

Name: John & Julie Smith

Property Location

Address: 555 Anywhere St.

1414 Dream Home Pl.

City, State, Zip: Buyersville, MI 48555

Lovethishouse, MI 48555

E Mail address: jjbuyer@gmail.com

This is our report of a visual inspection of the accessible areas of this building, in accordance with the terms and conditions contained in the PRE-INSPECTION AGREEMENT, which is part of this report and incorporated herein. Please read the REMARKS printed on each page and call us for an explanation of any aspect of this report, written or printed, which you do not fully understand.

Date of inspection: 0/00/10 Time: 10 A.M. Weather conditions: Cloudy Outside temperature: 54 degrees F.

PRE-INSPECTION AGREEMENT

(PLEASE READ CAREFULLY)

MESSNER HOME INSPECTIONS LLC agrees to conduct an inspection for the purpose of informing the client of major deficiencies in the condition of the property, subject to the UNCONDITIONAL RELEASE AND LIMITATION OF LIABILITY below. The inspection and report are performed and prepared for the sole, confidential and exclusive use and possession of the CLIENT. The written report will only include the following:

- structural conditions and basement
- electrical, plumbing, water heater, heater, heating and cooling
- quality, condition and life expectancy of major systems
- kitchen and appliances
- general interior, including ceilings, walls, windows, insulation and ventilation
- general exterior, including roof, gutter, chimney, drainage, grading

It is understood and agreed that this inspection will be of readily accessible areas of the building and is limited to visual observations of apparent conditions existing only at the time of the inspection. Latent and concealed defects and deficiencies are excluded from the inspection; equipment, items, and systems will not be dismantled.

Maintenance and other items may be discussed, but they are not a part of our inspection. The report is not a compliance inspection or certification for past or present governmental codes or regulations of any kind.

The inspection and report do not address and are not intended to address the possible presence of or danger from any harmful substances and environmental hazards, including but not limited to radon gas, lead paint, asbestos, mold, mildew, urea formaldehyde, toxic or flammable chemicals, and water and airborne hazards. Also excluded are inspections of and reports on swimming pools, wells, septic systems, central vacuum systems, water softeners, sprinkler systems, fire and safety equipment, and the presence or absence of rodents, termites and other insects.

UNCONDITIONAL RELEASE AND LIMITATION OF LIABILITY

It is understood and agreed that MESSNER HOME INSPECTIONS LLC is not an insurer and that the inspection and report are not to be intended or construed as a guarantee or warranty of the adequacy, performance, or condition of any structure, item, or system at the property address. The CLIENT hereby releases and exempts MESSNER HOME INSPECTIONS LLC and it's agents and employees of and from all liability and responsibility for the cost of repairing or replacing any unreported defect or deficiency and for any consequential damage, property damage, personal injury of any nature.

In the event that MESSNER HOME INSPECTIONS LLC and/or it's agents or employees are found liable due to breach of contract, breach of warranty, negligence, negligent misrepresentation, negligent hiring or any other theory of liability, then the liability of MESSNER HOME INSPECTIONS LLC and it's agents and employees shall be limited to a sum equal to the amount of the fee paid by the CLIENT to MESSNER HOME INSPECTIONS LLC for the inspection and report.

CLIENT and MESSNER HOME INSPECTIONS LLC agree that should a court of competent jurisdiction determine and declare that any portion of this Agreement is void, voidable or unenforceable, the remaining provisions and portions shall remain in full force and effect.

Acceptance and understanding of this agreement are hereby acknowledged:

Larry Messner CRI, CI

0/00/10

John Smith

0/00/10

Company Representative

Date

Client

Date

Total Fee \$ 250

(1)

BUILDING ANALYSIS REPORT SUMMARY

“To Do” List Areas in red to be repaired ASAP

Add water to multiple basement floor drains now and as needed
 Have storm drain cleaned for baseline
 Purchase spare sump pump, same make and model
 Use dehumidifier in basement to pull moisture from walls
 Electronic filter not functioning, change to Media filter now and annually
 Door to furnace room needs to be changed to louvered door.
 Furnace needs cleaning if you not planning to replace very soon
 Clean drebris from crawl and grade, install 6 mil plastic floor
 Water heater tested OK but is old, no dialectic connectors, remove thermo unit on vent pipe
Resilient tiles in basement may contain asbestos, doesn't appear to be "friable", have tested
Kitchen and bathrooms need to be grounded and GFCI protected.
Home office needs grounding and GFCI protected
 Repair gas stove top, (burners won't light)
Plastic dryer vent is a fire hazard, replace with smooth walled metal vent
 Tub and shower pan need re cauliiing
 Repair damaged plaster ceiling with screw buttons
 Recommend spray silicone for sticking windows
Pulldown over basement stairs may be hazardous
Insulation in attic contains vermiculite, have tested and encapsulated or removed
 Add 6" more insulation to attic
 Block gable vents for more efficient air circulation from soffit vents to roof vents
 All downspouts need extensions
 Caulk around exterior window and door frames as needed
Smoke shelf in chimney contains creasote, clean before use
 Chimney needs new cement crown and aluminum cap
 "Tuckpoint" mortar cracks caused by rusted lientil at basement windows
Garage door safety reverse not working, repair
 Trim branches that touch roof
 Trim branches that break the plain of roof
 Clean window wells, install protective caps
 Clean all vegetation from house walls
 Improve grade at foundation
 Sidewalk slabs are uneven, creating trip hazards, repair with mud jacking
 Replace damaged deck boards, add additional to posts, power wash and stain or seal

Minor repairs during the first year of occupancy are estimated to be between \$3000 and \$4000
 This estimated amount does not include costs listed above for correcting major deficiencies, roof leaks and items currently not operating.

List of some important items not at present defective or in need of repair or replacement, but may be within the next 3 years.

ITEM	ESTIMATED PRICE RANGE
Furnace is very old, tested 3 ppm CO, replace	approx. \$2000
AC condenser is 16 years old, past normal life may need replacing soon	approx. \$2000
Water heater 8-14 years old, may need replacing soon	approx. \$200
Disposal may need replacing soon	approx. \$200
Refrigerator may need to be replaced in next few years	
Replace roof (with tear off) and replace old flashing within (5) years	approx. \$2.85 sq. ft.

REMARKS

“To Do” List may seem a little daunting, but this is an old house with normal “lumps and bumps” typical of a 1934 structure. Your labor will be rewarded by the character of the house
Address areas in red ASAP

The following pages cover in greater detail the items which are a part of this inspection. Additional recommendations may be found on the following pages.

REMARKS

Throughout this report where the age of appliances, roofs, etc., is stated, the age shown is approximate. It is not possible to be exact, but an effort is made to be as accurate as possible based on the visible evidence.

When any item in the report is reported to be "Satisfactory," the meaning is that it should give generally satisfactory service within the limits of its age and any defects or potential problems noted during the inspection.

Basement or Crawl Space Dampness

Basement dampness is frequently noted in houses and the conditions that cause it are usually capable of determination by an experienced home inspector. Often, however, in houses that are being offered for sale, the visible signs on the interior of a basement which would indicate a past or present water problem are concealed.

For example, an area may be painted over, or basement storage may be piled against a wall where a problem has occurred. If there has been a dry period before the time of the inspection, signs of past water penetration may not be visible. In such cases, the inspector may not be able to detect the signs of basement dampness or water penetration.

Elimination of basement dampness, whether slight or extensive, can usually be accomplished by one or both of the following actions: realigning gutters and extending downspouts to discharge some distance from the house; and regarding in the vicinity of the house so that the slope goes away from the house rather than toward it.

In most soils, a minimum recommended slope away from the house is a 5 inch drop over a 5 foot distance (one inch per foot).

Expensive solutions to basement dampness problems are frequently offered, and it is possible to spend many thousands of dollars for such unsatisfactory solutions as a system for pumping out water that has already entered the basement or the area around or under it. Another solution sometimes offered is the pumping of chemical preparations into the ground around the house. This has been found not to be of value.

Independent experts recommend solutions that prevent water from entering the basement around or under the building, and their solutions can be as simple as purchasing a splash block for \$5 to \$10 and placing it under a downspout outlet, or the purchasing of a load of fill dirt for building up the grade around the house.

Crawl spaces require the same care and water control as basements. Cross ventilation is necessary and installation of a plastic vapor barrier over a dirt floor is strongly recommended.

