

Inspection Report



GENERAL INFORMATION

Client: John & Jenny Jones
Inspection Address: 999 My Street, Anytown CO 80300
Inspection Date: January 11, 2009
Inspector: Garet Denise
Report Number: 09011102

Structure: Two story single family residence.
This is a new house, near the end of construction.
Weather: Partly cloudy. The ground was dry.
Temperature: 40s
Recent Weather: Fair.
Attendees: None.

For the purposes of this report, I'll assume the house faces south.

Who This Report Is For

This inspection and report are provided for the sole, confidential and exclusive use of the named client only. This report is not intended to be relied upon for any purpose by any other party not named on the report and Inspection Agreement. Other readers of this report should hire a qualified independent inspector to perform an inspection that meets their specific needs and to obtain current information about the property (property conditions change with time and use). A separate Inspection Agreement contains terms, conditions and limitations critical to understanding this report. Do not use this report without consulting that agreement.

Cornerstone Inspection, LLC assumes no responsibility to or liability from any third parties in connection with the inspection or report.

Your Risk

This inspection can help you reduce your risk, but I can not eliminate it nor do I assume it. This inspection is an overview of the property, but I will not find every defect. All homes require maintenance. You should anticipate occasional unexpected repairs. This inspection is not a guarantee or warranty of any kind.

Building Codes

This inspection does not include checking for compliance with building codes. It's not possible to determine compliance with codes after the home is completed because many critical components are no longer visible. If you want a 'code inspection' you'll need to talk to the local building department since they're the only people with the authority to do a code compliance inspection. If you find codes, specifications or standards referenced in this report you should realize that they're only provided to indicate the source for my opinions; they are not intended to imply that this code was in place at the time of construction, nor that this is a code compliance inspection. Not all code related issues can or will be disclosed in this report. We offer no warranty as to code compliance.

STRUCTURE

Foundation:	Piers with concrete walls.
Floor Structure:	Manufactured wood joists.
Exterior Walls:	Wood framed.
Ceiling Support:	Roof trusses.
Roof Structure:	OSB over trusses.

Many parts of the structure are concealed behind finished surfaces or are buried below grade. Therefore, much of the structural inspection consists of looking for signs of deterioration or movement. If there are no visible symptoms then hidden problems may go undetected.

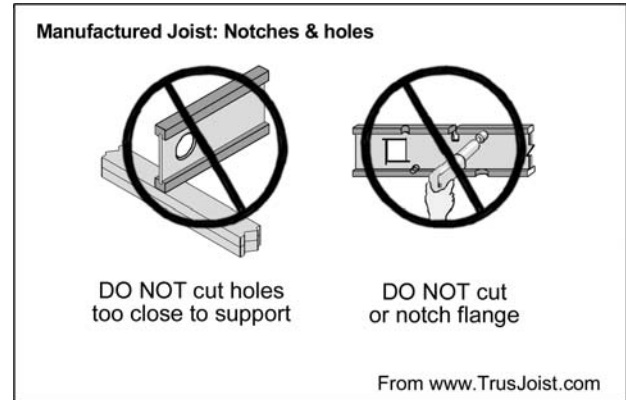
Damaged Floor Joist

The top flange is cut out of the manufactured floor joist under the bathtub. Manufacturers of floor joists (often called 'TJIs', named after one particular manufacturer) strictly limit allowable hole sizes and where holes can be cut. Joists with holes cut in the wrong places are damaged. Damaged joists are weak.

- 1. Repair damaged floor joists by adding another full-length joist along-side the damaged joist (often called a 'sister' joist). If a licensed structural engineer recommends an alternative repair then you should keep a copy of the engineering documentation for the time when you sell the house.**



Joist flange cut under bathtub.



ROOF

- Type:** Combination hip and gable.
- Covering:** Laminated asphalt shingles.
- Examination Method:** Walked on surface.
- Gutters:** Installed. Downspouts discharge above and below grade.

