

Sample Structural Inspection Report For:

1234 Almost Heaven, Charleston, WV



Inspection Date:
March 31, 2014

Prepared For:
Mr. & Mrs. Homeowner

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Report Overview

This report is limited to the structural components of the house and items that may directly affect the structure of the home. Please refer to Scope of Inspection section on the following page and the Inspection Agreement previously provided to you for a more detailed explanation of the scope of this inspection.

Each section within the report contains three subsections: Components, Observations, & Limitations.

- The Component subsection contains a list of the home's various components.
- The Observations section contains a list of concerns along with any applicable pictures and diagrams.
- The Limitations subsection contains a list of items or areas that are typically not included in a standard home inspection or were excluded due to the specific circumstances present during the inspection.

This report reflects the condition of the property at the time of the inspection only. Although some references to time may have been made, there is no way to predict or guarantee the lifespan of any component or predict the rate of movement during a one-time inspection. As with all homes, unexpected repairs should be anticipated. This inspection report should not be construed as a warranty or guarantee of any kind.

THE HOUSE IN PERSPECTIVE

This is a well built home that has had some structural movement. As with all homes, ongoing maintenance is required and improvements to the systems of the home will be needed over time. *Apart from the structural movement, the improvements that are recommended in this report are not considered unusual for a home of this age and location.* Please remember that there is no such thing as a perfect home.

CONVENTIONS USED IN THIS REPORT

For your convenience, the following conventions have been used in this report.

- **Major Concern:** Denotes a system or component which is considered significantly deficient or may result in significant expense. A Major Concern may also represent a Safety Issue. Major Concerns are significant deficiencies that are not typical for a house of this age or construction and will likely impact the property or its occupants in the short-term.
- **Investigate:** Denotes a specific area where a component could not be fully inspected and further evaluation is recommended as a defect is suspected. It is recommended that this area of concern be fully evaluated prior to closing to prevent assuming a potential liability.
- **Safety Issue:** Denotes a condition that is unsafe and in need of prompt attention to prevent possible injury to the occupants.
- **Repair:** Denotes a system or component which is missing or is defective and needs corrective action to assure proper and reliable function.
- **Improve:** Denotes improvements which are recommended but are very common among most homes of this age and construction.
- **Monitor:** Denotes a system or component needing further investigation and/or monitoring in order to determine if repairs are necessary.

**Please note that the observations listed under “Discretionary Improvements” are not essential repairs, but represent logical long-term improvements.

Throughout the report, locations are described as though you are looking at the front of the house.

THE SCOPE OF THE INSPECTION

The Inspection is limited to observations based on visible evidence readily available during the site visit performed by Kanawha Valley Home Inspections. Areas of the structure that are not visible at the time of the inspection, such as inside walls or behind interior finishes, are excluded from the inspection. No Geotechnical or soil sampling was performed as part of this inspection. Please refer to Sections 3.01 and 4.01 of the Inspection Agreement for a more detailed explanation.

Structure

DESCRIPTION OF STRUCTURE

Foundation:	•Concrete Block •Basement Configuration
Columns:	•Concrete Block Wall
Floor Structure:	•Wood Joist •Steel Beam
Wall Structure:	•Wood Frame, Brick Veneer

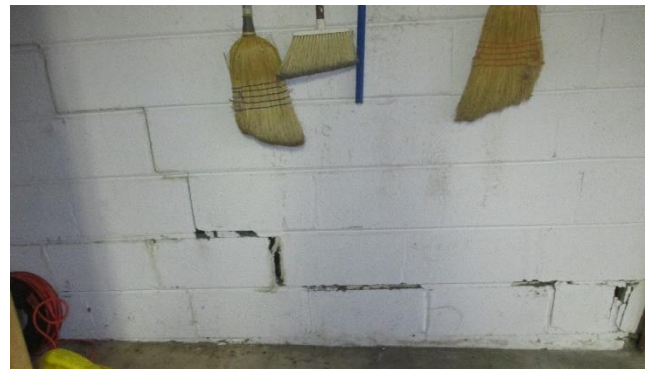
STRUCTURE OBSERVATIONS

General Comments

Significant movement was detected in the structural components of the home.