If you have a basement dampness problem that persists in spite of efforts you have made in solving it, call the inspector for further consultation and advice.

Insect Boring Activity and Rot

If there is an inaccessible basement or crawl space, there is a possibility that past or present termite activity and/or rot exists in this area. Since no visual inspection can be made, it is not possible to make a determination of this damage if it exists.

Insect Boring Inspection

No inspection is made by this company to detect past or present insect boring activity or rot. We recommend you contact a qualified exterminator should you desire more information or a possible examination of the building and/or a warranty.

STRUCTURAL

TYPE OF BUILDING	Single <input checked="" type="checkbox"/> Duplex _____ Roof: Gable <input checked="" type="checkbox"/> Shed Hip Gambrel Multi-Unit _____ Mansard Flat _____
STRUCTURE	Foundation: Poured concrete <input checked="" type="checkbox"/> Block _____ Posts/Columns: Steel <input checked="" type="checkbox"/> Masonry Wood Concrete Not visible

Floor structure: 2" x 10" joists, 16" on center, plywood subfloor with bridging

Wall structure: Plaster on lath and drywall on studwall

Roof structure: 2" x 6" rafters, 16" on center, web trusses, 24" on center in addition, plywood sheathing

Water damage: Some signs Extensive None observed
 Signs of abnormal condensation: Some signs Extensive None observed
 No major structural defects noted, in normal condition for its age

Remarks: House is a 1934 colonial with rear addition installed in 1952, brick and vinyl, 3200 sq. ft.

BASEMENT (OR LOWER LEVEL)

BASEMENT	Full <input checked="" type="checkbox"/> Partial _____ None _____ Slab on Grade _____ Walls: Open Closed <input checked="" type="checkbox"/> Ceiling: Open Closed <input checked="" type="checkbox"/> Limited visibility due to extensive basement storage
FLOOR	Concrete <input checked="" type="checkbox"/> Dirt _____ Satisfactory <input checked="" type="checkbox"/> Resilient tile <input checked="" type="checkbox"/> Sheet goods _____ Carpeting _____ N/A
FLOOR DRAIN	Tested <input checked="" type="checkbox"/> Not tested _____ Water observed in trap _____ Satisfactory N/A
SUMP PUMP	Tested <input checked="" type="checkbox"/> Not tested _____ Water observed in crock <input checked="" type="checkbox"/> Pipes: Copper <input checked="" type="checkbox"/> Galvanized _____ Plastic <input checked="" type="checkbox"/> _____ Satisfactory <input checked="" type="checkbox"/> N/A
BASEMENT DAMPNESS	Some signs <input checked="" type="checkbox"/> Extensive _____ Past _____ Present <input checked="" type="checkbox"/> South wall None observed
CRAWL SPACE	Readily accessible <input checked="" type="checkbox"/> Not readily accessible _____ Not inspected _____ Satisfactory Conditions inspected <input checked="" type="checkbox"/> Method _____ N/A Floor: Concrete Dirt <input checked="" type="checkbox"/> _____ Wood to earth contact Dampness: Some signs <input checked="" type="checkbox"/> Extensive _____ None observed Vapor barrier _____ Insulation _____ Ventilation _____

Remarks: Moisture readings taken every 6' around perimeter basement wall, 3-8 % moisture found, except for South wall. 20% moisture found on South wall. Adjust exterior grade and pull moisture from wall with dehumidifier.

Floor drains are dry, add water to keep sewer gas from entering basement, now and as needed.

Sump turned on when tested but appears old. Normal life is approx. 5 years, has a bad habit of breaking down when most needed. Purchase spare, same make and model. I'll instruct you how to install.

Resilient tile is 9" x 9". Given the size of the tile and the age of the house, it may contain asbestos. No broken tile observed so it's not friable. Asbestos fibers not floating in the air. Have tested by an environmental firm for asbestos content so you'll know what to do when and if tiles begin to break up.

Crawl under addition showing 10-15% moisture content. It is full of construction debris and does not have a vapor barrier. Without a vapor barrier, several gallons of water a day can wick up through sub floor from dirt floor. With a 6 mil plastic vapor barrier, that amount reduces to just a couple quarts.

Use dehumidifier in crawl to reduce moisture content, remove debris and grade dirt floor, Then install 6 mil plastic sheeting.

REMARKS

Testing the Air Conditioning System

If the outside temperature has not been at least 65 degrees F. for the past 24 hours, an air conditioning system cannot be checked without possibly damaging the compressor. In this situation, it is suggested that the present owner of the property warrant the operational status of the unit on a one-time start-up and cool-down basis when warmer weather allows.

Air Conditioning Compressor/Condensing Unit

The major components of an air conditioning, condensing unit are the compressor and the condensing coil. A compressor has a normal life of 8 to 15 years; a condensing coil may last longer. The estimated age of a condensing unit is taken from the specification plate. Sometimes the compressor, which is not visible, may have been replaced since the original installation.

Electric Furnace

Electric furnaces have a normal life of 15 to 20 years, although at times the heating elements have to be replaced.

Oil and Gas Fired Furnaces

Oil and gas fired furnaces have a normal life of 15 to 20 years.

Heat Exchanger

The heat exchanger in a gas or oil furnace is partially hidden from view; it cannot be fully examined and it's condition determined without being disassembled. Since this is not possible during a visual inspection, it is recommended that a service contract be placed on the unit and a service call made prior to settlement to check the condition of the heat exchanger.

Air Filter

Air filters should be changed or cleaned every 30 to 60 days to provide proper air circulation throughout the house and help protect the heating and cooling system.

Humidifier

Since it is not possible during a visual inspection to determine whether the humidifier is operating properly, it is recommended that it be serviced at the same time as the furnace, and be cleaned regularly.

Cast Iron Boiler

Cast iron hot water boilers have a normal life of 30 to 50 years.

Steel Boiler

Steel hot water boilers have a normal life of 15 to 30 years.

Circulating Pump

Circulating pumps have a normal life of 10 to 15 years.

Heat Pump

Outside units have a normal life of 6 to 10 years. Heat pumps operate best when serviced at least once a year. Adequate air flow is more critical than with other forced air systems; it is important that the filter be kept clean. It is not advisable to shut off supply grills to rooms except as required to balance heat and cooling. Heat pumps cannot be checked on the heat cycle if the outside temperature has been over 65 degrees F. within the past 24 hours. The total heating capacity of a heat pump system varies with outside temperature conditions.

Electric Baseboard Heat

Electric baseboard heaters have a life of 10 to 15 years.

HEATING

HEATING SYSTEMS	Fuel : Gas <input checked="" type="checkbox"/> Electric _____ Forced air furnace <input checked="" type="checkbox"/> Gravity hot water boiler _____ Forced hot water boiler _____ Steam boiler _____ Radiant heat _____ Electric baseboard _____ Heat pump _____ No. 1 Capacity: 125,000 btu Age: older than 1960 No. 2 Capacity: _____ Age: _____ Yrs. No. 3 Capacity: _____ Age: _____ Yrs. When turned on by thermostat: Fired <input checked="" type="checkbox"/> Did not fire _____	Satisfactory <input checked="" type="checkbox"/> N/A
FUEL SUPPLY	Oil tank in basement _____ Buried _____ Public gas supply <input checked="" type="checkbox"/> Tank _____ Electricity _____ Fuel supply shut off location: on furnace	
HEAT EXCHANGER	Partially observed <input checked="" type="checkbox"/> Not visible, enclosed combustion _____ Have condition checked before settlement	N/A
HEAT DISTRIBUTION	Radiators _____ Convectors _____ Baseboard convectors _____ Radiant _____ Pipes: Galvanized _____ Copper _____ Black iron _____ Pipes not visible _____ Ductwork <input checked="" type="checkbox"/> Heat source in each room: Yes <input checked="" type="checkbox"/> No	Satisfactory <input checked="" type="checkbox"/> N/A
HUMIDIFIER	Atomizer _____ Evaporator _____ Steam _____ Not functioning _____ Not tested _____	N/A <input checked="" type="checkbox"/>
FILTER	Washable _____ Disposable _____ Electronic <input checked="" type="checkbox"/> Electrostatic _____	N/A
SUPPLEMENTARY HEAT	Location _____ Type _____ _____ _____ _____ _____ _____ _____	Satisfactory Satisfactory Satisfactory

Remarks: Carbon monoxide test performed on furnace, "3" parts per million CO found. My reference material goes back to 1960. This furnace is older than that. Normal life is 18-22 years. This unit is a older than that. 3 parts per million CO is not critical, but because furnace is older than 1960, I recommend new furnace. Electronic filter not working. Having it repaired is expensive. Most people remove (2) metal cartridges and install paper Media filter in container. This is almost as good as an electronic filter, replace annually less than \$20. Door on furnace room is solid, when closed could prevent furnace from getting enough "make up air" to fuel burners. Door should be louvered.

