Public Comment No. 126-NFPA 101-2022 [New Section after 3.3.164.2]

Interlocked-Door Vestibule.

A compartment provided with doors in series where only one of the doors in series is openable at a time.

Statement of Problem and Substantiation for Public Comment

This proposed definition is modeled after the definition of “sally port”, and along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 38, 39, 40, and 42, offers the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 125-NFPA 101-2022 [New Section after 7.2.1.6.4.2]	

Related Item

• PI 341 • PI 343

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 17:50:38 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected
Resolution: Related PC-125 was rejected. The term is not used elsewhere in the Code.

Public Comment No. 5-NFPA 101-2022 [Section No. 7.1.5.1]

7.1.5.1

Means of egress shall be designed and maintained to provide headroom in accordance with other sections of this *Code*, and such headroom shall be not less than 7 ft 6 in. (2285 mm). Projections from the ceiling shall provide headroom of not less than 6 ft 8 in. (2030 mm), with a tolerance of −¾ in. (−19 mm), above the finished floor, unless otherwise specified by any of the following:

(1) In existing buildings, the ceiling height shall be not less than 7 ft (2135 mm) from the floor, with projections from the ceiling not less than 6 ft 8 in. (2030 mm), with a tolerance of −¾ in. (−19 mm), nominal above the floor.

(2) Headroom in industrial equipment access areas as provided in 40.2.5.3 shall be permitted.

Additional Proposed Changes

File Name	Description	Approved
101_A2023_SAF_AAC_CCN_3.pdf	101_CC Note No. 3	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 3 appeared in the First Draft Report on First Revision No. 6529, and is also related to Public Input No. 231.
Reconsider the action on FR-6529. The specification of a precise tolerance might be more restrictive than the existing nominal dimension. If tolerance is retained, consider
deleting "nominal."

Related Item

• FR-6529

Submitter Information Verification

Submitter Full Name: CC ON SAF_AAC
Organization: NFPA
Street Address:
City:
State:
Zip:
Submittal Date: Thu Mar 17 11:42:37 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6536-NFPA 101-2022
Statement: The action deletes the term 'nominal' as suggested by the correlating committee. The revision makes the subparagraph consistent with the language in the base paragraph.

Correlating Committee Note No. 3-NFPA 101-2022 [Section No. 7.1.5.1]

Submitter Information Verification

Committee: SAF-AAC
Submittal Date: Mon Jan 17 09:39:01 EST 2022

Committee Statement and Meeting Notes

Committee Statement: Reconsider the action on FR-6529. The specification of a precise tolerance might be more restrictive than the existing nominal dimension. If tolerance is retained, consider deleting "nominal."

First Revision No. 6529-NFPA 101-2021 [Section No. 7.1.5.1]

Ballot Results

✔ **This item has passed ballot**

11 Eligible Voters
1 Not Returned
10 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

Taluba, Jon

Affirmative All

Bush, Kenneth E.
Carson, Wayne G. Chip
Gilyeat, Sharon S.
Harbuck, Stanley C.
Hopper, Howard
Hugo, Jeffrey M.
Lucas, Jeffrey A.
Quiter, James R.
Reiswig, Rodger
Rosenbaum, Eric R.

First Revision No. 6529-NFPA 101-2021 [Section No. 7.1.5.1]

7.1.5.1

Means of egress shall be designed and maintained to provide headroom in accordance with other sections of this *Code*, and such headroom shall be not less than 7 ft 6 in. (2285 mm). Projections from the ceiling shall provide headroom of not less than 6 ft 8 in. (2030 mm), with a tolerance of −¾ in. (−19 mm), above the finished floor, unless otherwise specified by any of the following:

(1) In existing buildings, the ceiling height shall be not less than 7 ft (2135 mm) from the floor, with projections from the ceiling not less than 6 ft 8 in. (2030 mm), with a tolerance of −¾ in. (−19 mm), nominal above the floor.

(2) Headroom in industrial equipment access areas as provided in 40.2.5.3 shall be permitted.

Submitter Information Verification

Committee: SAF-MEA
Submittal Date: Fri Jul 09 14:11:22 EDT 2021

Committee Statement and Meeting Notes

Committee Statement: This revision will allow the 3/4-inch tolerance for ceiling projections for existing conditions. The current wording only permits the tolerance for new construction.

Response Message: FR-6529-NFPA 101-2021

Committee Notes:

Date	Submitted By	
Jul 13, 2021	Gregory Harrington	For correlating committee: tolerance might be more restrictive than existing nominal measurement.

Public Input No. 231-NFPA 101-2021 [Section No. 7.1.5.1]

Ballot Results

This item has passed ballot

34 Eligible Voters
2 Not Returned
31 Affirmative All
1 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

Brackett, Joshua

Day, Richard L.

Affirmative All

Alles, Ryan
Bales, Fred M.
Barlow, Charles V.
Bush, Kenneth E.
Clayton, Jason R.
Collins, David S.
Coombs, Christopher
Crowley, Michael A.
Elvove, Joshua W.
Farr, Ronald R.
Frable, David W.
Frye, Laura
Gebhart, Michelle Renee
Guest, Rita C.
Hoskins, Bryan Lawrence
Jackson, Waymon
Larson, Mark
Lathrop, James K.
Leffler, John
Lujan, Cesar
Marcyjanik, Brian A.
Mueller, Marc
Pappas, Denise L.
Pauls, Jake
Quinterno, Vincent
Saks, Kenneth
Shulman, Michael S.
Simard, J. Francois
Tierney, Michael
Tilton, Kelly R.
Versteeg, Joseph H.

Affirmative with Comment

Ramseur, Mitchell

In support of the committee statement.

Public Comment No. 114-NFPA 101-2022 [Section No. 7.2.1.5.7]

7.2.1.5.7* Stair Enclosure Re-entry.

Every door assembly in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following conditions:

(1) Re-entry from the stair enclosure to the interior of the building shall be provided.

(2) An automatic release shall be provided that meets all of the following:

(a) The automatic release shall unlock all stair enclosure door assemblies to allow re-entry.

(b) The automatic release shall be actuated with the initiation of the building fire alarm system.

(c)* Door ~~electrical~~ electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

(3) Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

7.2.1.5.7.1

Door assemblies on stair enclosures shall be permitted to be equipped with hardware that prevents re-entry into the interior of the building, provided that all of the following criteria are met:

(1) There shall be not less than two levels where it is possible to leave the stair enclosure to access another exit.

(2) There shall be not more than four stories intervening between stories where it is possible to leave the stair enclosure to access another exit.

(3) Re-entry shall be possible on the top story or next-to-top story served by the stair enclosure, and such story shall allow access to another exit.

(4) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.

(5) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

7.2.1.5.7.2

The requirements of 7.2.1.5.7, except as provided in 7.2.1.5.7.3, shall not apply to the following:

(1) Existing installations in buildings that are not high-rise buildings as permitted in Chapters 11 through 43

(2) Existing installations in high-rise buildings as permitted in Chapters 11 through 43 where the occupancy is within a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7

(3) Existing approved stairwell re-entry installations as permitted by Chapters 11 through 43

(4) Stair enclosures serving a building permitted to have a single exit in accordance with Chapters 11 through 43

(5) Stair enclosures in health care occupancies where otherwise provided in Chapter 18

(6) Stair enclosures in detention and correctional occupancies where otherwise provided in Chapter 22

7.2.1.5.7.3

When the provisions of 7.2.1.5.7.2 are used, signage on the stair door leaves shall be required as follows:

(1) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.

(2) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

Additional Proposed Changes

File Name	Description	Approved
2024_NFPA_101_UL_294_and_UL_1034_Public_Comments_20220520.pdf	NFPA 101 2024 add UL 1034 as an option where door hardware is required to be listed to UL 294.	

Statement of Problem and Substantiation for Public Comment

The proposed revisions help clarify the door electrical locking hardware that is required to be listed for these electrical locking applications. In addition of adding the option to list to UL 1034 included in the First Revision, this proposal brings consistency in the text where UL 294 and UL 1034 are referenced in NFPA 101. The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.
Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for this life-safety application.
The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101. This section of NFPA 101, Stair Enclosure Re-entry, first required listing of door locking hardware to UL 294 with the 2021 edition of NFPA 101.
UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to help assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.
These examples illustrate that some of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, the collateral listing to UL 1034 should have been the language included in NFPA 101 in the earlier editions.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]	
Public Comment No. 121-NFPA 101-2022 [Section No. 18.2.2.2.5.2]	

Related Item

• PI 278 • PI 277

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:13:33 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6546-NFPA 101-2022
Statement: The revision accepts the recommendations in PC-114 and PC-115. It is noted that the PCs were accepted by the technical committee at its meeting; however, the revisions must be processed as Reject but See Related SR-6546 in order to keep the revised annex language associated with the base paragraph. The net result is identical to the intended action. Note that the first sentence of A.7.2.1.5.7(2)(c) is existing language and is erroneously displayed as new underlined text. The substantiations for PC-114 and PC-115 follow.

PC-114: The proposed revisions help clarify the door electrical locking hardware that is required to be listed for these electrical locking applications. In addition of adding the option to list to UL 1034 included in the First Revision, this proposal brings consistency in the text where UL 294 and UL 1034 are referenced in NFPA 101. The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for this life-safety application.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101. This section of NFPA 101, Stair Enclosure Re-entry, first required listing of door locking hardware to UL 294 with the 2021 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to help assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that some of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, the collateral listing to UL 1034 should have been the language included in NFPA 101 in the earlier editions.

PC-115: The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

2021 / 2024 NFPA 101 UL 294 and UL 1034
Revised 20, 2022
BHMA, John Woestman
Proposed public comment revisions are based on NFPA 101 language as revised, or not, per the First Draft Report.

Chapter 2 Referenced Publications

UL 294, Access Control System Units, 2018.

UL 1034, *Burglary-Resistant Electric Locking Mechanisms,* 2011, revised 2020

Chapter 7 Means of Egress

7.2.1.5.7 * Stair Enclosure Re-entry.
Every door assembly in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following conditions:

1. Re-entry from the stair enclosure to the interior of the building shall be provided.
2. An automatic release shall be provided that meets all of the following:

    a) The automatic release shall unlock all stair enclosure door assemblies to allow re-entry.
    b) The automatic release shall be actuated with the initiation of the building fire alarm system.
    c) *Door ~~electrical~~ electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

3. Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

A.7.2.1.5.7(2)(c)
The electrical locking hardware may be a component of an electrical locking system (e.g. access control system) or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Reason:

The proposed revisions help clarify the door electrical locking hardware that is required to be listed for these electrical locking applications. In addition of adding the option to list to UL 1034 included in the First Revision, this proposal brings consistency in the text where UL 294 and UL 1034 are referenced in NFPA 101. The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for this life-safety application.

Commented [WJ1]: Public Input No. 277-NFPA 101-2021
The approved First Revision is the highlighted text. No revisions needed for public comment.

Commented [WJ2]: Public Input No. 278-NFPA 101-2021
The approved First Revision is with the highlighted text with potential further revisions via public comment.

Commented [JW3]: PC 114

Commented [WJ4]: Public Input No. 278-NFPA 101-2021
The approved First Revision is the highlighted text. No revisions via public comment needed.

Commented [JW5]: PC 115

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101. This section of NFPA 101, Stair Enclosure Re-entry, first required listing of door locking hardware to UL 294 with the 2021 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to help assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that some of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, the collateral listing to UL 1034 should have been the language included in NFPA 101 in the earlier editions.

7.2.1.6* Special Locking Arrangements.

Commented [WJ6]: **Public Input No. 279-NFPA 101-2021**

Commented [JW7]: PC 116 is the mandatory text (Chapter 7). Separate PC for the Annex revisions.

7.2.1.6.1 * Delayed-Egress Electrical Locking Systems.
7.2.1.6.1.1
Approved, delayed-egress electrical locking systems shall be permitted to be installed on door assemblies serving low- and ordinary-hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

1. The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:

    a) Approved, supervised automatic sprinkler system in accordance with Section 9.7
    b) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6
    c) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

2. The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon loss of power controlling the lock or locking mechanism.
3. *An irreversible process shall release the electrical lock in the direction of egress within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.3 under all of the following conditions:

    a) The force shall not be required to exceed 15 lbf (67 N).
    b) The force shall not be required to be continuously applied for more than 3 seconds.
    c) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.
    d) Once the electrical lock has been released by the application of force to the releasing device, rearming the delay electronics shall be by manual means only.

4. *A readily visible, durable sign that conforms to the visual characters requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities*, shall be located on the door leaf adjacent to the release device in the direction of egress, and shall read as follows:

    a) PUSH UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing in the direction of egress travel
    b) PULL UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing against the direction of egress travel

5. The egress side of doors equipped with delayed-egress electrical locking systems shall be provided with emergency lighting in accordance with Section 7.9.
6. *Door electro-mechanical or electromagnetic locking ~~H~~hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A.7.2.1.6.1.1(6)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW8]: PC 117

7.2.1.6.2 * Sensor-Release of Electrical Locking Systems.
7.2.1.6.2.1
Where permitted in Chapters 11 through 43, door assemblies in the means of egress shall be permitted to be equipped with sensor-release electrical locking system hardware provided that all of the following criteria are met:

1. A sensor shall be provided on the egress side, arranged to electrically unlock the door leaf in the direction of egress upon detection of an approaching occupant.
2. Door leaves shall automatically electrically unlock in the direction of egress upon loss of power to the sensor or to the part of the locking system that electrically locks the door leaves.
3. Door locks shall be arranged to electrically unlock in the direction of egress from a manual release device complying with all of the following criteria:

    a) The manual release device shall be located on the egress side, 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor, and within 60 in. (1525 mm) of the secured door openings, except as otherwise permitted by 7.2.1.6.2(3)(c).
    b) The requirement of 7.2.1.6.2(3)(a) to locate the manual release device within 60 in. (1525 mm) of the secured door opening shall not apply to previously approved existing installations.
    c) The manual release device shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.
    d) When operated, the manual release device shall result in direct interruption of power to the electrical lock — independent of the locking system electronics — and the lock shall remain unlocked for not less than 30 seconds.

4. Activation of the building fire-protective signaling system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.
5. The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in 7.2.1.6.2(4) shall not be required to unlock the door leaves.
6. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.

