

Inspecting a House



Before you buy any house, take the time to thoroughly inspect the structure and mechanical systems.

Costly repairs can often be avoided or at least anticipated by conducting a preliminary inspection before you sign a purchase offer for a home. If the house is inspected before a purchase offer is made, you will know in advance if heating equipment, wiring, or any other costly repairs or replacements will be needed. If defects are found, you do not necessarily have to reject the home. A purchase offer can include a “contingency clause” that identifies what needs to be corrected before the home sale is finalized. Another option you may choose is to offer a lower price for the home based on the cost of correcting the problems.

After an “offer to purchase” contract is signed (but before a loan is applied for or title inspection ordered), a thorough home inspection should be completed. Some lenders require a mechanical and structural inspection by a qualified, licensed home inspector. Even if a lending institution does not require such an inspection, you should have one. Reserve the right to cancel or renegotiate a purchase agreement if a professional inspection reveals significant defects.

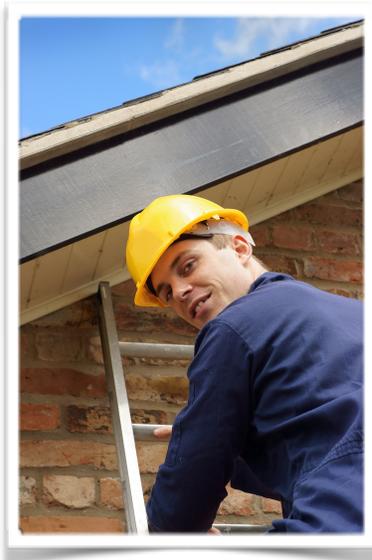
If you hire a professional inspector, be there when the inspection is

done. Follow the inspector around. Ask questions. It is important for you to know what is being checked, why, and the condition of each area inspected.

If you decide to do the job yourself, you might find it useful to study the Extension publication FCS-440 Preventive Home Maintenance and Repair — especially the inside and outside home inspection checklists. Then review the following list of tools and procedures.

Tools

- *Pencil and paper* to record information on the house.
- *Measure tape* (25-50 feet) to measure dimensions of the house. The measurements will help you determine whether pieces of your furniture will fit into specific rooms.
- *Stepladder*, if needed, for attic access.
- *Flashlight* with a strong beam for inspecting the attic, basement, and storage areas with poor lighting.
- *Coveralls* to protect your clothing when inspecting the attic or crawlspace.



- *Pocket knife* to test the condition of wood structures.
- *Moisture meter* to measure the moisture content of wood, especially in the crawlspace.
- *Hand level* to check drainage of sidewalks, porches, and basement floor and to see if the floors are level.
- *Screwdriver* to remove electrical faceplates to look for evidence of insulation and condition of the wiring. (Turn off electrical power at fuse or circuit breaker box first!)
- *Three-prong electrical circuit tester* to test receptacles.
- *Binoculars* for inspecting roof shingles and flashing from the ground.
- *Plumb line* and *T-square*.

Inspection Procedure

Walk around the outside of the house at least twice. As you walk, note specific areas that you need to inspect more carefully when inside the home. Look first at the foundation, drainage, and siding; the second time check windows, gutters, and the roof.

Once the outside is finished, move inside the house. Start in the crawlspace or basement and work your way up through the house to the attic. Take plenty of time to look behind boxes, in dark areas, in closets, under cabinets, etc.

The items listed below will help you do a thorough inspection. Use this list as a guide when inspecting any house. The items do not include such personal preferences as interior decoration (wall color, carpet, window treatments, etc.) or presence of optional equipment (air conditioning, security system, sprinkler system, etc.) **NOTE:** The items are not listed in the exact order which you might follow when inspecting a house.

Answer **YES** or **NO** to as many of the questions as apply to the house you are inspecting.

Lot

___ Does the slope of the lot prevent water from standing next to the

house? Water saturated soil could indicate the lack of drain tile.