COOLING

COOLING	Cooling system integral with heating system _____ Central air <input checked="" type="checkbox"/> Room units _____ Heat pump _____ Through-wall _____ Electric compressor _____ Gas chiller _____ Air filter _____ Air handler _____ Thermostat _____ No. 1 Condensing Unit Capacity: 38,500 btu Age: 16 Yrs. mfg. 1994 No. 2 Condensing Unit Capacity: _____ Age: _____ Yrs. No. 3 Condensing Unit Capacity: _____ Age: _____ Yrs. Tested <input checked="" type="checkbox"/> Not tested _____ Ductwork <input checked="" type="checkbox"/>	Satisfactory N/A
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Remarks: AC condenser is 16 years old. Normal life is 12-15 years. Performed drop test on condenser. I'm looking for a 12-15 degree drop from the A Coil above the plenum to the nearest supply register. Temp is 58 degrees at A Coil and 71 degrees at register for a 13 degree drop, satisfactory. Less than this and condenser is too small and has to work too hard. More than this and the condenser is too large and will cool the house very fast but won't take away the humidity. Your have a cold, damp house. AC condenser tested well but is past normal life. It may last a year or it may last several.

REMARKS

Wells

Examination of wells is not included in this visual inspection. It is recommended that you have well water checked for purity by the local health authorities and, if possible, a check on the flow of the well in periods of drought.

Septic Systems

The check of septic systems is not included in our visual inspection. You should have the local health authorities or other qualified experts check the condition of a septic system. In order for the septic system to be checked, the house must have been occupied within the last 30 days.

Water Pipes

Galvanized water pipes rust from the inside out and may have to be replaced within 20 to 30 years. This is usually done in two stages: horizontal piping in the basement first, and vertical pipes throughout the house later as needed.

Copper pipes usually have more life expectancy and may last as long as 60 years before needing to be replaced.

Hose Bibs

During the winter months it is necessary to make sure the outside faucet are turned off. This can be done by means of a valve located in the basement. Leave the outside faucets open to allow any water standing in the pipes to drain, preventing them from freezing. Hose bibs cannot be tested when turned off.

Water Heater

The life expectancy of a water heater is 8 to 12 years. Water heaters generally are not replaced unless they leak. The heating in an electric water heater may require replacing prior to the end of life expectancy of the heater itself.

Leg Tubs

If the bathroom has a leg tub, it is probable that the waste lines are made of lead. In many jurisdictions, the lead waste lines must be changed to copper or PVC pipes when remodeling work is performed in the bathroom.

Ceramic Tile

Bathroom tile installed in a mortar bed is excellent. It is still necessary to keep the joint between the tile and the tub/shower caulked or sealed to prevent water spillage from leaking through and damaging the ceilings below.

Ceramic tile is often installed in mastic. It is important to keep the tile caulked or water will seep behind the tile and cause deterioration in the wallboard. Special attention should be paid to the area around faucets, other tile penetrations and seams in corners and along the floor.

Stall Shower

The metal shower pan in a stall shower has a probable life span of 8 to 10 years. Although a visual inspection is made to determine whether a shower pan is currently leaking, it cannot be stated with certainty that no defect is present or that one may not soon develop. Shower pan leaks often do not show except when the shower is in actual use with a person standing in it.

PLUMBING AND BATHROOM

WATER SERVICE ENTRANCE PIPE	Water supply: Public <input checked="" type="checkbox"/> Private Not known Pipe: Copper <input checked="" type="checkbox"/> Galvanized Brass Plastic Lead Unknown Main shutoff location: basement wall, see pic	Satisfactory <input checked="" type="checkbox"/> N/A
PIPES	Copper <input checked="" type="checkbox"/> Galvanized Brass Plastic <input checked="" type="checkbox"/> Unknown Water flow: Tested <input checked="" type="checkbox"/> Not tested Leaks: Some signs None observed <input checked="" type="checkbox"/> Cross connections: _____ None observed Hose bibs: Operating <input checked="" type="checkbox"/> Frost free Not tested	Satisfactory <input checked="" type="checkbox"/> N/A
DRAIN/WASTE/ VENT	Drain/Waste/Vent Pipes: Copper Galvanized Brass Plastic Lead Cast iron <input checked="" type="checkbox"/> Unknown Slow drain: Leaks None observed <input checked="" type="checkbox"/> Waste disposal: Public <input checked="" type="checkbox"/> Private Not known	
WATER HEATER	Gas <input checked="" type="checkbox"/> Electric Oil Integral with heating system In line system Fuel cutoff location: Capacity: 40 Gal. Ample for 4 people Age: 8-14 Yrs. Pressure relief valve <input checked="" type="checkbox"/> Extension <input checked="" type="checkbox"/>	Satisfactory <input checked="" type="checkbox"/> N/A

Remarks: [Pipes are copper and cross linked polyester, \(PEX\). PEX is a tough plastic material that will expand to several times it's size before bursting when frozen. The cost is similar to copper but because it installs so much faster and easier it is a major savings because of reduced labor costs. It is also worthless to thieves.](#)
[Water pressure is 70 psi. @ 9 gallons per minute, typical pressure and flow for area.](#)
[Cast iron drain/waste vent.](#)
[Recommend having storm drain cleaned upon occupancy for baseline.](#)
[Water heater tested OK but is somewhat old. Because of age may need replacing in next few years. As of right now, am not getting CO reading at draft hood. Since copper corrodes steel, dielectric connectors should be installed between the two metals. There are none on this heater. There is a thermo unit on the vent of this water heater, see pic. This could malfunction and introduce CO into basement. Remove and replace with plain piece of vent pipe.](#)

BATHROOM NO. 1 Location basement full	BATHROOM NO. 2 Location 1st floor half
Built in tub Leg tub Stall shower <input checked="" type="checkbox"/> Whirlpool Toilet <input checked="" type="checkbox"/> Bidet Lavatory <input checked="" type="checkbox"/> Vanity Fan Window Shower wall: Ceramic tile Fiberglass/Plastic <input checked="" type="checkbox"/> Room floor: Ceramic tile <input checked="" type="checkbox"/> Resilient _____ Leaks: Some signs None observed <input checked="" type="checkbox"/> Satisfactory <input checked="" type="checkbox"/>	Built in tub Leg tub Stall shower Whirlpool Toilet <input checked="" type="checkbox"/> Bidet Lavatory <input checked="" type="checkbox"/> Vanity Fan Window Shower wall: Ceramic tile Fiberglass _____ Room floor: Ceramic tile <input checked="" type="checkbox"/> Resilient _____ Leaks: Some signs None observed <input checked="" type="checkbox"/> Satisfactory <input checked="" type="checkbox"/>
BATHROOM NO. 3 Location 1st floor full	BATHROOM NO. 4 Location
Built in tub <input checked="" type="checkbox"/> Leg tub Stall shower Whirlpool Toilet <input checked="" type="checkbox"/> Bidet Lavatory <input checked="" type="checkbox"/> Vanity Fan Window Shower wall: Ceramic tile <input checked="" type="checkbox"/> Fiberglass _____ Room floor: Ceramic tile <input checked="" type="checkbox"/> Resilient _____ Leaks: Some signs None observed <input checked="" type="checkbox"/> Satisfactory <input checked="" type="checkbox"/>	Built in tub Leg tub Stall shower Whirlpool Toilet Bidet Lavatory Vanity Fan Window Shower wall: Ceramic tile Fiberglass _____ Room floor: Ceramic tile Resilient _____ Leaks: Some signs None observed Satisfactory
BATHROOM NO. 5 Location	BATHROOM NO. 6 Location
Built in tub Leg tub Stall shower Whirlpool Toilet Bidet Lavatory Vanity Fan Window Shower wall: Ceramic tile Fiberglass _____ Room floor: Ceramic tile Resilient _____ Leaks: Some signs None observed Satisfactory	Built in tub Leg tub Stall shower Whirlpool Toilet Bidet Lavatory Vanity Fan Window Shower wall: Ceramic tile Fiberglass _____ Room floor: Ceramic tile Resilient _____ Leaks: Some signs None observed Satisfactory

Remarks: [Tub and shower pan need to be re caulked, use the best grade of silicone caulk available. It will last longer.](#)

REMARKS

Power usage of major appliances and mechanical equipment

Electric range	30 – 50 Amps
Electric Dryer	25 – 40 Amps
Electric Hot Water Heater	25 – 30 Amps
Electric Central A/C	30 Amps
Room A/C	7 – 20 Amps
Electric Heat	50 – 75 Amps
Electric Heat Pump	50 – 75 Amps

Dishwashers and Disposals

Dishwashers and disposals have a normal life of 5 to 12 years.