This inspection is not a warranty, guarantee or insurance policy and it's not intended to predict how long the roof will last or if it will leak. Leaks can develop at any time depending on rain intensity, wind direction, ice build-up and other factors. All roofs should be inspected annually in order to last typical life spans. Expect to make minor repairs to any roof.

Missing Kickout Flashing

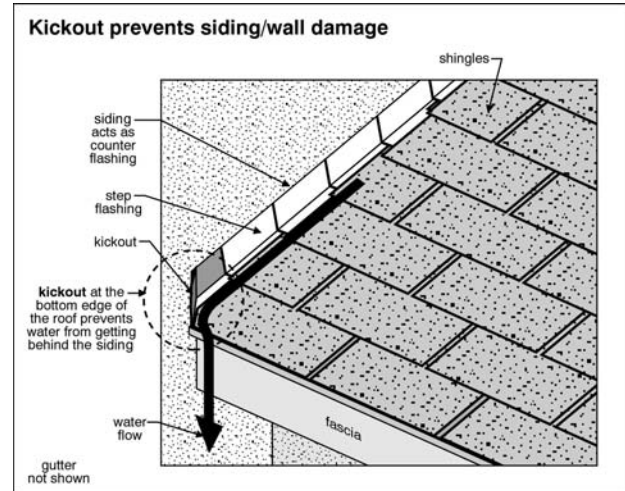
Roof flashings need special treatment where the roof ends at an eave but the adjacent wall surface continues past. These locations need a "kickout" or "diverter" flashing to keep the water on the outside of the wall surface. If a kickout is not installed then water running down the joint ends up behind the wall surface where it can cause extensive damage.

"Special attention needs to be paid to the bottommost step flashing where an eave intersects a continuous vertical surface to ensure water is diverted to the outside of the wall covering. NRCA suggests a kick-out at this intersection." (National Roofing Contractors of America, *The NRCA Roofing Manual: Steep-sloped Roof Systems - 2009* p. 48)

- 2. Install missing kickout flashings at the lower end of the roof-to-sidewall junction.**



Missing kickout flashing.



Gutters and Drains

Gutters and drains are important because water from the roof entering the ground adjacent to the foundation can cause structural damage and is a frequent source of water problems in basements or crawl spaces. Unless it is raining during the inspection I may not be able to see leaks or other problems.

Although many homeowners ignore them, gutters and drains need regular maintenance and cleaning to make sure that water flows through the system and then flows well away from the structure after it exits downspouts. Some gutters need cleaning several times per year, depending on landscaping.

EXTERIOR

Primary Siding:	Composite lap siding.
Other Siding:	Artificial stone veneer.
Eave Trim:	Wood soffits.
Deck:	Wood.
Porch:	Concrete.

You should routinely check the outside of the house. Exteriors need regular maintenance to stay sealed against the weather. There can be hidden damage when the exterior is not sealed or is poorly finished, damaged or decayed. Areas with little or no roof overhang need particular attention.

Deck Collapse Hazard

Decks must to be securely attached to the structure to avoid collapse which could cause serious injury or death. Nails are not sufficient for this task; this critical connection requires bolts.

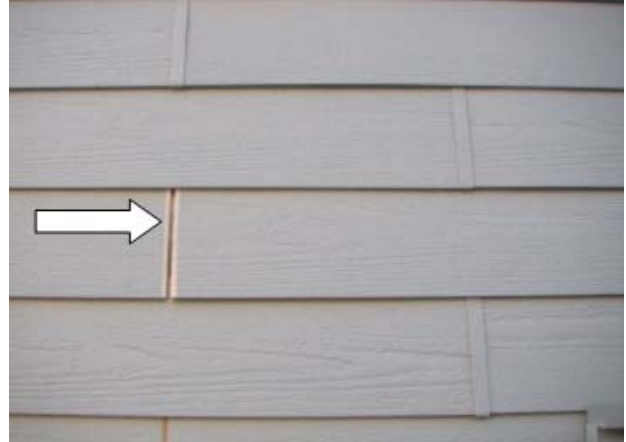
- 3. Fasten the deck to the house with bolts instead of nails to avoid the risk of collapse.**

Unsealed Penetration Through Wall

Water is likely to cause problems anyplace it can enter through the exterior wall.

