



# Where is it in the Code?

Oh, the questions we get about specific gypsum information and where it is hidden in the building codes. Examples abound.

*“I remember something called the “lid rule,” and I believe it was described in the Uniform Building Code. It was a great way to enclose a rated corridor. I can’t find it in the IBC. Did it vanish when the IBC was created?”*

No, the “lid rule” is still in the International Building Code and we have written about it in the past. The problem is that it was relocated and rewritten a few editions back and it’s now more difficult to find and interpret.

The lid rule describes two methods of enclosing the top, or “lid,” of a

fire-rated corridor. It is particularly useful in a situation where a fire-rated egress corridor is being installed in a building that has a significant floor-to-deck or floor-to-roof height.

The relevant language was in Chapter 10 of the Uniform Building Code. When the three predecessor model codes were merged in 2000, it migrated to Chapter 10 of the IBC. A few IBC editions ago it moved to Chapter 7 where it was re-written as a series of exceptions to the continuity language for fire partitions in Section 708.4. It now spe-

cifically appears as exceptions 2 and 3 to Section 708.4 in the 2012 IBC. Technically, moving the language to Chapter 7 made sense; logically, it begs for clarity.

## **A ROSE BY ANY OTHER NAME?**

The IBC language is not quite as clear as the UBC language, but it gets you to the same place. You can terminate the walls that define a one-hour-rated corridor at the underside of a rated ceiling if the ceiling has the same rating as the walls. You also can eliminate the application of board above the ceiling on the inside face of the walls that enclose a one-hour corridor if the membrane on the opposite (room) side of the walls runs full height to the underside of the deck above and you install a rated ceiling in the corridor.

*“I understand that some elevator shafts must now be enclosed with impact-resistant systems. Where is the language that defines what to use to enclose a shaft in a building?”*

There are four instances where an impact-resistant shaft enclosure system must be installed as prescribed by the 2012 IBC: Shafts enclosing elevator and interior exit stairways in high-rise buildings in specific structural risk categories; Shafts enclosing elevator and interior exit stairways in buildings greater than 420 feet in height; Fire service access elevator enclosure shafts in all buildings; and occupant evacuation elevator enclosure shafts in all buildings.

The requirement mandating the installation of an impact-resistant system in a high-rise or a building over 420 feet in height is in Section 403 of the IBC where specific requirements unique to construction of high-rise buildings—buildings that have an occupied floor more than 75 feet above the lowest level of fire-fighter vehicle access—are contained. The mandates to install an impact-resistant system enclosure around a fire service elevator or an occupant evacuation elevator are contained in sections 3007 and 3008 respectively.

The construction requirements for the impact-resistant system are con-

tained in Section 403.2. A gypsum panel system can be used to satisfy the impact-resistant requirement. The gypsum panel system must conform to the prescriptive language in Section 403.2 and must comply with the requirement to satisfy the ASTM C 1629 test method requirement as defined by the code. Construction of enclosures that conform to the requirements of Sections 3007 and 3008 is defined by the reference to Section 403.2 that is contained in both sections.

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**All of the relevant gypsum board code language is not in the most obvious places. Sometimes you must peck through the codes to find it.**

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#### **CONFLICTING REPORTS**

*“An inspector told me that I can’t use drywall to create a rated enclosure around a horizontal grease duct because the language is no longer in the IBC. Is that correct?”*

No, it is not correct. He or she is looking in the wrong code.

First, there has never been language in the IBC (nor, to my knowledge, in any of the predecessor model building codes) describing or defining the use of a drywall enclosure for a rated horizontal grease duct enclosure. The language defining the use of a rated drywall horizontal grease duct enclosure has always been contained in the applicable mechanical code where it makes reference to the building code for some prescriptive requirements.

Despite some claims to the contrary, you may still use a drywall shaft system to create a rated enclosure around a horizontal grease duct as long as the drywall system complies with requirements of the applicable mechanical code. In the 2012 International Mechanical Code the prescriptive language is contained in Section 506.3.11.1. That section defines the applicable construction limits for the system and describes the construction of the enclosure. Because of the fire hazard inherent in a grease duct, mechanical codes are laden with requirements for duct access and protection.

*“My typical townhouse designs terminate the townhouse separation wall at the underside of the roof. We then install gypsum board as a roof underlayment on each side of the common wall. I’ve just submitted plans to a small community where townhouses have never been erected, and the plan reviewer doesn’t think my method is legit. I know it’s in the codes, but where is it?”*

The use of 5/8 inch thick type X gypsum board as an underlayment for combustible roofs is an alternate to parapets in townhouse construction. This method of fire protection is designed to resist the spread of fire from unit to unit over the top of common walls.

The concept you describe is legitimate and is contained in both the International Residential Code and the IBC. In the 2012 IRC, the language is contained in Section R302.2.2 and is presented as an exception to the parapet requirement.

#### **CONFUSED?**

It’s a bit more complicated in the 2012 IBC as the use of a gypsum underlayment system is codified twice in Chapter 7. Because the wall you are describing is considered to be a fire wall in the IBC, the relevant language on gypsum underlayment is contained as exception 4 to Section 706.6 where the vertical continuity requirements for fire walls are defined. Nearly identical language is also in Section 705 where the parapet requirements for exterior walls are defined. In either instance, the language gets you to the same end result and permits the installation of gypsum underlayment in lieu of a parapet.

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