Ranges, Ovens and Refrigerators

Ranges, ovens, cook tops and refrigerators have a normal life of 15 to 20 years.

Clothes Washers and Dryers

Clothes washers and dryers cannot be inspected properly without a load of laundry, so these appliances are not tested other than to determine whether they are operating.

A washer or dryer has an average life of 6 to 12 years.

When hooking up a dryer, it must be kept vented to the exterior to prevent excessive moisture from building up in the house.

Washers and dryers often are not included in a sales contract, or are included in “as is” condition.

Smoke Detectors

If no smoke detectors are presently installed in the building, it is the recommendation that smoke detectors be installed at least in the ceiling of the basement near the mechanical equipment, as well as in the hallway ceiling outside sleeping rooms.

Carbon monoxide detectors are now required by some jurisdictions when the house contains any gas burning appliances or has an attached garage. These devices should be placed and maintained in accordance with manufacturers directions.

Smoke detectors installed in the house should be checked every 2 to 3 weeks to insure that they are functioning.

Ground Fault Circuit Interrupters

Ground fault circuit interrupters (GFCIs) are recommended on all outdoor outlets and on interior outlets in wet areas such as bathrooms and kitchen counter areas. GFCIs should be tested monthly to insure they are functioning.

Aluminum Wiring

Houses built after 1960 may have aluminum lower branch wiring. Initially, this wiring was pure aluminum which proved unstable and subject to surface corrosion when placed in direct contact with dissimilar metals at fixture and outlet connections.

Later, aluminum alloy was used and although its performance was much better, special care and special connections must be used to prevent corrosion, overheating, arcing or fire. The practice of using aluminum alloy wiring was generally stopped around 1973; however, its use has continued on a limited basis.

ELECTRICAL		
SERVICE ENTRANCE CABLE	Capacity: 150 Amps _____ Volts Service line entrance: Overhead <input checked="" type="checkbox"/> Underground Raceway Conductor material: Copper Aluminum <input checked="" type="checkbox"/>	Satisfactory <input checked="" type="checkbox"/>
MAIN PANEL BOX	Location: basement wall Grounded <input checked="" type="checkbox"/> Bonded <input checked="" type="checkbox"/> Fuses Circuit Breakers <input checked="" type="checkbox"/> Subpanel Location _____ Capacity of Main Disconnect 150 Amps	Satisfactory <input checked="" type="checkbox"/> N/A
CIRCUITS AND CONDUCTORS	Quantity: Ample <input checked="" type="checkbox"/> Branch wiring: Copper <input checked="" type="checkbox"/> Aluminum Wiring method: Romex <input checked="" type="checkbox"/> BX Knob and tube Raceway Conduit Overfused circuit Double tap breaker GFCI: Exterior Garage Kitchen _____ Bathroom	Satisfactory
OUTLETS AND FIXTURES	Random testing <input checked="" type="checkbox"/> Reversed polarity Open ground Smoke detectors absent	Satisfactory
Remarks:	<p>Service panel grounded at water meter and exterior grounding rod. Kitchen and bathrooms need grounding and GFCI protection. A GFCI protected outlet can save your life. Picture someone taking a bath and someone else drying they're hair. A stubbed toe and the hair dryer is in the bath tub. There are (2) outcomes to this story. Outcome #1 without GFCI, serious injury or death, outcome #2 with GFCI, it senses the short and cuts off the electricity. The bather is safe. Most of house not grounded, not an issue as long as you don't depend on ungrounded outlet to protect more expensive appliances such as wide screen tv and computer. Home office should also be grounded.</p>	

KITCHEN AND APPLIANCES

CABINETS AND COUNTERTOPS		Satisfactory <input checked="" type="checkbox"/>
SINK	Plumbing leaks: Some signs None observed <input checked="" type="checkbox"/> Disposal: Operating <input checked="" type="checkbox"/> Not operating	Satisfactory
DISHWASHER	Operating <input checked="" type="checkbox"/> Not operating Air gap or high loop	Satisfactory <input checked="" type="checkbox"/> N/A
RANGE/OVEN	Range: Operating Gas <input checked="" type="checkbox"/> Electric Wall oven: Operating Gas Electric Cooktop: Operating Gas Electric	Satisfactory <input checked="" type="checkbox"/> N/A
REFRIGERATOR	#1 Operating <input checked="" type="checkbox"/> Frost free <input checked="" type="checkbox"/> Icemaker <input checked="" type="checkbox"/> #2 Operating Frost free Icemaker	Satisfactory N/A
OTHER APPLIANCES	Microwave _____ Operating <input checked="" type="checkbox"/> _____ Operating	Satisfactory <input checked="" type="checkbox"/> N/A
FLOOR COVERING	Resilient tile Sheet goods Ceramic Wood Laminate <input checked="" type="checkbox"/>	Satisfactory <input checked="" type="checkbox"/>
VENTILATION	Exhaust fan <input checked="" type="checkbox"/> Ductless Vented to outside <input checked="" type="checkbox"/> Filter <input checked="" type="checkbox"/> Light <input checked="" type="checkbox"/>	Satisfactory <input checked="" type="checkbox"/> N/A
CLOTHES WASHER	Operating <input checked="" type="checkbox"/> Not tested	Satisfactory <input checked="" type="checkbox"/> N/A
CLOTHES DRYER	Operating <input checked="" type="checkbox"/> Gas <input checked="" type="checkbox"/> Electric Not tested Vented to: outside	Satisfactory N/A
Remarks:	<p>Disposal is working but is quite loud, a sign that it will need replacing soon. 2 of 4 burners would not light on stove top, standing pilots not working, repair Refrigerator tested 48 degrees F., freezer was 14 degrees F., should be 40 & 0. Fridge is getting old and will need replacing soon. Dryer vent is plastic ribbed variety. DO NOT USE. Lint can build up on ribs and ignite, causing a major house fire. Use metal, smooth walled variety vent pipe.</p>	

REMARKS

Fireplace

It is important that a fireplace be cleaned on a routine basis to prevent the buildup of creosote in the flue, which can cause a chimney fire.

Masonry fireplace chimneys are normally required to have a terra cotta flue liner or 8 inches of masonry surrounding each flue in order to be considered safe and to conform with most building codes.

During the visual inspection it is common to be unable to detect the absence of a flue liner either because of stoppage at the firebox, a defective damper, or lack of access from the roof.

Asbestos and Other Environmental Hazards

Asbestos fiber in some form is present in many homes, but it often not visible or cannot be identified without testing.

If there is a reason to suspect that asbestos fiber may be present and it is of particular concern, a sample of the material in question may be removed and examined in a testing laboratory. However, detecting or inspecting for the presence or absence of asbestos is not a part of our inspection.

Also excluded from the inspection and report are the possible presence of or danger from lead in water, radon gas, mold, mildew, lead paint, urea formaldehyde, EMF (electromagnetic fields), toxic or flammable chemicals and all other similar or potentially harmful substances and environmental hazards.

Plaster on Gypsum Lath (Rock Lath)

Plaster on gypsum lath will sometimes show the seams of the 16" wide gypsum lath, but this does not indicate a structural fault. The scalloping appearance can be leveled with drywall joint compound, or drywall can be laminated over the existing plaster on the ceiling.

Nail Pops

Drywall nail pops are due in part to normal expansion and contraction of the wood members to which the gypsum lath is nailed, and are usually only of cosmetic significance.

Wood Flooring

Always attempt to clean wood floors first before making the decision to refinish the floor. Wax removers and other mild stripping agents plus a good waxing and buffing will usually produce satisfactory results. Mild bleaching agents help remove deep stains.

Sanding removes some of the wood in the floor and can usually be done safely only once or twice in the life of the floor.

