

DATE: 9-30-2011

The following are additional comments relative to OIR-B1-1802

This is to advise that I have read additional comments which were added for review by others for the recent open hearing and would like to respond further based on review of these comments. As I understand OIR-B1-1802, the amended Inspection list form, is based primarily on the 2002 research which deals with a compilation of historical residential storm damage, Florida Building Codes, and secondarily on a further report prepared by the same group in 2008 which includes, additional to other information, ASCE 7 procedures and relative wind velocities and pressure coefficients to be used in design. While not clear to me at this time, the second study may suggest inclusion of possible additional changes to the inspectors form 5 years from now. There is additional information, if interpreted correctly, which may indicate additional testing which may have been performed beyond ASCE 7. The form includes new information to be completed by an inspector, to be provided to an insurance company for determination of the insurance home owner's premium.

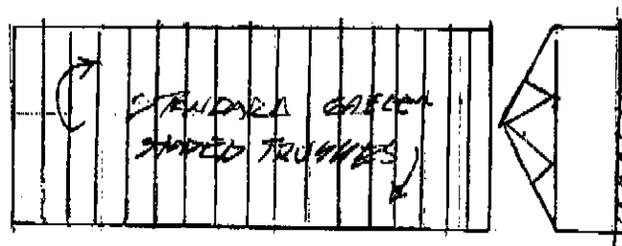
This is a complex matter in my opinion dealing with realistic Insurance Company future risk and concerns as well as the how this new check list equally will impact homeowners dealing with the uncertainty in today's economy and specifically in this matter as to present and future homeowners insurance premiums. It is complex to the extent that construction requirements have changed as a result of meteorological studies and observations, increasing storm severity, increasing wind velocities and directional behavior, increase knowledge relative to modeling and testing of components and wind tunnel tests and in some instances effects and consequences relative to storm surge and related responses of building main wind force resistance, components and cladding and fastening. The knowledge base was advanced by improved methods of analysis by professional trade associations such as ASCE, the building materials and building components trade associations analysis, meteorological review, testing and faster computers. Understanding how this may affect individual homeowners financially is a body of information that has yet to be determined. To successfully arrive at a solution to this matter the realities of proven risk must somehow be explained in lay language to all homeowners by means of instructional manuals and possibly regional seminars prior to the suddenness of implementing a new check list.

Insurers must be compensated for proven risk. Equally important, however, in light of the current financial conditions, homeowners may lack means and methods to meet increased premiums and which has not been addressed and requires further study. One of the largest factors affecting the premium for example is the determination of the geometry of the roof. Section 5 of the check list is to indicate if the roof geometry is a hip roof or a gable roof.

While geometry is the focus, the framing seems to be ignored. While there may be other methods of roof framing in residential construction, the two most common methods of framing are with proprietary metal plate connected wood trusses (MPCWT) or conventional framing with roof rafters and ceiling joists.

MPCWT behavior when correctly designed erected and installed is by far the more effective roof protection than conventionally framed roofs. While roof slope has been a variable reported as well as roof geometry in general, no distinction appears to have been made to the unique differences between the two types of construction.

A symmetrical hip roof is weighted more favorably than a gable shaped roof (for the primary reason indicated in my earlier email). A simple gable roof is generally meant to be a roof shaped to a point as indicated below



A symmetrical hip trussed roof is generally understood to look as indicated below:



These are classic simplistic examples generally understood but some roofs combine features of them both. Errors, in my opinion, might be made in classifying some roofs as gable shape when in fact they may have been constructed with gable shape overframing on top of hip roof framing. When a hip roof is installed with metal plate connected wood trusses, the roof is sheathed with plywood or OSB. Truss top chords must be continuously laterally braced (sheathed) to resist applied loads (both axial compression and bending loads). Wood overframing when the building is designed with "valley set" framing is generally installed over a decked roof. Sometimes the deck below the valley framing might be omitted below the overframing. Should this be the situation the valley framing requires adequate fastening to the top chords of the trusses to be sure the truss top chords are braced by the overframing and its fastening. Such condition(s) could be added to the check list but would not result in incorrectly classifying the roof as gable roof. Obviously this would require additional more discussion as there are roofs that are not installed with clear span roof trusses such as rafters and ceiling joists¹ and therefore no direct comparisons can be made!!

¹ Instructions should be added in any training aids for inspectors to identify a trussed roof as opposed to a conventionally framed roof (hip or gable). Studies (testing) made on pitched conventionally framed roofs would be expected to be different than roofs framed with proprietary metal plate connected wood trusses. Investigation of numerous failures or roof penetrations of actual truss roofs framed as gable shaped indicate that the required "gable end trusses" were not adequately braced. This is a concern as to the permanent bracing of the gable ends. Such bracing usually reviewed as a lateral buckling and horizontal bending phenomena.

Summary

Obvious methods need to be developed in order for the Insurers to quantify the risk from damage. A form is only one of several tools to be developed and revised and edited in the future. It would be more meaningful and reasonable to first develop a titled protocol for both the insurers and the insured (or their representatives) from which a list can then be created where both parties participating understand as well as architects and Engineers throughout the state and knowledgeable parties including representatives from trade associations. Meetings in various locations throughout the state to develop such a protocol would result in greater participation in view of present economic considerations such as travel expense etc.

Respectfully submitted



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