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December 29, 2010

Brian Gale, Chairman
Board of Building Regulations and Standards
COMMONWEALTH OF MASSACHUSETTS
One Ashburton Place
Boston, MA 02108

Re: Public Hearing – December 14, 2010 – Code Change Proposals

Dear Mr. Gale:

My name is Tim Travers and I am the New England Regional Manager of the National Fire Sprinkler Association. Let me tell you about the NFSA. Established in 1905, the National Fire Sprinkler Association's (NFSA's) Mission Statement is: "To protect lives and property from fire through the wide-spread acceptance of the fire sprinkler concept." NFSA leads the drive to get life-saving fire sprinklers into all buildings; provides support and resources for its members; and educates authorities having jurisdiction of fire control matters. Headquartered in N.Y., NFSA has regional operations offices throughout the country. I'm retired after 35 years in the Whitman, Massachusetts fire service, the last 22 as Chief of Department. I am a life member of the Fire Chiefs Association of Massachusetts and the International Association of Fire Chiefs.

For the record, the NFSA is ***in favor*** of the adoption of the IRC without amendments which downgrade the code, including deleting the section mandating fire sprinklers in new homes. In the absence of full adoption of the IRC without amendments, the NFSA is ***in favor*** of Proposal 2010-12-12: The 1 & 2 Family Stretch Sprinkler Code.

Across the United States, sprinkler opponents are pushing regulations that would restrict a community's ability to make its own decision about model safety codes for new construction. The regulations would prevent communities from implementing any new sprinkler mandates in one- and two-family homes. If enacted, such regulation will put lives at risk.

Since their defeat at ICC hearings in Baltimore in 2009, the opposition has been "walking the halls" and using their arguments to try and convince state regulators to prohibit the inclusion of one- and two-family sprinkler provisions in the building code. In some cases, they are presenting data used completely out of context. I'd like to explain the facts about some of the common arguments against sprinklers that we're hearing:

The opposition's argument: New homes are safer.

THE FACTS: Opponents of residential fire sprinkler systems like to boast that newer homes are safer homes and that our nation's fire and death problem is limited to older homes. This claim evaporates if you adjust for the higher risk characteristics (e.g., lower income, less education) found on average in the occupants of older homes.

Recent research reveals that newer homes are more likely to include a threat to firefighters in the form of lightweight construction, estimated to be used in one-half to two-thirds of all new wood one- and two-family homes. Larger homes, open spaces, increased fuel loads, void spaces, and changing building materials contribute to faster fire propagation, shorter time to flashover, rapid changes in fire dynamics, shorter escape time, and shorter time to collapse. Fire sprinklers can offset the increased dangers posed by lightweight construction and create a safer fire environment for firefighters.

CASE IN POINT: 3 alarm fire in a residential duplex in Natick, MA on August 23, 2010 at about 10:00 AM. From the news article: "We arrived to find nothing showing," Fire Chief Sheridan said. "We interviewed the occupant and found that there was a lot of heat in the wall between the (homes)." Firefighters went to the back of the home and saw smoke in the kitchen of 17 Avon St. "(The fire) had gained such headway, it had burned through the floor," Sheridan said.

The fire was ultimately contained to the basement and first floor, both of which suffered "significant damage," Sheridan said. The collapsed kitchen floor created a hazard for firefighters on the first floor as well as the basement. "At one point we had to order everyone out of the basement because we didn't want any appliances falling and hitting anybody," he said. According to the Town's Assessor's records the home was built in 2007 and valued at \$600K (each side of the duplex).

The opposition's argument: Fire sprinklers are costly and have not been proven to be a cost effective solution.

THE FACTS: The Fire Protection Research Foundations' Home Fire Sprinkler Cost Assessment report revealed that the cost of installing home fire sprinklers averages \$1.61 per square sprinklered foot (SF) for new construction. The data included in the report reflects the sprinkler system bid price plus all associated costs for the system which were not included in the bid, such as permit fees and increases in water service line tap fees.

If you look at the BBRs "One and Two Family Residential Fire Sprinkler Sub Committee" Report; Appendix E, the Home Builders Association of Massachusetts Sprinkler System Costs Analysis; it states that in 2007 the average costs to install fire sprinklers per unit was \$13,574. 59 or \$4.02 ft². This reflects the average unit being over 3,375 ft². Yet, an article published in the Boston Globe on September 11, 2009 stated that the average size of newly built homes in Massachusetts from 1999 to 2005 was 2,474 ft².

