R. Heyl & Associates

inspections & consulting

Inspection Report

John Q. Public

Property Address:
123 Sample Drive
Saint Louis MO 00000

R. Heyl & Associates, LLC

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Date: 11/26/2010	**Time:** 11:30 AM	**Report ID:** 000
Property: 123 Sample Drive Saint Louis MO 00000	**Customer:** John Q. Public	**Real Estate Professional:**

- **R. Heyl & Associates, LLC** (RHA) performed this inspection according to the Standards of Practice and Code of Ethics of the American Society of Home Inspectors (ASHI) which are available at www.ashi.org.
- **This report** lists deficiencies visible at the time of inspection. The inspector is not required to move furniture, appliances, storage, or disassemble components beyond normal user controls nor perform destructive testing. RHA does not accept responsibility for hidden or latent defects discovered upon occupancy or during remodeling after the date of inspection. Please note that our inspection is thorough but not technically exhaustive. The intent of this inspection is to discover significant defects as it is not possible to detect every maintenance or minor repair item. Most homes continue to be occupied after our inspections, thus we do not warrant 100% discovery of all maintenance or minor repair items such as drippy faucets, isolated wood damage, light switch functionality, etc. We do not inspect for county or municipal code compliance as the St. Louis Metro area and adjacent counties have many jurisdictions, thus codes are interpreted and enforced differently. RHA has no legal authority to mandate compliance to the municipal codes and ordinances. This report does not list municipal or county code infractions.
- **RHA does not guarantee** future performance or provide a warranty, expressed or implied, regarding the inspected property after the date of inspection. Warranty policies are readily available for purchase in the State of Missouri. We are not liable for defects covered by homeowner's hazard insurance policy or items covered by a warranty program. Should you discover a defect for which you think RHA may be liable, you must notify us and provide a reasonable opportunity to re-inspect the property before the defect is repaired. If RHA is not given the opportunity to review an alleged liability, we do not accept any responsibility for same. NOTE: Even property vacant between the time of inspection and closing can develop mechanical, electrical or plumbing defects. The purchaser's pre-closing final walk-through is to confirm that all systems are operable, that maintenance or repair issues have not developed since the inspection and that any requested repairs have been completed to your satisfaction. RHA accepts no responsibility for defects that could have been observed by you during their FINAL WALK-THROUGH provided by the St. Louis Association of Realtors Residential Sales Contract.
- **The RHA building or home inspection** does not include inspection or testing for EPA listed or any other environmental hazards or materials. We do not inspect for termites or vermin. However, a termite inspection and/or radon test can be ordered from us in addition to our building or home inspection, in which case separate reports will be provided.
- **Our Inspection Report** is for the use of our client(s). This report is only for the benefit of the person(s) listed on this report unless specifically agreed to otherwise in writing.

Attendees:	**Approx. Age (years):**	**Weather Conditions:**
Clients, Client's Family Members	42	Sunny
Exterior Temperature:	**Property Front Faces:**	**Property Occupied:**
40	East	Vacant

1. Informational Notes

Observations regarding building, plumbing, electric, mechanical system or component improvement or suggestions and helpful tips that do not necessarily require immediate attention.

1.0 Information Items

1. Annual termite inspection should include close attention to pantry floor framing and floor framing adjacent laundry/half bath floor slabs as well as garage, porch and patio slabs. Remember to also inspect under kitchen cantilevered floor.
2. Additional attic insulation would be a worthwhile home improvement for energy cost savings. Install rafter tail baffles before adding insulation to prevent soffit ventilation blockage.
3. Installing additional attic ventilation between attic and roof overhang soffits would be a worthwhile home improvement for energy cost savings in summer and reduction of heat stress at roofing materials.

2. Maintenance Notes

Building, plumbing, electric, mechanical system or component conditions that have not significantly affected normal function yet warrant attention in the interest of a maintaining system or component.

2.0 Maintenance Items

1. Photos 1-2: Paint furnace flue and electrical service mast at roof to stop rust.
2. Caulk driveway joints (photo 3) to minimize seasonal movement. Use of joint filler for improved caulking performance.
3. Photo 4: Caulk window frame perimeters where caulking is missing.
4. Dryer vent cover at exterior wall is stuck open.
5. Hall bath toilet tank flush arm sticks open.


2.0 Picture 1


2.0 Picture 2


2.0 Picture 3

2.0 Picture 4

3. Repair Notes

Building, plumbing, electric, mechanical system or component that is defective, inoperable or not functioning as intended and needs repair or replacement as necessary.