7. The egress side of sensor-release electrically locked egress doors, other than existing sensor-release electrically locked egress doors, shall be provided with emergency lighting in accordance with Section 7.9.
8. *Door electro-mechanical or electromagnetic locking ~~H~~hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A.7.2.1.6.2.1(8)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW9]: PC 118

7.2.1.6.3 Door Hardware Release of Electrically Locked Egress Door Assemblies.
7.2.1.6.3.1
Door assemblies in the means of egress shall be permitted to be equipped with approved electrical locking systems released by the operation of door hardware provided that all of the following conditions are met:

1. The hardware for egress-side occupant release of the electrical lock is affixed to the door leaf.
2. The hardware has an obvious method of operation that is readily operated in the direction of egress under all lighting conditions.
3. The hardware is capable of being operated with one hand in the direction of egress.
4. Operation of the hardware directly and immediately interrupts the power supply to the electric lock to unlock the door assembly in the direction of egress.
5. *Loss of power to the listed releasing hardware automatically unlocks the door assembly in the direction of egress.
6. *Door electro-mechanical or electromagnetic locking ~~H~~hardware for new installations ~~is~~ shall be listed in accordance with UL **294**, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A.7.2.1.6.3.1(6)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW10]: PC 119

7.2.1.6.4 * Elevator Lobby Exit Access Door Assemblies Locking.
7.2.1.6.4.1
Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electrically locked, provided that all the following criteria are met:

1. *~~The~~ Door electro-mechanical or electromagnetic locking hardware ~~is~~shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Locking Mechanisms*.
2. The building is protected throughout by a fire alarm system in accordance with Section 9.6.
3. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.
4. Waterflow in the sprinkler system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system.
5. The elevator lobby is protected by an approved, supervised smoke detection system in accordance with Section 9.6.
6. Detection of smoke by the detection system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system and notify building occupants.

7. Initiation of the building fire alarm system by other than manual fire alarm boxes unlocks the electrical locks on the elevator lobby door assembly.
8. Loss of power to the elevator lobby electrical lock system unlocks the electrical locks on the elevator lobby door assemblies.
9. Once unlocked, the elevator lobby door assemblies remain electrically unlocked until the building fire alarm system has been manually reset.
10. Where the elevator lobby door assemblies remain mechanically latched after being electrically unlocked, latch-releasing hardware in accordance with 7.2.1.5.3 is affixed to the door leaves.
11. A two-way communication system is provided for communication between the elevator lobby and a central control point that is constantly staffed.
12. The central control point staff required by 7.2.1.6.4 is capable, trained, and authorized to provide emergency assistance.

A.7.2.1.6.4.1(1)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW11]: PC 120

Reason:
Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 **or to UL 1034** appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Chapter 18 New Health Care Occupancies

18.2.2.2.5
Door-locking arrangements shall be permitted in accordance with either 18.2.2.2.5.1 or 18.2.2.2.5.2.

18.2.2.2.5.1 *
Door-locking arrangements shall be permitted where the clinical needs of patients require specialized security measures or where patients pose a security threat, provided that staff can readily unlock doors at all times in accordance with 18.2.2.2.6.

18.2.2.2.5.2 *
Door-locking arrangements shall be permitted where patient special needs require specialized protective measures for their safety, provided that all of the following criteria are met:

1. Staff can readily unlock doors at all times in accordance with 18.2.2.2.6.
2. A total (complete) smoke detection system is provided throughout the locked space in accordance with 9.6.2.9, or locked doors can be remotely unlocked at an approved, constantly attended location within the locked space.
3. *The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 18.3.5.1.
4. The locks are electrical locks that fail safely so as to release upon loss of power to the device.
5. The locks release by independent activation of each of the following:
    a) Activation of the smoke detection system required by 18.2.2.2.5.2(2)
    b) Waterflow in the automatic sprinkler system required by 18.2.2.2.5.2(3)
6. ~~*Door electrical locking hardware for new electric lock installations is listed for the purpose.~~ *Door electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A. 18.2.2.2.5.2(6)
~~UL 294, *Access Control System Units*, and UL 1034, *Burglary-Resistant Electric Locking Mechanisms*, are two standards that provide criteria for listed door-locking hardware.~~ The electrical locking hardware might be a component of an electrical locking system or the electrical locking hardware might be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Reason:
Because of implications to life safety with electrical locking systems potentially affecting egress on these doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Requiring listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code, in chapters 18 and 19, first required this electrical door hardware to be listed to UL 294 in the 2018 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes,

Commented [WJ12]: Public Input No. 282-NFPA 101-2021
The approved First Revision is the highlighted text.

Commented [JW13]: PC 121

Commented [JW14]: PC 123

and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – meeting a mandatory listing requirement with the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

The revisions of the Annex A text complement the revisions to 18.2.2.2.5.2(6)

Chapter 19 Existing Health Care Occupancies

19.2.2.2.5
Door-locking arrangements shall be permitted in accordance with either 19.2.2.2.5.1 or 19.2.2.2.5.2.

19.2.2.2.5.1 *
Door-locking arrangements shall be permitted where the clinical needs of patients require specialized security measures or where patients pose a security threat, provided that staff can readily unlock doors at all times in accordance with 19.2.2.2.6.

19.2.2.2.5.2 *
Door-locking arrangements shall be permitted where patient special needs require specialized protective measures for their safety, provided that all of the following are met:

1. Staff can readily unlock doors at all times in accordance with 19.2.2.2.6.
2. A total (complete) smoke detection system is provided throughout the locked space in accordance with 9.6.2.9, or locked doors can be remotely unlocked at an approved, constantly attended location within the locked space.
3. *The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.
4. The locks are electrical locks that fail safely so as to release upon loss of power to the device.
5. The locks release by independent activation of each of the following:
    1. Activation of the smoke detection system required by 19.2.2.2.5.2(2)
    2. Waterflow in the automatic sprinkler system required by 19.2.2.2.5.2(3)
6. ~~*Door electrical locking hardware for new electric lock installations is listed for the purpose.~~ *Door electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A. 19.2.2.2.5.2(6)
~~UL 294, *Access Control System Units*, and UL 1034, *Burglary-Resistant Electric Locking Mechanisms*, are two standards that provide criteria for listed door-locking hardware.~~ The electrical locking hardware might be a component of an electrical locking system or the electrical locking hardware might be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [WJ15]: Public Input No. 283-NFPA 101-2021
The approved First Revision is the highlighted text.

Commented [JW16]: PC 122

Commented [JW17]: PC 124

Reason:

Because of implications to life safety with electrical locking systems potentially affecting egress on these doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Requiring listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code, in chapters 18 and 19, first required this electrical door hardware to be listed to UL 294 in the 2018 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – meeting a mandatory listing requirement with the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

The revisions of the Annex A text complement the revisions to 19.2.2.2.5.2(6).

Public Comment No. 154-NFPA 101-2022 [Section No. 7.2.1.5.7]

7.2.1.5.7* Stair Enclosure Re-entry.

Every door assembly in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following conditions:

(1) Re-entry from the stair enclosure to the interior of the building shall be provided.

(2) An automatic release shall be provided that meets all of the following:

(a) The automatic release shall unlock all stair enclosure door assemblies to allow re-entry.

(b) The automatic release shall be actuated with the automatic initiation of the building fire alarm system.

(c)* Door electrical locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Locking Mechanisms*.

(3) Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

7.2.1.5.7.1

Door assemblies on stair enclosures shall be permitted to be equipped with hardware that prevents re-entry into the interior of the building, provided that all of the following criteria are met:

(1) There shall be not less than two levels where it is possible to leave the stair enclosure to access another exit.

(2) There shall be not more than four stories intervening between stories where it is possible to leave the stair enclosure to access another exit.

(3) Re-entry shall be possible on the top story or next-to-top story served by the stair enclosure, and such story shall allow access to another exit.

(4) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.

(5) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

7.2.1.5.7.2

The requirements of 7.2.1.5.7, except as provided in 7.2.1.5.7.3, shall not apply to the following:

(1) Existing installations in buildings that are not high-rise buildings as permitted in Chapters 11 through 43

(2) Existing installations in high-rise buildings as permitted in Chapters 11 through 43 where the occupancy is within a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7

(3) Existing approved stairwell re-entry installations as permitted by Chapters 11 through 43

(4) Stair enclosures serving a building permitted to have a single exit in accordance with Chapters 11 through 43

(5) Stair enclosures in health care occupancies where otherwise provided in Chapter 18

(6) Stair enclosures in detention and correctional occupancies where otherwise provided in Chapter 22

7.2.1.5.7.3

When the provisions of 7.2.1.5.7.2 are used, signage on the stair door leaves shall be required as follows:

(1) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.

(2) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

Statement of Problem and Substantiation for Public Comment

As indicated in the repsonse to PI 233, this applies to new healthcare facilities per 18.2.2.2.10. Manual means of actviating fire alarm should not activate re-entry protocols of stairwell doors.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 155-NFPA 101-2022 [Section No. 18.2.2.2.10]	

Related Item

• PI 233

Submitter Information Verification

Submitter Full Name: Joshua Brackett
Organization:
Affiliation: ASHE Regulatory Affiars Committee
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 26 23:41:24 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected

Resolution: The issue applies to specific occupancies, such as health care. As submitted, the revision would apply to all occupancies. Where this applies to a specific occupancy, it should be addressed by the applicable occupancy committee.

Public Comment No. 202-NFPA 101-2022 [Section No. 7.2.1.5.7 [Excluding any Sub-Sections]]

Every door assembly in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following conditions:

(1) Re-entry from the stair enclosure to the interior of the building shall be provided.

(2) An automatic release shall be provided that meets all of the following:

(a) The automatic release shall unlock all stair enclosure door assemblies to allow re-entry.

(b) The automatic release shall be actuated with the initiation of the building fire alarm system. Activation of manual fire alarm boxes that activate the building fire alarm system shall not be required to unlock the stair doors.

(c)* Door electrical locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*, or UL 1034, *Burglary-Resistant Locking Mechanisms*.

(3) Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

Statement of Problem and Substantiation for Public Comment

This language in this PC would increase the security provided by re-entry provisions for all occupancies. The provisions of this section preventing re-entry to the interior of the building from a stair can be defeated by simply activating a manual fire alarm box which is not very secure. Both delayed egress electrical locking (7.2.1.6.1.1(1)) and sensor-release electrical locking (7.2.1.6.2(4)) do not require activation of a manual fire alarm box to release the locking mechanism on the door. The same allowance should be provided for stair re-entry.

Related Item

• PI-233

Submitter Information Verification

Submitter Full Name: Lennon Peake
Organization: Koffel Associates, Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 30 11:58:57 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected

Resolution: The issue addressed by the public comment is not the same as that of delayed egress and other special locking arrangements because in those cases, the manual fire alarm box is on the secure side of the door. In the case of stair re-entry, the manual fire alarm box is not located within the stair. In some buildings, a manual fire alarm box might be the only means available to activate the alarm. Each occupancy chapter can modify these core chapter requirements based on their security needs. The correlating committee is currently evaluating to what extent security provisions should be included in the code.

Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]

7.2.1.6* Special Locking Arrangements.

7.2.1.6.1* Delayed-Egress Electrical Locking Systems.

7.2.1.6.1.1

Approved, delayed-egress electrical locking systems shall be permitted to be installed on door assemblies serving low- and ordinary-hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

(1) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:

(2) Approved, supervised automatic sprinkler system in accordance with Section 9.7

(3) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6

(4) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

(5) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon loss of power controlling the lock or locking mechanism.

(6)* An irreversible process shall release the electrical lock in the direction of egress within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.3 under all of the following conditions:

(7) The force shall not be required to exceed 15 lbf (67 N).

(8) The force shall not be required to be continuously applied for more than 3 seconds.

(9) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.

(10) Once the electrical lock has been released by the application of force to the releasing device, rearming the delay electronics shall be by manual means only.

(11)* A readily visible, durable sign that conforms to the visual characters requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities*, shall be located on the door leaf adjacent to the release device in the direction of egress, and shall read as follows:

(12) PUSH UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing in the direction of egress travel

(13) PULL UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing against the direction of egress travel

(14) The egress side of doors equipped with delayed-egress electrical locking systems shall be provided with emergency lighting in accordance with Section 7.9.

(15) ~~Hardware~~ Door electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System ~~Units~~ Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms* .

7.2.1.6.1.2

The provisions of 7.2.1.6.2 for sensor-release of electrical locking systems and 7.2.1.6.3 for door hardware release of electrically locked egress door assemblies shall not apply to door assemblies with delayed-egress electrical locking systems.

7.2.1.6.2* Sensor-Release of Electrical Locking Systems.

7.2.1.6.2.1

Where permitted in Chapters 11 through 43, door assemblies in the means of egress shall be permitted to be equipped with sensor-release electrical locking system hardware provided that all of the following criteria are met:

(1) A sensor shall be provided on the egress side, arranged to electrically unlock the door leaf in the direction of egress upon detection of an approaching occupant.

(2) Door leaves shall automatically electrically unlock in the direction of egress upon loss of power to the sensor or to the part of the locking system that electrically locks the door leaves.

(3) Door locks shall be arranged to electrically unlock in the direction of egress from a manual release device complying with all of the following criteria:

(4) The manual release device shall be located on the egress side, 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor, and within 60 in. (1525 mm) of the secured door openings, except as otherwise permitted by 7.2.1.6.2.1 (3)(b).

(5) The requirement of 7.2.1.6.2.1 (3)(a) to locate the manual release device within 60 in. (1525 mm) of the secured door opening shall not apply to previously approved existing installations.

(6) The manual release device shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.

(7) When operated, the manual release device shall result in direct interruption of power to the electrical lock — independent of the locking system electronics — and the lock shall remain unlocked for not less than 30 seconds.

(8) Activation of the building fire-protective signaling system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.

(9) The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in 7.2.1.6.2.1(4) shall not be required to unlock the door leaves.

(10) Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.

(11) The egress side of sensor-release electrically locked egress doors, other than existing sensor-release electrically locked egress doors, shall be provided with emergency lighting in accordance with Section 7.9.

(12) ~~Hardware for~~ Door electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms* .

7.2.1.6.2.2

The provisions of 7.2.1.6.1 for delayed-egress electrical locking systems and 7.2.1.6.3 for door hardware release of electrically locked egress door assemblies shall not apply to door assemblies with sensor-release of electrical locking systems.

7.2.1.6.3 Door Hardware Release of Electrically Locked Egress Door Assemblies.

7.2.1.6.3.1

Door assemblies in the means of egress shall be permitted to be equipped with approved electrical locking systems released by the operation of door hardware provided that all of the following conditions are met:

(1) The hardware for egress-side occupant release of the electrical lock is affixed to the door leaf.

