

## RED FLAGS IN GRANDMA'S ATTIC

By

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Every home has some kind of space above the top floor and we, as home inspectors, are called upon to inspect it. In this article, I plan to share my attic inspection methodology, touch on few examples of defensive report writing and alert you regarding typical "red flags to watch for."

While not perfect, I do follow a practiced routine or methodology when observing & evaluating the attic. For the home inspector, a methodology is defined as: "a practiced order of discovery that touches on all important components." A professional home inspector must utilize an efficient methodology throughout the entire inspection process so as to service the needs of the client in a manner that prevents errors & omissions.

Where to start? Firstly, (C.Y.A.) your report should document what you "did or did not do, what you could or could not see and why." For example:

***...."due to closet obstructions and stored goods within the attic, the attic was only viewed from a step ladder with my head through the hatch, using a flashlight. The attic was NOT entered...."***

***...."be advised that because I could not enter the attic, hidden problems may exist that are not documented in this report. When clearances or obstructions are improved, I recommend that you fully examine each attic space prior to commitment. If your research reveals any suspicious areas***

***of concern, then you should call me for consultation or schedule an optional return visit inspection...."***

Report writing, as listed above, documents what you did, what you did not do and gives your client direction while protecting your backside. The next step is to follow your methodology of inspecting all important components while on the look-out for red flag areas or other concerns. Each observation should be accurately documented in your report per the ASHI® Standards of Practice, but don't forget the simple layman's expectations of your client. Most uneducated buyers want the answers to simple questions such as:

***Does the roof leak?***

***Are there any signs of decay?***

***Is the attic insulated?***

***Will I have room for storage?***

Certainly you should inspect all key areas and alert your client regarding important concerns, but if you fulfill your clients basic expectations by answering the above questions, you will have gained a friend also.

While still at the hatch, I first check for bees or nasty critters that jeopardize my personal safety. (Note: Through personal choice, some home inspectors wear a respirator when entering the attic. I am guilty of not wearing one and I am well aware of the potential exposure hazards. However, the respirator debate can be saved for a future article.) Once the entrance is deemed clear of hazards, my mag-light becomes my third eye.

I flash the beam on every accessible component allowing the categories of my methodology to overlap. In other words, while viewing the accessible members of the roof frame, I am also alert for red flags in the areas of water infiltration, insulation & ventilation. Any suspicious item that catches my eye results in a closer scrutiny with the flashlight

and an up close & personal investigation when warranted and accessible.

If the home has full head height, then my preference is always to enter the attic to see beyond the storage or around the other side of the chimney. Yes, I also get lazy about entering the attic through a difficult hatch, but usually my sub-conscience wins out and I enter only to observe a problem that I would have missed otherwise. In my mind is a picture of associated exterior concerns, such as a wavy roof frame, missing vent pipe or lack of ventilation. I like to leave the bathroom fan running to easily locate it within the attic.

Inspecting the structure is my first order of business. I follow the beam of the mag-light across every structural component and also test by probing & sounding when warranted. While not performing a code compliance inspection, I evaluate the materials, condition, method of assembly, workmanship, fastening, size, span, alterations, violations, etc. The following is a brief list of structural "red flags": (Note: This is not a complete list, I'm sure you can add to it.)

Ridge board: sags, improperly spliced, undersized for rafter cut, too small, spaced to far etc., spreading at ridge, cracked or sagging, decayed from suspected pest infestation, decayed from suspected water infiltration.

Rafters: decayed from moisture within non-vented attic, rafters not in alignment at ridge board, rafter or truss cut or altered without header, rafter excessively notched, rafter bird mouth over- cut, rafter nailing schedule not adequate, rafters charred from past fire.

Roof sheathing: decayed, delaminated, sagging, erupted, broken boards or holes, improperly nailed, weak or spongy when walked on, sheathing FRT. plywood problems.

Hip or valley rafter broken, or spliced.

Ceiling joist cut without adding header. Ceiling joist sag, decayed, cracked, broken, undersized, excessively spaced.

Truss lift, solid blocking missing at end of trusses.