3.0 Repair Items

1. Photo 1-2: Rear foundation wall has bowed inward and stabilization repairs are required. Contact reputable foundation repair contractors for suggestions and bids for repair. Stiff-backs or tie backs will probably be recommended. The diagonal cracks in rear foundation wall were caused by lateral pressure of ground and seasonal ground freeze. These cracks will require epoxy injection if ground water seepage ever occurs.
2. Photo 3: Tuckpoint the eroded mortar joints on the chimney as necessary to prevent water and frost damage
3. Photos 4-5: Sidewalk at north side of garage wall is higher than frame wall base plate and bottom of wall studs. Keep edge of sidewalk sealed with exterior caulk. Bottom of wall will require reframing with treated lumber.
4. Photo 6: NE corner of garage needs baseplate repair and replacement.
5. Photos 7-8: NE garage corner brick veneer is moving which would indicate the footing is not stable. Short term, recaulking is needed. A definitive repair would require brick veneer wall reconstruction after an appropriate footing is poured in place.
6. Photo 9: Three plumbing vent pipes at roof need flashing caps to repair deteriorated lead flashing.
7. Photo 10: Protect hall bathroom recessed light fixtures (can lights) in attic with appropriate spacing cover (light cap) so that insulation does not touch can light fixtures. Reference this website for one type of solution: http://www.tenmat-us.com/thermal-product-ff135.htm
8. Bathroom exhaust fans need to be vented with ducting up to ridge vents.
9. Garage wall receptacle should be GFCI protected.
10. Kitchen sink sprayer does not provide 100% transfer of water flow from faucet spout to sprayer; repair or replace.

3.0 Picture 1 - Top center of rear basement wall.

3.0 Picture 2 - Top SW corner of rear wall.

3.0 Picture 3

3.0 Picture 4

3.0 Picture 5

3.0 Picture 6

3.0 Picture 7

3.0 Picture 8

3.0 Picture 9

3.0 Picture 10

4. Structure

Structure was inspected per ASHI Standards. Our inspection of the property is a visual examination of the exposed and readily accessible areas. We do not perform load calculations or soil analysis. If property has a

finished basement or excessive storage in house/garage/basement our visual inspection is limited to accessible areas. The findings in this report are based on our experience and opinion; it reflects conditions observed at the time of inspection.

4.0 Foundation

The foundation walls are poured in place concrete construction; full basement design. Rear basement foundation wall has bowed inward and needs structural repairs (see commentary in "Notes").

Shrinkage cracks, such as those visible in this foundation (except for rear wall), are common in concrete construction but are not considered structurally significant. However, the portion of cracks below grade could become a point of ground moisture penetration as evidenced by the cracks that have had epoxy injection. If crack seepage is ever observed, epoxy injection of cracks should provide satisfactory moisture control as long as exterior gutters are properly maintained and yard drainage is directed away from the foundation.

Laundry room and half bath are constructed on a concrete slab on grade foundation.

4.1 Basement

Basement floor slab was in satisfactory condition with no evidence of significant cracking or movement. Existing cracks or future hairline cracks that might develop are typical as floor is a floating slab by design thus some seasonal movement is expected. One symptom of a floating slab that you might notice over time is doors sticking during extended wet weather or drought conditions, which would be considered typical.

Basement had no evidence of chronic recurring seepage, dampness or odors at this time. However, this comment does not guarantee a dry basement in the future. NOTE: Ground conditions can change and unusual rainfall can create subgrade moisture issues. Therefore, ongoing exterior drainage control is most important. Keep gutters and downspouts in good repair and clean. Yard care should diligently maintain positive drainage away from foundation at all points. Be sure to read the seller's disclosure and make a direct inquiry of owner regarding any history of a damp or wet basement. R. Heyl & Associates is not responsible if basement ground water seepage occurs in future.

4.2 Floors

The visible floor structure consists of standard wood joists with typical floor sheathing for age supported on the exterior foundation walls with steel beams and columns at the center. Visible areas of the floor framing system are in typical condition and performing as intended, consistent with the age and style of construction.

4.3 Walls

The exterior bearing walls are standard frame construction. The walls had no evidence of significant or reportable differential movement; walls are performing as intended.

4.4 Roof

The roof structure consists of standard wood joists and rafters with typical roof sheathing for age. There were no visible damaged framing members or signs of significant differential movement. The roof structure appears to be performing as intended.