(2) The hardware has an obvious method of operation that is readily operated in the direction of egress under all lighting conditions.

(3) The hardware is capable of being operated with one hand in the direction of egress.

(4) Operation of the hardware directly and immediately interrupts the power supply to the electric lock to unlock the door assembly in the direction of egress.

(5)* Loss of power to the listed releasing hardware automatically unlocks the door assembly in the direction of egress.

(6) ~~Hardware~~ Door electro-mechanical or electromagnetic locking hardware for new installations ~~is~~ shall be listed in accordance with UL 294, *Access Control System ~~Units~~ Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms* .

7.2.1.6.3.2

The provisions of 7.2.1.6.1 for delayed-egress electrical locking systems and the provisions of 7.2.1.6.2 for sensor-release of electrical locking systems shall not apply to door assemblies with door hardware release of electrically locked egress doors.

7.2.1.6.4* Elevator Lobby Exit Access Door Assemblies Locking.

7.2.1.6.4.1

Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electrically locked, provided that all the following criteria are met:

(1) ~~The electrical~~ Door electro-mechanical or electromagnetic locking hardware ~~is~~ shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms* .

(2) The building is protected throughout by a fire alarm system in accordance with Section 9.6.

(3) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

(4) Waterflow in the sprinkler system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system.

(5) The elevator lobby is protected by an approved, supervised smoke detection system in accordance with Section 9.6.

(6) Detection of smoke by the detection system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system and notify building occupants.

(7) Initiation of the building fire alarm system by other than manual fire alarm boxes unlocks the electrical locks on the elevator lobby door assembly.

(8) Loss of power to the elevator lobby electrical lock system unlocks the electrical locks on the elevator lobby door assemblies.

(9) Once unlocked, the elevator lobby door assemblies remain electrically unlocked until the building fire alarm system has been manually reset.

(10) Where the elevator lobby door assemblies remain mechanically latched after being electrically unlocked, latch-releasing hardware in accordance with 7.2.1.5.3 is affixed to the door leaves.

(11) A two-way communication system is provided for communication between the elevator lobby and a central control point that is constantly staffed.

(12) The central control point staff required by 7.2.1.6.4.1(11) is capable, trained, and authorized to provide emergency assistance.

7.2.1.6.4.2

Elevator lobby exit access doors equipped with electrical locking systems shall not be required to comply with 7.2.1.6.1, 7.2.1.6.2, or 7.2.1.6.3.

Additional Proposed Changes

File Name	Description	Approved
2024_NFPA_101_UL_294_and_UL_1034_Public_Comments_20220520.pdf	NFPA 101 2024 add UL 1034 as an option where door hardware is required to be listed to UL 294.	

Statement of Problem and Substantiation for Public Comment

Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as

electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 114-NFPA 101-2022 [Section No. 7.2.1.5.7]	Same topic.
Public Comment No. 115-NFPA 101-2022 [Section No. A.7.2.1.5.7(2)(c)]	Same topic.
Public Comment No. 117-NFPA 101-2022 [New Section after A.7.2.1.6.1.1(4)]	
Public Comment No. 118-NFPA 101-2022 [New Section after A.7.2.1.6.2]	
Public Comment No. 119-NFPA 101-2022 [New Section after A.7.2.1.6.3.1(5)]	
Public Comment No. 120-NFPA 101-2022 [New Section after A.7.2.1.6.4]	
Public Comment No. 121-NFPA 101-2022 [Section No. 18.2.2.2.5.2]	

Related Item

• PI 279

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:30:17 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-6547-NFPA 101-2022

Statement: The revision accepts the recommendations in PC-116, PC-117, PC-118, PC-119, and PC-120. It is noted that the PCs were accepted by the technical committee at its meeting; however, they must be processed as Reject but See Related SR-6547 to associate the new annex language with the base requirements. The net result is identical to that intended by the committee. The substantiations for the noted PCs follow.

PC-116: Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release

electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

PC-117 through PC-120: The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

2021 / 2024 NFPA 101 UL 294 and UL 1034
Revised 20, 2022
BHMA, John Woestman
Proposed public comment revisions are based on NFPA 101 language as revised, or not, per the First Draft Report.

Chapter 2 Referenced Publications

UL 294, Access Control System Units, 2018.

UL 1034, *Burglary-Resistant Electric Locking Mechanisms,* 2011, revised 2020

Chapter 7 Means of Egress

7.2.1.5.7 * Stair Enclosure Re-entry.
Every door assembly in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following conditions:

1. Re-entry from the stair enclosure to the interior of the building shall be provided.
2. An automatic release shall be provided that meets all of the following:

    a) The automatic release shall unlock all stair enclosure door assemblies to allow re-entry.
    b) The automatic release shall be actuated with the initiation of the building fire alarm system.
    c) *Door ~~electrical~~ electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

3. Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

A.7.2.1.5.7(2)(c)
The electrical locking hardware may be a component of an electrical locking system (e.g. access control system) or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Reason:

The proposed revisions help clarify the door electrical locking hardware that is required to be listed for these electrical locking applications. In addition of adding the option to list to UL 1034 included in the First Revision, this proposal brings consistency in the text where UL 294 and UL 1034 are referenced in NFPA 101. The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for this life-safety application.

Commented [WJ1]: Public Input No. 277-NFPA 101-2021
The approved First Revision is the highlighted text. No revisions needed for public comment.

Commented [WJ2]: Public Input No. 278-NFPA 101-2021
The approved First Revision is with the highlighted text with potential further revisions via public comment.

Commented [JW3]: PC 114

Commented [WJ4]: Public Input No. 278-NFPA 101-2021
The approved First Revision is the highlighted text. No revisions via public comment needed.

Commented [JW5]: PC 115

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101. This section of NFPA 101, Stair Enclosure Re-entry, first required listing of door locking hardware to UL 294 with the 2021 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to help assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that some of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, the collateral listing to UL 1034 should have been the language included in NFPA 101 in the earlier editions.

7.2.1.6* Special Locking Arrangements.

Commented [WJ6]: **Public Input No. 279-NFPA 101-2021**

Commented [JW7]: PC 116 is the mandatory text (Chapter 7). Separate PC for the Annex revisions.

7.2.1.6.1 * Delayed-Egress Electrical Locking Systems.
7.2.1.6.1.1
Approved, delayed-egress electrical locking systems shall be permitted to be installed on door assemblies serving low- and ordinary-hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

1. The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:

    a) Approved, supervised automatic sprinkler system in accordance with Section 9.7
    b) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6
    c) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

2. The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon loss of power controlling the lock or locking mechanism.
3. *An irreversible process shall release the electrical lock in the direction of egress within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.3 under all of the following conditions:

    a) The force shall not be required to exceed 15 lbf (67 N).
    b) The force shall not be required to be continuously applied for more than 3 seconds.
    c) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.
    d) Once the electrical lock has been released by the application of force to the releasing device, rearming the delay electronics shall be by manual means only.

4. *A readily visible, durable sign that conforms to the visual characters requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities*, shall be located on the door leaf adjacent to the release device in the direction of egress, and shall read as follows:

    a) PUSH UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing in the direction of egress travel
    b) PULL UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing against the direction of egress travel

5. The egress side of doors equipped with delayed-egress electrical locking systems shall be provided with emergency lighting in accordance with Section 7.9.
6. *Door electro-mechanical or electromagnetic locking ~~H~~hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A.7.2.1.6.1.1(6)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW8]: PC 117

7.2.1.6.2 * Sensor-Release of Electrical Locking Systems.
7.2.1.6.2.1
Where permitted in Chapters 11 through 43, door assemblies in the means of egress shall be permitted to be equipped with sensor-release electrical locking system hardware provided that all of the following criteria are met:

1. A sensor shall be provided on the egress side, arranged to electrically unlock the door leaf in the direction of egress upon detection of an approaching occupant.
2. Door leaves shall automatically electrically unlock in the direction of egress upon loss of power to the sensor or to the part of the locking system that electrically locks the door leaves.
3. Door locks shall be arranged to electrically unlock in the direction of egress from a manual release device complying with all of the following criteria:

    a) The manual release device shall be located on the egress side, 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor, and within 60 in. (1525 mm) of the secured door openings, except as otherwise permitted by 7.2.1.6.2(3)(c).
    b) The requirement of 7.2.1.6.2(3)(a) to locate the manual release device within 60 in. (1525 mm) of the secured door opening shall not apply to previously approved existing installations.
    c) The manual release device shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.
    d) When operated, the manual release device shall result in direct interruption of power to the electrical lock — independent of the locking system electronics — and the lock shall remain unlocked for not less than 30 seconds.

4. Activation of the building fire-protective signaling system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.
5. The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in 7.2.1.6.2(4) shall not be required to unlock the door leaves.
6. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.

7. The egress side of sensor-release electrically locked egress doors, other than existing sensor-release electrically locked egress doors, shall be provided with emergency lighting in accordance with Section 7.9.
8. *Door electro-mechanical or electromagnetic locking ~~H~~hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A.7.2.1.6.2.1(8)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW9]: PC 118

7.2.1.6.3 Door Hardware Release of Electrically Locked Egress Door Assemblies.
7.2.1.6.3.1
Door assemblies in the means of egress shall be permitted to be equipped with approved electrical locking systems released by the operation of door hardware provided that all of the following conditions are met:

1. The hardware for egress-side occupant release of the electrical lock is affixed to the door leaf.
2. The hardware has an obvious method of operation that is readily operated in the direction of egress under all lighting conditions.
3. The hardware is capable of being operated with one hand in the direction of egress.
4. Operation of the hardware directly and immediately interrupts the power supply to the electric lock to unlock the door assembly in the direction of egress.
5. *Loss of power to the listed releasing hardware automatically unlocks the door assembly in the direction of egress.
6. *Door electro-mechanical or electromagnetic locking ~~H~~hardware for new installations ~~is~~ shall be listed in accordance with UL **294**, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A.7.2.1.6.3.1(6)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW10]: PC 119

7.2.1.6.4 * Elevator Lobby Exit Access Door Assemblies Locking.
7.2.1.6.4.1
Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electrically locked, provided that all the following criteria are met:

1. *~~The~~ Door electro-mechanical or electromagnetic locking hardware ~~is~~shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Locking Mechanisms*.
2. The building is protected throughout by a fire alarm system in accordance with Section 9.6.
3. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.
4. Waterflow in the sprinkler system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system.
5. The elevator lobby is protected by an approved, supervised smoke detection system in accordance with Section 9.6.
6. Detection of smoke by the detection system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system and notify building occupants.

7. Initiation of the building fire alarm system by other than manual fire alarm boxes unlocks the electrical locks on the elevator lobby door assembly.
8. Loss of power to the elevator lobby electrical lock system unlocks the electrical locks on the elevator lobby door assemblies.
9. Once unlocked, the elevator lobby door assemblies remain electrically unlocked until the building fire alarm system has been manually reset.
10. Where the elevator lobby door assemblies remain mechanically latched after being electrically unlocked, latch-releasing hardware in accordance with 7.2.1.5.3 is affixed to the door leaves.
11. A two-way communication system is provided for communication between the elevator lobby and a central control point that is constantly staffed.
12. The central control point staff required by 7.2.1.6.4 is capable, trained, and authorized to provide emergency assistance.

A.7.2.1.6.4.1(1)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [JW11]: PC 120

Reason:
Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 **or to UL 1034** appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Chapter 18 New Health Care Occupancies

18.2.2.2.5
Door-locking arrangements shall be permitted in accordance with either 18.2.2.2.5.1 or 18.2.2.2.5.2.

18.2.2.2.5.1 *
Door-locking arrangements shall be permitted where the clinical needs of patients require specialized security measures or where patients pose a security threat, provided that staff can readily unlock doors at all times in accordance with 18.2.2.2.6.

18.2.2.2.5.2 *
Door-locking arrangements shall be permitted where patient special needs require specialized protective measures for their safety, provided that all of the following criteria are met:

1. Staff can readily unlock doors at all times in accordance with 18.2.2.2.6.
2. A total (complete) smoke detection system is provided throughout the locked space in accordance with 9.6.2.9, or locked doors can be remotely unlocked at an approved, constantly attended location within the locked space.
3. *The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 18.3.5.1.
4. The locks are electrical locks that fail safely so as to release upon loss of power to the device.
5. The locks release by independent activation of each of the following:
    a) Activation of the smoke detection system required by 18.2.2.2.5.2(2)
    b) Waterflow in the automatic sprinkler system required by 18.2.2.2.5.2(3)
6. ~~*Door electrical locking hardware for new electric lock installations is listed for the purpose.~~ *Door electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A. 18.2.2.2.5.2(6)
~~UL 294, *Access Control System Units*, and UL 1034, *Burglary-Resistant Electric Locking Mechanisms*, are two standards that provide criteria for listed door-locking hardware.~~ The electrical locking hardware might be a component of an electrical locking system or the electrical locking hardware might be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Reason:
Because of implications to life safety with electrical locking systems potentially affecting egress on these doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Requiring listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code, in chapters 18 and 19, first required this electrical door hardware to be listed to UL 294 in the 2018 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes,

Commented [WJ12]: Public Input No. 282-NFPA 101-2021
The approved First Revision is the highlighted text.

Commented [JW13]: PC 121

Commented [JW14]: PC 123

and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – meeting a mandatory listing requirement with the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

The revisions of the Annex A text complement the revisions to 18.2.2.2.5.2(6)

Chapter 19 Existing Health Care Occupancies

19.2.2.2.5
Door-locking arrangements shall be permitted in accordance with either 19.2.2.2.5.1 or 19.2.2.2.5.2.

19.2.2.2.5.1 *
Door-locking arrangements shall be permitted where the clinical needs of patients require specialized security measures or where patients pose a security threat, provided that staff can readily unlock doors at all times in accordance with 19.2.2.2.6.

19.2.2.2.5.2 *
Door-locking arrangements shall be permitted where patient special needs require specialized protective measures for their safety, provided that all of the following are met:

1. Staff can readily unlock doors at all times in accordance with 19.2.2.2.6.
2. A total (complete) smoke detection system is provided throughout the locked space in accordance with 9.6.2.9, or locked doors can be remotely unlocked at an approved, constantly attended location within the locked space.
3. *The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.
4. The locks are electrical locks that fail safely so as to release upon loss of power to the device.
5. The locks release by independent activation of each of the following:
    1. Activation of the smoke detection system required by 19.2.2.2.5.2(2)
    2. Waterflow in the automatic sprinkler system required by 19.2.2.2.5.2(3)
6. ~~*Door electrical locking hardware for new electric lock installations is listed for the purpose.~~ *Door electro-mechanical or electromagnetic locking hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units* or UL 1034, *Burglary-Resistant Electric Locking Mechanisms*.