Animal odors and stains are common in older homes. These problems cannot be positively identified in a general inspection.

Carpeting

Where carpeting has been installed, the materials and condition of the floor underneath cannot be determined.

Access to Attic

If there are no attic stairs or pulldown, the attic may be inaccessible and therefore uninspected. Lacking access, the inspector will not be able to inspect the attic insulation, framing, ventilation or search for evidence of current or past roof leaks.

INTERIOR

FLOORS	Hardwood X Softwood Plywood Wall-to-Wall Carpeting X Satisfactory X Resilient Laminate _____ Not Visible
WALLS	Plaster X Drywall X Wood Masonry _____ Satisfactory X
CEILINGS	Plaster X Drywall X Wood Satisfactory X
STAIRS/RAILINGS	Balcony Stairs X Railings X Satisfactory X N/A
FIREPLACE	Flue liner: Partially observed X Satisfactory Damper: Operating X Not operating N/A Metal pre-fab Free-standing Wood stove Pellet stove Gas Operating Not operating Clean chimney before use
DOORS (INSIDE)	Satisfactory X
WINDOWS AND SKYLIGHTS	Double hung X Single hung Casement Awning Sliding X Satisfactory X Wood X Vinyl or aluminum clad wood Vinyl X Aluminum N/A Steel Insulated glass X Single pane glass X Roof windows and skylights Moisture stains Extensive

Remarks: Floors appear satisfactory.
 Walls and ceilings in original section are plaster, walls and ceiling in addition are drywall. As pics show, ceiling in living room is sagging. Plaster has lost it's "keys". Wet plaster is installed to "lath", which is 1/2" thick wood nailed to studs with 1/2" gap between boards. Wet plaster is applied to lath and pushed through gaps between boards forming "keys" when it dries. This holds plaster in place. Over time the keys break and the plaster sags and may fall altogether. Reattach ceiling with "screw buttons". These are screws, set into 1" plastic or metal washers. Applied through plaster, into lath, tighten screws until washer is just below surface of plaster. This will bring ceiling up tight to lath. Use drywall mud, prime and paint to finish.
 Creasote found in smoke shelf of chimney, black tarry substance, extremely flammable. Have cleaned by qualified chimney sweep before having a fire.
 If windows stick, try using spray silicone

ATTIC

ACCESS	How inspected: went inside Not inspected Satisfactory X Stairs Pulldown X Scuttlehole No access N/A
MOISTURE STAINS	Some signs Extensive None observed X Condensation
STORAGE	Heavy Light Floored Not floored No storage X
INSULATION	Type: rockwool, vermiculite Average inches 6 Satisfactory Installed in: Rafters Floor X Approx. R Rating: 21 N/A Vapor retarder X
VENTILATION	Window(s) Attic fan Whole house fan Turbine Satisfactory X Ridge vent Soffit vents X Roof vent(s) X Gable end louver X N/A

Remarks: Pulldown is over basement stairs, could be hazardous if one isn't paying attention to what they're doing.
 Vermiculite is an old insulation that may contain "tremilite" which is a form of asbestos. Have tested for asbestos content. Ask abatement professional if it needs to be completely removed or encapsulated.
 There isn't enough insulation in attic. You should have a total of at least 12" for an R42
 Air enters though soffit vents and exits through roof vents. This cyclical action keeps attic relatively cool in Summer and cold in Winter, preventing ice dams. The (2) gable vents interrupt this flow and should be blocked off.

REMARKS

Inspection of Roof

Many roofs are hazardous to walk on and in most cases can be satisfactorily inspected from the ground with or without binoculars or from a window with a good view of the roof. Some roofs, such as asbestos cement, slate, clay or concrete tile, shingles and shakes, may be seriously damaged by persons walking on them. Accordingly, the home inspector will base the inspection report on visible evidence which can be seen without walking on the roof.

The condition of a flat metal roof often cannot be determined unless it is possible for the home inspector to closely inspect its surface. Access to the roof from within the building is sometimes possible, but in many cases an additional inspection may be scheduled with special ladders to reach the roof from the outside.

“Satisfactory” Roof Covering

When the report indicates that the roof is “satisfactory,” that means that it is satisfactory for its age and general usefulness. A roof which is stated to be satisfactory may show evidence of past or present leaks or may soon develop leaks. However, such a roof can be repaired and give generally satisfactory service within the limits of its age.

Asphalt and Fiberglass Shingles

In cold and temperate climates, asphalt and fiberglass shingle roofs have a normal life of 15 to 20 years. In the South and Southwest, they have a normal life of 12 to 15 years. If a new roof is required, it may be installed over the original roof unless prohibited by local building codes. If two layers of roofing have already been installed, most building codes require both layers to be removed before installing a new roof covering.

Roll Roofing

Selvage or asphalt roll roofing is an inexpensive type of roof with a life of 5 to 10 years.

Built-Up Roof

Four-ply built-up roofs have a normal life of 15 to 20 years if they drain properly. If there is standing water on the roof, the rate of deterioration is doubled.

One-ply sheet membrane roofs have a normal life of 15 to 20 years.

Wood Shingles and Shakes

Wood shingles and shakes have more insulating value than other roofs. Wood shingles have a normal life of 12 to 15 years, and shakes have a normal life of 15 to 20 years.

Slate Roof

Slate roofs have a normal life of 30 to 75 years depending upon the grade of slate. Slate roofs do need annual maintenance, and it is necessary to replace defective individual slates and tar ridges as required from time to time.

If improperly installed, the nails fastening slates may rust through; individual slates can be lifted and relaid with copper slating nails. When one set of nails rusts through, it is likely it will happen soon to other slates, so lifting and relaying of all the slates may be required in the near future.

Clay Tile Roof

A clay tile roof has a normal life of 30 to 50 years, but individual pieces can become cracked or broken or the nails rust out. Tiles may have to be replaced periodically.

Asbestos Cement Shingles

Asbestos cement shingles have a normal life of 30 to 50 years, but they are brittle and individual shingles should be replaced as needed. In many states removal of asbestos cement shingles must be according to EPA standards.

Metal Roof

Metal roofs have a very long life if the exposed metal is kept coated with paint. When a metal roof has been tarred, it is impossible to determine the condition of the metal underneath the tar. While there may be no evidence detected of any ongoing leaks, it is possible the roof has rusted through and will need replacement in the near future.

ROOFING SYSTEM						
ROOF COVERING	Location	Materials	Age			
		asphalt, 1 layer	approximately 15 yrs.			Satisfactory X
						Satisfactory X
						Satisfactory X
						Satisfactory X
	How inspected: walked (2) roofs					
	Roof leaks:	Some signs	Extensive	None observed		X
FLASHING	Aluminum	Galvanized X	Copper	Rubberized membrane		Satisfactory N/A
GUTTER AND DOWNSPOUTS	Aluminum X	Galvanized	Copper	Vinyl	Wood	Satisfactory
	Extensions:	Yes	No X			N/A
Remarks:	<p>Shingles are getting old. Cupping, curling and slight loss of aggregate noted. Keep debris out of valleys. Roof will need replacing within (5) years. Should be a tear off. It will cost a little more for a tear off, but will save you money down the road. New roof will last years longer.</p> <p>Step and counter flashing at roof, wall intersection and chimney is galvanized, should last until new roof is installed. When new roof is installed, make sure new aluminum flashing is installed.</p> <p>All downspouts need extensions to keep water away from foundation.</p>					

EXTERIOR						
EXTERIOR DOORS						Satisfactory X
WINDOWS AND SKYLIGHTS						Satisfactory X
EXTERIOR WALL COVERINGS	Location	Materials				
		brick				Satisfactory X
						Satisfactory X
						Satisfactory
EXTERIOR TRIM	Eaves	Fascia X	Soffits X			Satisfactory X
	Signs of deterioration:		Extensive	None observed		
CHIMNEY	Brick X	Metal	Block		In chase	Satisfactory
	Flue liner partially observed			Clean before use		N/A
GARAGE/ CARPORT	Garage X	Carport	Attached X	Detached		Satisfactory X
	Door operator:	Operating X	Safety reverse X			N/A
PORCH	Floor:	Wood	Concrete X			Satisfactory X
	Railing/Guardrail					N/A
Remarks:	<p>Inspect exterior door and window frames for possible caulking needs.</p> <p>"Lentils" are installed above windows in brick homes. This is an angle iron weight bearing member. It keeps the weight of the brick from crushing the window. Lentils are made of steel and rust over the years. When they rust they expand dramatically, pushing out existing mortar. A process called "Tuckpointing" replaces the mortar and makes area around windows structurally sound. Virtually all basement windows need tuckpointing.</p> <p>Top of chimney is called the crown. This one is severely cracked, letting water into house, have replaced. You also need an aluminum cap on flue liner to keep out the rain, snow and critters.</p> <p>There is no safety reverse on motorized garage door. This is unsafe and potentially life threatening for a child, have repaired.</p>					

REMARKS

Sidewalk and Driveways

Spalling concrete cannot be patched with concrete because the new will not bond with the old. Water will freeze between the two layers, or the concrete will break from movement or wear. Replacement of the damaged section is recommended.

