

Inspecting and Testing Oversized Fire Doors & Construction-Labeled Door Frames and Doors

By Keith E. Pardoe, DSC, FDAI, DAHC, CDC

In the universe of all things, fire doors and the myriad types, materials, designs, configurations, sizes, and components comprising them are among the least recognized fire protection systems in our buildings and structures. Most laypeople don't notice the ubiquitous labels attached to fire doors or understand what they represent when they see them. Since swinging doors are one of the few building elements we interact with daily, we take them for granted. Building, fire, and life safety codes require fire doors to be appropriately labeled, installed correctly, and operate as designed at all times. Fire doors have one job: preventing a fire from spreading; *they must be kept in a constant state of readiness!*

Fire door assemblies are specially engineered fire-protection systems requiring the highest attention to detail at every step, from design and selection to specifying and detailing, to ordering and installing, and throughout the lives of their installation. In addition to *swinging fire doors with builders hardware*¹—the most common type of fire doors—there are several other types of fire door assemblies such as 1) rolling steel doors, 2) horizontally-sliding fire doors, 3) vertically-sliding fire doors, 4) swinging fire doors with fire door hardware,² 5) service counter fire doors, 6) chute doors, 7) access doors, 8) elevator/dumbwaiter hoistway doors, 9) floor/roof access doors, and 10) accordion/folding horizontally-sliding doors.

Regardless of type, fire door assemblies are designed to suit an array of standardized applications for which they are fire door tested. They are available in sizes, materials, and construction, each for particular uses and hourly fire ratings. Occasionally, new construction projects have unusual conditions requiring custom (non-standard) fire door assemblies. For instance, some fire door assemblies might need to be larger than the

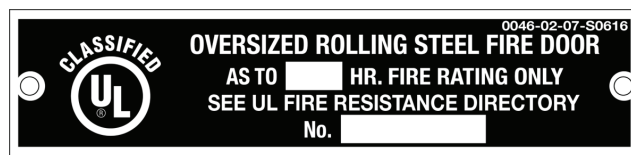


Fig. 1 Sample Oversized Fire Door Label

(Source: Underwriters Laboratories' website.)

standard sizes available from the manufacturers. In other cases, combinations of custom features and functions require components untested by the respective manufacturers. Hence, there is a need for *oversized labeled* fire doors and *construction-labeled* door frames and doors.

Oversized Labeled Fire Doors

As their name suggests, *oversized labeled* fire doors are physically larger than their smaller but otherwise identical and appropriately labeled counterparts that successfully passed fire door testing. In some cases, the overall size of these fire door assemblies is too large to fit onto the testing apparatus and furnace. In other cases, these doors might be small enough to test but are oddly sized—meaning they might be one-off custom-sized doors—but larger than the manufacturer's standard offerings. In either case, these doors are labeled as being oversized and include the mark of a testing laboratory. Notice the phrasing shown on the sample oversized label in Fig. 1; the words "AS TO" preceding the hourly rating indicate the door is constructed identically to other appropriately labeled fire doors from the same manufacturer.

Large rolling steel³ and service counter fire doors⁴ are likely candidates for oversized fire door labels. These fire doors are unit-based systems wherein the label covers the curtain and all the attached subcomponents (e.g., tracks, rollers, pulleys, cables, fusible links, torsion springs, bottom bars, chain hoists, hoods, etc.)

¹ See Chapter 6, *Swinging Doors with Builders Hardware* in NFPA 80.

² See Chapter 7, *Swinging Doors with Fire Door Hardware* in NFPA 80. These doors differ significantly from *swinging doors with builders hardware*; they are large industrial doors using strap hinges and counter-weight closing mechanisms.

³ See Chapter 11, *Rolling Steel Doors* in NFPA 80.

⁴ See Chapter 13, *Service Counter Fire Doors* in NFPA 80.

NFPA 80 and the IBC⁵ (and the former model building codes) have provisions for using oversized fire doors. Consequently, building code officials and other AHJs don't need to approve their use since the codes and standards explicitly allow for oversized fire doors.