4. Seal the exterior to avoid water entry and damage. Location: dryer vent**Open Siding Joints**

End joints of siding panels are sealed with metal flashing strips. Many of them are not nailed in place. Some have already fallen out leaving the joints open. Water entry at these points will cause damage.

5. Replace missing flashing strips at siding butt joints, and nail all the flashing strips in place.

Flashing strips not nailed in place. Several have fallen out.

GROUNDS

Driveway:	Concrete.
Walks:	Concrete.
Retaining Wall:	Wood.

Fences, recreational facilities, detached buildings (other than detached garages), trees and landscaping, erosion control and earth stabilization measures are not inspected unless specifically documented.

Grading

Proper drainage (slope of the ground surface) is important. Water entering the ground near the foundation can cause various problems ranging from a wet basement or crawl space to structural problems. Water from roof gutters and downspouts should be directed away from the foundation for the same reason.

It is not unusual for soils backfilled around the foundation to be poorly compacted (or not compacted at all) and to settle. Sometimes this can show up within the first year; other times it takes years or decades. There is no way to discover this during a home inspection if the ground surface has not yet settled. Such settlement may create low spots with poor drainage that may lead to structural problems or to problems with water entry to basements or crawl spaces. Settlement could also damage anything resting on the ground or buried in the ground, such as sidewalks, driveways, patios, electrical cables, pipes, etc. With new houses in general, decks are a better option than patios because patios are frequently damaged by settlement. You should periodically check the grading around the house. If there has been settlement then add more soil below the landscaping materials.

The grading around the structure appears to be adequate.

Expansive Soils

Expansive soils are found in much of the Colorado Front Range. These clay minerals act like a sponge and swell when water is added. They also shrink when dried out. This swelling and shrinkage can cause major structural damage. Colorado also has a semi-arid climate. Many naive (but well-intentioned) homeowners

plant Kentucky Bluegrass or other water-thirsty plants next to their house and add lots of water to the foundation with sprinklers. I strongly suggest that you keep dry landscaping or drought tolerant landscaping without irrigation (also called 'Xeriscape') for at least the first 5 feet around the house (more if there are signs of expansive soil problems). You should minimize lawn irrigation and pay particular attention to any gutter and grading improvements that may be identified elsewhere in this report.

GARAGE

Type: Attached.
Doors: 2 overhead vehicle doors.
Openers: 2

Garage Door

The garage vehicle door is the largest moving object in the home. A malfunctioning or falling garage door can cause severe injury. You should check its operation monthly.

Automatic Opener - General

An automatic garage door opener that doesn't reverse properly can cause severe injury. You should test this important safety feature each month by placing a 2x4 wood block flat on the floor and closing the door on the block. The door should reverse. Read the owner's manual.

Safety Reverse Not Working

The overhead garage door opener reversed correctly when the photo-electric eye was interrupted, but did not automatically reverse when it struck a 2x4 block of wood.

6. **Adjust or repair the garage door openers so the safety reverse mechanism works properly. If the opener can't be repaired then replace it. Disconnect the opener until it's been repaired.**

Garage Door Opener Button Too Low

Control buttons for overhead garage door openers should be mounted high enough that young children can not reach them. Most manufacturers recommend the button should be at least 60 inches up.

7. **Raise garage door opener buttons at least 60 inches above the adjacent standing surfaces.**

WINDOWS & DOORS

Exterior Doors: Metal covered and sliding glass.
Interior Doors: Hollow-core.
Windows: Vinyl frame. Double pane glass.