A. 19.2.2.2.5.2(6)
~~UL 294, *Access Control System Units*, and UL 1034, *Burglary-Resistant Electric Locking Mechanisms*, are two standards that provide criteria for listed door-locking hardware.~~ The electrical locking hardware might be a component of an electrical locking system or the electrical locking hardware might be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Commented [WJ15]: Public Input No. 283-NFPA 101-2021
The approved First Revision is the highlighted text.

Commented [JW16]: PC 122

Commented [JW17]: PC 124

Reason:

Because of implications to life safety with electrical locking systems potentially affecting egress on these doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Requiring listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code, in chapters 18 and 19, first required this electrical door hardware to be listed to UL 294 in the 2018 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – meeting a mandatory listing requirement with the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

The revisions of the Annex A text complement the revisions to 19.2.2.2.5.2(6).

Public Comment No. 199-NFPA 101-2022 [Section No. 7.2.1.6.1.1]

7.2.1.6.1.1

Approved, delayed-egress electrical locking systems shall be permitted to be installed on door assemblies serving low- and ordinary-hazard

~~contents in buildings protected~~
contents where permitted in Chapters 11 through 43 , provided that all of the following criteria are met:

(1) The building shall be protected by one of the following methods:

(a) The building shall be protected throughout by an approved supervised sprinkler system in accordance with Section 9.7.

(i) For existing buildings only the secured area and the required egress paths from the secured area to the exterior of the building shall be required to be protected by an approved supervised automatic sprinkler system in accordance with

Section 9.7 provided the secured area and the required egress paths from the secured area to the exterior of the building are separated from nonsprinklered portions of the building by a 2-hour fire barrier.

(b) The building shall be protected throughout by an approved

,
supervised automatic fire detection system in accordance with

~~Section~~
Section 9.6

~~or an approved, supervised automatic sprinkler system in accordance with Section 9.7 , and where permitted in Chapters 11 through 43 , provided that all of the following criteria are met:~~

.

(i) For existing buildings only the secured area and the required egress paths from the secured area to the exterior of the building shall be required to be protected by an approved supervised automatic fire detection system in accordance with

Section 9.6 provided the secured area and the required egress paths from the secured area to the exterior of the building are separated from the non-fire detected portions of the building by a 2-hour fire barrier.

(1) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:

(2) Approved, supervised automatic sprinkler system in accordance with Section 9.7

(3) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6

(4) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

(5) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon loss of power controlling the lock or locking mechanism.

(6)* An irreversible process shall release the electrical lock in the direction of egress within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.3 under all of the following conditions:

(7) The force shall not be required to exceed 15 lbf (67 N).

(8) The force shall not be required to be continuously applied for more than 3 seconds.

(9) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.

(10 Once the electrical lock has been released by the application of force to the releasing device, rearming the delay electronics shall be by manual means only.

(11* A readily visible, durable sign that conforms to the visual characters requirements of ICC A117.1, *Accessible and Usable Buildings and Facilities*, shall be located on the door leaf adjacent to the release device in the direction of egress, and shall read as follows:

(12 PUSH UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing in the direction of egress travel

(13 PULL UNTIL ALARM SOUNDS, DOOR CAN BE OPENED IN 15 SECONDS, for doors that swing against the direction of egress travel

(14) The egress side of doors equipped with delayed-egress electrical locking systems shall be provided with emergency lighting in accordance with Section 7.9.

(15) Hardware for new installations shall be listed in accordance with UL 294, *Access Control System Units*.

Additional Proposed Changes

File Name	Description	Approved
7.2.1.6.1.1.docx	Changes provided in word file for clarity	

Statement of Problem and Substantiation for Public Comment

This PC was submitted to address the First Draft committee statement on PI 229 related to the lack of clarity of the terms “delayed egress path” and “secured compartment”, limiting the change to existing buildings and expanding the concept to include fire detection in addition to sprinkler protection.

Currently delayed egress locking is not permitted unless the building is completely sprinkler protected leaving only sensor-release electrical locking as the only security option. Sensor-release electrical locking is not always a feasible way of providing security due to the required motion sensor to unlock the door each time an occupant walks near the door. The new proposed text is similar to the exit discharge approach as detailed in Section 7.7.2 separating the non-protected portion of the egress by 2-hour construction. Provided the building occupants from the secure area and required egress paths to the building exterior are separated from non-protected areas by a 2-hour fire barrier, delayed egress should be permitted to be installed in existing buildings to provide security. Providing protection throughout an existing building is not always feasible in older buildings due to remediation of conditions such as asbestos.

Related Item

- PI-229

Submitter Information Verification

Submitter Full Name: Lennon Peake
Organization: Koffel Associates, Inc.
Affiliation: ASHE Regulatory Affairs Committee
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 30 11:15:39 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected
Resolution: It is not clear what defines the egress paths from the secured area. Also the code does not generally refer to supervised automatic fire detection systems or non-fire detected portions of the building.

7.2.1.6.1.1 Approved, delayed-egress electrical locking system shall be permitted to be installed on door assemblies serving low- and ordinary-hazard contents ~~in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and~~ where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

(1) The building shall be protected by one of the following methods:

a. The building shall be protected throughout by an approved supervised sprinkler system in accordance with Section 9.7.

i. For existing buildings only the secured area and the required egress paths from the secured area to the exterior of the building shall be required to be protected by an approved supervised sprinkler system in accordance with Section 9.7 provided the secured area and required egress paths from the secured area to the exterior of the building are separated from nonsprinklered portions of the building by a 2-hour fire barrier.

b. The building shall be protected throughout by an approved supervised automatic fire detection system in accordance with Section 9.6.

i. For existing buildings only the secured area and the required egress paths from the secured area to the exterior of the building shall be required to be protected by an approved supervised automatic fire detection system in accordance with Section 9.6 provided the secured area and required egress paths from the secured area to the exterior of the building are separated from non-fire detected portions of the building by a 2-hour fire barrier.

(~~1~~2) The delay of the delayed-egress electrical locking system shall deactivate allowing unobstructed egress upon actuation of one of the following:

(a) Approved, supervised automatic sprinkler system in accordance with Section 9.7

(b) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6

(c) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

Public Comment No. 70-NFPA 101-2022 [Section No. 7.2.1.6.2.1]

7.2.1.6.2.1

* Where permitted in Chapters 11 through 43 , door assemblies in the means of egress shall be permitted to be equipped with sensor-release electrical locking system hardware provided that all of the following criteria are met:

(1) A sensor shall be provided on the egress side, arranged to electrically unlock the door leaf in the direction of egress upon detection of an approaching occupant.

(2) Door leaves shall automatically electrically unlock in the direction of egress upon loss of power to the sensor or to the part of the locking system that electrically locks the door leaves.

(3) Door locks shall be arranged to electrically unlock in the direction of egress from a manual release device or contactless sensor complying with all of the following criteria:

(a) The manual release device or contactless sensor shall be located on the egress side, 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor, and within 60 in. (

~~1525 mm~~

1525 mm) of the secured door openings, except as otherwise permitted by 7.2.1.6.2.1 (3)(

~~b~~

c).

(b) The requirement of 7.2.1.6.2.1 (3)(a) to locate the manual release device or contactless sensor within 60 in. (1525 mm) of the secured door opening shall not apply to previously approved existing installations.

(c) The manual release device , where provided, shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.

(d)* The contactless sensor, where provided, shall be readily accessible and clearly identified by a sign that reads as follows: WAVE TO EXIT

(e) When operated, the manual release device or contactless sensor shall result in direct interruption of power to the electrical lock — independent of the locking system electronics — and the lock shall remain unlocked for not less than 30 seconds.

(f)* The contactless sensor referenced in 7.2.1.6.2.1(3) that is used to automatically unlock the doors in the direction of egress shall be independent of the sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.1.(2).

(4) Activation of the building fire-protective signaling system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.

(5) The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in 7.2.1.6.2.1 (4) shall not be required to unlock the door leaves.

(6) Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically electrically unlock the door leaves in the direction of egress, and the door leaves shall remain electrically unlocked until the fire-protective signaling system has been manually reset.

(7) The egress side of sensor-release electrically locked egress doors, other than existing sensor-release electrically locked egress doors, shall be provided with emergency lighting in accordance with

~~Section~~

Section 7.9 .

(8) Hardware for new installations shall be listed in accordance with ANSI/ UL 294, *Standard for Access Control System Units* .

Statement of Problem and Substantiation for Public Comment

The use of contactless sensors to open doors is becoming more prevalent due to Covid and other concerns about the

spread of infection, especially in health care settings. Contactless sensors (e.g., “wave to open” devices) can perform similarly to manual “push to exit” devices and should therefore be permitted as a substitute for “push to exit” devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure can’t result in both types of sensors failing simultaneously.

To avoid confusion, annex material is added to discuss the differences between the existing (overhead motion) sensors used to unlock doors upon occupant approach and the proposed contactless sensors to unlock doors in the event the (overhead motion) sensors fail. Text is also included that clarifies that contactless sensors can currently be used, but only as a supplement to “push to exit” devices.

Related Item

- • A.7.2.1.6.2 text

Submitter Information Verification

Submitter Full Name: Joshua Elvove
Organization: Self
Street Address:
City:
State:
Zip:
Submittal Date: Fri Apr 15 00:23:13 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but held
Resolution: The proposed revision is new material. The inclusion of common terminology would be advantageous during the next revision cycle.

Public Comment No. 85-NFPA 101-2022 [Section No. 7.2.1.6.4.1]

7.2.1.6.4.1

Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electrically locked, provided that all the following criteria are met:

(1) The electrical locking hardware is listed in accordance with UL 294, *Access Control System Units*.

(2) The building is protected throughout by a fire alarm system in accordance with Section 9.6.

(3) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

(4) Waterflow in the sprinkler system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system.

(5) The elevator lobby is protected by an approved, supervised smoke detection system in accordance with Section 9.6.

(6) Detection of smoke by the detection system required by 7.2.1.6.4.1 is arranged to initiate the building fire alarm system and notify building occupants.

(7) Initiation of the building fire alarm system by other than manual fire alarm boxes unlocks the electrical locks on the elevator lobby door assembly.

(8) Loss of power to the elevator lobby electrical lock system unlocks the electrical locks on the elevator lobby door assemblies.

(9) Once unlocked, the elevator lobby door assemblies remain electrically unlocked until the building fire alarm system has been manually reset.

(10) Where the elevator lobby door assemblies remain mechanically latched after being electrically unlocked, latch-releasing hardware in accordance with 7.2.1.5.3 is affixed to the door leaves.

(11) A means for two-way communication ~~system~~ is provided ~~for communication~~ between the elevator lobby and a central control point that is constantly staffed.

(12) The central control point staff required by 7.2.1.6.4.1(11) is capable, trained, and authorized to provide emergency assistance.

Statement of Problem and Substantiation for Public Comment

The intent of PI# 56-NFPA 101-2021 was to clarify what is desired by the code committee in the requirement for a two-way communication system. Because NFPA 101 does not define a "two-way communications system," it is left up to the interpretation of the designer to coordinate with the AHJ. This has lead to interpretation of enforcing requirements of NFPA 72 which does define a "two-way emergency communications system" and has specific requirements. If the intent is that any system that provides communication to and from the constantly attended location is acceptable, then revising the language as noted in the PC should convey this. If the committee's intent is to meet the requirements for NFPA 72, then a reference to NFPA 72 should be made and the wording should be revised to indicate a "two-way emergency communications system" is required.

Related Item

• PI# 56-NFPA 101-2021

Submitter Information Verification

Submitter Full Name: Adam Graybeal
Organization: Koffel Compliance, LLC
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 11 12:25:54 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action:	Rejected
Resolution:	The term 'system' needs to be retained. The current language does not mandate compliance with NFPA 72.

Public Comment No. 125-NFPA 101-2022 [New Section after 7.2.1.6.4.2]

7.2.1.6.5 Interlocked-Door Vestibule

Where permitted in chapters 11 through 43 with low- and ordinary-hazard contents, an interlocked-door vestibule shall be permitted in a the means of egress where there are provisions for continuous and unobstructed travel through the interlocked-door vestibule during an emergency egress condition. Interlocked-door vestibules shall comply with all of the following:

1. The building shall be protected by an approved supervised automatic sprinkler system in accordance with Section 9.7.

2. The area served by the interlocked-door vestibule shall be protected by an approved supervised automatic fire detection system in accordance with Section 9.6 and shall utilize smoke detectors on each side of the interlocked doors.

3. An override switch, which disables the interlocks of the doors of the interlocked-door vestibule for not less than 30 seconds, shall be provided on the egress side of each door of the interlocked-door vestibule. The override switch may be omitted by approval of the Authority Having Jurisdiction.

4. The override switches shall be within 48 in. (1220 mm) of door and between 34 in. (865 mm) and 48 in. (1220 mm) above the floor.

5. Signage shall be provided at each override switch describing its operation.

6. Upon loss of power to the interlock function of the doors of the interlocked-door vestibule, the interlock function shall be disabled.

7. The interlocks of the doors of the interlocked-door vestibule shall deactivate by activation of the fire alarm when initiated by the automatic fire detection system or the automatic sprinkler system.

8. The egress path shall not pass through more than one interlocked-door vestibule.

9. The fire department with responsibility for responding to a building that contains an interlocked-door vestibule shall be notified of the presence of the interlocked-door vestibule.

10. Where permitted by the authority having jurisdiction, interlocked-door vestibules shall be permitted to serve high-hazard content areas.

11. Door electrical locking hardware for new installations shall be listed in accordance with UL 294, Access Control System Units, or UL 1034, Burglary-Resistant Locking Mechanisms.

Potential Annex Note:

Outside of detention and correctional facilities, the commercial building equivalent of sally ports – interlocked-door vestibules - are utilized for security reasons (i.e. money handling rooms; and in health care), occupant protection, clinical needs of the patients, environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Interlocked-door vestibules are as the name implies: a vestibule with interlocked-doors. The door into the vestibule is interlocked with the door leading out of the vestibule such that only one of the doors can be open at a given time.

Requirement 3: an example of where interlock override switches may not be desired is where an interlocked-door vestibule is utilized to deter theft, such as a high-end precious gem business.

Visual indicators may be desirable on the egress side of each door to indicate when the door is in the locked status and when in the unlocked status, Visual indicators may be desirable in occupancies where some of the occupants are likely unfamiliar with interlocked-door vestibule, such as mercantile occupancies, or some health care occupancies.