Other candidates for *oversized labeled* fire door labels include access doors, chute doors, horizontally and vertically sliding doors, and accordion/folding doors.⁶ With this understanding, let's move on to *construction-labeled* door frames and doors and how they differ.

Construction-labeled door frames and doors are a special-use case of fire doors unique to swinging doors with builders hardware...

Construction-Labeled Door Frames and Doors

Unlike other fire door assemblies, *swinging doors with builders hardware* are component-based fire protective systems. These types of fire doors consist of almost infinite combinations of components produced by many manufacturers. Each component installed on these assemblies must be *listed*⁷ and *labeled*⁸ for use as part of an *appropriately labeled* fire door assembly. The hourly rating of the door panel (aka leaf) usually determines the assembly's overall fire rating. Generally, the maximum size of door leaves for these assemblies is four (4) feet wide by ten (10) feet high—there are numerous exceptions, larger and smaller—depending on the exemplar assemblies tested by the manufacturers.

Construction-labeled door frames and doors⁹ are a *special-use case* of fire doors unique to *swinging doors with builders hardware* requiring the building code official's approval before they are furnished and installed.¹⁰ Typically, these door frames and doors are identical in materials, construction, and fabrication to their *appropriately labeled* counterparts, but they cannot bear labels due to unusual and, more importantly, untested conditions such as overall size, hardware preparations (e.g., mortises in top rails for concealed hardware), cutouts for lights and louvers, glass and glazing material sizes and locations, and internal construction (e.g., raceways for wires)—or combinations thereof—that aren't covered in the door manufacturer's product listing(s).

Construction-labeled door frames and doors consist of fire-resistant materials and construction that have not been subjected to fire door testing due to deviations from

the manufacturer's design; therefore, they aren't *listed* for use as part of fire-rated assemblies. Hence, these components cannot bear the same labels as their fire-rated counterparts. It should be noted, however,

that the manufacturer's engineers analyze and evaluate these components and might also request formal engineering evaluations from one of the nationally recognized testing laboratories (NRTLs) before producing *construction-labeled* components.

It's All About the Listings

Listings are somewhat of an abstract concept for those unfamiliar with fire-rated equipment. Each fire-rated component has a formal product *listing* from one or more NRTL containing component-specific limiting conditions. Such conditions might include size, internal reinforcements for surface-applied hardware, means of hardware fastening (and frame anchoring), glass and glazing material restrictions (e.g., type, size, and placement), hardware preparations (e.g., overhead concealed stops and door closers), points of latching (e.g., single, two-, three-point latching, and fire pins) for doors, and particular combinations of door and hardware applications (e.g., top rod only fire exit hardware devices) that might require or prohibit specific hardware components to be used with the doors.

Certain combinations of door construction and hardware applications might be covered in the listings for a particular door construction and not in the listings for other door constructions, even from the same manufacturer. The door panels cannot bear a fire door label when these door constructions are used with hardware components and applications that are not covered in the door manufacturers' *listings*. When the door assemblies' overall size is larger than the maximum sizes covered in their *listings*, the door frames and doors cannot bear fire door labels.

5 See paragraph 4.2.1.6, *Section 4.3.9 Oversized Doors*, and paragraph A.4.3.9 in NFPA 80, and paragraph 716.2.9.2, *Oversized Doors* in IBC. Neither NFPA 80 nor the IBC scope oversized labeled fire doors to only rolling steel or service counter fire doors.

6 See chapters 8, 10, and 9 respectively in NFPA 80.

7 See *Section 6.5.1, General* and definition 3.2.4, *Listed* and paragraph A.3.2.4 in NFPA 80.

8 See paragraphs 4.2.1 and A.4.2.1 and definition 3.2.3 *Labeled* in NFPA 80.

9 Neither NFPA 80 nor the IBC contain provisions explicitly for construction-labeled door frames and doors.

10 See *Section 1.5 Equivalency* in NFPA 80, and *Section 104.2.3, Alternative Materials, Design, and Methods of Construction and Equipment* in the IBC.