We only report on physical condition and operability. Thermal efficiency is not a part of this inspection. We can't check windows or doors that are blocked by furniture. Broken seals on double pane window units are sometimes difficult to see and may not be reported. Storm windows, screens, storm doors, window and door coverings, shutters and other seasonal items are not inspected unless specifically documented.

Damaged Window Hardware

Window hardware should support the moving sash so it doesn't fall. Windows that won't stay up are dangerous because occupants are tempted to prop them open with a stick. **Do not prop windows open. This is dangerous.** Window sashes are heavy, and if they drop they can act like a guillotine and cause serious injury.

- 8. Repair window hardware so the moving sash will stay up on its own. Location: north side of master bedroom**

Egress Ladder Configuration

In order to safely exit during an emergency, egress ladders from basement windows should have rungs no more than 18 inches apart.

- 9. Reinstall the emergency egress ladder at the basement window so rungs are no more than 18 inches apart and the lowest rung is no more than 18 inches above the ground.**

CRAWL SPACE

Area:	Under the basement structural floor.
Examination Method:	Crawled through it.
Height:	About 1-2 feet.
Ventilation:	Powered fan.
Vapor Retarder:	Plastic on top the soil and sealed to the walls.
Insulation:	None.

A Few Words About Crawl Space Moisture

Moisture in the crawl space can lead to structural damage, wood destroying insects and health related issues such as mold/mildew. The crawl space was dry at the time of the inspection. However, because conditions can change (particularly in wetter years) it's impossible for us -or anyone else- to make a long-term prediction or give you a guarantee that you won't have problems.

You can reduce the risk of problems by maintaining your gutters, making sure downspouts discharge far away from the foundation and by sloping the ground surface away from the structure in all directions. Minimize irrigation from sprinkler systems.

You should periodically check to make sure your crawl space is staying dry (particularly after severe storms).

Organic Debris

There is sawdust and wood scraps on top the plastic sheeting in the crawl space. This material will grow mold if it gets wet. All organic debris should be removed from crawl spaces to reduce the risk of rot, insect infestation and future health problems (source: IRC R408.5).

Often, the most practical way to remove all of this material is to remove the plastic sheeting and replace it.

10. Remove all wood scraps and sawdust from the crawl space.

Sawdust and wood scraps on top plastic in crawl space.

Sump Pit

Sump pits are intended to collect water that could otherwise cause a wet basement or crawl space. **Do not ignore the sump pit.** Water rising too high in the sump pit could cause significant damage. You should check the sump pit periodically, particularly after major storms and during wetter seasons.

Although the sump pit is dry, it does not have a pump installed. Check the sump pit regularly to see if water is accumulating. If it is, then install a pump to remove the water.

BASEMENT

Type:	Full basement. It is unfinished.
Floor:	Wood.
Insulation:	Fiberglass wall batts and plastic vapor retarder. Insulation blocks a visual examination.

Conditions in the basement appear to be generally adequate.

ATTIC

Examination Method:	Walked through its center.
Insulation:	Loose fiberglass.
Estimated Depth:	10-12 inches.

Estimated R-Value: About the R-30 that is generally recommended for this climate. R-Value is the ability to resist the movement of heat. Higher numbers are better. This estimate is a rough average value.

Ventilation: Roof-top and soffit vents.

The remote areas of the attic were not examined due to limited access. Conditions in these areas (including water-tightness of the roof) are unknown and are specifically excluded from the inspection and report.

Not Enough Attic Ventilation

There is not enough attic ventilation. Proper ventilation will help to keep the house cooler during warm weather and reduce the potential for moisture build up that could lead to mildew and rot. It's usually straight-forward to install soffit, eave, ridge and/or roof top vents. Providing roughly equal amounts of low and high vents will improve circulation (hot air will rise and exit, drawing cool air in lower).

