



NEW JERSEY BUILDERS ASSOCIATION

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Michael L. Ticktin, Esq.
Chief, Legislative Analysis
Division of Codes & Standards
NJ Department of Community Affairs
PO Box 802
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RE: PRN 2009-280
Amendment of N.J.A.C. 5:23-2.20, 3.6, 3.14, 3.15, 3.17, 3.18, 3.20, 3.21, 3.22, 12.2 and 12.12.
Uniform Construction Code Building, Plumbing, Fire Protection, Energy, Mechanical, and Fuel
Gas Subcodes.

Dear Mr. Ticktin:

In the above notice, the Division of Codes & Standards within the New Jersey Department of Community Affairs (the Department) proposes to update the referenced subcodes to their respective 2009 International code publications. The NJBA offers the following comments for the Department's consideration.

General economic impact

Adopting new code editions adds thousands of dollars onto the cost of housing because: (1) new code requirements tend to become more restrictive and more expensive to implement; (2) inspectors, design professionals and builders have to be trained on the new codes; (3) existing prototype plan sets have to be reviewed by design professionals, re-designed and re-submitted for permits, and redistributed to subcontractors; (4) new code book sets have to be purchased; and, (5) contractual requirements often have to be renegotiated. Including the cost increases associated with this proposal, regulations (i.e., 2006 International Code adoptions, 2008 National Electrical Code adoption) put forth by the Department have increased the cost to build a dwelling unit from between \$10,000 to \$20,000 within the last three years alone.

- Has the Department considered or tracked the cumulative impact of its regulative changes upon the cost of housing New Jersey residents?

One- and two- family dwelling subcode

Existing section R313 of the 2009 IRC

The Department has proposed mandating automatic fire sprinklers in all new one- and two- family dwellings and townhouses built to the 2009 International Residential Code (IRC).

NJBA disagrees with the Department's reasons for proposing to require automatic fire sprinklers in all new one- and two- family dwellings and townhouses, and feels that requiring consumers to purchase a fire sprinkler system is not a cost effective means of improving fire-life safety in new dwellings built to the current IRC code requirements. Many more lives would be saved by assuring that every dwelling has operating smoke alarms, especially since National Fire Prevention Association statistics¹ indicate that about 20% to 25% of U.S. households lacked working smoke alarms.

The unintended consequences of otherwise well-intentioned proposals cannot be ignored. By pricing middle and modest income households out of homes built to today's standards, a sprinkler mandate will reduce the fire-life safety protection provided by the current codes for thousands of working households in New Jersey.

- Has the Department considered or investigated increases in fire related deaths for those that are further pushed into substandard housing because they cannot afford any of the cost effective fire safety features of the current codes, let alone the additional costs that sprinklers would add onto the price of a home?
- When does the Department expect to see a reduction in yearly state statistical fire related deaths because of a sprinkler mandate?

The Department states in the proposal's summary that it does not believe requiring sprinklers in one- and two- family dwellings and townhouses "would greatly increase the cost of constructing a home in New Jersey." Under the Housing Affordability Impact statement, the Department estimates the maximum cost for installing a multi-purpose domestic fire sprinkler system in newly constructed single family detached houses as: (1) \$2,500 for a 3,338 square foot two story colonial with a basement; (2) \$2,300 for three-story townhouse; and, (3) \$1,000 for a one-story ranch. NJBA calculations show that the actual costs will be at least double the Department's figures. In situations in which domestic water pressures and flow rates do not meet the requirements of NFPA-13D (i.e., certain well systems and water softeners), the cost of installing fire sprinkles will be even higher (approximately \$10,000 per house).

If the Department chooses to adopt the proposed sprinkler mandate, NJBA requests that the following concerns be addressed to assure minimal disruption and costs in providing housing to New Jersey families:

- Will the Department be offering new home buyer sprinkler rebates for offsetting the cost difference between their estimates and the actual costs of installing sprinklers? Penalty fees collected through Division of Fire Safety should be used to help fund such rebates.
- Although the un-amended 2009 IRC calls for an earlier effective date, the Code Advisory Board agreed that since installing automatic fire sprinklers increases the cost of housing, the current

¹ NFPA's *U.S. Experience with Smoke Alarms and Other Fire Detection/Alarm Equipment*, by Marty Ahrens, April 2007

economic condition of the housing industry warrants a later effective date of January 1, 2012. Does the Department have a procedure for re-evaluating the effective date, should the housing market not recover to healthy levels by 2012?

- How will the effective date be enforced and how will the 6-month grace period be applied since this will be a change to a technical subcode? Will an automatic fire sprinkler system only be required in new IRC dwellings with permit applications filed on or after January 1, 2012 or will it apply to all IRC dwellings with Certificate of Occupancies issued after January 1, 2012?
- Although sprinkler system designers and contractors are familiar with stand-alone systems which are separate and independent from the water distribution system, many are not yet familiar with designing and installing multipurpose systems which supplies water to both the fire sprinklers and plumbing fixtures. Will the Department assure the availability of sufficient design professionals and contractors to meet the demand of designing and installing IRC/2009 P2904 and NFPA 13D sprinklers as both stand alone and multipurpose systems? A lack of sufficient experienced designers and installers will cause costly construction delays.
- Does the Department have an action plan for educating plan reviewers, inspectors and the public on fire sprinklers for new one- and two- family dwellings and townhouses?
- To reduce the professional fees associated with designing sprinkler systems, NJBA recommends that the Department allow sprinkler plans for Class III structures to be prepared by plumbing contractors or sprinkler contractors. Mechanical, plumbing and electrical plans are already allowed to be prepared by the respective contractors per N.J.A.C. 5:23-2.15(f)1 vii.
- The NJ IRC currently requires either protected construction, an NFPA 13 or 13R fire sprinkler system in order to utilize the full third story of a new dwelling. NJBA recommends that the Department add IRC/2009 P2904 and NFPA 13D systems as another acceptable option for utilizing the full third story.
- The New Home Warranty may require amendments to assure that all aspects (i.e., pipe freeze ups, defective sprinkler heads, leaks) of sprinkler systems are covered within the warranty program. If warranty coverage rates rise due to such amendments, housing costs will also increase.