Most door frame and door manufacturers publish technical data for their fire-rated components on their websites, including details from their product listings.¹¹ Intertek, QAI, and UL publish portions of the manufacturers' product listings in their on-line databases.¹²

Construction-Labeled Wood Doors

Most wood fire door manufacturers offer a series of door constructions with different internal components (e.g., core materials, stiles, and rails) that result in doors with varying fire protection ratings and capabilities, like overall door sizes and hardware applications; each construction has a specific product listing. Cores used in fire-rated wood doors include particleboard, Agrifiber, SCL, stave block, and mineral materials, each with capabilities and limitations. Even among the same core type (e.g., mineral cores), its capabilities (e.g., temperature rise rated cores) and limitations (e.g., not more than 3/4-hour (45-minute) ratings) vary depending on its composition. For example, one type of mineral-core wood fire door construction might be available for doors up to four (4) feet wide by ten (10) feet high. Still, a mineral-core—having a different composition—wood fire door construction from the same manufacturer might have limited heights of not more than eight (8) feet.

Similarly, the maximum fire-rated door sizes for the same internal construction might vary between single doors and standard-swing paired and double egress paired doors. Sometimes, the hardware mounted to the doors (e.g., concealed cable/rod fire exit hardware devices) limits the maximum door sizes. Likewise, fire protection-rated glazing materials and their placement might limit the overall door size. The maximum area of glass

and glazing materials in some door constructions might be larger or smaller than those allowed in other door constructions, even from the same door manufacturer.

Construction-Labeled Hollow Metal Door Frames and Doors

Some sizes of fire-rated hollow metal (e.g., 20, 18, 16, and 14 gauge steel) doors are limited to less than the above-mentioned maximum size. The internal construction of hollow metal doors includes cores such as honeycomb, steel-stiffened ribs, polyurethane-filled (foamed in place), polystyrene-filled (drop-in), and mineral materials. Even though the doors are substantially made of metal, some are incapable of the full range of fire protection ratings.

Most non-fire-rated and fire-rated hollow metal door frames are fabricated from 16- and 14-gauge cold-rolled or galvanized steel—heavier and lighter gauges of steel are used for particular applications. As with other fire door components, labeled door frames have a product listing with one or more NRTL. These listings specify conditions such as maximum opening sizes, maximum and minimum overall jamb depths, sidelight and transom-light sizes and configurations, means of anchoring for different wall constructions, and hardware reinforcements and applications.

Untested sizes and hardware preparations in hollow metal doors might also require their companion door frames to be construction-labeled since the size(s) and preparations are not covered in the manufacturer's product listing(s)

Construction-labeled door frames and doors are a compromise between the architect's design and the availability of appropriately labeled door assemblies...



Fig. 2 Construction Label Applied to Wood Door
(Source: Unknown.)

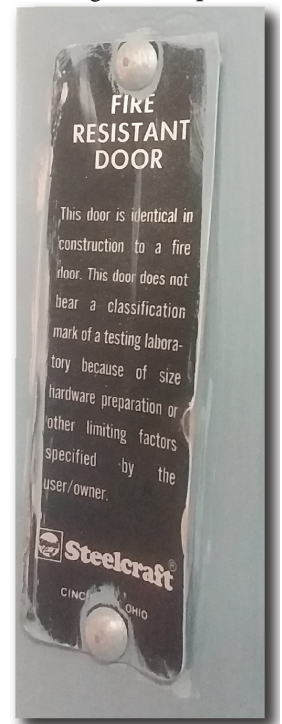


Fig. 3 Photo of Construction Label Applied to Hollow Metal Door
(Source: Author.)

11 Manufacturers publish portions of their product listings data for general use; proprietary data and information is not published.

12 For more information regarding accessing the NRTL's Online product directories of fire-rated swinging door components see page 7.