RECOMMENDATIONS / OBSERVATIONS

Major Concern: Bowing and cracking were observed in the left, rear, and right foundation walls. Measured horizontal movement of up to 2 1/8" in 48" vertical was observed. This is usually the result of excessive soil and hydrostatic pressure on the foundation. Although previous repairs have been performed on multiple occasions, the observed amount of movement is considered significant and signs of ongoing movement were observed. The foundation is not currently considered stable. Repairs are recommended to reduce pressure and stabilize the foundation. The rate of movement cannot be predicted during a one-time inspection. Lot drainage improvements should be addressed to keep water away from the building in conjunction with these repairs. See exterior. The soil around the foundation should be excavated and the walls pushed back into place as much as possible. The walls should then be reinforced by installing 2 vertical strands of #4 rebar in separate hollow cores of each block every 16" and 4000 psi concrete. The rebar should extend below the basement floor slab and up through the top block whether it be a hollow or solid



block. See diagram for proper termination at the top of the wall. All cracks in the foundation should be patched and the foundation damp proofed. Many different processes of damp proofing exist. One excellent process is to install an impervious membrane against the foundation, wrap the open excavation with filter fabric, install a perforated schedule 40 pipe adjacent to the footing at the bottom of the excavation, and back fill with pervious gravel to within 12-24" of finished grade. The perforated pipe should extend to daylight and to an area that is not vulnerable to damage from lawn equipment or vehicles.

- **Major Concern:** The rear wall in the laundry room was filled with concrete on a previous occasion. This will prevent the previously described repair from being performed in this area. The installation of 2 helical tie backs (soil anchors) with 12" channel iron is recommended. The bottom of the channel iron should be secured to the basement floor slab.



LIMITATIONS OF STRUCTURE INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Structural components concealed behind finished surfaces could not be inspected.
- Only a representative sampling of visible structural components were inspected.
- Furniture and/or storage restricted access to some structural components.
- No Geo-Technical or Soil Testing was performed as part of this inspection.
- This inspection and report was limited to an evaluation of the foundation as well as the development of a repair plan.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

Exterior

DESCRIPTION OF EXTERIOR

Wall Covering:	•Brick
Entry Driveways:	•Concrete
Entry Walkways And Patios:	•Concrete
Porches, Decks, Steps, Railings:	•Concrete
Surface Drainage:	•Lot Slopes from Rear to Front •Graded Towards House

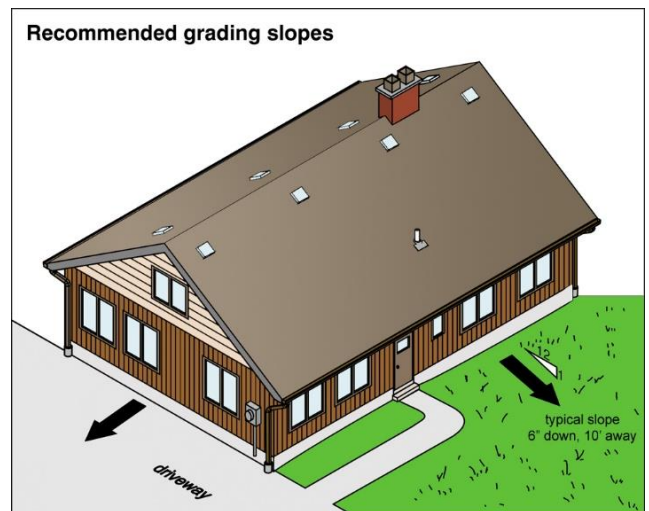
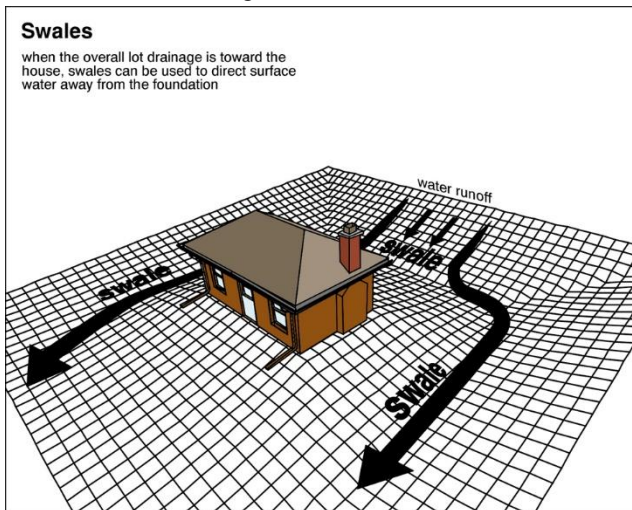
EXTERIOR OBSERVATIONS

General Comments

The exterior of the home shows normal wear and tear for a home of this age.

