



Legislation Text

File #: 2018-0799, Version: 3

Title/Name/Summary

Village Code Amendment Title 5, Chapter 1, Section 13 - Construction Type 3B for R-2 Multi Family Buildings

History

The Village of Orland Park has been requested to investigate the possibility of an amendment to the code for R-2 Multi-family dwelling unit buildings using the Type 3 construction types.

The construction classification of Type 3 by model definition is “the type of construction in which the exterior walls are of non-combustible materials and the interior elements are of any materials permitted by this code” IBC 602.3. The Village definition is “The type of construction in which the exterior walls are of non-combustible **and masonry** materials and the interior elements are of any materials permitted by this code.”

The discussion was based on the construction cost of steel non-combustible building going up after tariffs imposed on steel imports and raw materials. According to Mr. Joe Casucci, Chief Executive Officer of steel fabricator and erector FJM Ferro Inc., the tariffs announced in March have already caused American mills to increase mill pricing by almost 30%. These costs are passed along to steel erectors that construct not only to major steel building but also buildings utilizing a light gauge steel stud partitions.

Cost comparisons:

R-2 building 4 floors total area = 100,000 sq. ft. building for a Type 2A building = \$14,723,000

R-2 building 4 floors total area = 100,000 sq. ft. building for a Type 3A building = \$12,705,000

Cost savings for change in construction = \$2,018,000 = **13.7% cost savings**

These cost savings do not include the increase in steel cost for current U.S. Government tariffs.

The fire safety of the building would not be decreased and would still require fire rated construction for separations, exits, and building elements but would allow combustible materials to be encapsulated within the membrane of fire resistive materials. A full NFPA 13 system would be required and with properly designed sprinklers and quick detection via fire alarm systems, the sprinklers would engage any fire occurrence and extinguish quickly before any major structural damage would be incurred.

Code History:

The Village has building code section Title 5 Chapter 1 section 501.3.3. established July 19, 2005, that requires the following:

Precast or engineered reinforced concrete separating tenants (i.e. dwelling units).

Exceptions allow with an NFPA 13 full sprinkler system a reduction to an open web steel joist floor system with a 1-hour non-penetrated fire rated system/assembly.

Interior walls separating tenant dwelling units are required to be solid masonry or a min. 2 wall system & a min. 1-hour fire rating with a full sprinkler system per NFPA 13.

All vertical shaft for stairs, HVAC and elevators are required to be min. 2 hours rated if connecting three levels (including basements) or 1 hour rated connecting 2 levels (including basement). This requirement exceeds the min. model code requirement.

Proposed Code amendment:

Amended Hybrid Type 3 construction type to allow combustible products for floor construction and to limit combustible wood studs for interior non-load bearing partitions contained entirely within the dwelling unit perimeter walls or envelope. The exterior walls and the demising walls separating other dwelling units, exit corridors and/or shafts will still be noncombustible materials and fire-rated according to the Village code for elements of construction. The introduction of this hybrid version of type 3 construction would introduce an increased rating for floor construction to 1 ½ hours (See exhibit 3) while still maintaining the required demising wall fire rating with non-combustible materials.

In summary, the dwelling unit will be encapsulated with rated non-combustible construction while allowing combustible pre-engineered wood trusses with an increased floor fire rating of 1 ½ hours in lieu of the 1 hour rated per present code.

This item went before the Development Service Planning and Engineering Committee for discussion only on November 19, 2018. The Committee directed staff to meet with the Fire Districts to discuss the proposed code change. Staff has met with the Orland Fire Protection District and they are supportive of the proposed code change. They recognize that the proposed code will actually increase the fire safety from a 1 hour rated to a 1-1/2 hour rated construction, while also reducing the cost of construction for builders. This is a double benefit to the Orland Park community. Both Mokena and Orland Fire Protection District have provided letters of support for this proposed code amendment.

This item went before the Development Service Planning and Engineering Committee on January 21, 2019 and was recommended for approval. Orland Fire Protection District was present to provide a consensus that this code amendment should move forward.

Recommended Action/Motion

I move to approve the Village Code Amendment Title 5, Chapter 1, Section 13 - Construction Type 3B for R-2 Multi-Family Buildings.