These provisions for interlocked-door vestibules cannot address all potential uses and applications.

Additional Proposed Changes

File Name	Description	Approved
NFPA_101_Special_Locking_Arrangements_Interlocked_Door_Vestibule_Public_Comments_20200520.pdf	NFPA 101 2024 public comments re: interlocked door vestibule.	

Statement of Problem and Substantiation for Public Comment

This proposal, along with complementary proposals in Chapters 18, 19, 20, 21, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.
While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).
Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.
Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.
An occupant egressing through an interlocked-door vestibule would be delayed at the second door in series if the first door in series is not in a closed position, and vise-versa.
The proposed criteria were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 126-NFPA 101-2022 [New Section after 3.3.164.2]	
Public Comment No. 126-NFPA 101-2022 [New Section after 3.3.164.2]	
Public Comment No. 127-NFPA 101-2022 [New Section after 18.2.5.7.4]	
Public Comment No. 128-NFPA 101-2022 [New Section after 19.2.5.7.4]	
Public Comment No. 129-NFPA 101-2022 [New Section after 20.2.5.3.2]	
Public Comment No. 130-NFPA 101-2022 [New Section after 21.2.5.3]	
Public Comment No. 131-NFPA 101-2022 [New Section after 36.2.5.11]	
Public Comment No. 132-NFPA 101-2022 [New Section after 37.2.5.11]	
Public Comment No. 133-NFPA 101-2022 [New Section after 38.2.5.3.2]	
Public Comment No. 134-NFPA 101-2022 [New Section after 39.2.5.3]	
Public Comment No. 135-NFPA 101-2022 [New Section after 40.2.5.3.2]	
Public Comment No. 136-NFPA 101-2022 [New Section after 42.2.5]	

Related Item

• PI 343 • PI 341

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 17:35:57 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action:	Rejected
Resolution:	It is not clear how to define the area served by the interlocked door vestibule or the required locations of smoke detectors in item 2. No details are provided for the signage in item 5. There is concern about the potential for occupants to become trapped in the vestibule. The use of supervised detection system is unclear and inconsistent. It is also unclear under what conditions an AHJ would permit the omission of the manual interlock release or when to permit the arrangement for high hazard contents.

NFPA 101 Special Locking Arrangement – Interlocked-Door Vestibule – Informal Task Group
Public Comments for 2nd draft, Sept. 29, 2021 – revisions Oct. 1, 2021, further revisions Nov. 1, 2021, Nov. 3, 2021, and May 4, 6, 9, & 20, 2022.
John Woestman, BHMA

Black underscored text is original proposed revisions.
Red or blue formatted text are potential revisions for 2nd draft consideration.

Interlocked-Door Vestibule.
A compartment provided with doors in series where only one of the doors in series is openable at a time.

Commented [WJ1]: **Public Input No. 341-NFPA 101-2021**

Commented [JW2]: Public Comment No. 126-NFPA 101-2022

Reason:

This proposed definition is modeled after the definition of "sally port", and along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 38, 39, 40, and 42, offers the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

Chapter 7 Mean of Egress

7.2.1.6.5 Interlocked-Door Vestibule

Commented [WJ3]: Public Input No. 343-NFPA 101-2021

Commented [JW4]: Public Comment No. 125-NFPA 101-2022

Where permitted in chapters 11 through 43 with low- and ordinary-hazard contents, an interlocked-door vestibule shall be permitted in ~~a~~ the means of egress where there are provisions for continuous and unobstructed travel through the interlocked-door vestibule during an emergency egress condition. Interlocked-door vestibules shall comply with all of the following:

1. The building shall be protected by an approved supervised automatic sprinkler system in accordance with Section 9.7.
2. The area served by the interlocked-door vestibule shall be protected by an approved supervised automatic fire detection system in accordance with Section 9.6 and shall utilize smoke detectors on each side of the interlocked doors.
3. An override switch, which disables the interlocks of the doors of the interlocked-door vestibule for not less than 30 seconds, shall be provided on the egress side of each door of the interlocked-door vestibule. The override switch may be omitted by approval of the Authority Having Jurisdiction.

4. The override switches shall be within 48 in. (1220 mm) of door and between 34 in. (865 mm) and 48 in. (1220 mm) above the floor.
5. Signage shall be provided at each override switch describing its operation.
6. Upon loss of power to the interlock function of the doors of the interlocked-door vestibule, the interlock function shall be disabled.
7. The interlocks of the doors of the interlocked-door vestibule shall deactivate by activation of the fire alarm when initiated by the automatic fire detection system or the automatic sprinkler system.
8. The egress path shall not pass through more than one interlocked-door vestibule.
9. The fire department with responsibility for responding to a building that contains an interlocked-door vestibule shall be notified of the presence of the interlocked-door vestibule.
10. Where permitted by the authority having jurisdiction, interlocked-door vestibules shall be permitted to serve high-hazard content areas.
11. Door electrical locking hardware for new installations shall be listed in accordance with UL 294, Access Control System Units, or UL 1034, Burglary-Resistant Locking Mechanisms.

Reason:

This proposal, along with complementary proposals in Chapters 18, 19, 20, 21, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

An occupant egressing through an interlocked-door vestibule would be delayed at the second door in series if the first door in series is not in a closed position, and vise-versa.

The proposed criteria were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Potential Annex Note:

Outside of detention and correctional facilities, the commercial building equivalent of sally ports – interlocked-door vestibules - are utilized for security reasons (i.e. money handling rooms; and in health care), occupant protection, clinical needs of the patients, environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Interlocked-door vestibules are as the name implies: a vestibule with interlocked-doors. The door into the vestibule is interlocked with the door leading out of the vestibule such that only one of the doors can be open at a given time.

Requirement 3: an example of where interlock override switches may not be desired is where an interlocked-door vestibule is utilized to deter theft, such as a high-end precious gem business.

Visual indicators may be desirable on the egress side of each door to indicate when the door is in the locked status and when in the unlocked status, Visual indicators may be desirable in occupancies where some of the occupants are likely unfamiliar with interlocked-door vestibule, such as mercantile occupancies, or some health care occupancies.

These provisions for interlocked-door vestibules cannot address all potential uses and applications.

Chapter 18 New Health Care Occupancies

18.2.5.8 Interlocked-Door Vestibule

Commented [WJ5]: Public Input No. 345-NFPA 101-2021

Commented [JW6]: Public Comment No. 127-NFPA 101-2022

An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 19, 20, 21, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 19 Existing Health Care Occupancies

19.2.5.8 Interlocked-Door Vestibule

Commented [WJ7]: Public Input No. 346-NFPA 101-2021

Commented [JW8]: Public Comment No. 128-NFPA 101-2022

An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 20, 21, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 20 New Ambulatory Health Care Occupancies

20.2.5.4 Interlocked-Door Vestibule

An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 21, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 21 Existing Ambulatory Health Care Occupancies

21.2.5.4 Interlocked-Door Vestibule

Commented [WJ9]: Public Input No. 348-NFPA 101-2021

Commented [JW10]: Public Comment No. 129-NFPA 101-2022

Commented [WJ11]: Public Input No. 350-NFPA 101-2021

Commented [JW12]: Public Comment No. 130-NFPA 101-2022

An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 36, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 36 New Mercantile Occupancies

36.2.5.12 Interlocked-Door Vestibule

An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress where doors are not required to swing in the direction of egress travel.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 37, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

For this occupancy, this proposal suggests an interlocked-door vestibule should be permitted only where the occupant load of the area served does not require doors to swing in the direction of egress travel.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

Commented [WJ13]: **Public Input No. 352-NFPA 101-2021**

Commented [JW14]: **Public Comment No. 131-NFPA 101-2022**

Commented [JW15]: Revisions to address TC reasons for resolution.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 37 Existing Mercantile Occupancies

37.2.5.12 Interlocked-Door Vestibule

~~Where approved permitted by the authority having jurisdiction, a~~An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress where doors are not required to swing in the direction of egress travel.

Commented [WJ16]: Public Input No. 353-NFPA 101-2021

Commented [JW17]: Public Comment No. 132-NFPA 101-2022

Commented [JW18]: Revisions to address TC reasons for resolution.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 38, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

For this occupancy, this proposal suggests an interlocked-door vestibule should be permitted only where the occupant load of the area served does not require doors to swing in the direction of egress travel.

Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 38 New Business Occupancies

38.2.5.4 Interlocked-Door Vestibule

~~Where approved permitted by the authority having jurisdiction, a~~An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress where doors are not required to swing in the direction of egress travel.

Commented [WJ19]: Public Input No. 355-NFPA 101-2021

Commented [JW20]: Public Comment No. 133-NFPA 101-2022

Commented [JW21]: Revisions to address TC reasons for resolution.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 39, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

For this occupancy, this proposal suggests an interlocked-door vestibule should be permitted only where the occupant load of the area served does not require doors to swing in the direction of egress travel.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 39 Existing Business Occupancies

39.2.5.4 Interlocked-Door Vestibule

~~Where approved by the authority having jurisdiction, a~~An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress where doors are not required to swing in the direction of egress travel.

Commented [WJ22]: Public Input No. 356-NFPA 101-2021

Commented [JW23]: Public Comment No. 134-NFPA 101-2022

Commented [JW24]: Revisions to address TC reasons for resolution.

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 38, 40, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

For this occupancy, this proposal suggests an interlocked-door vestibule should be permitted only where the occupant load of the area served does not require doors to swing in the direction of egress travel.

Unfortunately, the term "sally port", and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

Chapter 40 Industrial Occupancies

40.2.5.4 Interlocked-Door Vestibule

In other than high-hazard occupancies, an interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress.

Commented [WJ25]: Public Input No. 358-NFPA 101-2021

Commented [JW26]: Public Comment No. 135-NFPA 101-2022

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 38, 39, and 42 offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

For this occupancy, the proposal suggests interlocked-door vestibules would not be permitted in high-hazard industrial occupancies – the committee is encouraged to revise as appropriate.

Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria in proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Chapter 42 Storage Occupancies

42.2.5.1 Interlocked-Door Vestibule

An interlocked-door vestibule in accordance with 7.2.1.6.5 shall be permitted in the means of egress.

Commented [WJ27]: Public Input No. 359-NFPA 101-2021

Commented [JW28]: Public Comment No. 136-NFPA 101-2022

Reason:

This proposal, along with complementary proposals in 7.2.1.6.5 and Chapters 18, 19, 20, 21, 36, 37, 38, 39, and 40, offer the opportunity for interlocked-door vestibules in these occupancies.

While sally ports are defined in NFPA 101 (3.3.249) and permitted in detention and correctional occupancies, sally ports are typically used as security vestibules and control egress (obviously).

Outside of detention and correctional facilities, the commercial building equivalent of sally ports are utilized for security reasons (i.e. money handling rooms), occupant protection (health care), environmental contamination control (manufacturing clean rooms), controlled substance dispensing (prescription drugs and cannabis), and other uses and applications.

Unfortunately, the term “sally port”, and its definition, is predominately reserved for uses where occupants are restrained against their will in buildings or spaces. An interlocked-door vestibule could be used for that purpose, but would more commonly be used as mentioned above.

The criteria is proposed section 7.2.1.6.5 (via separate public comment) were developed by an informal task group of stakeholders who volunteered to assist with developing requirements for interlocked door vestibules which could be submitted as public comments for second draft consideration.

Public Comment No. 6-NFPA 101-2022 [Section No. 7.2.3.3.2]

7.2.3.3.2

Where a vestibule is used as part of one of the design methods, it shall be within the 2-hour-rated enclosure and shall be considered part of the smokeproof enclosure.

Additional Proposed Changes

File Name	Description	Approved
101_A2023_SAF_AAC_CCN_4.pdf	101_CC Note No. 4	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 4 appeared in the First Draft Report on First Revision No. 6536, and is also related to Public Input No. 17.
Clarify what is intended by "as part of one of the design methods."

Related Item

• FR-6536

Submitter Information Verification

Submitter Full Name: CC ON SAF_AAC
Organization: NFPA
Street Address:
City:
State:
Zip:
Submittal Date: Thu Mar 17 11:50:15 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6538-NFPA 101-2022
Statement: The revision responds to CN-4 and clarifies what was intended by "one of the design methods."

Correlating Committee Note No. 4-NFPA 101-2022 [Section No. 7.2.3.3.2]

Submitter Information Verification

Committee: SAF-AAC
Submittal Date: Mon Jan 17 09:41:36 EST 2022

Committee Statement and Meeting Notes

Committee Statement: Clarify what is intended by "as part of one of the design methods."

First Revision No. 6536-NFPA 101-2021 [Section No. 7.2.3.3.2]

Ballot Results

This item has passed ballot

11 Eligible Voters
1 Not Returned
10 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

Taluba, Jon

Affirmative All

Bush, Kenneth E.
Carson, Wayne G. Chip
Gilyeat, Sharon S.
Harbuck, Stanley C.
Hopper, Howard
Hugo, Jeffrey M.
Lucas, Jeffrey A.
Quiter, James R.
Reiswig, Rodger
Rosenbaum, Eric R.

First Revision No. 6536-NFPA 101-2021 [Section No. 7.2.3.3.2]

7.2.3.3.2

Where a vestibule is used as part of one of the design methods , it shall be within the 2-hour-rated enclosure and shall be considered part of the smokeproof enclosure.

Submitter Information Verification

Committee: SAF-MEA
Submittal Date: Fri Jul 09 15:38:42 EDT 2021

Committee Statement and Meeting Notes

Committee Statement: This section falls under the "general" requirements of the smokeproof enclosure section and needs to clarify that only when the vestibule is considered as part of the design method (design methods include: Natural Ventilation, Mechanical Ventilation, and Enclosure Pressurization) that it is to be included within the smokeproof enclosure. When using the enclosure pressurization method, a vestibule is not required (See Sec. 7.2.3.6). However, there are instances where based on the building function that a vestibule may be required to access the stairway. This section as currently written and if using the enclosure pressurization method would require that vestibule to be included as part of the smokeproof enclosure and subject to the pressurization requirements. This may not cause a big issue on many high-rise buildings, however, this is problematic in air traffic control towers that have a single stair and typically a shared vestibule between the single stairway and the elevator shaft. In this instance, the design of the system would be complicated if using the enclosure pressurization method that has to include a shared vestibule. While in this example another method could be utilized such as the mechanical ventilation method with vestibule, it could still be problematic with an elevator opening into the vestibule as well and code issues with elevators opening into exit enclosures. This revision is intended to clarify that if using the enclosure pressurization method and a vestibule is provided that it does not need considered part of the smokeproof enclosure unless it is part of the design method (i.e. the designer can decide if to include the vestibule as enclosure pressurization method which is common in California High Rise buildings).