11. Add more attic ventilation.

ELECTRICAL SYSTEM

Size: 120/240 volt. 200 amp.

Main Disconnect: A circuit breaker in the main distribution panel outside at the rear.

Grounding: Metal water pipe. Driven ground rod.

Wiring: Copper wire in non-metallic cable.

Subpanels: None found.

Electrical repairs should have a high priority because most electrical problems are either a shock and/or fire hazard. Repairs should be made by a qualified licensed electrician.

The electrical inspection consists of looking inside circuit breaker panels, testing receptacles and lights and observing wiring in accessible areas. The hidden nature of the electrical system prevents inspection of many components. Electrical components can not be inspected if access is blocked by furniture and/or storage.

The electrical inspection does not include: low voltage systems, telephone, cable or satellite TV systems, sound systems, intercoms, data/communications wiring, security systems, timers, sensors, lightening or surge protection systems or operation of smoke alarms.

Loose Grounding Connection

Clamps on the grounding wires should be tight to ensure a good connection.

12. Tighten the electrical clamp at the water pipe grounding.

Ground Fault Circuit Interrupters (GFCI)

GFCIs are safety devices (either a receptacle or circuit breaker) designed to protect people from shock and electrocution. In the event that you are shocked, the GFCI senses the current passing through your body and shuts off the circuit. You should test GFCIs monthly or more frequently as instructed by the manufacturer.

Defective GFCI

A GFCI receptacle that does not trip off is defective and will not protect you from shocks or electrocution.

13. Repair or replace the defective GFCI receptacle. Location: first floor hall bathroom**Smoke Detectors**

Smoke detectors are present. Be sure to test your smoke detectors monthly.

Frequently Asked Question: Why doesn't Cornerstone Inspection push the test button on smoke detectors?

Answer: First, smoke detectors are designed so that you can test them yourself on a regular basis. More importantly, the test button only checks for power, it does not test the sensing mechanism. Older smoke detectors may not work even if they respond to the test button. The National Fire Protection Agency (NFPA) urges homeowners to replace smoke detectors more than 10 years old.

PLUMBING SYSTEM

Main Valve Location: Front wall of basement.

Service Pipe: Copper.

Interior Supply Pipes: Copper.

Waste Pipes: Plastic.

Water Heater: 2, natural gas, 50 gallon.

Fuel Valve: Valve at the natural gas meter outside.

The plumbing inspection consists of looking for visible signs of problems and checking fixtures for functional flow and drainage. In other words: *"Is it working or not?"* Concealed pipes within walls, floors and ceilings or that are buried below soil can not be evaluated. Keep in mind that leaks can and do occur at any time without warning. You should expect to have leaks, clogs and toilets fixed from time to time.

Water Heater Drain Pan Not Connected

The drain pans under the water heater are not connected to the floor drain. When the water heater begins to leak, as many of them do, water will damage the floor.

14. Install a pipe from the water heater drain pan to the floor drain.**Drain Tailpiece Too Long**

The vertical drain pipe (also called the 'tailpiece') below the laundry sink is too tall. This increases the risk that the drain trap will be siphoned dry, allowing sewer gases into the house.

15. Replace laundry sink drain pipes so the trap is the correct distance below the fixture.

Discharge pipe missing at water heater drain pans.

Adjust Hot Water Temperature

Hot water can cause severe scalding. The risk is especially high for infants, children, and the elderly. After taking occupancy you should have your plumber adjust the water heater so it does not produce water hotter than 120°F (there is a big warning label on most new water heaters telling you to do this). Note that modern dishwashers contain heating elements and do not need high temperature supply.

Underground Drain Pipes Not Inspected

I can't inspect sewer pipes that are buried outside the house. The likelihood and severity of problems (such as leaks or blockages) is greater with older pipes, but newer pipes can have problems with cracks, damaged pipes or separated joints. Sewer pipes are expensive to fix. If you want more information about their condition, then have a professional plumber video-inspect their interior.

