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Re: Single Family Dwelling Design - Signed / Sealed Drawings

Dear Kathy,

I have reviewed the issue outlined in your email of February 11th regarding whether signed and sealed plans are required for the design and permitting of 1 & 2 family dwellings or other buildings and structures as identified in *Florida State Statute 489, Contracting*. I offer the following comments:

Section 489.113 outlines the qualifications for practice. Subsection (9)(b)(2) provides guidance regarding exceptions to the requirements for signed and sealed designs, as follows:

489.113 Qualifications for practice; restrictions.

(b) This part, chapter 471, chapter 481, or any other provision of law does not:

2. Require a licensed engineer or architect, when preparing drawings, specifications, plans, or master design manuals for use by any licensed contractor, to prepare site-specific drawings, specifications, or plans for the design and construction of single-family and two-family dwellings; swimming pools, spas, or screened enclosures; or any other structure not exceeding 1,200 square feet or one story in height. For the purpose of issuing building permits, local building officials shall accept such drawings, specifications, or plans when submitted by any licensed contractor. Upon good cause shown, local government code enforcement agencies may accept or reject plans prepared by persons licensed under chapter 471, chapter 481, or this chapter.

As used in this section, the term “master design manual” means a restrictive design manual intended to be used to design, permit, and construct structures as described in this section. Any such manual must be prepared by a licensed engineer or architect and specifically detail the limits of its use, including, but not limited to, the structure type, size, materials, loading conditions, time limits, applicable codes, and associated criteria. The manual must also detail the required training for the contractor, engineer, or architect using the manual. All master design manuals must be peer reviewed by an independent licensed engineer or architect having no financial interest in the development of the manual or the construction of structures pursuant to the manual. The engineer or architect conducting the peer review must be identified in the manual.

However, as with all statutes and codes, one particular section cannot be taken individually but must be read in conjunction with other sections. Section 489.115 provides guidance for the certification of one and two family dwellings by contractors, as follows:

489.115 Certification and registration; endorsement; reciprocity; renewals; continuing education.

(4)(b) 2. In addition, the board may approve specialized continuing education courses on compliance with the wind resistance provisions for one and two family dwellings contained in the Florida Building Code and any alternate methodologies for providing such wind resistance which have been approved for use by the Florida Building Commission. Division I certificateholders or registrants who demonstrate proficiency upon completion of such specialized courses may certify plans and specifications for one and two family dwellings to be in compliance with the code or alternate methodologies, as appropriate, except for dwellings located in floodways or coastal hazard areas as defined in ss. 60.3D and E of the National Flood Insurance Program.

The above language makes it clear that contractors must successfully complete an approved course on the wind provisions of the *Florida Building Code* in order to certify plans for one and two family dwellings.

Further, *Florida State Statute 553, Part IV, Florida Building Code*, Section 553.79(15) reinforces the requirement for the successful completion of the wind resistance course by reference to F.S. 489.115(b), as follows:

553.79 Permits; applications; issuance; inspections.

(15) Certifications by contractors authorized under the provisions of s. 489.115(4)(b) shall be considered equivalent to sealed plans and specifications by a person licensed under chapter 471 or chapter 481 by local enforcement agencies for plans review for permitting purposes relating to compliance with the wind resistance provisions of the code or alternate methodologies approved by the commission for one and two family dwellings. Local enforcement agencies may rely upon such certification by contractors that the plans and specifications submitted conform to the requirements of the code for wind resistance. Upon good cause shown, local government code enforcement agencies may accept or reject plans sealed by persons licensed under chapter 471, chapter 481, or chapter 489. A truss-placement plan is not required to be signed and sealed by an engineer or architect unless prepared by an engineer or architect or specifically required by the Florida Building Code.

As the above sections reference the wind resistance provisions of “the code or alternate methodologies”, the design requirements of the code must also be reviewed.

Florida Building Code, Residential, Section R301, Design Criteria, provides for the acceptable design methodologies for buildings and structures under the scope of the residential code, as follows:

R301.1 Application.

Buildings and structures, and all parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, and wind loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets all requirements for the transfer of all loads from their point of origin through the load-resisting elements to the foundation.

Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

Exception: *Buildings and structures located within the High Velocity Hurricane Zone shall comply with Sections R302 to R324, inclusive and the provisions of Chapter R44 and Section R406. In addition, buildings and structures located in flood hazard areas established in Table R301.2(1) shall comply with Sections R301.2.4 and R322.*

As noted above, buildings and structures under the scope of the residential code may be constructed per the **prescriptive** provisions of the code.

The use of alternative design methodologies is addressed in Section R301.1.1, as follows:

R301.1.1 Alternative provisions.

As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards, the design shall comply with the Florida Building Code, Building.

1. *American Forest and Paper Association (AF&PA) Wood Frame Construction Manual (WFCM).*
2. *American Iron and Steel Institute (AISI) Standard for Cold-Formed Steel Framing - Prescriptive Method for One- and Two-Family Dwellings (AISI S230).*
3. *ICC-400 Standard on the Design and Construction of Log Structures.*

As such, the *Florida Building Code, Residential*, allows one and two family dwellings to be designed as follows:

- Per the prescriptive provisions of the residential code (light-frame construction);
- Per engineered designs (FBC-Building Volume/ASCE 7);
- Per the alternate design standards listed (Items 1 through 3).

Therefore, it is my opinion that Division I and registered contractors, upon successful completion of an approved wind resistance design course, may design and certify plans for one and two family dwellings under the prescriptive provisions of the residential code or an alternate design standard which then can only be rejected by the local permitting authority upon good cause, i.e. plan review finds the design to be noncompliant with the selected design methodology.

Respectfully Submitted,

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Vice President