

Gutters are important and so are downspouts. Rain and snowfall shed a surprisingly large volume of water from roofs to the ground below. We suggest you extend downspout discharge at least 6 feet away from the foundation to reduce the chances of below grade leaks or foundation problems.

Even slab-on-grade structures can suffer from water problems—these tips apply to *all* styles of construction. Note that water problems might also lead to foundation problems, thus our concern is not only with water intrusion into the structure, but also with the foundation itself. Some soils will exert excess pressure on foundation walls if they hold too much water. Unless you have a geotechnical engineer test your soils and examine the underground drainage system for the home, you should assume that the best course is to get the water away from the structure while keeping it below the level of siding and masonry veneers.

Occasionally, even the best roof and grade drainage won't prevent a below-grade leak. In this case, you may need the services of a professional foundation contractor to stop water intrusion. Be sure to check their credentials, verify that they are fully insured and compare estimates. Be careful—some companies propose unnecessary and expensive repairs. Some use a shotgun to kill a fly.

## Electrical Addendum



### Electrical Addendum

**General Notes.** Our electrical inspection meets the ASHI standards of practice and is done by sampling visibly accessible wiring and fixtures. We do not move belongings and do not examine every fixture, outlet, wiring run, etc., nor do we remove insulation, or wall coverings. Covers are not removed, with the exception of the cover of the main electrical panel, when this can be done safely and without risking damage to finish. Much of the wiring in the home is not visible and not reviewed. Once the current occupant's belongings have been removed, it's a good idea to check all outlets with a tester and to look inside cabinets, closets and other obstructed areas before moving in your own belongings. We use a standard electrical tester to check a sample of outlets. While the tester is generally reliable, it can be fooled by certain improper wiring practices, which we cannot detect during a general home inspection. More extensive electrical testing and review can be arranged with a licensed electrician for an additional fee, to be billed at an hourly rate.

**Following is a glossary of some of the electrical terms that you may find in your report as well as information on some upgrades that can enhance the electrical system. This addendum should help you better understand the terms used in our report, why certain recommendations are given, and why various conditions are a concern. Even if no electrical defects were discovered in your home, be sure to read the sections on Arc-Fault Circuit Interrupters and Ground-Fault Circuit-Interrupters and, if you have an electric oven or dryer, the section on Dryers and ovens.**

**Remember.** because electrical defects are a safety concern, a qualified electrician should perform all electrical repairs without delay under a municipal permit. You should ask the electrician to report on any additional deficiencies he sees and make suggestions for upgrades.

**Arc-Fault Circuit-Interrupters (AFCI)** are a device intended to reduce the chance of electrical fire by recognizing arcing (generally from poor connections you can't see) and then shutting down power to the circuit. AFCI's are a new technology that only became required by the in recent years. At this time, AFCI's are installed for protection of bedroom circuits in new homes. They are worth considering as an upgrade for all dwellings; please check with your electrician for further information.

**Abandoned or Cut Off Wiring** is wiring that is no longer in service. In some cases it is still live, which is a safety concern; in others, it can be confused with functional wiring. Common areas to find abandoned wiring are garages, basements and attics. We recommend that you have wiring that is not in use checked for connection to a live source, and then removed or properly capped/terminated within an approved junction box.

**Ceiling fans that wobble or are too low** We suggest having wobbling fans re-balanced or re-mounted as needed to reduce the chance of a fan or fan parts coming off and causing injury. Wobbling fans can be a sign of improper installation, loose blades, a loose or missing mounting bracket or other deficiency. Balancing kits for ceiling fans are available at some lighting stores. We suggest checking the mounting brackets to be sure they are capable of properly holding the fan. When fans are low, there is risk of a personal injury. An informative article can be found on the web at [www.faninfo.com](http://www.faninfo.com) .

**Copper and Aluminum conductors at same terminal** is improper, because copper and aluminum expand and contract at different rates. Putting the two under the same terminal, unless that terminal is specifically designed for that purpose, increases the risk of loose wiring, which can cause unsafe arcing and corrosion to occur.

**Damaged Wire** When a wire is frayed, nicked or poorly connected, the wire is effectively smaller and more likely to overheat in the damaged area. Damage also makes contact with live wiring more likely. Due to the potential safety hazard, it is important that damaged wiring be replaced promptly.

**Doubled-up circuitry** This is a very common electric panel defect. Most electric panel termination lugs (breakers, fuses, etc.) are not designed or approved for multiple wires being attached. Adding additional wires where not approved can overload a circuit, causing nuisance tripping or loss of power. More importantly, adding additional wires can mean loose connections, which can cause unsafe arcing. Wires should be independently attached for better protection/performance, unless the devices they are attached to are approved for this use. In some cases, the connection can be made ahead of the breaker or fuse; in others, additional circuits are needed and sometimes a new panel is needed.

**Electric baseboard heaters and electric cords** Electrical cords should not be draped over electric baseboard heaters due to the risk of melting the cord, which could cause a fire. For this reason, current standards typically prohibit outlets directly above electric baseboard heat. If you have this style heating in any rooms in your home, be sure to take precautions against allowing cords to touch the heater(s) (and keep furnishings, drapes etc. safely away as well).