At a previous public hearing I strenuously objected to the Home Builders Association's costs analysis being included in the report. The report cited 5 communities with residential sprinkler systems; one community, Whitman, was removed from the report because there are no NFPA 13D systems in one- or two- family dwellings there. It is suspected that the HBAM's report likely reflected NFPA 13 and 13R systems, which are more costly commercial and multiple unit building systems. A survey with 4 respondents should not be considered significant.

At the December 14, 2010 Public Hearing, written testimony was submitted by John C. Dawley, President and CEO of Northland Residential Corporation titled "Massachusetts Single Family Residential Sprinkler Cost Analysis." Clearly, this document reflects townhouse style condominiums 2 – 4 units and 2 – 3 units respectively built to NFPA 13 requirements with fire department connections, etc. These are not one- and two- family dwellings, built to NFPA 13D requirements and the testimony should be discounted.

I'm not surprised at the turnout of Home Builders here today, but they're here because of things they've been told or read in "Mass Builder" such as "final cost to the homeowner, which came to \$4.02 per square foot, or an average cost per dwelling of \$13,575," and "The unsuspecting new homebuyer is in for a shock when he/she finds out that this new code is going to raise the price of their new home by as much as \$12,000 in an area where home prices are already some of the highest in the nation."

In a case study of North Andover, three house floor plans were obtained from a local developer in the community. All three homes were built with a basement foundation, with living space (including the basement area) ranging from 3,084 to 5,422 square feet. With garage square footage considered, the three homes ranged from 3,568 to 5,906 sprinklered square feet. The cost of the sprinkler systems to the builder ranged from \$4,500 to \$6,500, or \$1.10 to \$1.26 per sprinklered square foot; much less than the HBAM survey of \$4.02 ft² and less than the national average of \$1.61 ft².

To put the cost of a sprinkler system into perspective, we cannot overlook the fact the housing market is, has always been, and will always be a negotiated price market – the seller is seeking to maximize profits and the buyer is wishing to pay the lowest possible price. Fire sprinklers should not singularly be targeted as there are many other significantly higher cost drivers found in the new home such as hardwood floors, granite countertops, and kitchen islands.

The substantive issue is simply the homebuilders want to maximize profit margin and their rebuild market. And to do so they are asking government to allow the homebuilder to build new homes in non-compliance with the national model construction and safety codes. This is clearly not in the best interest of the health, safety and welfare of the public.

There is another substantive issue missed in the OTFRSC report that I must briefly discuss – homebuilder/realtor liability. Rarely a day goes by when I do not notice a safety warning; the visor of the car warns us about seatbelts and airbags, labels on the

food we eat warn us we will get fat. Practically every product, particularly every electronic product has multiple warning labels. The substantive question is where is the “early collapse during fires” warning that should be given to the homebuyer from the homebuilder and realtor when they sell a house that is made of the new lightweight construction material? The homebuilder and Realtor knows or should know that new construction practices have created a less safe environment for the homebuyer – they should have an obligation to inform them of fire escape practices. The wood-products industry has known for decades that engineered wood fails quicker in fires – where is their notice to the public; why have they failed to respond to the repeated concerns of the fire service? There is an entire class of people who are in harm’s way and the people creating the hazard willfully and wantonly failed to provide for mitigation.

And now when the homebuilder comes to a standards body such as the BBRS and persuades them to pass a code prohibiting local government from applying the national model safety codes does this not create a liability link when the new home fails during a fire and lives are lost?

The homebuilders have to be able to say convincingly in a court of law, where this issue will inevitably go, that it did everything they possibly could to lower the risk of death, injury, and excessive property loss from fire. One cannot assume the homebuyer will accept 100% of the risk of death, injury, and excessive property loss from fire when the homebuilder knowingly uses construction products that have been proven, from very credible sources, to fail quickly in fires and they use these new construction products for the sole reason of reducing construction costs thereby maximizing profit margins.

Add in the fact that the homebuilders actively lobby at the national and state level to ignore the fire safety problem and allow them to build in non-compliance with national construction and safety codes and standards then the future liability exposure for the homebuilder, the realtor failing to inform the buyer, and the industry producing these new construction products absent consumer warnings appears to be very concerning.

At the end of the process, I hope the BBRS decision is on the side of life safety.

Respectfully,

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