___ Is there easy and safe access to the lot?

___ Is the lot safe and convenient?

___ Are there signs of septic field drainage problems? This may include odor of raw sewage, extremely soggy soil over the drain field, sewage discharged over the ground or in nearby ditches, broken or cracked white pipes that stick out of the ground, or an alarm flashing or beeping in the house.

Soundness of Construction

___ Are the foundation walls, interior walls, and ceilings free of cracks, especially horizontal ones? Check for door frame that seem to lean in one direction. These conditions might indicate excessive settling.

___ Does the structure sag? Are exterior walls plumb and square? Do floor or ceiling joists sag?

___ Are the floor and ceiling joists in good condition? Check the size and condition of the main beams, support posts, and rafters.

Windows

___ Do all windows open easily and close tightly?

___ Is the woodwork surrounding all windows a good fit and in good condition?

___ Are the weatherstripping, caulking, and window pane glazing in good condition?

___ Is there any evidence of window condensation or moisture damage?

___ Are there storm windows and screens?

___ Do the work properly?

___ Are any missing or broken?

___ For storm windows, are the weep holes open?

Make certain to inspect windows from both the inside and outside.

Doors

___ Do all exterior doors fit tightly and operate easily? Check by opening and closing each door. If one tends to stick, check the fit. It



could be swollen from too much moisture. Carefully check the weatherstripping to see if it is in good condition. Check the operation and security of locks and hinges.

___ Are the interior doors in good condition or are they warped? They should close and latch properly and easily. Check the door trim for good fit. Knobs, locks, and hinges should operate easily and be in good condition.

Paint

___ Are the painted surfaces of the house in good condition? Check for peeling, blistering, and chipping both inside and outside the house. If any of these conditions are present, a paint job might be your first project should you choose to buy the home.

Keep in mind that if the home was built prior to 1978, it could contain lead. Paint with lead poses a health hazard to young children who might eat chips from the paint. Lead may also pose a health risk to other members of the family. To learn about risks associated with lead, as well as how to manage lead issues, see the EPA's website at <http://www2.epa.gov/lead>

Siding

___ Are the siding materials and the paint or stain in good condition? Peeling paint or white spots on stain could indicate moisture problems. Look for decay, split siding, or excessive rusting of nail heads.

___ Is there caulking around doors and windows, at corners, and wherever different building materials meet? Are they in good condition?

Roofing

___ Is the roof in good condition? Note the type of roofing material used. Try to determine its age by asking the owner. Are there broken or missing shingles, or some with curling edges?

___ Is the ridge beam of the roof straight, or does the roof sag?

___ Is there evidence of water leakage inside the house? Inspect rafters and insulation in the attic

as well as ceilings and interior walls for water stains and discoloration.

___ Is the flashing in good condition and properly placed to prevent

water from entering the attic? Make sure there is flashing around the chimney.

___ Are the gutters and downspouts in good condition? Are there any signs of leakage? Do the downspouts empty away from the foundation?



Basement or Crawlspace

___ Is there an easy, clear access to the basement or crawlspace? If heating equipment or the water heater is located there, can it be reached easily for servicing?

___ Is the basement or crawlspace dry and resistant to water penetration? Check for water stains on concrete floors and foundation walls. Damp spots on walls are not necessarily a sign of leakage; they can result from condensation.

Even if floors and walls are dry, a damp or musty smell can give an indication of seasonal wetness.

___ Are there foundation vent openings in the crawlspace? Is there a vapor or moisture barrier covering the ground to control for crawlspace moisture?

___ Is there a radon mitigation system present, and if so, is it in good condition?

Crawlspace moisture can be a problem in North Carolina homes. To learn more about controlling for moisture, as well as about sealing crawlspaces, visit Advanced Energy's website at <http://www.crawlspaces.org/>

Floors

___ Are floors level and in good shape?

___ Is carpet or vinyl torn?

___ Are there any broken tiles?

___ Does the floor squeak or “give” when you walk over it? A wood floor should be smooth, tight, and free from squeaks. Check the condition of its finish.