**Dryers and ovens (240 volt)** Recently, electric codes have been updated to improve the safety of electric dryers and ovens. The electric supply for dryers and ovens used to be three-wire-type with three prong cords. New installations must be four-wire-type with four-prong cords. If you replace an existing electric dryer or oven or move either to a new location, you may be required to have the electric supply (wire from the electric panel to the outlet) and the appliance adapted to the four-wire-type. Also, if upgrading from an old style connection to a new one, there is a required safety alteration (a bonding strap or screw needs to be removed) inside the appliance. Without the internal wiring change, the old appliance can actually become unsafe to use. To assure a safe installation, be sure to use a qualified installer.

**Exposed wiring** refers to wiring that is installed without protection from physical damage. Examples include when an electric wire is run under floor joists or rafters, along the front of studs, or is installed down or across walls. Appropriate installations might include: installing the wire through holes in floor joists, above rafters, or by enclosing the wire in conduit to meet the requirements for protection from physical damage. Exposed wiring at the exterior, inside cabinets and down walls is particularly prone to damage and should be corrected as soon as possible. **Note:** Do not store things on top of or against wiringâ€”even wiring that does not meet the technical definition of "exposed" can be damaged, causing a hazard.

**Extension Cords** should not be used for any purpose other than as a temporary power source. Permanent approved wiring is advised in place of extension cords to any permanently installed electrical component. Extension

cords should never run through walls or floors and should not be run inside cabinets as they can be more easily damaged in these areas.

**Grounding.** Until the late 1950s, *Grounding* in residential systems was required only on the main electric panel. Afterward, grounding became a requirement for all branch circuits including lights and outlets. The ground wire is normally idle. If there is a defect, the ground wire acts as an escape route for the electricity, inducing the current to flow through this wire to the ground, reducing the risk of shock or fire. We use a tester at three-prong outlets to check a sample of outlets for ground; however, this tester can be fooled by some types of miswiring. Verifying the integrity of grounding/bonding systems is a technically sophisticated procedure that is beyond the scope of a visual building inspection. Ungrounded outlets should be corrected or upgraded as needed--check with the local municipal inspector for advise on proper corrective action.

**Ground-Fault Circuit-Interrupters (GFCI or GFI)** are inexpensive devices that do a great job protecting folks from shocks at outlets. Once you've closed on the property, we suggest having GFCI protection installed wherever not present on exterior outlets and near all interior water sources. These specialized outlets (or breakers) shut the power off to a circuit when as little as .005 amp of electricity is leaking. Under normal conditions, the power flowing out through the black (or hot) wire will be equivalent to the power flowing back through the white (or neutral) wire. GFCI outlets are designed to detect these power leaks by comparing the amount of electricity going out through the black wire with the amount coming back through the white wire. Under current standards, GFCI protection should be provided in kitchens (*all* countertop outlets), bathrooms, near all sinks, in garages and unfinished basements, and at exterior outlets. ***GFCI's should be tested at least monthly***, to assure proper performance. ***To test a GFCI outlet***, plug in a night-light or lamp and push the test button. If the light goes out, your GFCI is currently working. You may now press the reset button to restore power. The test a GFCI breaker, just push the test button. Note the GFCI receptacle outlets will protect all other outlets downstream on the same circuit so you might have a reset button in a bathroom, for example, that protects other receptacles or even lights.

**Ground-Fault Circuit-Interrupters?"Ungrounded.** GFCI's may also be used for protection on old circuits where grounding is not feasible. In fact, the only time one can use an ungrounded three-prong outlet is if it is GFCI protected. An ungrounded GFCI device should be labeled "No Equipment Ground" and any protected outlets downstream of the actual GFCI device should be marked "No Equipment Ground" and "GFCI Protected." Keep in mind that appliances such as refrigerators and computers (or any appliance with a three-prong plug) ***need the ground***; so do not use a GFCI in place of proper grounding in such instances.

**Knob and tube electric wiring.** This type of wiring was standard many years ago but is now considered outdated. Often the insulation is dried out and worn, and may be deteriorated in areas that are not visible. When knob and tube wiring is present, we suggest having an electrician evaluate the integrity of the wiring. In most cases, upgrading is advised. Attic or wall insulation and belongings should not be placed over this wiring.

**Loose Wiring.** All electrical wiring should be firmly attached to framing and at fixtures. Wiring should also be fastened near each fixture, junction box, etc. to help prevent live wires being pulled loose.

**Open Knockouts.** Knockouts are openings in electrical boxes that are intended for wiring runs. Open knockouts are those that are not currently in use but that expose live wires in the box. Openings in electrical boxes should be sealed with appropriate covers to prevent accidental contact with electrical power. Knockout plugs are generally readily available and easily installed.

**Open splices.** *Open splicing* refers to electrical wiring that has been improperly cut and spliced without proper protection from physical damage or contact with live wires. Whenever an electric wire is cut, it should be properly spliced and protected at once. The splice should be encased in a covered, secure junction box to prevent shocks and other risks, including separation of the splice.