Response Message: FR-6536-NFPA 101-2021

Committee Notes:

Date	Submitted By	
Jul 13, 2021	Gregory Harrington	For correlating committee: Request clarification of what design methods? Specified by what?

Public Input No. 17-NFPA 101-2020 [Section No. 7.2.3.3.2]

Ballot Results

This item has passed ballot

34 Eligible Voters
2 Not Returned
30 Affirmative All
0 Affirmative with Comments
1 Negative with Comments

1 Abstention

Not Returned

Brackett, Joshua

Day, Richard L.

Affirmative All

Alles, Ryan

Bales, Fred M.

Barlow, Charles V.

Bush, Kenneth E.

Clayton, Jason R.

Collins, David S.

Coombs, Christopher

Crowley, Michael A.

Elvove, Joshua W.

Farr, Ronald R.

Frable, David W.

Frye, Laura

Gebhart, Michelle Renee

Guest, Rita C.

Hoskins, Bryan Lawrence

Jackson, Waymon

Larson, Mark

Lathrop, James K.

Lujan, Cesar

Marcyjanik, Brian A.

Mueller, Marc

Pappas, Denise L.

Pauls, Jake

Quinterno, Vincent

Saks, Kenneth

Shulman, Michael S.

Simard, J. Francois

Tierney, Michael

Tilton, Kelly R.

Versteeg, Joseph H.

Negative with Comment

Ramseur, Mitchell

Not enough clarity and the safety of high rises should not be compromised.

Abstention

Leffler, John

Topic is outside my experience

Public Comment No. 61-NFPA 101-2022 [Section No. 7.2.4.3.5]

7.2.4.3.5*

Fire barriers forming horizontal exits shall not be penetrated by ducts, unless one of the following criteria is met:

(1) The ducts are existing penetrations protected by approved and listed fire dampers.

(2) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

(3) The duct penetrations are those permitted in detention and correctional occupancies as otherwise provided in Chapters 22 and 23 and are protected by combination fire ~~dampers/smoke-leakage-rated~~ -smoke dampers that meet the smoke damper actuation requirements of 8.5.5.

Statement of Problem and Substantiation for Public Comment

SAF-AAC appointed a task group to review damper terminology throughout NFPA 101 based upon FR 6516 which modified the definitions for various dampers and made the change to extract the definitions from NFPA 90A. The purpose of this Public Comment, submitted on behalf of the Task Group, is to revise the language to be consistent with the defined terms in Chapter 3. It should be noted that the terms proposed are based upon the First Draft Report of NFPA 90A and not necessarily the definitions in Chapter 3 of the First Draft Report for NFPA 101. If NFPA 90A is revised during the Public Comment period it is the intent that these terms would be revised to be consistent with the defined terms being extracted from NFPA 90A.

It should be noted that although Koffel Associates is a consultant to AMCA International, the Public Comment is not identified as being submitted on behalf of AMCA International since the Public Comment was the result of the SAF-AAC Task Group.

Related Item

• FR 6516

Submitter Information Verification

Submitter Full Name: William Koffel
Organization: Koffel Associates, Inc.
Street Address:
City:
State:
Zip:
Submittal Date: Thu Apr 14 09:17:09 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Accepted
Resolution: SR-6539-NFPA 101-2022
Statement: SAF-AAC appointed a task group to review damper terminology throughout NFPA 101 based upon FR 6516 which modified the definitions for various dampers and made the change to extract the definitions from NFPA 90A. The purpose of this Public Comment, submitted on behalf of the Task Group, is to revise the language to be consistent with the defined terms in Chapter 3. It should be noted that the terms proposed are based upon the First Draft Report of NFPA 90A and not necessarily the definitions in Chapter 3 of the First Draft Report for NFPA 101. If NFPA 90A is revised during the Public Comment period it is the intent that these terms would be revised to be consistent with the defined terms being extracted from NFPA 90A.

Public Comment No. 46-NFPA 101-2022 [Section No. 7.3.1.2]

7.3.1.2* Occupant Load Factor.

The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.

Table 7.3.1.2 Occupant Load Factor

Use	ft^2 per person[a]	m^2 per person[a]
Assembly Use	-	-
Concentrated use, without fixed seating	7 net	0.65 net
Less concentrated use, without fixed seating	15 net	1.4 net
Bench-type seating	1 person/18 linear in.	1 person/455 linear mm
Fixed seating	Use number of fixed seats + 10%	Use number of fixed seats + 10%
Waiting spaces	See 12.1.7.2 and 13.1.7.2.	See 12.1.7.2 and 13.1.7.2.
Kitchens	100	9.3
Library stack areas	100	9.3
Library reading rooms	50 net	4.6 net
Swimming pools	50 (water surface)	4.6 (water surface)
Swimming pool decks	30	2.8
Exercise rooms with equipment	50	4.6
Exercise rooms without equipment	15	1.4
Stages	15 net	1.4 net
Lighting and access catwalks, galleries, gridirons	100 net	9.3 net
Casinos and similar gaming areas	11	1
Skating rinks	50	4.6
-	-	-
Business Use (other than below)	150	14
Concentrated business use[b]	50	4.6
Airport traffic control tower observation levels	40	3.7
Collaboration rooms/spaces ≤450 ft^2 (41.8 m^2) in area[b]	30	2.8
Collaboration rooms/spaces >450 ft^2 (41.8 m^2) in area[b]	15	1.4
Day-Care Use	35 net	3.3 net
Detention and Correctional Use	120	11.1
Educational Use	-	-
Classrooms	20 net	1.9 net
Shops, laboratories, vocational rooms	50 net	4.6 net
Health Care Use	-	-
Inpatient treatment departments	240	22.3
Sleeping departments	120	11.1
Ambulatory health care	150	14
Industrial Use	-	-
General- and high-hazard industrial	100	9.3
Special-purpose industrial	MP	MP
Mercantile Use	-	-
Sales area on street floor[c,d]	30	2.8
Sales area on two or more street floors[d]	40	3.7
Sales area on floor below street floor[d]	30	2.8
Sales area on floors above street floor[d]	60	5.6

Use	ft^2 per person[a]	m^2 per person[a]
Floors or portions of floors used only for offices	See business use.	See business use.
Floors or portions of floors used only for storage, receiving, and shipping, and not open to general public	300	27.9
Mall structures[e]	Per factors applicable to use of space[f]	-
Residential Use	-	-
Hotels and dormitories	200	18.6
Apartment buildings	200	18.6
Board and care, large	200	18.6
Storage Use	-	-
In storage occupancies	MP	MP
In mercantile occupancies	300	27.9
In other than storage and mercantile occupancies	500	46.5

MP: The occupant load is the maximum probable number of occupants present at any time.

[a]All factors are expressed in gross area unless marked “net.”

[b]See A.7.3.1.2.

[c]For determining occupant load in mercantile occupancies where, due to differences in the finished ground level of streets on different sides, two or more floors directly accessible from streets (not including alleys or similar back streets) exist, each such floor is permitted to be considered a street floor. The occupant load factor is one person for each 40 ft^2 (3.7 m^2) of gross floor area of sales space.

[d]For determining occupant load in mercantile occupancies with no street floor, as defined in 3.3.290, but with access directly from the street by stairs or escalators, the floor at the point of entrance to the mercantile occupancy is considered the street floor.

[e]For any food court or other assembly use areas located in the mall concourse that are not included as a portion of the gross leasable area of the mall structure, the occupant load is calculated based on the occupant load factor for that use as specified in Table 7.3.1.2. The remaining mall concourse area is not required to be assigned an occupant load.

[f]The portions of the mall concourse not used as gross leasable area are not required to be assessed an occupant load based on Table 7.3.1.2. However, means of egress from a mall concourse are required to be provided for an occupant load determined by dividing the gross leasable area of the mall building (not including anchor buildings) by the appropriate lowest whole number occupant load factor from Figure 7.3.1.2(a) or Figure 7.3.1.2(b).

Each individual tenant space is required to have means of egress to the outside or to the mall concourse based on occupant loads calculated by using the appropriate occupant load factor from Table 7.3.1.2.

Each individual anchor store is required to have means of egress independent of the mall concourse.

Figure 7.3.1.2(a) Mall Structure Occupant Load Factors (U.S. Customary Units).

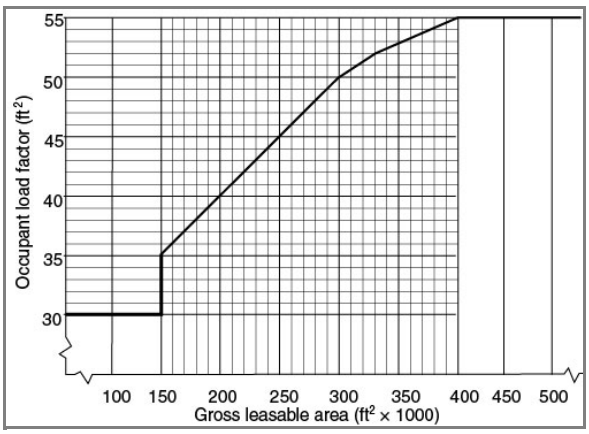
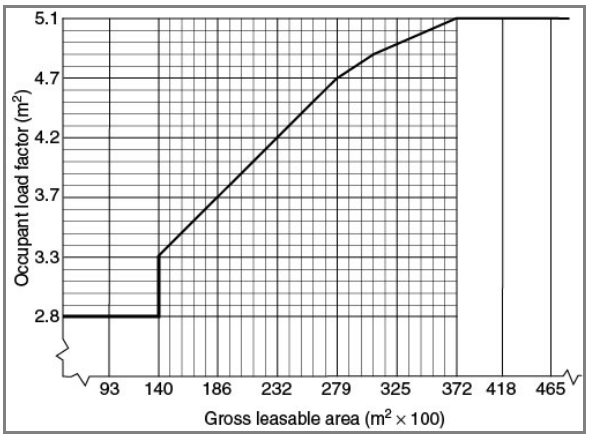


Figure 7.3.1.2(b) Mall Structure Occupant Load Factors (SI Units).



Statement of Problem and Substantiation for Public Comment

I submitted the same proposal during the First Draft and it was ignored by the NFPA because it was determined to be in the scope of the Assembly Occupancy Committee and it was supposed to be acted on by that committee, but it was not. It is interesting that this same proposal was deemed to be within the scope of the Means of Egress Committee last cycle when it was rejected. Since this has been deemed to be in the scope of this committee at least once in the last few years, this comment is being submitted so that it can't be ignored again if the decision is made that this is in the scope of the Means of Egress Committee.

The Means of Egress committee stated in the previous cycle that their reason for their rejection was, "No data has been provided to substantiate the proposed revision." The Committee Statement is incorrect. The statement that I submitted in support of the proposed change was to account for people in wheelchairs and people who stand up in front of the room that do not have a seat. The egress system needs to account for these people as well as the people in fixed seats. The occupant load needs to include these people so that the egress capacity is actually adequate to handle them.

Does the committee doubt that people in wheelchairs use assembly occupancies with fixed seats without getting out of their wheelchairs? How does the egress system account for these people? Has the committee ever heard of the Americans with Disabilities Act (ADA)? Does the committee really need me to remind them that if people in wheelchairs are not counted in the occupant load that is used to determine egress capacity, these people can sue the NFPA under the ADA for being discriminated against?

Does the committee doubt that people stand in front of lecture halls, theaters, and other assembly spaces without using a seat? Do I really need to build a case that by only counting the seats in a fixed seating assembly occupancy, you are ignoring the people that are not in seats?

Asking specifically about the 10% number would have been appropriate. The committee never actually questioned this number, but I can share how it was obtained. The ADA Standards for Accessible Design require a certain number of spaces to be added to fixed seat assembly spaces based on the number of fixed seats. The requirements vary between 1% and 8% for spaces with more than 50 seats (meeting the definition of Assembly). Since the justification for this proposed change is more than just ADA acceptance (such as a professor standing up in front of a class), the 8% number was rounded up to 10% so that there would be one simple rule that would help everyone comply with the ADA and account for everyone who was reasonably going to be in the room.

Alternatively, the committee could refer to the ADA Standards For Accessible Design to figure out how many additional people they should add to the occupant load, but that would be more cumbersome for the user. The 10% number is reasonable, easy to calculate, and provides a number that helps everyone meet the ADA Standards for Accessible Design regardless of the number of seats.

Related Item

• PI 323

Submitter Information Verification

Submitter Full Name: Kenneth Isman
Organization: University of Maryland
Street Address:
City:
State:
Zip:

Submittal Date: Tue Mar 22 12:22:43 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected

Resolution: Occupant load factors are under the jurisdiction of the applicable occupancy committees. The proposed revision will be reviewed by the TC on Assembly Occupancies. If accepted, the revision will be moved to Table 7.3.1.2 by the correlating committee.

Public Comment No. 60-NFPA 101-2022 [Section No. 7.7.2]

Use text from CI-6545 (Note - what is submitted below is (or should be) an exact copy of the CI)

Proposal – Revise 7.7.2

–

as follows.

(1) **Add new 7.7.2(1)(c)**

(2) **Move existing 7.7.2(3) to 7.7.2(4) (text unchanged)**

(3) **Move existing 7.7.2(4) to 7.7.2(3) (text unchanged)**

7.7.2 Exit Discharge Through Interior Building Areas.

~~- Exits shall be permitted to discharge through interior building areas, provided that all of the following are met:~~

~~(1) Not more than 50 percent of the required number of exit enclosures serving normally occupied areas of each floor, and not more than 50 percent of the exit enclosure capacity required for normally occupied areas of each floor, shall discharge through areas on any level of discharge, except as otherwise permitted by one of the following:~~

~~(a) One hundred percent of the exits shall be permitted to discharge through areas on any level of discharge in detention and correctional occupancies as otherwise provided in Chapters 22 and 23 .~~

~~(b) In existing buildings, the 50 percent limit on egress capacity shall not apply if the 50 percent limit on the required number of exits is met.~~

~~**(c) Where the level of discharge is protected throughout by an approved automatic sprinkler system in accordance with Section 9.7 and vestibules or foyers meeting the requirements of 7.7.2(3)(b) are provided, not more than 75 percent of the required number of exit stairs serving normally occupied areas of each floor, and not more than 75 percent of the exit stair capacity required for normally occupied areas of each floor, shall discharge through such vestibules or foyers on any level of discharge.**~~

~~(2) Each level of discharge shall discharge directly outside at the finished ground level or discharge directly outside and provide access to the finished ground level by outside stairs or outside ramps.~~

~~(3) The interior exit discharge shall lead to a free and unobstructed way to the exterior of the building, and such way shall be readily apparent or shall be identifiable by exit signage from the point of discharge from the exit. [JE1] -~~

~~(3) The interior exit discharge shall be protected by one of the following methods:~~

~~(a) The level of discharge shall be protected throughout by an approved automatic sprinkler system in accordance with~~

~~Section~~

Section 9.7 , or the portion of the level of discharge used for interior exit discharge shall be protected by an approved automatic sprinkler system in accordance with

~~Section~~

Section 9.7 and shall be separated from the nonsprinklered portion of the floor by fire barriers with a fire resistance rating

meeting the requirements for the enclosure of exits. *(See 7.1.3.2.1 .)*

(b) The interior exit discharge area shall be in a vestibule or foyer that meets all of the following criteria:

i. The depth from the exterior of the building shall be not more than 10 ft (3050 mm), and the length shall be not more than 30 ft (9.

