AIA Peconic
A Chapter of The American Institute of Architects

AIA-PECONIC POSITION PAPER No.5: INCLUDE SPECIFIC PRESCRIPTIVE STANDARDS FOR WOOD FRAMING DIRECTLY IN THE CODE

June 1, 2009

To the Editor:

Wood-framed homes—popularly known as "stick-built houses"— historically represent the most common residential construction method used on the East End of Long Island, a region designated as a hurricane wind zone.

The New York State Building Code, however, to the bafflement of many architects, engineers, builders and local code officials, is devoid of specific standards for Wood Framing Construction.

Nowhere in the state code are there explicit standards for Wood Framing. Instead, the code relies on references to external building industry publications and specifications to guide construction professionals on the design and assembly of sturdy, safe and durable residences.

AIA Peconic, the East End chapter of the American Institute of Architects, noting that reliance on reference standards alone can lead to unreliable construction practices and inconsistent code enforcement, believes the time has come for the State Code Division to write new rules that will *include important specific standards for Wood Framing directly in the Code*.

Since the East End was designated a part of the 120 MPH wind zone in the 2003 State Building Code, numerous changes to the way houses are required to be constructed in the eastern-most five towns of Long Island have been incorporated into the state code. Most noticeable have been the addition of special steel anchors, strapping and bracing to a home's wood frame components, along with impact-resistant windows and doors.

AIA Peconic has written to the state Code Division pointing out that, instead of agreement on the consequent requirements, architects, building officials and builders find themselves pursuing differing, and often conflicting, solutions to the referenced requirements for wood-frame construction. AIA Peconic argues that the result has too often been construction which does not satisfy the Code.

Wood Frames are commonly built, for instance, with too much steel strapping, strapping incorrectly located or nailed, or strapping used to secure exterior walls when proper placing and nailing of plywood sheathing would be stronger.

As an example, the architects cite manufacturer specifications for steel strapping and connectors. The redundant multiple nailing specified to install the connectors can have the negative consequence of splintering studs at their most important joint in the framing, the architects say. The Code could clearly offer, as an alternative, proper

nailing of plywood, which has been shown to add diaphragm performance in a way that applied strapping is unable to provide. But the standards invoked by reference to manufacturer specifications alone, encourage builders - in their confusion - to err on the side of excessive strapping.

Steel connector manufacturers warrant their products with the caveat that the guarantee is voided if the connector is inaccurately installed, especially if not nailed through the correct openings. Yet, when straps or other steel connectors are employed, and siding overlays strapping and is nailed to the studs through the strapping, this standard construction sequence is itself a certain guarantee of damage to the strapping or connectors sufficient to void the manufacturers' warranties.

AIA Peconic's letter to the state Code Division observes that Wood Framing requirements are often not clearly understood, even by building officials, because there are no standards explicitly stated in the Code.

Wood shingle roofs cannot, for instance, any longer be underlain only by wood lath installed directly on the rafters. Now the wood roof shingles must be additionally underlain with plywood deck so that the roof assembly can achieve enough diaphragm performance to resist being deformed during a hurricane wind event.

The traditional lath assembly alone does not meet the new design pressure standards, but in some jurisdictions, the architects say they are aware of plywood decking being permitted to be installed only under the first few feet of the ice shield at the eave, thus negating the roof strength. The venting issues for wood shingle resulting from this procedure can be partially overcome by applying lath on the decking under the shingle, but these details are absent from the Code.

The Peconic Chapter believes the Code needs single overriding standards now for these Wood Framing requirements.

Since the Code contains an entire section devoted to steel stud construction. AIA Peconic says it is hard to believe that it is not possible to *prescribe* at least some essential construction standards for Wood Framing that will be adequate to meet the wind zone pressure requirements.

Beyond that, the architects ask that the code also include standards to meet the greater Wood Framing stresses of Partially Enclosed Design.

In its November, 2003 memorandum, the state Code Division seemed to imply that, with a little bit of 'beefing up," the wood framing methods traditionally employed to build houses on Long Island would already be enough to satisfy the *greater* strength requirements of Partially Enclosed Design in the Building Code.

AIA Peconic says that it hopes New York State seizes the opportunity to take the lead in reaffirming in the International Code the central role of Partially Enclosed Design in safe wind engineering, and the Chapter also encourages New York to take the lead in (re)introducing critical Wood Framing standards to the model code.

AIA Peconic sincerely hopes that publishing of this letter will help inform members of the public and will lead to support for timely action. Contact information and a copy of AIA Peconic's Position Letter of July 2008 - which addresses other Code issues important to building practices on the East End – may be found on the chapter's website: http://www.aiapeconic.org.

Very truly yours,

Stephen A. Lesser, AIA
Chairman, AIA Peconic Chapter Codes Committee

P.O. Box 327 – Hampton Bays, N.Y. 11946-0212
e-mail: aiapeconic@USA.net web site: http://www.aiapeconic.org