

# Rolling steel fire doors and the ICC 500 Standard for Storm Shelters

## TECH CORNER

### Editor's note:

In this installment of the Tech Corner, DASMA Technical Director Dave Monsour discusses a unique application for rolling steel fire doors and why DASMA has created a new label to provide more clarity on this subject.

Do you think rolling steel fire doors *warm* the heart of the experienced and trained technician and *burn* the brains of the uninitiated? Behind these fascinating and seemingly simple but often complex products lies a world of knowledge that can occupy an engineer for life.

One thing rolling steel fire doors all have in common is an automatic closing feature, whereby without any human intervention the door closes upon a signal from a detector or the melting of a fusible link. Or, at least, we thought that all these doors had that in common. As it turns out, ICC 500 had other ideas!



DAVE MONSOUR

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Time may be of the essence in that circumstance. The provision is in Section 603.1.1, and it reads, "In fire barriers required solely for compliance with Section 603.1, fire doors and shutters shall not be required to be self- or automatic-closing."

### Q: What is the significance of "solely for compliance with Section 603.1"?

The phrase "solely for compliance with Section 603.1" limits the application of the provision to walls that are designated as

fire walls *only because they are part of a storm shelter*. The upshot is that some (but not all) fire doors in storm shelters will be "self- or automatic-closing."

ICC 500 includes the "solely for compliance" stipulation because storm shelters often exist as rooms within larger structures. If one of the storm shelter walls is code-required to be a fire wall and to protect the larger structure, the code then demands the normal level of protection from the fire doors in that wall — which entails that they be self- or automatic-closing.

### Q: Why did DASMA create the special label?

The members of DASMA's Rolling Door Division are aware of the crucial importance of fire door performance. They know that the instructions, features, and operation of rolling fire doors can at times be difficult to understand.

With ICC 500, a new category of rolling fire doors has been introduced — namely those that do not close automatically. Helping dealers, inspectors, and end users be clear on the intended door function was imperative. The Rolling Door Division believes that the new label will serve as an excellent tool for clarification and encourages all manufacturers of rolling fire doors for storm shelters to use it where appropriate.

### Contact us

If you have questions about this topic or suggestions for future content, please email Dave Monsour at [dasma@dasma.com](mailto:dasma@dasma.com). ■



### Q: What is ICC 500?

ICC 500 is a publication of the International Code Council (ICC) entitled "Standard for the Design and Construction of Storm Shelters." The standard is referenced in the International Building Code (IBC) as the governing standard for the design and construction of storm shelters that afford a high level of protection against hurricanes and other severe weather events.

### Q: What role do rolling fire doors play in ICC 500?

Rolling fire doors are an acceptable component in ICC 500 storm shelters if they meet the stringent requirements

of the standard. In addition to verified fire resistance, an ICC 500 fire door mounted to an exterior wall in a storm shelter also has to meet the design wind pressure and impact resistance requirements, which are as extreme (as one would expect).

### Q: What is the difference between ICC 500 rolling fire doors compared to other rolling fire doors?

There is an unusual provision in ICC 500 that has since been adopted directly by the IBC. It stems from a concern of permitting people to freely enter a shelter when they seek protection from a storm without a closed door obstructing their path.