Window Wells

The amount of water that enters a window well from falling rain is generally slight, but water will accumulate in window wells if the yard is improperly graded. See page (3) for proper corrective action. Plastic window well covers are useful in keeping out leaves and debris, but they do block ventilation and light.

Retaining Wall

Retaining walls deteriorate because of excessive pressure build-up behind them, generally due to water accumulation. Often conditions can be improved by excavating a trench behind the retaining wall and filling it with coarse gravel. Drain holes through the wall will then be able to relieve the water pressure. Retaining walls sometimes suffer from tree root pressure or from general movement of top soil down the slope. Normally these conditions require the rebuilding the retaining wall. The inspector will only inspect the retaining wall if it is likely that any defect noted will adversely affect the building.

Exterior Wood Surfaces

All surfaces of untreated wood need regular applications of oil based paint or special chemicals to resist rot. Porch or deck columns and fence posts which are buried in the ground and made of untreated wood will rot within a year or two. All posts and wood members with ground contact should be of treated wood or constructed of wood which has natural resistance to rot, such as redwood. Decks should always be nailed with galvanized, aluminum or stainless nails.

Roof and Surface Water Control

Roof and surface water must be controlled to maintain a dry basement. This means keeping gutters cleaned out and aligned, extending downspouts, installing splash blocks or extensions, and building up the grade so that roof and surface water are diverted away from the building. A positive grade of approximately 1 inch per foot for at least 5 feet from the foundation walls is recommended. Where trees, air conditioning units and other obstructions do not permit the recommended slope, surface drains can be used instead. Failure to control surface water will usually result in a wet basement.

Trees, Shrubbery and Fencing

There is no inspection of trees, shrubbery, vegetation and fencing unless any defect noted may adversely affect the building.

Outbuildings

With the exception of a detached garage or carport and the driveway leading to them, outbuilding are not inspected.

GROUNDS

GRADING	General grading, slope and drainage				Satisfactory N/A
	Grading and slope at house wall (within 5 feet from building)				Satisfactory X N/A
SIDEWALK AND WALKWAY	Concrete X	Asphalt	Flagstone	Pavers	Satisfactory N/A
DRIVEWAY	Concrete X	Asphalt	Gravel	Brick _____	Satisfactory X N/A
WINDOW WELLS	Metal X	Brick	Concrete	_____	Satisfactory X N/A
RETAINING WALL	Brick	Block	Stone	Timber _____	Satisfactory N/A X
TREES AND SHRUBBERY					Satisfactory N/A
FENCING	Metal X	Wood X	Plastic	_____	Satisfactory X N/A

Remarks: Grade at foundation is too flat, should slope away from, 1" per foot for 5'. Because of it's clay content, use fill dirt, not top soil, water will ride on top. "Frost Heaving" has occurred on sidewalk slabs. Winter frost has pushed one slab 2" higher than the one next to it creating a "trip hazard" and possible law suit, recommend having repaired by process called "mud jacking". Contractor drills a series of 1" holes in cement slab, injects cement slurry which raises slab, eliminating trip hazard.

Window wells are dirty and need cleaning. Recommend purchasing plastic tops for window wells to keep out debris.

Trim all vegetation away from brick walls, as it holds moisture against the brick and could, over time, damage it.

Branches that touch roof need to be trimmed so as not to damage shingles.

Tree branches that break plane of roof should be trimmed back so that in the event of an ice storm, ice coated branches don't damage roof.

DECK/BALCONY BACK PORCH	Signs of deterioration X	Extensive	None observed		Satisfactory
	On grade	Raised X	Wood X	Metal	N/A
PATIO/TERRACE	Concrete	Brick	Flagstone	_____	Satisfactory N/A X
STEPS TO BUILDING	Landing:	Concrete/Masonry	Wood	_____	Satisfactory X
	Steps:	Concrete/Masonry X	Wood X	Metal _____	N/A
	Handrails:	Wood	Metal	_____	
OUTBUILDINGS	Not inspected X				

Remarks: Some boards on deck need replacing. Deck needs power washing and sealing or staining. Deck posts need more support. Ideally, deck railing should withstand #200 of horizontal force before breaking, this one will not.

REMARKS

Continued from page _____ Subject _____

Continued from page _____ Subject _____

Continued from page _____ Subject _____

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LIFE CYCLES AND COSTS

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The following costs are intended as ball park estimates for a typical three bedroom home. The figures for life expectancy and costs are based on this area. In other areas, these figures may differ. Cedar roofing, for example, is significantly less expensive on the west coast than in the east. The life expectancy of some components will vary with the severity of weather in the region. The design, quality of installation and level of maintenance can also drastically affect life expectancy. The figures include labor and materials.

ROOFING / FLASHING / CHIMNEYS

1.	Conventional asphalt shingles installed over existing shingles.	\$1.25-\$2.50 per sq. ft.	(twelve to fifteen years)
2.	Strip and reshingle with conventional asphalt shingles.	\$2.50-\$3.50 per sq. ft.	(fifteen to twenty years)
3.	Strip and reshingle with top quality asphalt shingles	\$3.00-\$4.00 per sq. ft.	(twenty five to thirty years)
4.	Strip and reshingle with low slope	\$3.00-\$4.00 per sq. ft.	(ten to fifteen years)
5.	Strip and reroof with cedar shingles	\$6.00-\$9.00 per sq. ft.	(twenty to forty years)
6.	Strip and reroof with cedar shakes	\$7.00-\$10.00 per sq. ft.	(twenty five to fifty years)
7.	Install concrete tile roofing (assuming no structural reinforcement)	\$5.00-\$7.00 per sq. ft.	(fifty years and up)
8.	Install new slate roof	\$10.00-\$20.00 per sq. ft.	(forty to two hundred years)
9.	Repair loose slates or tiles	\$30.00 per slate/tile	(minimum \$300)
10.	Install roll roofing	\$1.00-\$2.00 per sq. ft.	(five to ten years)
11.	Strip and replace built up tar and gravel roof	\$6.00-\$10.00 per sq. ft. (minimum \$1000)	(fifteen to twenty years)
12.	Strip and install modified bitumen roof membrane	\$6.00-\$10.00 per sq. ft. (minimum \$1000)	(unknown- estimate twenty years)
13.	Improve flat roof drainage prior to installation of new membrane	\$2.00-\$3.00 per sq. ft.	
14.	Paint modified bitumen membrane	\$0.25-\$0.50 per sq. ft.	(minimum \$200)
15.	Install sheet metal on small roof surfaces	\$8.00-\$20.00 per sq. ft. (minimum \$500)	
16.	Reflash standard chimney: asphalt shingle roof built up or modified bitumen membrane	\$300-\$500 \$400-\$700	
17.	Install a metal cricket at wide chimney	\$300-\$500	
18.	Reflash standard skylight: asphalt shingle roof built up or modified bitumen membrane	\$300-\$500 \$400-\$700	
19.	Repair valley flashing on existing roof	\$20-\$30 per lin. ft.	(minimum \$300)
20.	Replace parapet wall flashing	\$20-\$30 per lin. ft.	(minimum \$300)
21.	Rebuild typical chimney above roof line: single flue double flue	\$100-\$200 per lin. ft. \$200-\$300 per lin. ft.	(minimum \$500) (minimum \$500)
22.	Repoint typical chimney above roof line: single flue double flue	\$20-\$30 per row \$25-\$40 per row	(minimum \$250) (minimum \$250)
23.	Install concrete crown on typical chimney: single flue double flue	\$150-\$300 \$200-\$400	
24.	Install rain cap on typical chimney	\$50-\$100 eac	