Read the Labels

The reasons these components bear construction labels are many and vary from manufacturer to manufacturer. *Construction-labeled* door frames and doors are a compromise between the architect's design and the availability of appropriately labeled door assemblies needed for a project. It should be noted that *construction-labeled* door frames and doors are typically part of the building's original construction and are not a mistake, an oversight, or an afterthought. As mentioned, since the codes don't explicitly cover *construction-labeled* door frames and doors, architects must seek the building code official's approval before these components can be furnished and installed.

From a distance, the labels on *construction-labeled* door frames and doors might appear to be fire-rated labels due to their shape and placement, but closer inspection reveals them to be something else entirely. Many of these labels include statements declaring the door frames and doors cannot bear a fire-rated label due to size, hardware preparation(s), or other untested conditions requested by the owner (or the owner's representative); otherwise, they are identical in design, material(s), and

fabrication to their fire-rated counterparts. The manufacturer's name and logo appear on these labels, but hourly fire protection ratings are not usually listed, nor is the mark of a testing laboratory/certification agency included. In addition to qualifying statements regarding size and hardware preparations, some construction labels include statements such as "This label certifies this mineral core door is constructed to meet requirements of 45 [60, 90] minute fire rating." Construction labels have no standard format or content.

Because these doors are located in positions that require fire protection-rated doors, they must be installed, inspected, tested, and perpetually maintained as labeled fire door assemblies without exception.

Regardless of NFPA 80's and the IBC's (and other model codes') provisions and requirements, the maximum door size for any swinging door with builders hardware is subject to the sizes tested by the respective

manufacturers. In other words, even though the codes allow fire-rated swinging fire doors with builders hardware to be four (4) feet wide by ten (10) feet high, individual door sizes are

limited to the maximum sizes successfully tested by the manufacturers for each of their door constructions per their listings.

Where Construction-Labeled Door Frames and Doors are Located

Because *construction-labeled* door frames and doors vary from the parameters of the manufacturer's product listings—making them a *special-use case* of swinging doors and requiring the building code official's approval—these doors are more likely to be located along corridors (e.g., office suite entries and cross-corridor) than in stair towers or other locations requiring fire ratings greater than 3/4-hour (45 minutes), but there are exceptions.

Inspecting and Testing Oversized Labeled Fire Doors

When inspecting and testing *oversized labeled* fire doors, the processes are identical to those needed for other fire-rated doors of the same type.¹³ Inspectors might want to confirm the technical details for particular installations through the manufacturer's websites or other resources, but otherwise, no other work is necessary. Remember, the codes and NFPA 80 allow for *oversized labeled* fire doors to be used.

Inspecting and Testing Construction-Labeled Door Frames and Doors

Construction-labeled door frames and doors can be found on nearly all types of buildings and structures, in new (e.g., up to three (3) years old), recently existing (e.g., four (4) to twenty-four (24) years old), and older existing (e.g., twenty-five (25) years and older) construction.¹⁴ Because these doors are located in positions that require fire protection-rated doors, they must be installed, inspected, tested, and perpetually maintained as labeled



Fig. 4 Construction Labeled Hollow Metal Door Frame (Source: Author.)

¹³ See Section 5.2.3.7 *Horizontally Sliding, Vertically Sliding, and Rolling Doors* and paragraph 5.1.1.3 for other door types in NFPA 80.

¹⁴ Most swinging fire doors installed before the year 2000 were neutral-pressure tested in compliance with one of the former model building codes. Older doors are permitted to remain in service indefinitely, provided they are properly maintained; there are no expiration dates.

fire door assemblies without exception. Even though their labels declare the door frames and doors can't be *labeled* due to size, hardware prep, or other special conditions, they are approved substitutions for fire doors; therefore, they must be treated as fire doors throughout their service lives.

Since most construction labels don't list the hourly ratings of these components, inspectors need to employ their detective skills to determine the hourly ratings required for the particular door assembly they are inspecting. From there, they can inspect and operationally test them as fire door assemblies and be on the lookout for the conditions that caused these components to be construction labeled. For instance, the minimum hourly rating of cross-corridor pairs of swinging fire doors depends on the rating of the fire barriers, walls, and partitions. Usually, the rating of fire protection-rated swinging doors is three-quarters (75%) of the rating of the construction in which they are installed—there are some exceptions. Before inspecting *construction-labeled* door frames and doors, inspectors must research the rating(s) of the fire barrier, wall, or partition.