RECOMMENDATIONS / OBSERVATIONS

- **Repair:** After the foundation has been backfilled as previously described, the grading should be improved to promote the flow of storm water away from the house. This can often be accomplished by the re-grading of existing top soil to create a drainage swale that diverts water around the house. The ground should slope away from the house at a rate of one inch per foot for at least the first ten feet. At least eight (8) inches of clearance should be maintained between soil level and the bottom of exterior wall siding.



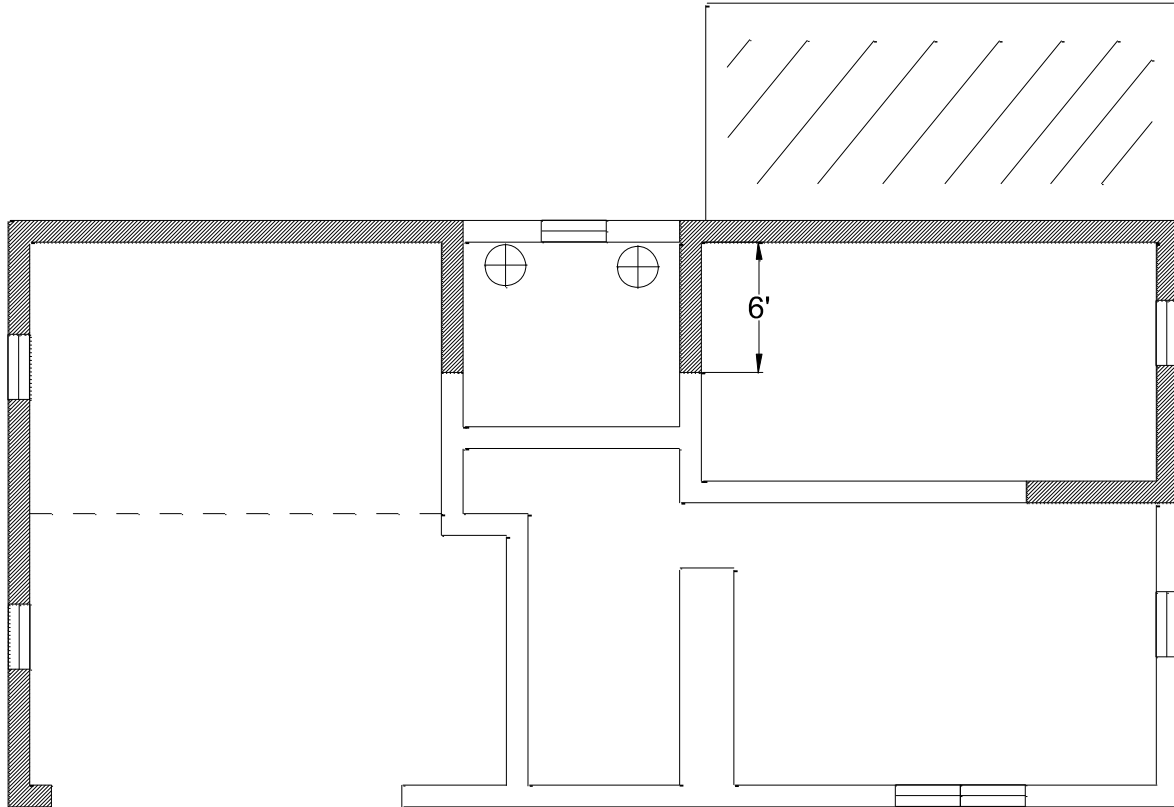
LIMITATIONS OF EXTERIOR INSPECTION

As we have discussed and as described in your inspection contract, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- A representative sample of exterior components was inspected rather than every occurrence of components.
- The inspection does not include an assessment of geological, geotechnical, or hydrological conditions, or environmental hazards.
- Screening, shutters, awnings, or similar seasonal accessories, fences, recreational facilities, outbuildings, seawalls, break-walls, docks, erosion control and earth stabilization measures are not inspected unless specifically agreed-upon and documented in this report.
- Determining whether or not doors and windows contain safety glazing or if there are any underground tanks on the property is outside of the scope of this inspection.

Please also refer to the pre-inspection contract for a detailed explanation of the scope of this inspection.