Attic

___ Can you get to the attic easily? In some homes, a permanent or fold-down stair provides easy access to the attic, but in other homes access to the attic is through a panel in the closet or hall and a stepladder must be used to gain entrance.

___ Do you see evidence of moisture, such as discoloration of the rafters; stains on the attic floor, masonry, and pipes; or damp insulation?

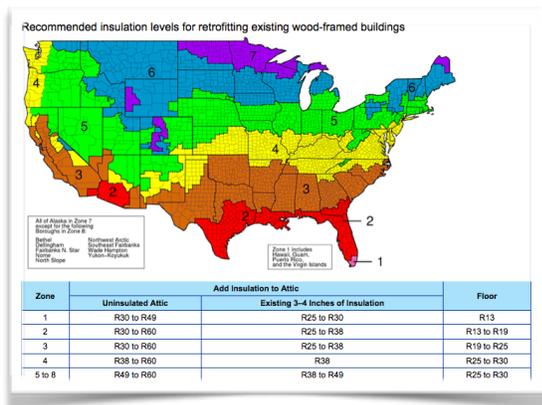
___ Is there adequate ventilation in the attic? Do all plumbing, heating, and exhaust fan vents extend and vent to the outside?

___ Do you see streaks of light around vents, chimneys, or roof seams? If so, these are potential leaks.

Insulation

___ Is the house insulated? There should be adequate insulation in the walls, floor, ceiling, and attic. Check the thickness and general condition. The local utility company can provide recommended R-values. Visit the Energy Star website to determine the R-value needs for your area:

http://www.energystar.gov/?c=home_sealing_hm_improvement_insulation_table



Use the following chart to help you determine how much insulation is currently in the attic space.

What you see	What it probably is:	Depth (inches)	Total R-Value
Loose Fibers	Light-weight yellow, pink, or white	_____	= 2.5 X depth
	Dense gray or near-white, may have black specks	_____	= 2.8 X depth
	Small gray flat pieces or fibers (from newsprint)	_____	= 3.7 X depth
Granules	Light-weight	_____	= 2.7 X depth
Batts	Light-weight yellow, pink or white	_____	= 3.2 X depth

Chart from the Department of Energy and Oak Ridge National Laboratory Insulation Fact Sheet

Heating System

___ Is the heating system in safe and workable condition? Check for a sticker on the furnace or boiler that shows the last time a combustion efficiency test was performed. At what level of efficiency does the burner operate? Turn the system on and note its performance.

___ Check for adequate air movement in each room if the system is a forced air system. Check for leaks from hot water systems. If the system is electrical, check the baseboard units to determine whether they are securely attached.

___ Is the thermostat located in a central location and away from doors or windows?

Replacing a heating system is a major expense, so it is recommended that you have the system inspected by an expert. Ask the seller if an energy audit of the home has been conducted – if so, ask to see a copy of the report.

Electrical System

___ Does the service box have at least 100 amperes? Check the quantity and types of circuits for appliances and other electrical equipment to be used. Check to see whether kitchen and laundry circuits are adequate.

___ Are there enough electrical receptacles to meet your needs? Grounded receptacles have a third, round hole. Use a circuit tester to see if receptacles are wired correctly and are grounded.

___ Does the house have ground-fault circuit interrupter (GFCI) protection in the kitchen, bathroom, garage, and outdoor circuits? Special GFCI

receptacles can be identified by the “test” and “reset” buttons on the face of each outlet: GFCI



breakers are labeled in the service box. If this protection is found in an older home, it indicates that the electrical system has been upgraded.

___ Is there visible electrical wiring in the attic, basement, or garage? Note the type of wire used and its condition.

As with the heating system, you may wish to have a licensed professional check the electrical system.

Water System and Quality of Water

___ Are plumbing fixtures, especially in the bathroom and kitchen, in good condition? Look for water damage on the bottom of sink cabinets, around the bases of toilets, and on ceilings (below upstairs plumbing fixtures).

___ Check the water pressure at the faucets. Turn on all faucets and flush all toilets at the same time. How long it takes the tanks to refill under these conditions is a good indication of the water pressure.

