



## **I. Change in Permitting for Fire Protection**

Ask a sprinkler or fire alarm contractor where to go for a permit to install a sprinkler system or fire alarm, the likely answer will be the fire chief. This commonly held belief exists in spite of the fact that the installation of this equipment is regulated by the Massachusetts State Building Code. Until January of this year, the contractor could obtain a permit for the installation of fire protection equipment from the fire department. The revised Fire Safety Code (527CMR) changes that for the most part. The Department of Public Safety has issued a [memorandum](#) on this topic. Here is our understanding of the permitting process as required by the building code in light of this memorandum:

- The installation of any fire protection equipment regulated by the State Building Code requires a permit from the building department. This includes fire alarms and detection systems, sprinkler systems, fire pumps, and ansul systems.
- Plans, calculations, shop drawings, and other submittals pertinent to the installation are to be filed with the building official for review. The building official will forward these documents to the head of fire department for review.
- The fire official has 10 working days to complete a review. If the fire official finds item that are not compliant, he/she must notify the building official, in writing, citing relevant code/standard sections, of non compliant items.
- Both the building official and fire official must be notified for inspections and the witnessing of tests and flushings.
- NFPA completion certificates must be submitted to the building official and fire official.

## **II. Roof Mounted Solar Installations**

The FCCIP issued building permits for 104 residential solar installations last calendar year, most all of which were roof-mounted. Although most of these PV systems are lightweight, the combined loads can increase the roof framing support requirements by as much as 20%. There must be an evaluation of the existing roof structure before a building permit can be issued. The question of whether engineering is required has been a grey area. Some building departments require engineering for all roof-mounted installations. The FCCIP policy has been not to require engineering for a roof system that has been stick-built and prescriptively meets the structural requirements of the current IRC. Engineering would be required for installations on truss roofs and for stick-built roofs that did not meet the structural requirements of IRC. This policy has changed slightly as described below.

Massachusetts licensed Engineer James Trant has developed a [Prescriptive Process for Structural Approval of Small PV Systems](#). The FCCIP will now accept the use of this [questionnaire](#) for installations <10 kW in lieu of engineering. The completion of this questionnaire must be done by a contractor or a design professional licensed in the State of Massachusetts or someone approved by the building official. The questionnaire is to be used only for 1-2 family dwellings with traditional rafters built after 1975.

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### **III. Fastener Requirements**

For contractors who have been in the business for a long time, nailing patterns have become routine. Perhaps it's not a bad idea to take a fresh look at the fastener requirements in Table R602.3(1) of the IRC. Here are a few requirements from that table that may be worth reviewing:

- Rafter to ridge requires seven 16d nails per rafter, 4 toe and 3 face
- Sole plate to joist or blocking at braced wall panels requires three 16d nails 16"o.c.
- Rim joist to top plate requires 8d nail 6"o.c.
- Ledger strip that supports joists or rafters requires three 16d nails at each joist or rafter
- Sheathing for walls and roofs requires edge nailing of 6"o.c., which depending on orientation would, most likely, require blocking.

### **IV. ICC Predicts Future Inspector Shortage**

A survey of code professionals done by the International Code Council confirmed the growing concern within the building industry about a pending retirement exodus of Building Officials. Eighty percent of the existing code professional workforce is expected to retire in the next 15 years, and more than 30 percent plan to do so within five years. While some contractors may think this is a good happening, others may be looking for a new vocation. If you have an interest, give a call.

### **V. When is a Registered Design Professional Needed?**

The job of the building official is to enforce the provisions of the building code. This can be straight forward, at times, when the code prescribes a minimum standard (e.g. rafter size for a given spacing and span). The code spells out exactly what is needed. There are times when parts of construction do not fall neatly into a prescriptive package. Section R 106.1 gives the building official the authority to require or waive the stamp of a registered design professional on construction documents at his/her discretion. For 1-2 family dwellings and their accessory structures, this office requires a stamp for roof trusses. Additionally, at the official's discretion, a stamp may be required for solar installations, post and beam structures, and complicated framing not prescribed in code regulations. TJI's and LVL's have become commonplace enough that our office accepts appropriate documentation without a stamp.

Buildings other than 1-2 family and agricultural that have a volume greater than 35,000 cu.ft. require controlled construction and stamped plans, with the exception that minor work on these buildings can be permitted without the oversight of a registered designed professional at the discretion of the building official.

**Note: There are several links imbedded in this newsletter. If you are receiving it in paper format, you may want to visit our website: [fccip.org](http://fccip.org) to use links.**



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