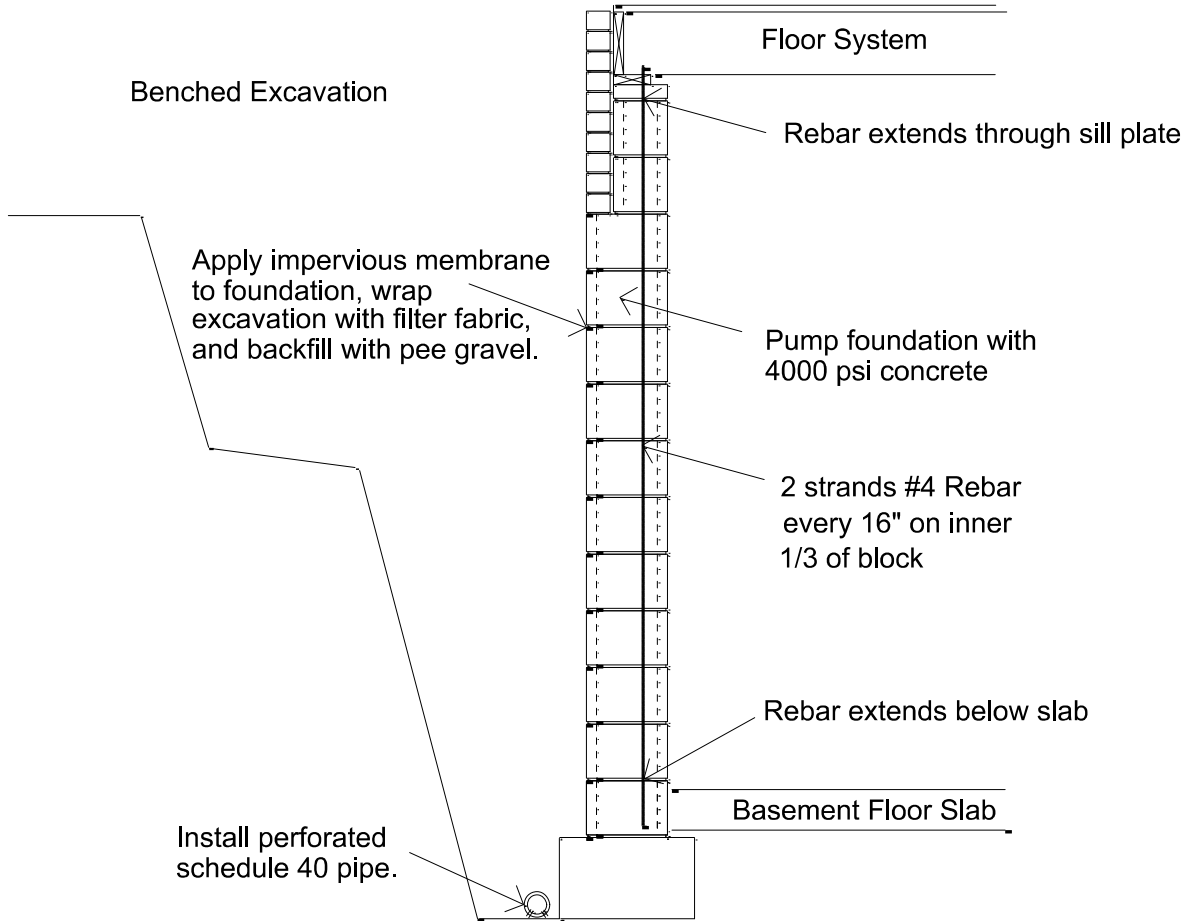
Foundation Repair Plan



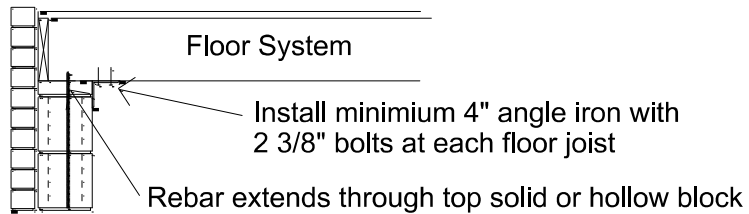
 Retrofit walls

 Install helical tie back with 12" channel iron

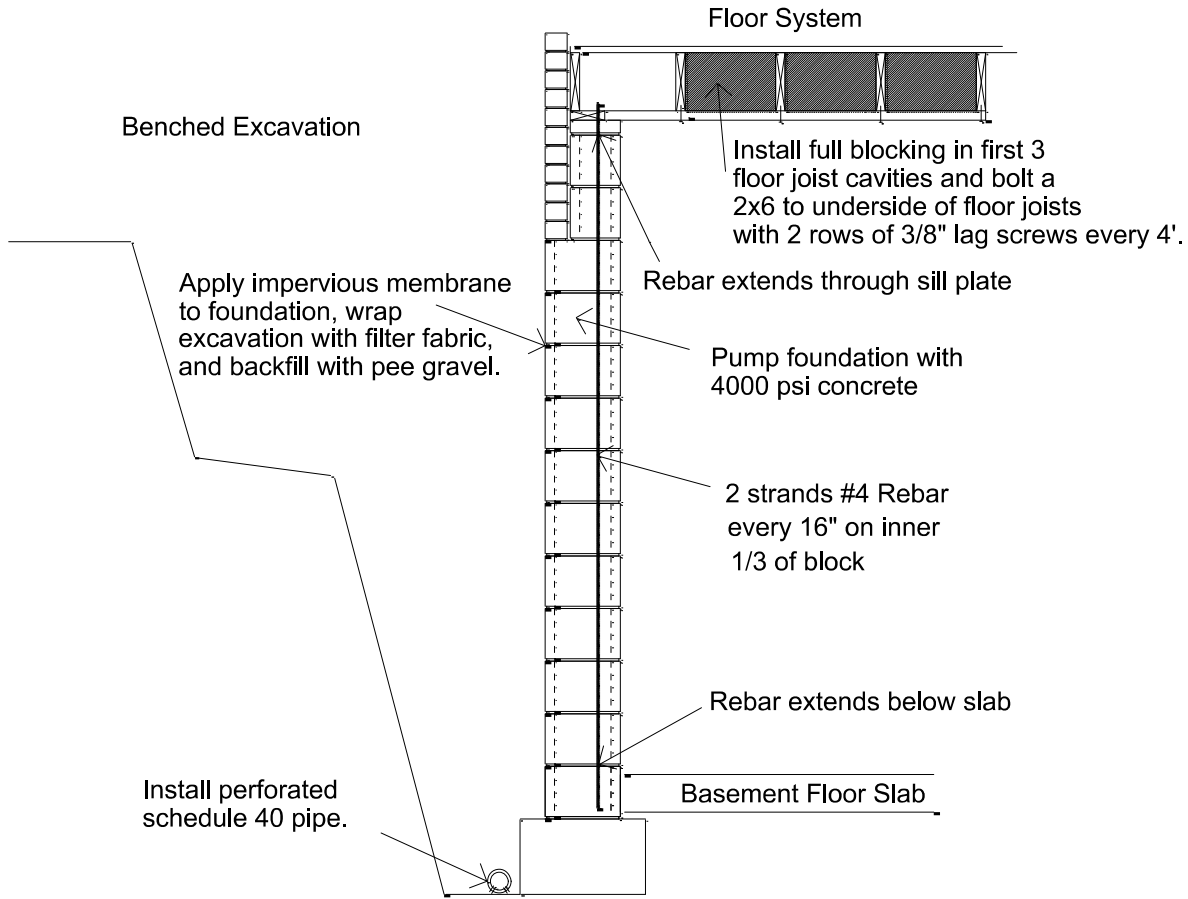
Retrofit of Bearing Foundation Wall



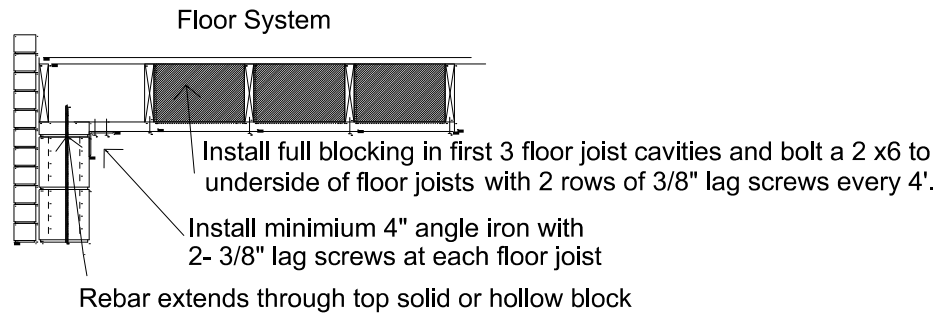
For situations where a sill plate is not present.



Retrofit of Non-Bearing Foundation Wall



For situations where a sill plate is not present.