~~1 m~~

1 m).

ii. The foyer shall be separated from the remainder of the level of discharge by fire barriers with a minimum 1-hour fire resistance rating, and existing installations of wired glass in steel frames shall be permitted to be

continued in use.

iii. The foyer shall serve only as means of egress and shall include an exit directly to the outside [JE2]

(4) The interior exit discharge shall lead to a free and unobstructed way to the exterior of the building, and such way shall be readily apparent or shall be identifiable by exit signage from the point of discharge from the exit [JE3] .

~~(4) The interior exit discharge shall be protected by one of the following methods:~~

~~(a) The level of discharge shall be protected throughout by an approved automatic sprinkler system in accordance with Section 9.7, or the portion of the level of discharge used for interior exit discharge shall be protected by an approved automatic sprinkler system in accordance with Section 9.7 and shall be separated from the nonsprinklered portion of the floor by fire barriers with a fire resistance rating~~

~~meeting the requirements for the enclosure of exits.~~ ~~*(See 7.1.3.2.1.)*~~

~~*(b) The interior exit discharge area shall be in a vestibule or foyer that meets all of the following criteria:*~~

~~*i. The depth from the exterior of the building shall be not more than 10 ft (3050 mm), and the length shall be not more than 30 ft (9.1 m).*~~

~~*ii. The foyer shall be separated from the remainder of the level of discharge by fire barriers with a minimum 1-hour fire resistance rating,and existing installations of wired glass in steel frames shall be permitted to be continued in use.*~~

~~*iii. The foyer shall serve only as means of egress and shall include an exit directly to the*~~

~~*outside.*~~ *[JE4]*

(5) The entire area on the level of discharge shall be separated from areas below by construction having a fire resistance rating not less than that required for the exit enclosure, unless otherwise provided in 7.7.2(6) .

(6) Levels below the level of discharge in an atrium shall be permitted to be open to the level of discharge where such level of discharge is protected in accordance with 8.6.7 .

Substantiation

The purpose of this proposal is to allow a new scenario to increase the number and capacity of exit stairs on the level of exit discharge from 50% to 75% under certain very specific conditions without reducing the level of safety currently provided by the Code.

Currently, 50% credit is given to stairs that discharge to building interiors in sprinklered buildings or stairs that discharge into compliant vestibules in non-sprinklered buildings. This revision would permit compliant vestibules (i.e., those that meet the three existing requirements for vestibules – 10' x 30', 1 hr enclosure, direct egress) additional credit in buildings where the level of exit discharge is completely sprinklered. Note: compliant vestibules already would meet 100% of the discharge requirements if installed in non-sprinklered buildings less than 4 stories in height (since they require 1 hr enclosures) or in existing sprinklered buildings (since 7.1.3.2.1(3) permits 1 hr exit enclosures). Reordering (3) and (4) better introduces interior exit discharge.

This concept was accepted by this committee during the 1st draft meeting last cycle and text inserted into the 1st draft of the 2021 Code, but was rightfully removed during the 2nd draft meeting because after subsequent review, the text as written created potential problems. This proposal addresses those problems and presents the concept again.

[JE1] (3) becomes (4)

[JE2] old (4) relocated to (3) text unchanged

[JE3] old (3) relocated to 4 as interior discharge is introducted in (3) text unchanged

[JE4] (4) becomes (3)

Statement of Problem and Substantiation for Public Comment

Justification from the original CI remains unchanged.

Related Item

• CI 6545

Submitter Information Verification

Submitter Full Name: Joshua Elvove
Organization: Self
Affiliation: na
Street Address:
City:
State:
Zip:
Submittal Date: Wed Apr 13 18:23:37 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-6552-NFPA 101-2022

Statement: The revision accepts the recommendations in CI-6545, PC-60, and PC-89. The only technical change to the current language is the addition of item 7.7.2(1)(c). Existing 7.7.2(3) is moved to 7.7.2(4), and existing 7.7.2(4) is moved to 7.7.2(3) for clarity. The committee statement for CI-6545 follows:

The purpose of this committee input is to allow a new scenario to increase the number and capacity of exit stairs on the level of exit discharge from 50% to 75% under certain very specific conditions without reducing the level of safety currently provided by the Code.

Currently, 50% credit is given to stairs that discharge to building interiors in sprinklered buildings or stairs that discharge into compliant vestibules in non-sprinklered buildings. This revision would permit compliant vestibules (i.e., those that meet the three existing requirements for vestibules – 10’ x 30’, 1 hr enclosure, direct egress) additional credit in buildings where the level of exit discharge is completely sprinklered. Note: compliant vestibules already would meet 100% of the discharge requirements if installed in non-sprinklered buildings less than 4 stories in height (since they require 1 hr enclosures) or in existing sprinklered buildings (since 7.1.3.2.1(3) permits 1 hr exit enclosures). Reordering (3) and (4) better introduces interior exit discharge.

This concept was accepted by this committee during the 1st draft meeting last cycle and text inserted into the 1st draft of the 2021 Code, but was rightfully removed during the 2nd draft meeting because after subsequent review, the text as written created potential problems. This committee input addresses those problems and presents the concept again, and is intended to solicit public comments for further review at the second draft stage.

Public Comment No. 89-NFPA 101-2022 [Section No. 7.7.2]

7.7.2

Exit Discharge Through Interior Building Areas.

Exits shall be permitted to discharge through interior building areas, provided that all of the following are met:

(1) Not more than 50 percent of the required number of exit enclosures serving normally occupied areas of each floor, and not more than 50 percent of the exit enclosure capacity required for normally occupied areas of each floor, shall discharge through areas on any level of discharge, except as otherwise permitted by one of the following:

(2) One hundred percent of the exits shall be permitted to discharge through areas on any level of discharge in detention and correctional occupancies as otherwise provided in Chapters 22 and 23.

(3) In existing buildings, the 50 percent limit on egress capacity shall not apply if the 50 percent limit on the required number of exits is met.

(4) Each level of discharge shall discharge directly outside at the finished ground level or discharge directly outside and provide access to the finished ground level by outside stairs or outside ramps.

(5) The interior exit discharge shall lead to a free and unobstructed way to the exterior of the building, and such way shall be readily apparent or shall be identifiable by exit signage from the point of discharge from the exit.

(6) The interior exit discharge shall be protected by one of the following methods:

(7) The level of discharge shall be protected throughout by an approved automatic sprinkler system in accordance with Section 9.7 , or the portion of the level of discharge used for interior exit discharge shall be protected by an approved automatic sprinkler system in accordance with Section 9.7 and shall be separated from the nonsprinklered portion of the floor by fire barriers with a fire resistance rating meeting the requirements for the enclosure of exits. *(See 7.1.3.2.1 .)*

(8) The interior exit discharge area shall be in a vestibule or foyer that meets all of the following criteria:

(9) The depth from the exterior of the building shall be not more than 10 ft (3050 mm), and the length shall be not more than 30 ft (9.1 m).

(10) The foyer shall be separated from the remainder of the level of discharge by fire barriers with a minimum 1-hour fire resistance rating, and existing installations of wired glass in steel frames shall be permitted to be continued in use.

(11) The foyer shall serve only as means of egress and shall include an exit directly to the outside.

(12) The entire area on the level of discharge shall be separated from areas below by construction having a fire resistance rating not less than that required for the exit enclosure, unless otherwise provided in 7.7.2(6).

(13) Levels below the level of discharge in an atrium shall be permitted to be open to the level of discharge where such level of discharge is protected in accordance with 8.6.7.

Statement of Problem and Substantiation for Public Comment

'I wholly support this committee input. My facility has a very complex exiting arrangement where more than 50% of the exit stairs discharge within the interior on the level of exit discharge. I currently have a temporary equivalency that permits this arrangement, but because my facility is completely sprinklered, I would actually be code compliant if this change were made. Discharging into fire rated sprinklered vestibules has to be much safer than discharging onto the floor without any protection other than sprinklers."

Related Item

• CI6545

Submitter Information Verification

Submitter Full Name: Seth Burmeister
Organization: Va Med Ctr

Street Address:
City:
State:
Zip:
Submittal Date: Wed May 11 16:24:23 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-6552-NFPA 101-2022

Statement: The revision accepts the recommendations in CI-6545, PC-60, and PC-89. The only technical change to the current language is the addition of item 7.7.2(1)(c). Existing 7.7.2(3) is moved to 7.7.2(4), and existing 7.7.2(4) is moved to 7.7.2(3) for clarity. The committee statement for CI-6545 follows:

The purpose of this committee input is to allow a new scenario to increase the number and capacity of exit stairs on the level of exit discharge from 50% to 75% under certain very specific conditions without reducing the level of safety currently provided by the Code.

Currently, 50% credit is given to stairs that discharge to building interiors in sprinklered buildings or stairs that discharge into compliant vestibules in non-sprinklered buildings. This revision would permit compliant vestibules (i.e., those that meet the three existing requirements for vestibules – 10’ x 30’, 1 hr enclosure, direct egress) additional credit in buildings where the level of exit discharge is completely sprinklered. Note: compliant vestibules already would meet 100% of the discharge requirements if installed in non-sprinklered buildings less than 4 stories in height (since they require 1 hr enclosures) or in existing sprinklered buildings (since 7.1.3.2.1(3) permits 1 hr exit enclosures). Reordering (3) and (4) better introduces interior exit discharge.

This concept was accepted by this committee during the 1st draft meeting last cycle and text inserted into the 1st draft of the 2021 Code, but was rightfully removed during the 2nd draft meeting because after subsequent review, the text as written created potential problems. This committee input addresses those problems and presents the concept again, and is intended to solicit public comments for further review at the second draft stage.

Public Comment No. 156-NFPA 101-2022 [Section No. 7.15.1]

7.15.1 General.

7.15.1.1*

Where passenger elevators for general public use are permitted to be used for occupant evacuation prior to Phase I Emergency Recall Operation mandated by the firefighters' emergency operation provisions of ASME A17.1/CSA B44*, Safety Code for Elevators and Escalators*, the elevator system shall also comply with this section, except as otherwise permitted by 7.15.1.2.

7.15.1.2

The provisions of Section 7.15 shall not apply where the limited or supervised use of elevators for evacuation is part of a formal or informal evacuation strategy, including the relocation or evacuation of patients in health care occupancies and where the ~~relocation or evacuation of occupants with disabilities in other occupancies~~ occupants are unable to relocate or evacuate without assistance .

7.15.1.3*

The occupant evacuation elevators shall be in accordance with the occupant evacuation operation (OEO) requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators,* and the building emergency action plan required by 7.15.3.1.

7.15.1.4

Occupant evacuation elevators in accordance with Section 7.15 shall not be permitted to satisfy requirements of this *Code* applicable to the following:

(1) Number of means of egress

(2) Capacity of means of egress

(3) Arrangement of means of egress

Statement of Problem and Substantiation for Public Comment

The exceptions in the current 7.15.1.2 are for occupancies where the occupants are unable to evacuate without assistance or supervision. In many cases an occupant with a disability, such as use of a wheelchair, could evacuated using the occupant evacuation elevators without assistance. This proposal clarifies when 7.15 applies.

Related Item

• PI 237

Submitter Information Verification

Submitter Full Name: Kevin Brinkman
Organization: National Elevator Industry, In
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 09:06:42 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected

Resolution: The proposed revision does not clarify the intent of Sec. 7.15. This would create confusion and does not add anything to the Code. The use of "evacuate without assistance" could apply to detention and correctional occupancies and educational and day care occupancies.

Public Comment No. 158-NFPA 101-2022 [Section No. 7.15.6]

7.15.6 Elevator Installation.

7.15.6.1

Except as modified by 7.15.6.2 and 7.15.6.3, occupant evacuation elevators shall be installed in accordance with ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators,* including the provisions for occupant evacuation operation, as required by 7.15.1.3.

7.15.6.2*

Shunt breakers shall not be installed on elevator systems used for occupant evacuation.

7.15.6.3

Occupant evacuation elevators shall be limited to electric passenger elevators that are located in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

Statement of Problem and Substantiation for Public Comment

NFPA 13 currently requires sprinklers to be installed in hydraulic elevator pit but A17.1 prohibits sprinklers in the hoistway, including the pit, for occupant evacuation elevators. Until NFPA 13 removes sprinklers from hydraulic pits, 11.14.6.3 needs to prevent a hydraulic elevator from being included as an occupant evacuation elevator.

Related Item

• PI 240

Submitter Information Verification

Submitter Full Name: Kevin Brinkman
Organization: National Elevator Industry, In
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 09:17:02 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Accepted
Resolution: SR-6541-NFPA 101-2022
Statement: NFPA 13 currently requires sprinklers to be installed in hydraulic elevator pit but A17.1 prohibits sprinklers in the hoistway, including the pit, for occupant evacuation elevators. Until NFPA 13 removes sprinklers from hydraulic pits (11.14.6.3), NFPA 101 needs to prevent a hydraulic elevator from being included as an occupant evacuation elevator.