5. Roofing

Roofing was inspected per ASHI Standards. We walk on the roof only when it can be done safely without special equipment and will not cause damage to the roofing materials. Otherwise, roofing is examined from ladder placed at roofs edge or from ground with binoculars. Specific prediction as to the actual remaining life of existing roofing application(s) or when leaks will occur in the future is not possible. Our commentary concerning roofing condition should not be considered nor is it a warranty or guarantee.

5.0 Composite

Architectural composite roofing shingles were in good visual condition and could have been installed within the last five years or so. Architectural grade shingles are heavier weight and have a longer expected service life vs. regular tab shingles; usually 20-30 years from the date of application. Actual service life depends on weather conditions, roof pitch and other variables.

5.1 Flashings

There were no apparent roof flashing deficiencies at this time except for plumbing vents pipes at roof (see "Notes"). Flashing areas are vulnerable to leaks, therefore, all roof flashing areas should be examined annually so that maintenance and/or repairs can be performed on a timely basis.

5.2 Gutters & Downspouts

Aluminum gutters w/helmets and downspouts were in reasonably good visual condition for age. Inspect gutters and downspouts every spring, fall and December; be sure to keep gutters/downspouts clean, secure and well maintained.

5.3 Chimney

The masonry chimney above roof needs spot tuckpointing. Review chimney, its flashing and top of chimney cap annually. Be sure to tuckpoint on a timely basis when loose or cracked mortar joints are observed. Also caulk or patch chimney cap when cracks are observed and make sure chimney flashing is kept well secured and sealed as needed.

6. Exterior

Exterior of property was inspected per ASHI Standards. Exterior wood components are randomly probed. There might be areas of deteriorated wood that are hidden/covered by recent paint and/or added maintenance free coverings which will not be detectable. Vegetation and trees are only examined to the extent that it affects the building. We do not inspect screening, storm windows, shutters and awnings unless noted otherwise. Fencing, invisible fences, recreational facilities, yard accessories, outbuildings, break-walls and docks, pools, hot tubs and patio equipment/grills are not part of this inspection. Geological (soil) testing is not within the scope of this inspection.

6.0 Exterior Materials

The exterior walls have brick veneer and vinyl siding. Roof overhangs have been enclosed with maintenance free fascia and soffits. Exterior materials were in typical and satisfactory condition for age accept for any commentary in "Notes". Anticipate normal maintenance requirements in the future i.e. caulk exterior openings/joints when needed; keep siding and maintenance free materials secured if loose areas are observed.

Added brick veneer wall resting on angle iron was installed to replace siding or a past brick veneer wall that were damaged by inward movement of rear basement foundation wall.

6.1 Doors & Windows

Doors were in acceptable condition relative to age. We did not specifically check the door locks for function, but recommend as a best security practice that locks be re-keyed after closing. FYI- All houses have some seasonal movement depending on weather conditions. Therefore, an interior door rubbing on the side or top of door jamb occasionally at different times of year is not unusual for this area.

The Pella clad wood window glazing is a mix of interior storm panes w/slim shades and thermal glass panes. The door and window panes were clear at this time. If you notice condensation or cloudiness inside the thermal panes in the future, this indicates that the thermal pane has a broken seal which minimizes energy efficiency and will eventually become cosmetically unacceptable relative to view. Replacement is the only corrective measure for this condition and will restore thermal efficiency. Broken seals in many cases are difficult to see and can appear suddenly with a change in the weather. Inspect the window panes carefully during your pre-closing walk through. R. Heyl & Associates will not be responsible for thermal pane deficiencies observed after the date of inspection.

6.2 Porches

Covered porch structure and concrete slab were in satisfactory condition with no evidence of differential movement or current repair requirements. Porch slab is somewhat newer (less than 10 years old).

6.3 Flatwork

The concrete drive, walks and patio slabs were in typical condition relative to age. Existing shrinkage cracks and future cracks that might develop are normal for exterior flatwork. Keep cracks and joints sealed with appropriate caulk or cement products in order to minimize seasonal movement due to ground moisture and frost heave.

6.4 Yard Drainage

Yard drainage generally appears satisfactory relative to avoiding collection of water next to the foundation. However, monitor the house perimeter during heavy rains and make any necessary corrections if standing rain water is observed. Always maintain positive drainage away from the foundation at all points. Include attention to the preceding in any future landscaping changes.