Existing section N.J.A.C. 5:23-3.21(c)3i

This section of the Uniform Construction Code should be revised to allow a full third story in one- and two- family dwellings and townhouses of type VB construction without the installation of fire sprinklers or protected construction, as permitted in the un-amended International code framework.

Expert testimony in the code development process indicates that there is no appreciable risk associated with the construction of a full third story in dwellings built to the IRC. Construction of a full third story provides an additional 22% of habitable space on the same building footprint without significantly increasing the cost.

When the state initially adopted the I-codes, the IRC was amended to either require sprinklers or protected construction to make use of the full third story. In justifying that amendment, the Department expressed concern [Response No. 4, Cite 35 N.J.R. 5074] regarding the shorter fire separation distance. The 2006 IRC, however, requires fire rated exterior construction at greater distances from the property line than what was required in previous IRC editions. Where previous editions of the IRC required rated

exterior construction within 3-feet of a property line, the 2006 edition has expanded that requirement to within 5-feet of a property line. This change addresses the Department's earlier concern.

Other proposed changes support allowing a full third story without the installation of sprinklers or protected construction. For example, the Department retained UCC Formal Technical Opinion 13 (FTO-13), which contains more restrictive requirements than the 2006 IRC for the fire protection between the garage and living space. FTO-13 requires a minimum of 5/8" Type X gypsum board on the garage wall separating the residence and two layers of 5/8" Type X gypsum board separating a habitable space above. The 2006 IRC only requires a 1/2" layer of any type of gypsum board on the garage wall separating the residence and one layer of 5/8" Type X gypsum board between a habitable space above.

Since the Department's concerns with the fire separation distance have been addressed in the 2006 edition of the IRC and the Department has kept the stricter requirements of FTO-13, the full use of third story without protected construction or sprinklers should be allowed as permitted in the un-amended editions.

Existing section R311.3.2 of the 2009 IRC

Section R312 of the 2000 NJ IRC contained an exception in which a landing was not required on the exterior side of sliding doors. Section R311.4.3 of the 2006 NJ IRC restricted this exception to only when there are two or few risers. Placing a landing on the exterior side of a sliding door when there are two or few risers has resulted in: (1) a trip and fall hazard since the landing must extend at least 36 inches in the direction of travel and can be up to 30 inches high above the surrounding surface before a guard is required; and, (2) an excessive burden to design and construct. Section R311.3.2 of the un-amended 2009 IRC still requires a landing when there are greater than two risers. NJBA recommends that the language be reverted back to that of the 2000 NJ IRC or at least only require a landing on the exterior side of a sliding glass door when there are three or more risers.

Chapter 4, Chapter 5, Chapter 6 and Chapter 7 of the 2009 IRC

All references to seismic design should be deleted since they are not applicable in New Jersey. Reduction of these sections will reduce the size of the NJ IRC publication and conserve paper resources.

Energy subcode

The Department has requested input on the effective date of the duct and blower door testing requirements of the 2009 International Energy Conservation Code (IECC). In light of the cost and lack of qualified professionals to conduct the on-site testing, NJBA recommends that the testing requirements be removed all together. In today's unhealthy housing market, any additional cost increases to new construction will further diminish an economic recovery.

Furthermore, the NJ 2006 IECC accurately and precisely divides the state into four climate zones. The un-amended 2009 IECC only divides the state into two climate zones, thus losing the application of climatic precision. This causes excessive application of insulation and larger wall stud sizes in regions, especially the central part of the state, where it is not cost-effective. NJBA asks the Department to investigate whether local modification of the 2009 IECC is permissible for the State to still receive Federal stimulus funds. If so, then NJBA recommends that the Department: (1) retain the four climate zones per the NJ 2006 IECC; (2) remove the blower door testing from section 402.4.2; and, (3) remove duct testing requirements from section 403.2.2. Blower door and duct pressure testing is expensive

(especially since third party contractors will have to be hired to conduct the tests) and adds additional inspection layers thus creating more potential construction delays.

- Has the Department considered the unhealthy interior breathing atmospheres that will be created in new homes by the extreme thermal “tightness” of the 2009 IECC? Will conforming to the 2009 IECC allow enough fresh air into a new home to prevent mold growth and the build up of airborne toxins?
- Will the Department be offering energy rebates to new home buyers for offsetting increase in costs associated with the more stringent energy code? Funds from the Federal Stimulus Package should be used to fund such rebates.

If there are any questions, please contact George Spais, NJBA’s Director of Codes and Technical Services at (609) 570-2157.

Respectfully,

A handwritten signature in black ink, appearing to read 'Timothy J. Touhey'. The signature is stylized with large loops and a long, sweeping tail.

Timothy J. Touhey