Maintenance Advice

UPON TAKING OWNERSHIP

After taking possession of a new home, there are some maintenance and safety issues that should be addressed immediately. The following checklist should help you undertake these improvements:

- Change the locks on all exterior entrances, for improved security.
- Check that all windows and doors are secure. Improve window hardware as necessary. Security rods can be added to sliding windows and doors. Consideration could also be given to a security system.
- Install smoke detectors on each level of the home. Ensure that there is a smoke detector outside all sleeping areas. Replace batteries on any existing smoke detectors and test them. Make a note to replace batteries again in one year.
- Create a plan of action in the event of a fire in your home. Ensure that there is an operable window or door in every room of the house. Consult with your local fire department regarding fire safety issues and what to do in the event of fire.
- Examine driveways and walkways for trip hazards. Undertake repairs where necessary.
- Examine the interior of the home for trip hazards. Loose or torn carpeting and flooring should be repaired.
- Undertake improvements to all stairways, decks, porches and landings where there is a risk of falling or stumbling.
- Review your home inspection report for any items that require immediate improvement or further investigation. Address these areas as required.
- Install rain caps and vermin screens on all chimney flues, as necessary.
- Investigate the location of the main shut-offs for the plumbing, heating and electrical systems. If you attended the home inspection, these items would have been pointed out to you.

REGULAR MAINTENANCE

EVERY MONTH

- Check that fire extinguisher(s) are fully charged. Re-charge if necessary.
- Examine heating/cooling air filters and replace or clean as necessary.
- Inspect and clean humidifiers and electronic air cleaners.
- If the house has hot water heating, bleed radiator valves.
- Clean gutters and downspouts. Ensure that downspouts are secure, and that the discharge of the downspouts is appropriate. Remove debris from window wells.
- Carefully inspect the condition of shower enclosures. Repair or replace deteriorated grout and caulk. Ensure that water is not escaping the enclosure during showering. Check below all plumbing fixtures for evidence of leakage.
- Repair or replace leaking faucets or shower heads.
- Secure loose toilets, or repair flush mechanisms that become troublesome.

SPRING AND FALL

- Examine the roof for evidence of damage to roof coverings, flashings and chimneys.
- Look in the attic (if accessible) to ensure that roof vents are not obstructed. Check for evidence of leakage, condensation or vermin activity. Level out insulation if needed.
- Trim back tree branches and shrubs to ensure that they are not in contact with the house.
- Inspect the exterior walls and foundation for evidence of damage, cracking or movement. Watch for bird nests or other vermin or insect activity.
- Survey the basement and/or crawl space walls for evidence of moisture seepage.
- Look at overhead wires coming to the house. They should be secure and clear of trees or other obstructions.
- Ensure that the grade of the land around the house encourages water to flow away from the foundation.

- Inspect all driveways, walkways, decks, porches, and landscape components for evidence of deterioration, movement or safety hazards.
- Clean windows and test their operation. Improve caulking and weather-stripping as necessary. Watch for evidence of rot in wood window frames. Paint and repair window sills and frames as necessary.
- Test all ground fault circuit interrupter (GFCI) devices, as identified in the inspection report.
- Shut off isolating valves for exterior hose bibs in the fall, if below freezing temperatures are anticipated.
- Test the Temperature and Pressure Relief (TPR) Valve on water heaters.
- Inspect for evidence of wood boring insect activity. Eliminate any wood/soil contact around the perimeter of the home.
- Test the overhead garage door opener, to ensure that the auto-reverse mechanism is responding properly. Clean and lubricate hinges, rollers and tracks on overhead doors.
- Replace or clean exhaust hood filters.
- Clean, inspect and/or service all appliances as per the manufacturer's recommendations.

ANNUALLY

- Replace smoke detector batteries.
- Have the heating, cooling and water heater systems cleaned and serviced.
- Have chimneys inspected and cleaned. Ensure that rain caps and vermin screens are secure.
- Examine the electrical panels, wiring and electrical components for evidence of overheating. Ensure that all components are secure. Flip the breakers on and off to ensure that they are not sticky.
- If the house utilizes a well, check and service the pump and holding tank. Have the water quality tested. If the property has a septic system, have the tank inspected (and pumped as needed).
- If your home is in an area prone to wood destroying insects (termites, carpenter ants, etc.), have the home inspected by a licensed specialist. Preventative treatments may be recommended in some cases.

PREVENTION IS THE BEST APPROACH

Although we've heard it many times, nothing could be more true than the old cliché "an ounce of prevention is worth a pound of cure." Preventative maintenance is the best way to keep your house in great shape. It also reduces the risk of unexpected repairs and improves the odds of selling your house at fair market value, when the time comes.

Please feel free to contact our office should you have any questions regarding the operation or maintenance of your home. Enjoy your home!