HVAC SYSTEM (HEATING/COOLING)

Forced-Air Furnace: Induced draft, 120,000 Btu/hr, located in basement.

Filter Location: Return duct beside furnace.

Exhaust Venting: Double-wall metal vent pipe.

Fuel: Natural gas.

Cooling: 3.5 ton air conditioner.

The HVAC inspection consists of visually examining readily accessible areas and verifying that the system responds to the thermostat. Further evaluation by an HVAC contractor may reveal defects that were not readily apparent to the inspector. HVAC equipment can fail at any time without warning, including the day after the inspection. Regular service is important for efficient operation and to achieve maximum life from equipment; most manufacturers recommend annual service.

Improper Clearance Around Vent

The exhaust vent is too close to framing in the attic. This is a fire hazard.

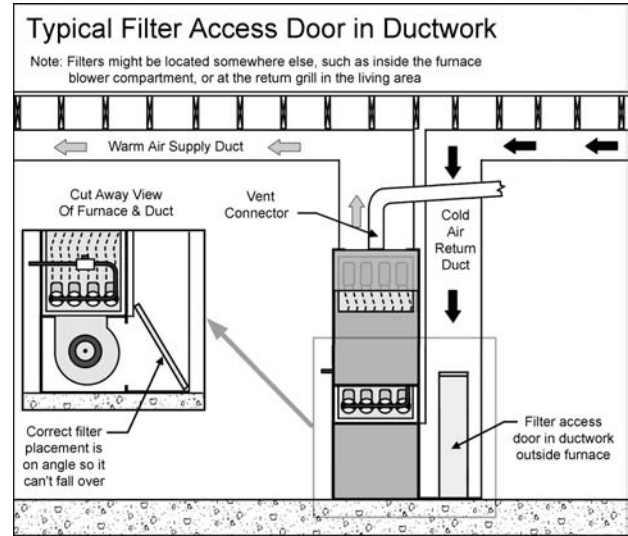
16. Repair the exhaust vent pipe so it has proper clearances to combustible materials.**Duct Cleaning**

Clean ducts are healthier than dirty ducts and most houses (even brand new ones) would benefit from a whole-house duct cleaning. In newer houses, a significant amount of construction debris can often be removed from floor-mounted air registers using a simple shop-vac. Most of the inside of the ducts can't be seen. Where visible, the ducts are dirty.

17. Clean the air ducts.



Construction debris in ducts.



Air Filter

Air filters should be changed or cleaned monthly during the heating season, or more often if necessary (also during the cooling season if you have A/C). A clean filter is vital to keeping the system working efficiently and minimizing wear and tear on equipment. The filter is clean.

Hot Water Heating - General

Hot water heating systems work best when operated at a relatively constant temperature. Set-back type thermostats are not as effective with this type of system. Hot water heating has the advantage of providing a relatively consistent heat supply. However, adding central air conditioning is significantly more expensive (or simply not practical) since there is no existing system of air ducts.

Electric Heat

Electric heat is usually more expensive than gas, although some savings can be gained by lowering the thermostat in rooms that are not being used. Potential cost savings depend on the lifestyle of the occupants and their degree of involvement with heat control.

Inspection of electric heat is limited to checking the units visually for damage, and turning up the thermostat. The electric heat responded to the thermostat.

INTERIOR

Walls & Ceilings: Drywall.
Flooring: Wood, carpet and tile.

This inspection is intended to address functional issues rather than aesthetic appeal. Nearly all buildings have minor cracks on interior surfaces. These are typically cosmetic in nature and can be caused by

settlement, shrinkage of building components or thermal expansion and contraction. Small cracks of this type are not mentioned in this report.

Stairway Low Headroom

Accidents frequently happen on stairways. There is not enough headroom to safely use the stairway. (Source: IRC 311.5.2, UBC 1003.3.3.4)

- 18. Repair the basement stairway so that it has at least 6'-8" of headroom measured vertically from the sloped plane adjoining the tread nosing.**

FIREPLACE AND CHIMNEY

Type: Pre-fabricated gas fireplace.