7. Garage

Our inspection of the garage included a visual examination of the readily accessible areas of walls, ceilings, floors, doors and garage door operator(s) if applicable.

7.0 Garage

The garage door operator responded to wall mounted control; door opened and closed normally. The photo electric safety reverse was functional. The garage structure was in acceptable physical repair except for commentary in "Notes". The concrete floor slab is in satisfactory condition. Existing cracks or future cracks that might develop in garage slab are typical as this is a floating slab by design.

8. Ventilation/Insulation

Insulation and ventilation areas of property were inspected according to ASHI Standards. Attic and crawl areas (if applicable) were only viewed from access openings unless noted otherwise on this report. The inspector does not disturb insulation or vapor barriers nor comment on or test for indoor air quality. As a courtesy, we look for evidence of unusual pest and vermin activity in the attic and home. However, a pest and vermin inspection is not part of this report. Ceiling fans are not within the scope of this inspection unless listed otherwise in this report.

8.0 Ventilation - Attic

Attic ventilation is provided by ridge and soffit vents . The present ventilation appears adequate for ambient air moisture control and reduction of heat load. *Increase ventilation openings between attic rafter tails and roof overhang soffit for improved attic ventilation.*

8.1 Ventilation - Fans

All the installed ceiling fans responded to brief test operation, however, individual fan speeds, balance and reverse features were not necessarily checked. FYI: The direction a ceiling fan rotates makes little difference in energy use and is simply a personal preference decision.

The whole house fan responded to controls and ran normally. This fan can shorten your central air conditioning season, however, it may increase allergy symptoms. Energy Tip: Cover the louvered openings in the winter to prevent heat loss into attic. Also, cover when central air conditioning system is in use to prevent heat gain from attic into house. The easiest way to do this is to use an old heavy blanket and cover the fan in attic. Be sure to tape fan switch in the off position when fan is covered.

8.2 Insulation - Attic

The current attic insulation factor is less than R-10 is much lower than the current standard of R-38 to R-60 for Zone 4 as listed at: www.energystar.gov. Adding insulation will significantly reduce heating/cooling cost. If your expected length of residence is long term, install more than R-50. *FYI- There are usually tax credits available for residential energy improvements; you might wish to investigate this further at the aforementioned web site.*

NOTE- Before adding insulation in attic, vent bathroom exhaust fans up to ridge vent and install rafter tail baffles.

8.3 Insulation - Wall

Type and amount of insulation at wall cavities was not specifically confirmed, however, the combination of

insulation and wall sheathing materials in frame houses of this age usually provide a wall insulation factor of approximately R-11 to R-13.

8.4 Insulation - Basement

There is no visible insulation in the basement. It is helpful to insulate the bandboard area at the top of the foundation. Fit sections of fiberglass or rigid insulation between the ends of floor joists at bandboard.

There are insulation batts between kitchen cantilevered floor joists and there is room for more if desired.

9. Heating & Cooling

Our inspection of the HVAC system included a visual examination of major components per ASHI Standards. Operation of heating or cooling equipment is from normal user controls only i.e. activation from thermostat (s). Our inspection does not include disassembly of equipment or ductwork; therefore the visual condition of internal components such as heat exchangers and evaporator coils are not within the scope of this inspection. Exterior mounted electrical disconnect boxes for A/C equipment are not opened unless noted otherwise in report. HVAC specific load calculations and HVAC ductwork capacity calculations are not part of this inspection.

9.0 Warm Air Furnace

The 90% plus energy efficient gas fired forced air furnace responded to the thermostat and operated normally. Unit is 9-10 years old. Typical service life of forced air furnaces from the date of installation is 20-25 years.

Laclede Gas Company should inspect the furnace, all gas fired appliances and gas piping before closing; this separate inspection is a part of most real estate purchase contracts in the St. Louis Metro Area. Laclede Gas Company inspection standards are rigorous and they are the final authority on the operational safety of all gas equipment.

Energy Tips: 1) Consider setting the thermostat fan control in the "ON" position during cooling as well as heating season especially if your home is multi-level, two story or has vaulted ceilings. Studies have shown that continuous operation of the blower fan reduces air stratification, improves comfort and increases efficiency. 2) Consider having an annual service check of the furnace and air conditioning system by an HVAC professional in the interest of preventative maintenance. 3) If you have a fireplace, keep the damper closed when not in use (keep the damper partially open for gas fireplace with a standing pilot). 4) Set-back thermostat setting in heating season and set-up in cooling season when you are not home. Programmable thermostats make this process much easier. A set-back of 8-10 degrees during heating season is recommended when you are not at home or have retired for the evening. A set-up of 6-8 degrees is recommended during cooling season when you are not home. Approximately each degree of set-back or set-up equals 2-3 percent energy cost savings for that time time period.