Adjoining roof planes misaligned.

Sag in flat roof structure. Wavy roof appearance.

Structural beam questioned at cathedral ceiling.

Struts do not bear on bearing wall, struts undersized broken or loose, purlins cracked or broken.

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Improper framing at skylight, pull-down stairs or attic fan.

Missing or incomplete fire shielding at party wall.

Ventilation red flags are "frequent flyers" for the home inspector. My methodology for evaluating the ventilation of the attic spaces first begins outside where I note the presence or absence of attic vents, their types and locations. I tuck that knowledge away until I get into the attic and then I re-examine each vent for condition. Regardless of codes that require specific minimum amounts of attic ventilation, I also rely on my senses & observations while answering one simple question: Does the present amount of attic ventilation appear functional in terms of adequately removing moisture and trapped heat from the home? If problems are suspected, then I alert my client accordingly. If the system is functional but does not comply with modern construction practices, then I discuss optional ventilation improvements. The following is a brief list of ventilation red flags:

No attic ventilation, blocked vents., slots not cut wide enough at ridge vent., Imbalanced ridge vent - no lower ventilation, Insulation blocks ventilation at soffit, Styrofoam baffles missing, loose, displaced., damaged vents., mildew in attic, delaminating roof sheathing at northerly side, frost in attic, rusted nails & rust stains on sheathing near nails, circular stains on floor boards, bathroom fan discharges into attic, hole too small for attic fan, amateur attic fan installation and whole house fan warning - potential back-drafting problem.

Insulation & vapor barrier red flags also are prevalent in the attic. Perhaps one of the most important things I always do is to lift up or dig through a piece of the insulation to see what lays underneath. By looking under the insulation I verify the presence of a vapor barrier and identify the types of insulation that may be sandwiched together. Sadly, I find that the vast majority of existing homes in the northeast are not properly insulated, lack a vapor barrier and have insufficient ventilation. So much energy could be saved if home owners would adequately insulate the attic appropriately for their geographic location. Red flags to watch for include:

No insulation in the attic, insufficient insulation, disturbed insulation, asbestos hazards, UFFI, insulation between rafters without clearance for ventilation, insulation compressed by boards or storage, wet insulation, gaps or voids in the

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insulation, insulation blocking ventilation at eaves, insulation too close to light fixtures.

Vapor barrier missing, vapor barrier installed upside-down, vapor barrier torn or damaged, only partial vapor barrier, improper double vapor barrier, old dried out & combustible paper vapor barrier. Bathroom fan discharge into attic.

The chimney, roof penetrations and mechanical systems can also pose red flags for the home inspector. A list of red flags in this area include:

Water stains observed, stains tested as moist or dry at time of inspection, roof leakage suspected at, flashing leakage suspected at, vent pipe does not extend through roof, leak suspected at vent pipe flashing boot, leak suspected at chimney flashing, decayed chimney, eroded mortar joints, soft mortar joints, parge coat peeling, unplugged chimney openings, creosote leaking from chimney, insufficient fire clearance between chimney and adjacent combustible framing, missing fire-stopping.

Electrical: Open splices, open boxes, zip cord, damaged wires, wires run on top of attic floor boards, wires run across joists, amateur lighting, amateur wiring to fan, insulation over knob & tube wiring.

Heating: Poorly run ducts, loose or detached ducts, non-insulated ducts, open joints. Non-insulated heating pipes. Insufficient air combustion air source.

Air-conditioning: Air handler not isolated from framing, missing safe pan & drain, missing trap on condensate drain, amateur wiring.

Hot water heater: Missing safe pan, discharge pipe not run to exterior, unsafe venting.

In closing, inspecting the attic space is just as important as every other area of the home. Your client has expectations that you will alert him or her regarding important attic concerns. The ASHI® Standards of Practice require that you observe the structure, insulation and ventilation systems and report accordingly. The methodology you employ must "cover all the bases" while in the attic to fulfill your client's expectations, to honor your contract and to comply with the Standards of Practice. If you stay alert and practice a sound methodology, then potential claims will be minimized.

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