Fig. 5 Construction-Labeled Wood Door
(Source: Author.)

Generally, the maximum size of glass and glazing materials in higher-hourly-rated doors is limited to smaller sizes than in lower-hourly-rated doors. Larger glazed sections in door panels might be why the doors are construction-labeled. Closer inspection of the hardware components might reveal clues as to other conditions warranting construction labels. For example, there was a period when the doors' listings did not permit using overhead concealed stops in fire-rated wood doors rat-

ed at and above 3/4-hr (45 minutes) and, if used, caused those doors to bear construction labels. Mortises in the top rails of wood doors for other hardware components might not be covered in the doors' listings. So, too, adjacent cutouts in door panels for multiple lights (aka windows) and hardware (e.g., mortise locks/latches) might warrant construction labels when they are closer than the allowed in the door's listing.

Ideally, requests for and approval of *construction-labeled* door frames and doors will be recorded in the construction documents; in many cases, such documentation might be forever lost. Wise inspectors will research the history of *construction-labeled* doors and include it in the acceptance testing records¹⁵ and periodic inspection and testing reports,¹⁶ thereby expediting subsequent inspections and testing.

Field Labeling of Construction-Labeled Door Frames and Doors

Field labeling (aka re-labeling) of fire-rated door frames and doors involves replacing the manufacturers' original fire-rated labels when rendered illegible (e.g., painted over) or missing with new labels. Before replacement labels are issued, each component is thoroughly inspected. The NRTLs have conducted field labeling swinging fire doors for decades. More recently, field labeling services have been available from non-testing lab providers.¹⁷ Non-testing lab field labeling service providers might be accredited by the ANSI National Accreditation Board (ANAB) or other sources. However, unlike the NRTLs, non-testing lab field labeling providers cannot

access manufacturers' proprietary technical information and have to rely on published listings and generic sources such as NFPA 80 and other related industry standards.

While replacing the manufacturers' original fire-rated labels for some swinging door components might be possible, *construction-labeled* door frames and doors are not eligible candidates for field labeling since they don't have the manufacturers' original fire-rated la-

...construction labeled door frames and doors are approved substitutions for appropriately labeled door assemblies, and they must be treated as fire door assemblies throughout their service lives.

...construction labeled door frames and doors are not eligible candidates for field labeling since they don't have the manufacturers' original fire-rated labels;

¹⁵ See Section 5.2.3 Acceptance Testing in NFPA 80.

¹⁶ See Section 5.2.4 Periodic Inspection and Testing in NFPA 80.

¹⁷ Generally, replacement labels from sources other than the respective manufacturers cannot be construed to be equal to the manufacturers' original labels.

bels; they have not been subjected to fire door testing. As mentioned earlier, statements on the manufacturers' construction labels explicitly declare these components cannot bear fire-rated labels due to untested conditions (e.g., size, glass and glazing, and preparations for certain hardware components). Consequently, field labeling cannot be used to convert construction-labeled door frames and doors into appropriately labeled components.

Remember, construction-labeled door frames and doors are a special-use case of swinging fire doors with builders hardware requiring the building code official's written approval before they are installed—they are approved substitutions for appropriately labeled components. Codes do not require construction-labeled door frames and doors to be field-labeled. Nor does NFPA 80 does not require field labeling of these components. In fact, certain editions of NFPA 80 contain provisions for field labeling, but NFPA 80 does not require building owners to replace the manufacturers' original fire-rated labels when they become illegible or go missing.¹⁸

Summary

Given that correctly installed and operating fire doors have a critical role in maintaining the structural integrity of the fire barriers, walls, and partitions in which they are installed, why are construction-labeled door frames and doors and *oversized labeled* fire doors allowed to be used? It's an obvious question that deserves an answer.