9.1 Combustion Venting

Water heater combustion gases exit the house through a typical class "B" metal flue pipe; there were no readily visible repair requirements at this time. Furnace combustion gases exit the house through a PVC pipe at the side of the house which is typical for high efficiency furnaces; there were no readily visible repair requirements at this time. The Laclede Gas Company house sale inspection will be more detailed as their standards are stringent and subject to change

without notice.

9.2 Warm Air Distribution

A HVAC system blower fan circulates air through standard ductwork. Where observable, the distribution system looks in good repair. Every section of the ductwork could not be inspected.

Regular return air filter cleaning or replacement is one of the most important homeowner responsibilities. The interval varies by the type of filter. Some premium grade disposable products suggest replacement only two times annually. However, the standard medium grade disposal filters need changing four times- spring, mid-summer, fall, and mid-winter. Economy grade filters should be changed monthly during heating and cooling seasons.

9.3 Humidifier

The humidifier equipment was operable when furnace was checked. FYI- Clean interior of unit and components annually and turn off spring through summer. Consult owner's manual for manufacturer's recommended maintenance procedures.

9.4 A/C Equipment

The split system (evaporator coil inside and compressor/condensing unit at exterior) central air conditioning equipment was not turned on because the outside temperature was below sixty degrees and cold weather operation risks damage to the compressor. If possible, verify that the equipment is functional and cooling before closing. Operate the system for at least five minutes. Look for a 15 to 20 degree temperature difference between supply and return air ducts.

Compressor/condensing unit is 13-14 years old. Typical service life of A/C equipment is 12-20 years. The electrical disconnect box at the exterior compressor was not opened.

Maintenance Tips: 1) Spray the condensing coils with a garden hose during the summer to keep them clean which will improve operating efficiency. 2) Disconnect the air conditioning system 240-volt circuit during the winter months. This prevents cold weather operation, which can damage the compressor. 3) Do not wrap or cover the compressor during winter. It is not necessary and can actually increase rust. 4) Do not plant foliage close to exterior unit. For the best air flow provide a minimum 18 inches of clear air space around the compressor.

FYI: Go to the following website for important homeowner information regarding future repairs or replacement of residential A/C equipment relative to the phase out of freon R22: http://www.epa.gov/ozone/title6/phaseout/22phaseout.html

9.5 A/C Distribution

The air distribution for the cooling system is identical to the heating system. Refer to the ''Heating Distribution'' section above.

9.6 Fireplace

The house includes as a masonry fireplace with a tile lined chimney. Damper was operable and the sections of flue visible from firebox were clear and clean at this time. Flue was not 100% visible. If fireplace is used for wood burning, flue cleaning will be necessary in the future when creosote is 1/4 inch thick or greasy looking. The frequency of use, type of flue, moisture content, wood species and size of fire all contribute to how often cleaning is necessary. A clean flue is the best protection against a chimney fire.

Hairline cracks in tile flue liner that exist or that might develop in the future are not considered a repair issue in our opinion as long as flue is kept clean. Conversely, some chimney sweeps consider any crack in a flue liner a repair requirement, thus R. Heyl & Associates do not accept

any responsibility for repairs recommended by a chimney sweep regarding a crack in a tile flue liner.

Gas logs are not part of this inspection and will be checked by Laclede Gas Company house sale inspection.

10. Electrical

Electrical system was inspected per ASHI Standards. Inspection included a visual examination of readily accessible components and a random sampling of electrical outlets. Every receptacle, switch and light fixture at property was not necessarily operated. Operability of exterior light fixtures and yard lighting are not part of this inspection unless listed otherwise. Electrical load calculations for present use or future use as well as amperage and voltage testing are not part of this inspection. Telephone, internet, video, audio, intercom, security systems and any other low voltage systems at property are not within the scope of this inspection.

10.0 Service Entrance

The 200 amp 240V overhead supplied exterior electrical service components are securely attached to the building and were in good visual condition with no apparent repair requirements at this time except for painting maintenance at mast head.

10.1 Panel

The 200 amp 240V single buss breaker panel is well secured and there were no apparent signs of corrosion, arcing or burn marks at interior components or breakers.