EXTERIOR

1.	Install galvanized or aluminum gutters and downspouts	\$4.00-\$5.00 per lin. ft. (minimum \$500)	(twenty to thirty years)
2.	Provide downspout extensions	\$15-\$20 each	
3.	Clean gutters in fall and/or spring	\$50-\$150	
4.	Install copper gutters and downspouts	\$15-\$25 per lin. ft.	(fifty to one hundred years)
5.	Install aluminum soffits and fascia	\$8.00-\$12.00 per lin. ft.	(indefinite)
6.	Install: aluminum siding	\$5.00-\$6.00 per sq. ft.	(indefinite)
	vinyl siding	\$3.50-\$5.00 per sq. ft.	(indefinite)
7.	Install wood siding using:		(maintenance dependent)
	cedar	\$5.00-\$7.00 per sq. ft.	
	paint grade	\$3.00-\$4.50 per sq. ft.	
8.	Install stucco	\$7.00-\$12.00 per sq ft.	(maintenance dependent)
9.	Repainting:		
	Soft mortar:	\$3.00-\$4.50 per sq. ft.	(minimum \$200)
	Hard mortar:	\$6.00-\$8.00 per sq. ft.	(minimum \$200)
10.	Replace deteriorating bricks	\$20-\$30 per sq. ft.	
11.	Rebuild parapet wall	\$20-\$30 per sq. ft.	
12.	Cleaning brick (chemical wash):		
	exposed	\$2.00-\$3.00 per sq. ft.	(minimum \$1000)
	painted	\$4.00-\$6.00 per sq. ft.	(minimum \$1000)
13.	Sealing of brickwork	\$0.75-\$1.00 per sq. ft.	
14.	Painting (exclusive of repairs):		(four to six years)
	trim only (soffits, fascia, doors and window frames)	\$1500-\$2000 and up	
	trim and wall surfaces (wood, brick, stucco)	\$2500 and up	
15.	Parge foundation walls	\$3.00-\$4.00 per sq. ft.	
16.	Dampproof foundation walls and install perimeter drainage tiles	\$100-\$150 per lin. ft. (minimum \$1000)	
17.	Install a deck	\$12-\$25 per sq. ft.	(ten to twenty years)
18.	Install a deck on a flat roof	\$20-\$30 per sq. ft.	(ten to twenty years)
19.	Resurface existing asphalt driveway	\$2.50-\$4.00 per sq. ft.	(ten to twenty years)
20.	Seal asphalt driveway	\$50 and up	(one to three years)
21.	Install interlocking brick driveway	\$6.00-\$8.00 per sq. ft.	(fifteen years and up)
22.	Install concrete driveway	\$6.00-\$10.00 per sq. ft.	(thirty to forty years)
23.	Install drain at bottom of sloped driveway	\$1000-\$1500	
24.	Install concrete slab patio	\$5.00-\$8.00 per sq. ft.	(thirty to forty years)
25.	Install concrete patio stones	\$2.00-\$5.00 per sq. ft.	(thirty to forty years)
26.	Rebuild exterior basement stairwell	\$3500-\$5000	
27.	Install drain at existing basement stairwell	\$500-\$800	
28.	Build detached garage: single	\$12000 and up	
29.	Break wood/soil contact at detached garage	\$25-\$40 per lin. ft.	(minimum \$500)
30.	Demolish and remove detached garage	\$1500 and up (dependent on dumping costs)	
31.	Install garage door		
	single metal one piece	\$600-\$800	
	single wood sectional	\$800-\$1000	
	double wood sectional	\$1200-1500	
32.	Install garage door opener	\$300-\$450	(eight to twelve years)
33.	Build retaining wall:		
	wood:	\$16-\$25 per sq. ft.	(minimum \$500)
	concrete:	\$30-\$40 per sq. ft.	(minimum 500)
34.	Replace porch steps:		
	wood:	\$200-\$300	
	concrete:	\$300-\$500	
35.	Replace porch flooring	\$4.00-\$6.00 per sq. ft.	

36. Replace porch skirting	\$10-\$15 per lin. ft.
37. Replace step railing	\$100-\$200
38. Install fencing: wood:	\$16-\$50 per lin. ft.
chain link:	\$7.00-\$12 per lin. ft.
39. Lay sod	\$1.00-\$2.00 per sq. ft.
40. Install lawn sprinkler system	\$1000 and up

STRUCTURE

1. Underpin one corner of house	\$3500 and up
2. Underpin or add foundations	\$300 and up per lin. ft. (minimum \$3000)
3. Lower basement floor by underpinning and/or bench footings	\$150 - \$300 and up per lin. ft. (minimum \$5000)
4. Replace deteriorating sill beam with concrete	\$60 and up per lin. ft. (minimum \$500)
5. Replace main beam in basement (unfinished	\$1000-\$2000
6. Re-support joist by sistering another alongside	\$100-\$300 (depending on how much wiring, piping or ductwork is in the way.)
7. Install basement support post with proper foundation	\$300-\$400
8. Chemical treatment for termites	\$1300 Roughly (10-20 years)
9. Termite inspection performed by a specialist	\$125-\$200
10. Remove or open bearing wall	\$2000 and up (exclusive of decorating)
11. Remove partition wall	\$500-\$1500 (exclusive of decorating)
12. Install door opening in interior wall	\$500-\$1000 (exclusive of decorating)
13. Rebuild arch above window or door opening	\$800 and up
14. Install lintel above opening in masonry wall	\$500 and up
15. Install exterior basement stairwell	\$5000 and up
16. Build an addition: foundation to roof:	\$150- \$300 per sq. ft.
additional story:	\$100-\$300 per sq. ft.
17. Install collar ties	\$30 -\$50 each (minimum \$500)
18. Install lateral bracing on collar ties	\$100-\$200
19. Replace roof sheathing	\$4.00-\$6.00 per sq. ft

ELECTRICAL

1. Upgrade electrical service to 100 amps	\$1000-\$1300
2. Upgrade electrical service to 100 amps (If suitable sized panel already exists)	\$500-\$700
3. Upgrade electrical service to 200 amps.	\$1800-\$2200
4. Replace main ground: home on public water system	\$100-\$150
home on private well (install grounding rods)	\$250-\$400
5. Install new breaker panel	\$500-\$900
6. Install auxiliary breaker panel	\$200-\$400
7. Replace circuit breaker (20 amp or less)	\$50-\$100
8. Add 120 volt circuit (microwave, freezer, etc.)	\$150-\$250
9. Install exterior outlet with waterproof cover	\$200-\$300
10. Add 240 volt circuit (dryer, stove, etc.)	\$250-\$350
11. Add conventional receptacle	\$75-\$150
12. Add kitchen split receptacle	\$150-\$250

13. Provide ground for conventional receptacle	\$75-\$100
14. Replace conventional receptacle with ground fault circuit interrupter receptacle	\$60-\$90
15. Replace conventional receptacle with aluminum compatible type (CO/ALR)	\$10-\$15 each (assuming several are required)
16. Upgrade entire house with aluminum compatible connectors, receptacles, etc.	\$500-\$700
17. Rewire electrical outlet with reversed polarity	\$5.00-\$10.00 each
18. Install switches (dimmer, standard, lighted, etc)	\$10.00-\$20.00 each
19. Install standard light fixture	\$100-\$200
20. Install exterior light	\$150-\$250
21. Install fluorescent light fixture	\$150-\$250
22. Rewire entire house during renovations	\$3000 and up

HEATING

1. Install mid efficiency forced-air furnace	\$1700-\$3000 (20-25 years)
2. Install high efficiency forced air furnace	\$3000-\$5000 (estimated 20-25 years)
3. Annual service by heating contractor	\$50-\$100 minimum
4. Replace blower and/or motor	\$400-\$600 (10-20 years)
5. Install humidifier	\$200-\$400 (5-10 years)
6. Install electronic air filter	\$500-\$800 (10-20 years)
7. Install mid efficiency boiler	\$2500-\$4000 (20-25 years)
8. Install high efficiency boiler	\$5000-\$9000 (estimated 20-25 years)
9. Rebuild firepot (refractory) on boiler	\$500-\$800
10. Install circulating pump	\$400-\$600 (10-25 years)
11. Install expansion tank	\$250-\$300
12. Install backflow preventer	\$100-\$150
13. Install chimney liner (for gas)	\$300-\$700
14. Install programmable thermostat	\$100-\$300
15. Remove oil tank:	
interior	\$400 and up
exterior	\$3000 and up
16. Replace radiator valve	\$75-\$150
17. Replace radiator	\$500-\$900
18. Add electrical baseboard heater	\$250-\$300 (15-25 years)
19. Convert oil furnace to gas (if possible)	\$1000-\$1200
20. Convert from hot water heat to forced air:	
bungalow	\$8000-\$10,000
two story	\$15,000-\$20,000
21. Clean ductwork	\$200-\$500
22. Ductwork modifications for conversions from gravity to forced air	\$1000-\$1500