As comprehensive and mature as building, fire, and life safety codes are, they can't cover unusual conditions and applications that inevitably arise. Remember, the codes and NFPA 80 contain provisions for using *oversized labeled* fire door assemblies. On the other hand, the codes and NFPA 80 contain other provisions for using, in this case, materials and equipment that are not directly covered; *construction-labeled* door frames and doors are approved substitutions for appropriately labeled door assemblies, and they must be treated as fire door assemblies throughout their service lives.

The differences between *construction-labeled* door frames and doors and *oversized labeled* fire doors are apparent once you understand their use:

1. Oversized fire door labels are applied to unit-based assemblies, covering the entire assembly:
 - They are covered in the codes and don't require the building code official's approval.
2. Construction labels are applied to the door frame and door panel components of swinging doors with builders hardware and do not cover any of the assembly's other components:
 - a. They are *not appropriately labeled* fire door frames and doors; they are identical in materials and construction to their fire-rated counterparts, but cannot be labeled due to untested conditions.
 - b. They are *approved substitutes* for *appropriately labeled* fire-rated door frames and doors due to special conditions or applications not covered by the manufacturer's listings.
 - c. Building code officials (aka AHJs) must approve their use during the plan review phase or separately before these components are installed.
 - d. Since they are used in place of *appropriately labeled* fire door assemblies, they must be installed, inspected, tested, and maintained as fire door assemblies in accordance with NFPA 80's requirements for *Chapter 6, Swinging Doors with Builders Hardware*.
 - i. *Acceptance Testing* must be conducted 1) upon completion of installation¹⁹ and 2) upon completion of maintenance²⁰ affecting the door's operation.
 - ii. *Periodic Inspection and Testing* must be conducted "...not less than annually."²¹
3. Third-party field labeling companies cannot convert *construction-labeled* door frames and doors into labeled fire door components since the manufacturer's original labels explicitly declare these components cannot bear fire-rated labels.

Consequently, field labeling cannot be used to convert construction-labeled door frames and doors into appropriately labeled components.

¹⁸ See paragraph A.4.2.1 in NFPA 80 regarding verifying the rating of existing fire door assemblies.

¹⁹ See paragraphs 5.2.1 and A.5.2.1, and *Section 5.2.3 Acceptance Testing* in NFPA 80.

²⁰ See paragraphs 5.5.10 and A.5.5.10, and *Section 5.2.3 Acceptance Testing* in NFPA 80.

²¹ See *Section 5.2.4 Periodic Inspection and Testing* in NFPA 80.

Accessing Online Directories of Certified/Listed Products

The testing labs provide a wealth of technical information regarding components of swinging fire doors with builders hardware through their Online directories. To see the current list of *approved* nationally recognized testing laboratories (NRTLs), go to the Occupational Safety and Hazard Administration's (OSHA) website at: <https://www.osha.gov/nationally-recognized-testing-laboratory-program/current-list-of-nrtls>.

The manufacturers' technical information available in the Online directories varies; some listings contain more (or less) information than other listings; proprietary information is not shared publicly. Consult the respective manufacturer's websites for additional technical information regarding their fire-rated swinging door components.

FM Approvals, LLC

<https://www.fmaprovals.com/approval-guide>

Access to FM Approvals' Online directory requires a free website user account.

1. Click on the *Approval Guide* button appearing near the top of the page, and log in.
2. Choose the *Walls, Ceilings, and Associated Equipment* category from the list provided.
3. To filter the product list, click one (or more) of the *Category* check boxes.

Note: FM Approvals has the fewest listings for swinging fire door components of the NRTLs.

Intertek/Warnock Hersey

To access Intertek's Directory of Building Products at: https://bpdirectory.intertek.com/pages/DLP_Search.aspx

Access to Intertek's product directories is free; follow the on-screen prompts.

1. Click on the *Resources* button at the top of the page and choose *Product Directories*.
2. Click on *Building Products* category listed under the *Product Directories*.
3. Users can search Intertek's directory using one or more of the fields provided.
4. Click on the Listing Report to see detailed information.

