



## National Ready Mixed Concrete Association

### Fire Safety Model State Legislation

#### Introduction

The Fire Safety Model Legislation proposed herein limits use of light frame, combustible construction and establishes additional fire safety protocols for multi-family residential construction.

#### Why are we concerned about fire safety?

With the recent apartment building fires across the country built using light frame, combustible construction (identified as Type V or “light frame” wood construction in the International Building Code), it has become clear that Type V construction is not appropriate within densely built areas and for certain occupancies. Type V construction puts citizens, fire fighters, and other first responders at risk.

There have been over a dozen massive fires in block-sized, light frame, wood buildings that have occurred in the past several years. Five of these massive fires have been in occupied buildings. Five other under-construction fires damaged nearby occupied buildings. See attached document titled “List of U.S. massive fires in large wood buildings”.

#### Proposed fire safety legislation

The model language in this proposed legislation was written in response to the five-alarm fire that destroyed a 408-unit apartment building in Edgewater, New Jersey on January 21, 2015. The incident highlighted the extreme speed with which light frame, combustible construction, such as that used in the apartment complex that burned, can reach its failure point when exposed to fire. The fire chief in Edgewater blamed the wood construction and truss style roof for the fire's rapid spread. The sprinkler system was actively engaged, and still the buildings burned. Although the Edgewater fire caused no human fatalities, a sudden structural collapse caused by light frame, combustible construction that quickly fails in a fire could have devastating results for residents and first responders. BUT, these fires happen everywhere.

This proposed legislation, modeled after existing legislation in the cities of New York and Chicago, would prohibit the use of light frame, combustible construction for multiple dwellings in jurisdictions with a population density of more than 5,000 persons per square mile. In jurisdictions with a population density of less than 5,000 persons per square mile, a multiple dwelling may be constructed utilizing light frame, combustible construction only if:

- They are three stories in height or less
- Have vertical fire barriers with a minimum two-hour fire rating
- Horizontal fire barriers with a minimum two-hour fire rating
- An automatic sprinkler system is installed throughout the structure in accordance with National Fire Protection Association (NFPA) 13.
- *Optional Language:* The bill imposes limits on the size of buildings that may be built with Type V construction and which utilize NFPA 13R sprinkler systems.

In addition, this bill would require owners and developers of multiple dwellings utilizing light frame, combustible construction to hire a fire watch guard to provide 24-hour a day monitoring of construction projects on light frame, combustible buildings. It also would require signs posted on light frame, combustible construction warning fire fighters of the potential danger of collapse and the type of building materials that are used in that building. The bill balances fire safety concerns with other policy considerations by affording developers an opportunity to increase the floor area of developments without increasing the height of buildings.

**About NRMCA and the model Fire Safety Legislation**

Founded in 1930, the National Ready Mixed Concrete Association is the leading industry advocate. Our mission is to provide exceptional value for our members by responsibly representing and serving the entire ready mixed concrete industry through leadership, promotion, education, and partnering to ensure ready mixed concrete is the building material of choice. The proposed legislation could be used by NRMCA State Affiliates, NRMCA members or others stakeholders in promoting Fire Safe Construction. For additional information visit [www.nrmca.org](http://www.nrmca.org) or contact Tien Peng, Senior Vice President, Codes and Standards, at 206-913-8535 or [tpeng@nrmca.org](mailto:tpeng@nrmca.org).

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## **Fire Safety Construction Act of [ year ]**

**Bill No. \_\_\_\_\_**

A Bill relating to improving the fire safety of multi-family construction (excluding single family homes).

Be it enacted by the state of [ state ]:

SECTION 1: At the first statutorily obligated date and/or by the effective date of this legislation, the [regulatory body responsible for building code adoption and enforcement in the State] shall make the following changes to the state adopted building regulations:

SECTION 2. The use of light frame, combustible construction for multi-family dwellings shall not be permitted in jurisdictions with a population density of more than 5,000 persons per square mile, according to the latest federal decennial census. Light frame, combustible construction refers to a type of construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive members comprised of combustible material(s).