Flue: Metal, direct vent.

This is a visual inspection. Screens and doors, appliance gaskets and seals, fireplace surrounds and heat distribution systems (gravity or fan assisted) are not inspected unless specifically documented.

Gas fireplaces need routine maintenance by a qualified licensed professional. Most manufacturers suggest this service be annual (check the owner's manual).

COMMON ENVIRONMENTAL ISSUES

A standard home inspection does not include screening for potentially hazardous or toxic substances or biological hazards. Here are some things you may want to know. This is presented for your information only, and is not intended to be a representation or warranty by Cornerstone Inspection, LLC.

Carbon Monoxide

Carbon monoxide, which can be fatal, can be produced by any thing with a flame (such as ranges, dryers, fireplaces, furnaces and water heaters). All gas appliances should be professionally serviced on a regular basis (see the manufacturer's instructions). Thorough carbon monoxide testing of a house is a specialized service that Cornerstone Inspection, LLC does not perform. You are strongly encouraged to install carbon monoxide detectors. They are readily available from hardware stores for a reasonable cost.

Radon Gas

Radon is a radioactive gas that is odorless, tasteless and invisible. It occurs naturally in soils and rocks, and enters houses through the foundation or through well water. The Surgeon General has warned that radon is the second leading cause of lung cancer. The Environmental Protection Agency (EPA) recommends testing for radon in all houses below the 3rd floor and fixing houses with elevated levels of radon. Cornerstone Inspection, LLC does not test for radon unless agreed-to under a separate contract. For more information read the booklet 'Home Buyer's and Seller's Guide to Radon' published by the EPA and available from the

Colorado Department of Public Health and Environment (CDPHE) at 303-692-3420 or on the internet at <http://www.epa.gov/iaq/radon/pubs/hmbyguid.html#Contents>

Mold

Mold, mildew or fungus growing in any building is a sign of a moisture problem. The source of the moisture should be found and corrected. Some types of mold have been linked to health effects for some people. Effects range from mild to severe. Recent media coverage has made mold a controversial issue among home inspectors, lawyers, and experts in the field. At this time there are no acceptable or unacceptable levels of mold exposure set by the Centers for Disease Control (CDC), the Environmental Protection Administration (EPA), or any other independent authoritative source.

The testing and interpretation of mold issues should be left to the true experts in the field such as doctors and industrial hygienists. This is why Cornerstone Inspection, LLC does not inspect or test for mold or other environmental/biological hazards (as stated in the Inspection Agreement). If you have concerns about mold or other indoor air quality issues you should contact your doctor, an industrial hygienist, the CDC or the EPA. Be prepared to receive differing opinions from different experts.

For more information on mold and other indoor air contaminants you should visit
CDC <http://www.cdc.gov/nceh/airpollution/mold/moldfacts.htm>
EPA <http://www.epa.gov/iaq/molds/moldresources.html>

SUPPORT AFTER THE INSPECTION

Re-Inspection Policy

Clients sometimes ask me to re-inspect problem areas after repairs are made. A minimum fee of \$125 covers a re-inspection of any two specific items, and does not include a written report, which is \$50 extra. Additional items to be inspected cost \$25 each.

Your Questions

I'll do my best to answer your questions during and after the inspection. All I ask is that you read the report first – all of it. Calls during business hours are preferred. Sometimes I'm available during the evening, but not always. Most questions can be answered in one call, but sometimes I have to go back to the office to look over your report. I'll try to answer any question the day you ask it.

The Questions Of Others

If the builder or the builder's repair person calls us with questions about your inspection, I'll politely inform them that I can't talk about your inspection unless you're a part of the conversation. I'll suggest that they call me back after setting up a conference call with you.