Note: Intertek's Building Products directory listings, generally, provide the most detailed information of the NRTLs.

QAI Laboratories

<https://qai.org/listing-directory/>

Access to QAI's listing directory is free; follow the on-screen prompts.

1. Click on Building Products/Windows & Doors.
2. Enter Manufacturer's Name and/or scroll down the list.
3. Click the links in the Listing No. column to see detailed information.

Note: The "QAI" in their name stands for Quality, Accountability, and Integrity. Founded in 1995, QAI is the newest nationally recognized testing laboratory (NRTL) in the field of swinging fire-rated door assemblies.

Underwriters Laboratories (UL)

UL's Product iQ® product certification database is free to registered website users. Go to <https://productiq.ulprospector.com> to register.

Once logged on:

1. Click on the *Building Materials, Systems, and Installation Codes* directory.
2. Click on the *Fire Door and Fire Window Related Certifications* category.
3. In the Keyword field enter the code GSYX to read the general information for Fire Doors.

Note: UL's directory contains a wealth of information and takes time to master. Take the time to read the General Information section for each category; they provide a baseline of criteria of the testing and, generally, the overall sizes and limitations of the respective categories. Understand that each manufacturer might have lesser or greater applications, depending on how they test their products.

Referenced Publications:

Citations listed in this document are based on the following publications. For a complete understanding of the technical points presented herein, we encourage you to read the referenced information in the respective publications.

International Code Council (ICC):

- International Building Code (IBC), 2024.

The ICC provides free access to its codes and standards through its publicACCESS website at codes.iccsafe.org/public. Access to the ICC codes and standards is free, no website user account is necessary.

National Fire Protection Association (NFPA):

- NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, 2022 edition.

The NFPA provides free access to its code and standard publications through its website at [www.NFPA.org](https://www.nfpa.org). Users need to have an NFPA website account, which is free—membership is not required.

TIP

To go directly to the landing pages for a specific NFPA code or standard add “/[document number]” to the URL address in your browser app. For example, entering [www.NFPA.org/101](https://www.nfpa.org/101) takes you directly to the NFPA 101 pages. Click on the FREE ACCESS button, and follow the on-screen instructions.

DISCLAIMER

THE OPINIONS, CONCEPTS, PRINCIPLES, TEACHINGS, AND CONSTRUCTS PRESENTED HEREIN ARE SOLELY THOSE OF THE AUTHOR AND THE SAFE DOORS SAVE LIVES FOUNDATION, INC., AND CANNOT BE CONSTRUED TO REPRESENT THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) OR THE INTERNATIONAL CODE COUNCIL (ICC). USERS OF THIS PUBLICATION ARE ENCOURAGED TO CONTACT THE NFPA AND ICC FOR FORMAL INTERPRETATIONS OF THEIR CODES AND STANDARDS.

A publication of:
Safe Doors Save Lives Foundation, Inc.
dba Door Safety
15191 Montanus Drive
Unit 135
Culpeper, VA 22701
www.DoorSafety.com

First Edition: April 2024

Reproduction of this publication, in whole or in part, is not permitted, in any form or means, without the express written permission of the Safe Doors Save Lives Foundation, Inc (SDSLF). No part of this publication is permitted to be stored in a retrieval system, or transmitted in any form or by any means, electronic, digital, mechanical, photocopying, recording, scanning, or published and/or posted on the Internet in any form.

Limit of Liability/Disclaimer of Warranty: While every effort in researching and preparing this publication has been used, no representations or warranties with respect to the accuracy or completeness of the contents of this publication are made, including any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by any advertisement, claim, or other material. The concepts, constructs, strategies, and teachings in this publication might not be suitable for your situation. For applications specific to your use, consult a building code expert and/or the appropriate building code official or Authority Having Jurisdiction (AHJ) for additional guidance. In no case, shall the SDSLFF be held liable for any loss of profit or any commercial damages, including but not limited to special, incidental, consequential, or other damages.