10.2 Grounding

The electrical system is grounded.

10.3 Wiring

The original house interior branch circuit wiring is aluminum NM with some added copper circuits. Based on spot checked outlets, would be considered old technology. The visible areas of wiring appeared acceptably installed.

BRIEF HISTORY OF ALUMINUM WIRING- Based on our research and inspection experience, the use of aluminum wire is not a reason to avoid buying a house. However, there are some issues regarding aluminum wire that homeowners should be aware of. Builders began using aluminum wire in 1965 when the price of copper wire sky-rocketed. From 1965 through 1980 a considerable number of houses and condominiums were wired with aluminum and although it is no longer used for branch circuits, aluminum wire is actually still code permitted in most areas of the United States.

Concerns are restricted to single conductor aluminum wire used for branch circuits, not the stranded heavy gauge aluminum cable still used for service entrance and larger appliances. While most studies show that aluminum wire is more susceptible to electrical problems than copper wire, no study or report has demonstrated conclusively that there is enough of a difference to indicate that aluminum wire should not be used. However, single conductor aluminum wiring does have more of a tendency for loose connections than copper. It should be noted that electrical problems for the most part occurred in the mobile homes and RV's

because receptacles and switches being used in these manufacturing industries had steel screws. When undetected, this condition sometimes caused arcing and overheating which in turn caused fires. In order to correct the problem, a change in code regarding installation methods for aluminum wiring occurred in 1973, resulting in the wiring before and after 1973 being labeled "old" and "new" technology respectively.

NEW TECHNOLOGY- Homes constructed with aluminum wire since 1973 are considered "new technology" as they were required to comply to the new electrical code **which required UL listed circuit breakers, receptacles, and switches with aluminum compatibility labeling; CO-ALR or CU-AL** (receptacles and switches are stamped where illustration says "Acceptable Wire"). These devices do not have steel connection screws and screw heads are larger to keep the connections tighter. If a receptacle, switch or breaker ever needs to be replaced, make sure the replacement item is labeled for use with aluminum wire. Another less common correction uses small pieces of copper wire "pigtailed" between the aluminum supply wire and an unlabeled electrical device. Done properly, this method works well, but it has gone out of favor because of the expensive equipment required to crimp the wires together properly. Note- Whether a house has "new or old technology", common sense also dictates that you should never ignore or take lightly any sign of an electrical problem.

OLD TECHNOLOGY- Unless upgraded later, homes constructed and wired with aluminum between 1965 and 1973, have "old technology" wiring. Even under old technology conditions, only a minuscule percentage of aluminum connections have actually caused fires in homes and buildings. Again, the majority of documented problems were in the mobile home and RV industry. It is easy to reduce potential for electrical failure by paying attention to the following-

- Warm cover plates
- Arcing at receptacles or switches
- Outlets or circuits that do not work
- Excessive light flickering or dimming
- Burned wiring, oxidation or corrosion on electrical connections
- When replacing receptacles and switches use CO-ALR devices

SUMMARY- New technology aluminum wiring should perform satisfactorily without specific maintenance attention. Old technology aluminum wiring that was installed by an electrician usually performs satisfactorily. There are no code requirements to make improvements and insurance companies currently do not refuse insurance if a home has aluminum wire. NOTE- Homeowners should look for the trouble signs listed above and correct any indication of problems immediately, whether a home has aluminum or copper wire.

10.4 Receptacles & Switches

Receptacles are three-slot design and switches are mostly standard toggle style. This inspection included a check of randomly sampled, accessible receptacles and switches using a standard multi-tester plug-in device for receptacles and turning interior lighting off and on at the wall or pull switches if fixtures had light bulbs. Outlets behind heavy furniture or otherwise inaccessible were not checked. The tested receptacles had no indications of open grounds or reversed polarity and interior light fixtures without dead or missing light bulbs responded to switches.

10.5 GFCI Protection

This residence has GFCI protection at most locations required by present day standards. The installed GFCI's responded appropriately to a test device. Additional GFCI's should be installed at recommended areas where they are not in place. GFCI's (Ground Fault Circuit Interrupters) are safety devices for use in wet areas. Present day standards require them at bathrooms,

kitchen sink counters, unfinished basement areas and exterior locations. Local authorities may require GFCI retrofit in older construction at a change of ownership. A single GFCI device can control additional receptacles "downstream", and you should become familiar with the network of controlling units; test them regularly. Do not connect laundry equipment, sump pumps, garage door operators, refrigerators or freezers into GFCI receptacles.

