

## CONDITIONS & METHODS

### CONDITIONS

The skies were partly cloudy with outdoor temperatures in the low 80's.

ii) Soil conditions were dry.

iii) The inspection began at 9 AM.

iv) The water pressure was measured at 72 psi. Up to 80 psi is fine.

v) All utilities were available at the time of the inspection.

vi) The house was staged (for marketing) at the time of inspection. Furniture and personal items hindered my view of some floor and wall surfaces. I might not report on what I cannot see.

### METHODS

The attic over the living area was inspected by walking through its accessible areas. The attic over the garage has no access that I could discern and so I could not inspect it. All attic spaces over a certain size should have access. From the 2006 International Residential Code:

*R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet (2.8 m<sup>2</sup>) and have a vertical height of 30 inches (762 mm) or more. The rough-framed opening shall not be less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.*

ii) I inspected the roof from the ground only. The roof surfaces were too steep for me to mount.

iii) The air conditioners and gas furnaces were checked for functionality but I did not attempt to gauge their performance.

iv) The smoke alarm system in this house may be tied into an alarm service. For this reason it was not test.

v) There is no carbon monoxide detector installed that I could discern. CO results from the incomplete combustion of fossil fuels such as natural gas. It's odorless and colorless yet it can kill if it's concentration in the blood is high enough. Doctors often misdiagnose it as the flu and send patients back home where exposure to it continues.

vi) The two garage door openers both have a **safety reverse feature** that reverses the direction of the door if the electronic beam is interrupted while the door is closing. That feature was tested on each door and both functioned as described.

vii) The garage door openers were both tested for the presence of a **pressure reverse feature** in which the presence of a closing obstruction, a 2X4 laid flat, will result a reversal of the direction of door travel. Both functioned as described.

1) Ask a carpenter to install access to the attic space over the garage.

2) Install a carbon monoxide detector that relies on an electro-chemical sensor such as the CO Experts Model 2002. For more information, visit <http://www.avweb.com/news/aeromed/186016-1.html>.

## STRUCTURAL



Missed staples evince a stapled roof deck. Staples are but thin wires. They're the worst fastener you can use to secure the roof deck on a house that's in a hurricane-prone coastal area. After the first roof panel is lost, the attic becomes either pressurized or depressurized, depending on the wind direction, and additional panel failures follow like dominoes. (Photo above)



ii) I observed cracks in the brickwork over the garage door and at one location on the left wall of the house. I don't judge either to be significant at

this time though you should monitor them on an annual basis for any changes. At some point, especially if the cracks become too wide, they may indicate a structural instability in the foundation. (Photo at lower left)



iii) I observed foundation cracks on one corner of the house. I call them v-cracks and they are a result of a difference in temperature between the foundation which is cooled by the Earth and the brick which is heated by the sun. Many houses with monolithic concrete foundations do this and I've never seen it to be much of a problem. My own house has a few. (Photo above)

3) Re-secure all roof panels to the framing during the next roof finish replacement interval in compliance with the Institute for Business and Home Safety recommendation at [http://64.16.194.32/content/data/file/FFSL\\_standards.pdf](http://64.16.194.32/content/data/file/FFSL_standards.pdf) (for 110 mph wind zones).

## DOORS

Many door stops are broken or missing. Door stops help prevent doorknobs from damaging the wall behind the door when the door is flung open.

ii) The front doorbell button is damaged though still functional.



iii) The electronic beam and sensor on the garage door are installed too high. They should be installed between 4 and 6" from the floor. If they are installed too high, small children who lie in the path of a closing door might fit between the beam and the floor, leaving them in danger. (Photo at left)

4) Install door stops wherever missing or broken.

5) Lower the garage door electronic beam and sensor to between 4 and 6 inches above the garage floor.

## WINDOWS

All windows screens were missing. The house has many energy conservation features but one of the best performing ones is to simply open a window. Without a screen that isn't possible without inviting insects into the house.

6) Install window screens on all openable windows.

## PLUMBING

There is very little water flow from the shower head in the master bathroom shower.

ii) The pump in the jetted tub took a long time to prime. I'm not sure if this will always be the case.



iii) The local shut off valve under the kitchen serves two appliances at once. Each appliance should have its own shut off valve. (Photo above)



iv) The flue pipe on an attic water heater is not properly situated upon the draft hood. Hot exhaust gases spill into the attic space if the flue pipe is not properly installed. (Photo above)

## ELECTRICAL

The ceiling fixture near the shower in the master bathroom does not illuminate.



ii) A cover is loose on an outdoor receptacle. Rainwater and electricity do not play well together. (Photo above)



iii) Many indoor general purpose receptacles tested at high values of voltage drop. Voltage drop is the loss of voltage that occurs when a load is placed upon a circuit. For a house, it shouldn't be more than about 5% but values as high as 15% were found. (Photo above)

7) Replace or repair the cover on the outdoor receptacle.

8) An electrician should examine and rectify the issue with excessive voltage drop. Bring all voltage drop values to within 5%.