**Ovens and Electric dyers.** See **Dryers and Ovens.**

**Overfusing** is another common electric panel defect. Amateur electricians often create a dangerous situation when they fail to match the right size wire to the right size overcurrent (breaker/fuse) device. This can allow excessive current to be carried by the branch wire conductor, which is a fire hazard. Overfusing should be corrected at once. In some cases, the fix is as simple as installing a properly sized breaker. In others, the wire must be replaced to meet the power demand of the circuit. If so, this could be much more expensive because it might involve removing wall coverings to run new wires.

**Recessed lighting** may be a safety concern if insulation is too close and/or lights are improperly installed. Some units are rated for insulation contact (IC rated) meaning the manufacturer has approved them to be installed in areas where insulation contact is likely. There are specific requirements as to bulb size and installation practices. Please check all recessed lights upon occupancy for the manufacturer's recommendations for proper installation instructions (generally located inside each light). It is common to need to move insulation away from lights as well as to exchange bulbs with the proper type and wattage.

**Reversed polarity** is a sign of amateur work and refers to improper wiring of an outlet or circuit where the hot (usually black) and neutral (usually white) wires are placed on the each other's terminals (reversed). The hot wire should be installed on the brass screw (short slot side of the outlet) and the neutral wire should be installed on the silver screw (taller slot side of the outlet). Reversed polarity is generally easily corrected by minor wiring adjustments at the receptacle. It is important that this correction be made for the safe use of the outlet and those items powered off the receptacle. **Note:** An improperly wired outlet anywhere "upstream" of other outlets (on the same circuit) could cause corresponding (and appropriately wired) "downstream" outlets to show reverse polarity.

**Three-prong ungrounded outlet(s)**. In homes built before the late 1950s, it is common to have ungrounded branch electrical circuits. Since then, the addition of a third (ground) wire has enhanced safety and is required for modern circuits and the appliances they service. Two-prong ungrounded outlets may continue to perform well when used with appliances that come with two-prong cords. They should not be used with three prong cords. A grounded outlet must be used wherever a grounded (three-prong) appliance is used (refrigerators, laundry appliances, computers, etc.).

We find that many homeowners have improperly changed ungrounded two-prong outlets to newer three prong style outlets without providing a proper ground. For safe operation, we suggest grounding these outlets. Any circuit added after the late 1950s was required to be grounded. In some cases, a three prong ungrounded GFCI protected outlet can be used. See the **Ground-Fault Circuit-Interrupters** for further information.

**Ungrounded outlets**. See "**Three-prong ungrounded outlets**".

**Uncovered electrical fixture(s)**. Whenever electrical connections are made, they are required to be made within an approved, covered wiring or junction box. *Open junction boxes* should have an approved secure cover to prevent risk of shock or fire. Uncovered receptacles and outlets should also have approved covers.

## Final Walkthrough Checklist



### Final Walkthrough Pre-Closing Checklist

Please use our complimentary pre-closing checklist on your final walk through of the property. There is a time period between our inspection and closing that varies with each property. Systems can fail at any time and defects can become visible under different viewing conditions (weather change, belongings removed etc.) so we urge you to operate all systems prior to closing and check all areas that may have been hidden from view due to occupant belongings or other obstructions. Bring a couple of light bulbs to check inoperable light fixtures.

- Obtain all operational manuals, well/septic records, records of sale (disclosure statement, offer to purchase, and closing documents), warranties and receipts for recent repairs. Keep them in a file.
- Check the exterior. Pay particular attention to the roof, especially if there has been a storm since the inspection. Run the sprinklers if weather permits.

- Check all interior rooms. Check for moving damage if the homeowner moved out between the inspection and closing. Operate all windows and doors and check for broken thermal pane seals, loose hardware, etc. Check ceilings for water stains.
- Check countertops and interiors of all drawers, cabinets and closets.
- Check all areas that may have been inaccessible during the inspection due to personal storage, furniture, area rugs, etc. and check items we don't review such as cosmetic concerns, alarms, intercoms and sound systems.
- Operate all systems/appliances, sump pump and the garage door. Obtain door transmitters. Do not operate air conditioners if the temperature is below 65 degrees. Check lights (bring a couple bulbs).
- Run all faucets and toilets. Fill tubs and sinks. Check for leaks. Run whirlpool tubs.
- Check basement and/or crawl space. Look for active stains and leaks at walls, floors and under and near plumbing.
- Check for signs of pests. Many folks do preventative pest control before taking occupancy.
- If possible, check inside of the attic.
- Verify that the seller has correctly completed any promised repairs (look at receipts, permits, etc).
- Verify that the seller has notified you of any changes in the condition of the property since the inspection.
- If you haven't purchased a home warranty, check with your agent and the web and consider purchasing.

We would like to thank you for allowing us to work with you and we wish you the very best in the future. Remember that we are here for advice at anytime. Whether it's counsel on something that breaks down or suggestions on a remodeling project, feel free to give us a call.

Finally, please don't hesitate to recommend us to your friends. We won't mind a bit!

The Appreciative Staff of Buyers Protection Group

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