11. Plumbing

Plumbing was inspected per ASHI Standards. This report only reflects visually detectable conditions at the time of inspection. Condition of water and waste lines below grade or hidden in walls and ceilings can not be evaluated. Our review of the plumbing system does not include landscape irrigation systems, water wells, cisterns, water quality, off-site community water supply systems, or private waste disposal (septic) systems unless specifically noted otherwise. A sewer lateral inspection is not part of this inspection unless ordered separately. Note: Concealed plumbing leaks are not necessarily detectible in the course of a normal inspection, especially if house has been vacant. It should also be noted that the majority of waste and water piping are not visible in a house with a finished basement or house built on a slab on grade foundation. Our inspectors assume no liability for the presence or functional condition of the local Water Company yard stop box.

11.0 Water Supply & Distribution

The house has a public water supply running through a copper service pipe with copper interior distribution piping. The main interior shutoff valve is located in basement. Main shut off valve was not operated.

The water piping appeared in typical condition. Every section of the water piping was not visible and shut off valves for fixtures were not operated. During the inspection the water was left running for several minutes at each sink and tub/shower. Toilets were flushed at least six times at each bathroom.

11.1 Waste Vent & Drain Piping

The waste piping is the original cast iron and the main floor drain is located in the basement utility area. The visible waste/vent pipes had no apparent active leaks or other reportable repair requirements at this time.

Inspection of the subgrade sewer drain pipes is beyond the scope of this visual inspection. Sewer video scanning of the subgrade waste pipes is the only way to ensure there are no clogged or defective sections.

11.2 Fuel Piping

The readily visible sections of the gas pipes appear to be in acceptable condition. Every section of the gas piping and all valves were not inspected. The Laclede Gas Company house sale inspection will review the gas pipes for leaks and perform a more detailed inspection of all gas appliances, valves, connections and piping.

11.3 Hot Water Equipment

The 50 gallon gas water heater was in typical condition for its age (5-6 years old). Unit was in operation with no evidence of active leaks. Vent pipe and relief valve were in place. The average service life of gas water heaters from the date of installation ranges from 15 to 25

years.

11.4 Exterior Hose Faucets

Hose faucets were turned on and had no visible leaks at this time. FYI: Do not leave hoses connected to exterior faucets during winter months; always disconnect hoses in the fall. Hoses left connected during winter greatly increase the risk of freeze damage. Turn off interior shut valves for hose faucets (if applicable) and drain the lines by opening the hose faucet, even if the faucet is a freeze resistant type. Check the interior piping and valves for leaks when faucets are turned back on in the spring.

12. Bathrooms

Bathrooms are inspected per ASHI Standards. This entails operation of fixtures from normal user controls and a visual inspection of accessible surfaces. Bathroom faucets are run simultaneously to check for adequate water pressure. Toilets are flushed at least three times each. Non-typical bathroom upgrades such as shower/tub steamers or saunas, are not inspected unless specifically listed in this report.

12.0 Fixtures

There are 2.5 bathrooms. Plumbing fixtures were operated; there was adequate water flow and drainage with no evidence of active leaks at this time. Bath finishes were in acceptable condition. Bathroom exhaust fans were operable.

Tub/shower walls were solid when pushed on. Note: Timely caulking maintenance whenever cracks or gaps are noted at existing caulk is important to prevent moisture problems at walls or subfloor. When re-caulking tub/shower edges and corners, remove caulk and clean these areas before applying new caulk. Use a good quality silicone bathroom caulk. FYI: Timely grouting maintenance at tile tub/shower walls is important for preventing moisture penetration into walls behind tile. When cracked or loose tile joints are observed, rake joints and re-grout immediately.

13. Laundry

Operation of washers, dryers, laundry water valves and drains are not within the scope of this inspection. We inspect the visual condition of readily accessible water pipes/valves, drain, electric/gas connections and dryer vent. If present, laundry sink fixtures will be operated.

13.0 Laundry

The laundry area is set up for a 3-slot plug, 240V electric gas dryer. The laundry faucets and drain were not tested during this inspection.

NOTE- Clogged dryer vents are one of the more common causes of house fires. It is important

to inspect vent cover and ducting annually to ensure absence of excessive lint build-up that might cause blockage of air flow. Dryers also lose efficiency if air flow is restricted by lint accumulation even if vent cover is not clogged completely. FYI- If vent ducting is going to be replaced or added, vinyl flex ducting is not recommended; use aluminum flex ducting or rigid metal vent piping.