SECTION 3. In jurisdictions with a population density of less than 5,000 persons per square mile, according to the latest federal decennial census, a multi-family dwellings may be constructed utilizing light frame, combustible construction only if:

- (a) They are three stories in height or less
- b) Have vertical fire barriers extending from the top of the foundation through the roof, and constructed of noncombustible materials with a minimum two-hour fire rating are installed between walls separating dwelling units in the same building and walls separating dwelling units from other occupied areas contiguous to them in the same building; and
- (c) Horizontal fire barriers with a minimum two-hour fire rating are installed between floors separating dwelling units; and
- (d) An automatic sprinkler system is installed throughout the structure in accordance with National Fire Protection Association (NFPA) 13. A building shall not be considered as separate and distinct buildings for the purpose of determining the maximum building height in feet or the number of stories of the building if the building, or a portion of the building, is Residential Group R-1 or R-2; and involves the use of Type III, Type IV, or Type V construction (see below for definitions). The number of stories to be used in determining the minimum type of construction for such buildings shall be measured from the grade plane.

Types of Construction (from the 2015 International Building Code):

Type III - Exterior walls are of noncombustible materials and the interior building elements are of any material permitted by the code.

Type IV - H. T. (Heavy Timber) - Exterior walls are of noncombustible materials and the interior building elements are of solid or laminated wood without concealed spaces.

Type V - Structural elements, exterior and interior walls are of any materials permitted by the code. A. Fire-resistance rated construction. B. Non fire-resistance rated construction.

This bill specifically affects the following Occupancy Groups:

R-1 - Residential occupancies where the occupants are primarily transient in nature, including: Boarding houses (transient), Hotels (transient), and Motels (transient)

R-2 - Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including: Apartment houses, Boarding houses (not transient), Convents, Dormitories, Fraternities and sororities, Monasteries, Vacation timeshare properties, Hotels (nontransient), and Motels (nontransient)

A building, all or a portion of which is of Type V construction, and equipped with an automatic sprinkler system installed in accordance with NFPA 13 shall not exceed three stories measured from the grade plane; and shall not exceed a per-story floor area of 36,000 square feet, except as provided in subsection (e) of this section.

(e) Square footage beyond that authorized in this section may be permitted by constructing an additional detached building or buildings.

*Optional Language: Automatic sprinkler systems may be installed in such buildings in accordance with NFPA 13R, however, the sprinkler systems shall protect concealed combustible spaces consistent with NFPA 13.*

SECTION 4. A construction project involving a multi-family dwelling that utilizes light frame, combustible construction shall not proceed unless a fire watch guard is present 24 hours a day for a minimum of 48 hours after the fire watch has concluded with a certificate of occupancy to monitor the construction project and alert firefighters, medical, rescue, or law enforcement personnel if a fire or other emergency occurs. A fire watch guard shall maintain a record of activities performed in connection with the construction project that serve as a potential threat to fire safety. The records shall be submitted to the Division of Fire Safety in the department on a weekly basis and the division may, in its discretion, take action appropriate to abate any fire safety issues, including, but not limited to, requesting that the local construction code official revoke the construction permit for the project.

An applicant shall be eligible to be a Fire Guard if the person holds a Certificate of Fitness for such purposes, and is trained in and responsible for maintaining a fire watch and performing such fire safety duties as may be prescribed by the commissioner. A developer or owner of a multiple dwelling utilizing fire watch guards to provide 24-hour per day monitoring pursuant to this subsection shall be responsible for hiring, training, and compensating the fire watch guards and any expense to ensure they are on site, including inspection by State or Local Officials. The Division of Fire Safety (or Fire Marshal) in the department may assess a developer or owner of a multiple dwelling, utilizing a fire watch guard pursuant to this subsection, reasonable administrative fees incurred by the division in performing its duties as set forth in this subsection. The FIRE GUARDS are required to make regular inspections and patrols of the assigned area of responsibility. They shall not be assigned any other responsibilities as this would interfere or prevent them from carrying out their required duties.”

SECTION 5. The State shall, pursuant to the authority under \_\_\_\_\_, promulgate rules and regulations to require that an identifying emblem be affixed to the front of each exterior entrance of structures that utilize light frame, combustible construction or truss construction to clearly communicate that the combustible structure in the affected area is known to the state to pose a fire hazard.

The emblem shall be of a bright and reflective color, or made of reflective material. The following language shall be included:

(a) “WARNING: This structure is built with light frame, combustible building materials..”

(b) At least one notice or sign, no smaller than 12 inches horizontally by 10 inches vertically, and bearing the warning message set forth in this subsection.” The following letters, of a size and color to make them conspicuous, shall be printed on the emblem: "F" to signify a floor with light frame or trussed combustible construction; "R" to signify a roof with light frame or trussed combustible construction; or "F/R" to signify both a floor and roof with light frame or trussed combustible construction. The emblem shall be permanently affixed to the left of each entrance door at a height between four to six feet above the ground and shall be installed and maintained by the owner of the building.

SECTION 6: This act shall become effective [ Date ].