Public Comment No. 159-NFPA 101-2022 [Section No. 7.15.8]

7.15.8 Electrical Power and Control Wiring.

7.15.8.1

The following features associated with occupant evacuation elevators shall be supplied by both normal power and Type 60, Class 2, Level 1 standby power:

(1) Elevator equipment

(2) Ventilation and cooling equipment for elevator machine/control rooms and machinery/control spaces

(3) Elevator car lighting

7.15.8.2

Wires or cables serving Phase II emergency in-car operation that are located outside elevator hoistways, machine/control rooms, and machinery/control spaces, and that provide normal power, standby power, control signals, communication with the cars, lighting, heating, air-conditioning, ventilation, and fire detecting systems to occupant evacuation elevators shall be protected by one of the following means, except as otherwise provided in 7.15.8.3:

(1) The wiring shall utilize Type CI cable with a minimum 2-hour fire resistance rating.

(2) The wiring shall be enclosed in a minimum 2-hour fire-resistance-rated construction.

(3) The wiring shall be wiring that is approved as providing a 2-hour performance alternative.

7.15.8.3*

Control signaling wiring and cables that do not serve Phase II emergency in-car service shall not be required to be protected.

Statement of Problem and Substantiation for Public Comment

The intent of Occupant Evacuation Elevators (OEE) is to provide an additional means to evacuate even prior to firefighters' arrival on-site. Once firefighters take control, they will assess when OEE will not be available to assist in evacuating occupants. The protection of the wiring and cables is critical for firefighters' operation when they are using the elevators under Phase II emergency in-car operation.

Related Item

• PI 241

Submitter Information Verification

Submitter Full Name: Kevin Brinkman
Organization: National Elevator Industry, In
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 09:20:11 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected
Resolution: The provision is already addressed by 7.15.8.3.

Public Comment No. 160-NFPA 101-2022 [Section No. 7.15.9]

7.15.9 Occupant Evacuation Shaft System.

7.15.9.1

Occupant evacuation elevators, except those that service only an open parking garage, shall be provided with an occupant evacuation shaft system consisting of all of the following:

(1) Elevator hoistway

(2) Enclosed elevator lobby outside the bank or group of hoistway doors on each floor served by the elevators, with the exception that elevator lobbies not be required to be enclosed where located either on the street floor or level of exit discharge

(3) Enclosed exit stair with doors to all floors, at and above grade level, served by the elevators

7.15.9.2* Elevator Lobby Size.

7.15.9.2.1

Occupant evacuation elevator lobbies shall have minimum clear floor area, except as otherwise provided in 7.15.9.2.2, as follows:

(1) The elevator lobby clear floor area shall accommodate, at 3 ft^2 (0.28 m^2) per person, a minimum of 25 percent of the occupant load of the floor area served by the lobby.

(2) The elevator lobby clear floor area also shall accommodate one wheelchair space of 30 in. × 48 in. (760 mm × 1220 mm) for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.

7.15.9.2.2

The size of lobbies serving multiple banks of elevators shall be exempt from the requirement of 7.15.9.2.1(1), provided that the area of such lobbies is approved on an individual basis and is consistent with the building's emergency action plan.

7.15.9.3

Access to the exit stair required by 7.15.9.1(3) shall be directly from the enclosed elevator lobby on each floor, except the floor that is at the lobby of the building .

7.15.9.4

The occupant evacuation shaft system shall be enclosed and separated from the remainder of the building by walls complying with the following:

(1) The shaft system walls shall be smoke barriers in accordance with Section 8.5.

(2) The shaft system walls separating the elevator lobby from the remainder of the building shall have a minimum 1-hour fire resistance rating and minimum ¾-hour fire-protection-rated opening protectives.

(3) The shaft system walls separating the elevator hoistway from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 1½-hour fire-protection-rated opening protectives.

(4) The shaft system walls separating the enclosed exit stair from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 1½-hour fire-protection-rated opening protectives.

7.15.9.5

Occupant evacuation shaft system enclosures shall be constructed to provide a minimum of classification Level 2 in accordance with ASTM C1629/C1629M, *Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels*.

7.15.9.6*

An approved method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the enclosed occupant evacuation elevator lobby shall be provided.

7.15.9.7

Occupant evacuation shaft system elevator lobby doors, other than doors to the hoistway, exit stair enclosure, control room, or control space, shall have all of the following features:

(1) The doors shall have a fire protection rating of not less than ¾ hour.

(2) The doors shall be smoke-leakage-rated assemblies in accordance with NFPA 105.

(3) The doors shall have an automatic positioning bottom seal to resist the passage of water at floor level from outside the shaft system.

7.15.9.8

Occupant evacuation shaft system elevator lobby doors shall have the following features:

(1) Each door, other than doors to the hoistway, exit stair enclosure, control room, or control space, shall be automatic-closing in accordance with 7.2.1.8.2, as modified by 7.15.9.8(2).

(2) In addition to the automatic-closing means addressed by 7.2.1.8.2, the elevator lobby door on any floor shall also close in response to any alarm signal initiated on that floor.

(3) Each door shall be provided with a vision panel arranged to allow people on either side of the door to view conditions on the other side of the door.

7.15.9.9

Each occupant evacuation shaft system exit stair enclosure door shall be provided with a vision panel arranged to allow people on either side of the door to view conditions on the other side of the door.

Statement of Problem and Substantiation for Public Comment

There is no need to have access to exit stairs in an open parking garage or in the lobby of the building that is at the exit discharge level.

Related Item

• PI 242

Submitter Information Verification

Submitter Full Name: Kevin Brinkman
Organization: National Elevator Industry, In
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 09:25:38 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Accepted
Resolution: SR-6542-NFPA 101-2022
Statement: There is no need to have access to exit stairs in an open parking garage or in the lobby of the building that is at the exit discharge level.

Public Comment No. 115-NFPA 101-2022 [Section No. A.7.2.1.5.7(2)(c)]

A.7.2.1.5.7(2)(c)

The electrical locking hardware might be a component of an electrical locking system (e.g., an access control system), or the electrical locking hardware might be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Statement of Problem and Substantiation for Public Comment

The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]	

Related Item

• PI 278 • PC 114

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:25:39 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-6546-NFPA 101-2022

Statement: The revision accepts the recommendations in PC-114 and PC-115. It is noted that the PCs were accepted by the technical committee at its meeting; however, the revisions must be processed as Reject but See Related SR-6546 in order to keep the revised annex language associated with the base paragraph. The net result is identical to the intended action. Note that the first sentence of A.7.2.1.5.7(2)(c) is existing language and is erroneously displayed as new underlined text. The substantiations for PC-114 and PC-115 follow.

PC-114: The proposed revisions help clarify the door electrical locking hardware that is required to be listed for these electrical locking applications. In addition of adding the option to list to UL 1034 included in the First Revision, this proposal brings consistency in the text where UL 294 and UL 1034 are referenced in NFPA 101. The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these applications. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for this life-safety application.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101. This section of NFPA 101, Stair Enclosure Re-entry, first required listing of door locking hardware to UL

294 with the 2021 edition of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to help assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks, electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that some of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, the collateral listing to UL 1034 should have been the language included in NFPA 101 in the earlier editions.

PC-115: The additions of the Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Public Comment No. 117-NFPA 101-2022 [New Section after A.7.2.1.6.1.1(4)]

A.7.2.1.6.1.1(6)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Statement of Problem and Substantiation for Public Comment

The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]	

Related Item

• PI 279

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:50:22 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6547-NFPA 101-2022
Statement: The revision accepts the recommendations in PC-116, PC-117, PC-118, PC-119, and PC-120. It is noted that the PCs were accepted by the technical committee at its meeting; however, they must be processed as Reject but See Related SR-6547 to associate the new annex language with the base requirements. The net result is identical to that intended by the committee. The substantiations for the noted PCs follow.

PC-116: Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks,

electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

PC-117 through PC-120: The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Public Comment No. 118-NFPA 101-2022 [New Section after A.7.2.1.6.2]

A.7.2.1.6.2.1(8)

The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Statement of Problem and Substantiation for Public Comment

The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]	

Related Item

• PI 279

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:53:38 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-6547-NFPA 101-2022

Statement: The revision accepts the recommendations in PC-116, PC-117, PC-118, PC-119, and PC-120. It is noted that the PCs were accepted by the technical committee at its meeting; however, they must be processed as Reject but See Related SR-6547 to associate the new annex language with the base requirements. The net result is identical to that intended by the committee. The substantiations for the noted PCs follow.

PC-116: Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks,

electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

PC-117 through PC-120: The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Public Comment No. 71-NFPA 101-2022 [Section No. A.7.2.1.6.2]

A.7.2.1.6.2

—

~~Doors with a sensor-release electrical locking system are equipped with an electrical locking system that is released by a sensor activated by the normal motions of an occupant egressing through that door. The activation of the sensor to cause the electrical lock to release is usually by passive action by the occupant, such as walking to the door. A manual release device, such as a push-button switch that directly interrupts the power to the electrical lock, is required by item (3) as a backup. With most sensor-release electrical locking systems, the occupant might not notice the door is electrically locked in the direction of egress. Doors equipped with these locking systems provide unobstructed, immediate egress.~~

~~These provisions were previously titled "Access-Controlled Egress Door Assemblies" as these doors typically have some type of access control system, such as a key pad, card scanner, or fob scanner controlling access (ingress) into the building or space. Because access control systems can be installed on essentially any door, the previous title resulted in differing interpretations, applications, and enforcement of permitted locking systems, and they were retitled in the 2018 edition of the *Code*~~

.1 The sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.2.1(2) used to unlock the door upon occupant approach is typically mounted above the locked door in the direction of egress. The purpose of the contactless sensor referenced in 7.2.1.6.2.1(3) is to provide another manual option to the "PUSH TO EXIT" button that doesn't require physical contact and locate it within 60 inches of the door to unlock the doors in the event the sensor referenced in 7.2.1.6.1.2(1) and 7.2.1.6.2.1(2) fails.

A.7.2.1.6.2.1(3)(d). A wave-to-open sensor is an example of a contactless sensor.

A.7.2.1.6.2.1(3)(f). The contactless sensor needs to be independent of the sensor referenced in 7.2.1.6.2.1(1) and 7.2.1.6.2.1(2) in order to ensure both sensors can't fail simultaneously .

Statement of Problem and Substantiation for Public Comment

Add the text from the public comment to existing annex text as appropriate (i.e., do not delete any existing text, if that's what Terra View shows)

The use of contactless sensors to open doors is becoming more prevalent due to Covid and other concerns about the spread of infection, especially in health care settings. Contactless sensors (e.g., "wave to open" devices) can perform similarly to manual "push to exit" devices and should therefore be permitted as a substitute for "push to exit" devices, but only if they are listed to UL 294 and only if they are configured to be independent of the (overhead motion) sensors used to unlock the door upon occupant approach such that a single failure can't result in both types of sensors failing simultaneously.

To avoid confusion, annex material is added to discuss the differences between the existing (overhead motion) sensors used to unlock doors upon occupant approach and the proposed contactless sensors to unlock doors in the event the (overhead motion) sensors fail.

Related Item

• New text for 7.2.1.6.2.

Submitter Information Verification

Submitter Full Name: Joshua Elvove
Organization: Self
Street Address:
City:
State:
Zip:
Submittal Date: Fri Apr 15 00:49:10 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but held

Resolution: The proposed revision is new material. The related PC-70 on Ch. 7 was also held.

Public Comment No. 119-NFPA 101-2022 [New Section after A.7.2.1.6.3.1(5)]

A.7.2.1.6.3.1(6)

The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Statement of Problem and Substantiation for Public Comment

The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]	

Related Item

• PI 279

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:56:14 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-6547-NFPA 101-2022

Statement: The revision accepts the recommendations in PC-116, PC-117, PC-118, PC-119, and PC-120. It is noted that the PCs were accepted by the technical committee at its meeting; however, they must be processed as Reject but See Related SR-6547 to associate the new annex language with the base requirements. The net result is identical to that intended by the committee. The substantiations for the noted PCs follow.

PC-116: Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks,

electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

PC-117 through PC-120: The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Public Comment No. 120-NFPA 101-2022 [New Section after A.7.2.1.6.4]

A.7.2.1.6.4.1(1)
The electrical locking hardware may be a component of an electrical locking system, or the electrical locking hardware may be a device with an individual listing. Depending on the electrical locking hardware system or component, either UL 294 or UL 1034 is the pertinent standard for the required listing.

Statement of Problem and Substantiation for Public Comment

The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 116-NFPA 101-2022 [Section No. 7.2.1.6]	

Related Item

• PI 279

Submitter Information Verification

Submitter Full Name: John Woestman
Organization: Kellen Company
Affiliation: Builders Hardware Manufacturers Association (BHMA)
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 20 16:58:34 EDT 2022
Committee: SAF-MEA

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6547-NFPA 101-2022
Statement: The revision accepts the recommendations in PC-116, PC-117, PC-118, PC-119, and PC-120. It is noted that the PCs were accepted by the technical committee at its meeting; however, they must be processed as Reject but See Related SR-6547 to associate the new annex language with the base requirements. The net result is identical to that intended by the committee. The substantiations for the noted PCs follow.

PC-116: Because of implications to life safety with electrical locking systems potentially affecting egress on doors in the means of egress, it is prudent to require listing of door electrical locking hardware used in these special locking arrangements. Listing to either UL 294 or to UL 1034 appropriately revises this important listing requirement to help assure the electrical locking hardware performs as intended for these life-safety applications.

The Life Safety Code first required door hardware to be listed to UL 294 in the 2009 edition of NFPA 101 on elevator lobby exit access door assemblies. Special locking arrangements included the UL 294 listing requirement with the 2012 and 2018 editions of NFPA 101.

UL 294 and 1034 address efficacy and safety considerations for door access control applications (ingress control) to assure the door hardware and access control solutions would perform as intended and expected. Typically, access control systems incorporating card readers, keypads, iris scanners, etc. are tested and listed to UL 294. Additionally, delayed egress electrical locking systems, sensor-release electrical locking systems, and certain types of door hardware release electrical locking systems are all typically tested and listed to UL 294. On the other hand, components such as electromagnetic locks,

electric dead bolts, electric strikes, and other door electrically operated locking mechanisms are typically listed to UL 1034. UL 294 and UL 1034 are collateral standards that complement each other.

These examples illustrate that many of the same systems and components used to control access (ingress) to a space are also used for egress-side electrical locking systems. Considering that egress-side electrical locking systems have life safety implications, NFPA 101 was enhanced (in 2009) to require listing of electrical locking hardware to UL 294. In hindsight, what's proposed here – the collateral listing to UL 1034 – should have been the language included in NFPA 101 in the earlier editions.

In addition to the option to list to UL 1034, this proposal brings consistency in the text where UL 294 (and UL 1034) are referenced in NFPA 101. The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.

PC-117 through PC-120: The additions of Annex A text complement the revisions to the mandatory language of these special locking arrangements.