14. Kitchen

Inspection of the kitchen was performed per ASHI Standards. We turn on kitchen appliances from normal user controls. Accuracy and calibration of clocks, timers, and temperature controls are beyond the scope of our inspection. Self-cleaning functions are not tested. Refrigerators, ice-makers and trash compactors are not inspected unless specifically noted; only appliances listed in this report were operated.

14.0 Kitchen

Kitchen finishes were in acceptable condition relative to age. Kitchen sink plumbing fixtures were functional with adequate water flow and appropriate drainage with no evidence of leaks at this time. Garbage disposal was operable.

Electric range and oven burners responded to controls. Dishwasher was run through a normal cycle and bottom of interior drained completely with no evidence of leaks. Note- Our dishwasher check does not verify the operability of internal components such as impellers or sprayers nor does it verify quality of dish cleaning. Microwave heated a wet object; exhaust fan is vented to exterior.

15. Interior

A visual inspection was completed according to ASHI Standards. The inspector was not required to inspect the condition of finishes such as paint, wallpaper, carpeting; window/door treatments and related hardware; to operate central vacuum systems or built-in household appliances not located in the kitchen, nor indoor recreational facilities. Inspection or testing for lead, asbestos, radon, mold or other environmental conditions are not part of this inspection unless a radon test was ordered separately.

15.0 Interior

The interior walls, ceilings and floors were in acceptable condition relative to age with no evidence of unusual movement. Overall cosmetic condition and housekeeping are a subjective determination based on individual standards and this report provides no commentary on this subject. FYI: Minor cracks near doorways, windows, ceilings and corners that exist or might develop are typical for a house of this age and require cosmetic attention only. Living room ceiling crack is due to overhead ceiling joist beam location (photo 1).

The operation of smoke detectors was not part of this inspection; confirm local municipal requirements regarding location. Test existing detectors and/or install new units when you

move in as required by local authorities.

Note: Carbon Monoxide Detectors (CMD's) are reasonably priced and are encouraged in all homes. FYI: CMD's manufactured after October 1998 are more likely to perform properly; thus, if this home has CMD's, replace units that are more than ten years old. Because carbon monoxide is colorless and odorless, never ignore an alarm, even if you feel no adverse symptoms. For additional information about carbon monoxide, go to the American Lung Association web site: http://www.lungusa.org/.

Inspecting and testing for mold, fungi or micro-biologicals (MFM) are not part of this inspection. People have varying sensitivities to these conditions and there are a cases where some individuals have serious allergic reactions. You may wish to have an additional environmental inspection performed for molds or other indoor air contaminants if you have allergies or health conditions that are sensitive to MFM. Additional information is available at the EPA's web site: http://www.epa.gov/epahome/learn.htm

FYI: Mold is sometimes discovered under carpets, behind drywall/wallpaper- particularly in bathrooms, as well as at other water use locations. If you remove drywall, carpet, wallpaper or otherwise open-up areas when remodeling, mold might be discovered. R. Heyl & Associates accepts no responsibility for mold that might be found subsequent to this inspection.

Note: The best time to have a general pest control treatment performed is when the house is vacant (and after cleaning) before moving in.

15.0 Picture 1

INVOICE

R. Heyl & Associates, LLC
101 W. Argonne #61
Kirkwood, MO 63122
314-504-8504
Inspected By: Richard M. Heyl

Inspection Date: 11/26/2010
Report ID: 000

Customer Info:	Inspection Property:
John Q. Public **Customer's Real Estate Professional:**	123 Sample Drive Saint Louis MO 00000

Inspection Fee:

Service	Price	Amount	Sub-Total
RADON TEST	135.00	1	135.00
TERMITE INSPECTION 1-	60.00	1	60.00
Home Inspection 1-	300.00	1	300.00

Tax $0.00
Total Price $495.00

Payment Method: Check
Payment Status: Paid at Inspection
Note:

R. Heyl & Associates, LLC

101 W. Argonne #61
Kirkwood, MO 63122
314-504-8504

Report Attachments

ATTENTION: This inspection report is incomplete without reading the information included herein at these links/attachments. Note If you received a printed version of this page and did not receive a copy of the report through the internet please contact your inspector for a printed copy of the attachments

Wood Destroying Insect Inspection Report

Termite Identification

Aluminum Wire Info