___ Are there shut-off valves on both hot and cold water supply lines to all sinks?

___ Are there signs of rust and leaks in the water heater? Is there a pressure relief valve?

___ Is there a private well? Has the water been tested? Acceptable water quality can be a contingency in your purchase offer.

You can obtain information on water testing from your county health department.

Sewage Disposal

___ If there is a septic tank, is it in good condition? What is its age? Has it been pumped regularly at 3- to 5- year intervals? Are there any signs indicating faulty or inadequate capacity of drain lines, such as a slowly draining sink, or a toilet that backs up?

Appliances

___ Do some appliances remain with the house? These may include a built-in oven, microwave, dishwasher, free-standing range, refrigerator, washer, dryer, and window air conditioning unit. All should be tested for efficient and safe operation. Ask the owner for any records of service and repair.

Insect Damage

___ Are there signs of wood damage from insects? The most destructive insect is the



termite, which eats the interior of studs and joists. Termites may cause much damage before they are detected. Termite inspection is required by most lenders. Has the house been periodically inspected and treated for termites?

___ Are there piles of coarse sawdust beneath the timbers? This may indicate the presence of carpenter ants. Unlike termites, carpenter ants

do not eat wood, but they nest in it. They are most likely to attack wood that has already begun to rot. These ants may also be heard within walls and may even be spotted inside the house in the winter. They are black and about 1/2 inch long.

___ Do you see deposits of sawdust on the floor and small pencil-lead size holes in wood beams and floor joists? This may indicate the presence of powder-post beetles. To verify, check to see if the wood crumbles when an ice pick or pocketknife is pressed into the beams, floor joists, support posts, and sill plates.

For more information about household pests, check with your county Cooperative Extension office or visit:

<http://www.ces.ncsu.edu/depts/ent/notes/Urban/index.htm>

If there is some indication of the presence of termites, carpenter ants, or powder-post beetles, your purchase offer can be contingent on the house being free from infestation by these or other insects. You can ask the seller to pay the cost of a professional insect inspection and treatment; however, inspection is usually paid by the buyer.

The Indoor Environment

Certain products or pollutants in the indoor environment can cause health problems. Asbestos, carbon monoxide, and radon are hazards that may be present. Lead, which can be present in water, paint, or soil, can cause health problems in children and during pregnancy. Additionally, some people are sensitive to certain products or pollutants like formaldehyde and volatile organic compounds. You may want to test for some or all of the following contaminants. Contact your local health department or Cooperative Extension office for guidance on testing.

- *Formaldehyde* is often found in particle and other composition board, plywood, paneling, wallpaper, and permanent-pressed fabrics.

- *Asbestos* fibers may be found in thermal insulation, pipe and duct insulation, vinyl flooring, textured paint, exterior siding, appliances, stoves, and furnaces. Removal of asbestos can be expensive and should be handled by a professional asbestos abatement contractor.
- *Carbon monoxide* may be leaking from defective or improperly vented combustion appliances such as furnaces, gas dryers, and gas heaters. These should be checked by a qualified heating system technician. Try to avoid the use of wood stoves or kerosene heaters inside a home. Exposure to high levels of carbon monoxide can cause serious health consequences, even death.
- *Radon* is a colorless and odorless soil gas that can travel from the soil through cracks in the foundation and then to the inside of the house. Radon can cause lung cancer. If the house hasn't been tested for radon, you may want to ask the seller to establish an escrow account to cover costs of radon remediation should it be needed. Better yet, have the home tested for radon before purchasing.
- *Volatile Organic Compounds* are found in flammable and other household cleaning and maintenance products. You may want these products removed before you take possession of the home.
- *Lead* may be present in paint in homes built prior to 1978. It may also be present in the piping system at soldered joints. If you have small children and suspect the presence of lead, have it checked, as lead exposure is a serious health issue for young children. Removal of lead-based paint or lead in the waste system can be costly.

For more information about indoor health concerns see the Environmental Protection Agency's indoor air quality information:

<http://www.epa.gov/iaq/>

Adapted from:

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