COOLING / HEAT PUMPS

1. Add central air on existing forced air system	\$2000-\$3500 (10-15 years)
2. Add heat pump on existing forced air system	\$4000-\$7000 (10-15 years)
3. Replace heat pump or AC condenser	\$1200-\$2500 (10-15 years)
4. Install independent AC system	\$8000-\$15,000 (10-15 years)
5. Annual service performed by technician	\$100-\$300

INSULATION

1. Insulate open attic area to modern standards	\$.50-\$1.25 per sq. ft.
2. Blow insulation into flat roof, cathedral ceiling or wall cavity	\$2.00-\$3.50 per sq. ft.
3. Improve attic ventilation	\$40-\$50 per vent
4. Removal of UFFI in wood frame walls	\$20-\$35 per sq. ft.
5. Remedial approach to UFFI insulation (i.e. caulking and heat recovery ventilator)	\$3000-\$5000
6. Insulate from exterior with rigid insulation prior to occupancy	\$1.00-\$2.00 per sq. ft.
7. Insulate basement from interior	\$1.00 and up per sq. ft.

PLUMBING

1. Replace galvanized piping with copper: bungalow with one bathroom	\$1500-\$2000	NOTE: Figures include some repairs to finishes after disruption
bungalow with two bathrooms	\$2000-\$2500	
two story with one bathroom	\$2000-\$3000	
two story with two bathrooms	\$2500-\$3500	
2. Replace water line to house	\$150-\$200 per lin. ft. (min. \$1400)	
3. Replace older or damaged main shut off valve	\$150-\$300	
4. Install water heater	\$600-\$800 (8-12 years)	
5. Typical monthly rental of water heater	\$5.00-\$9.00	
6. Replace toilet	\$300 and up (30-40 years)	
7. Replace toilet flush mechanism	\$100-\$150 (8-12 years)	
8. Unclog or remove obstruction from toilet	\$100-\$200	
9. Replace seal on toilet	\$150-\$250	
10. Install bidet	\$500 and up (30-40 years)	
11. Replace basin: vanity	(12-20 years) \$200 and up	
pedestal	\$350 and up	
12. Replace faucet set	\$150 and up (10-15 years)	
13. Replace bathtub including ceramic tile	\$1500 and up (20-30 years)	
14. Install refinished claw foot bathtub	\$1800 and up (15-20 years)	
15. Replace bathtub/faucet set	\$300 and up (10-15 years)	
16. Install whirlpool bath	\$3000 and up (15-25 years)	
17. Retile bathtub enclosure	\$800-\$1200 (maintenance dependent)	
18. Replace leaking shower stall pan	\$1000-\$1600 (unpredictable)	
19. Rebuild tile shower stall	\$1500-\$2500 (unpredictable)	
20. Install plastic bathtub enclosure	\$200-\$400 (10-15 years)	

21. Install plastic shower stall	\$600-\$2000 (10-15 years)
22. Install bathroom exhaust fan	\$250- \$500 (5-10 years)
23. Install basement bathroom	\$4000 and up
24. Replace laundry tubs	\$250-\$500 (15-25 years)
25. Install laundry facilities	\$900 and up
26. Remodel bathroom completely	\$6000 and up
27. Install kitchen sink:	
single	\$300 and up (15-25 years)
double	\$400 and up
28. Install dishwasher	\$600-\$1000 (10-15 years)
29. Install garbage disposal	\$400-\$600 (8-12 years)
30. Install kitchen stove hood	\$250-\$500 (8-12 years)
31. Install solid waste pump	\$1200-\$1800 (5-10 years)
32. Connect waste pumping system to municipal sewers	\$3000 and up
33. Snake out obstruction in main sewer line below yard	\$200-\$400
34. Repair collapsed or damaged section of sewer line below yard	\$1000 and up
35. Install submersible pump in well	\$800 and up (10-15 years)
36. Install suction or jet pump for well	\$600-\$800 (10-15 years)
37. Replace water tank for pump	\$250-\$300
38. Install water softener	\$1000 and up (5-15 years)
39. Install outdoor faucet	\$150-\$250
40. Replace sump pump	\$150-\$250 (2-7 years)
41. Install sauna	\$3000 and up

INTERIOR

1. Add drywall over plaster	\$1.50-\$2.50 per sq. ft.
2. Remove old plaster and install drywall	\$3.50-\$4.50 per sq. ft.
3. Add wire lath and new plaster over existing plaster	\$3.00-\$4.00 per sq. ft.
4. Spray stipple on existing ceiling	\$1.00 per sq. ft.
5. Install suspended tile ceiling	\$3.00-\$5.00 per sq. ft.
6. Install acoustical tile ceiling	\$1.50 per sq. ft.
7. Install drywall on unfinished basement ceiling	\$1.50-\$3.00 per sq. ft.
8. Sand and refinish hardwood floors	\$1.50-\$3.00 per sq. ft.
9. Install hardwood floors	
3/8" thick	\$6.00-\$8.00 per sq. ft.
3/4" thick	\$10.00-\$12.00 per sq. ft.
10. Install parquet flooring	\$5.00-\$7.00 per sq. ft.
11. Install ceramic floor tiles	\$15.00 and up per sq. ft.
12. Install vinyl floor tiles	\$3.00 and up per sq. ft.
13. Install sheet vinyl	\$7.00-\$12.00 per sq. ft.
14. Install synthetic wall to wall carpet	\$25.00-\$50.00 per sq. yd.
15. Install wool wall to wall carpet	\$60.00 and up 60.00 and up per sq.

16. Install underpad	\$5.00 per sq. yd.
17. Clean carpets	\$30 per room
18. Replacement windows:	
Sliding windows	\$35-\$45 per sq. ft.
Casement windows	\$50 per sq. ft.
Awning windows	\$50 per sq. ft.
Double hung	\$40-\$45 per sq. ft.
Fixed	\$30-\$40 per sq. ft.
Bay	\$40-\$65 per sq. ft.
19. Storm windows	\$125-\$250 each
20. Convert coal burning fireplace to wood burning unit	\$1500 and up
21. Install masonry fireplace: with single flue chimney from rough in	\$6000 and up \$2000 and up
22. Install zero clearance fireplace	\$3000 and up
23. Install glass fireplace	\$2500 and up
24. Install glass doors on fireplace	\$300 and up
25. Clean fireplace chimney flue	\$75-\$100
26. Install fireplace damper	\$200 and up
27. Install interior hollow core door	\$150-\$250
28. Install interior custom wood door	\$450 and up
29. Install interior frenchdoors	\$700 and up
30. Install louver doors on closet	\$150-\$250
31. Install sliding mirror doors on closet	\$1000 and up
32. Install exterior solid wood door	\$600-\$1200
33. Install exterior insulated metal door	\$600-\$900
34. Install closer on garage man door	\$100-\$200
35. Install storm door	\$350-\$700 (10-20 years)
36. Replace hardware on metal storm door	\$50-\$100
37. Install sliding glass doors:	
brick wall	\$2500-\$3500
wood frame wall	\$2000-\$2500
38. Replace sliding glass doors	\$1000-\$1700 (10-20 years)
39. Install skylight	\$1000-\$3000
40. Remodel kitchen completely	\$10,000 and up
41. Install roof window or ventilating skylight	\$1500 and up
42. Install kitchen cabinets	\$250 and up per lin. ft.
43. Install kitchen counter	\$20 and up per lin. ft.
44. Install ceiling fan	\$200 and up
45. Install conventional alarm system	\$1000 and up
46. Install central vacuum system	\$800-\$2000
47. Install central vacuum canister only	\$500-\$1000
48. Paint interior (walls, ceilings, doors, trim) of entire house	\$2000 and up (5-10 years)
49. Hang wallpaper	\$2.00 and up per sq. ft.
50. Urethane injection of foundation cracks	\$350-\$500 each
51. Dampproof foundation walls and install perimeter drains	\$70-\$120 per lin. ft. (minimum \$1000)