Public Comment No. 143-NFPA 101-2022 [New Section after 11.1.8]

11.1.9
Alcohol-Based-Hand-Rub Dispensers . .

The installation and maintenance of alcohol-based hand-rub dispensers and the storage of alcohol-based hand rub solutions in accordance with 8.7.3.3 shall be permitted.

Statement of Problem and Substantiation for Public Comment

To address the TC concerns the section number has been modified to reflect the correct desired section number for this change and provide guidance for storage and use of alcohol based hand sanitizer with a pointer to section 8.7.3.3 that was not addressed in this chapter previously.

This is a necessary change because, our current health situation with the latest viral outbreak has led to an increased need to install alcohol based hand sanitizer within many different types of occupancies and high-rise buildings have special risk factors associated with them and are often mixed-use occupancies. Adding this pointer is consistent with the actions taken in First Draft by other NFPA 101 TC's to provide uniformity throughout the standard by including a pointer to the requirements related to ABHR dispensers and storage of ABHR replacement solutions that are found in Section 8.7.3.3 of this code

Related Item

• PI 324

Submitter Information Verification

Submitter Full Name: Kelly Nicolello
Organization: UL LLC
Street Address:
City:
State:
Zip:
Submittal Date: Mon May 23 15:48:36 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected

Resolution: The allowance for the use, installation, and maintenance of ABHR should be with the individual occupancy, not based on the type of structure. Putting this in Chapter 11 could potentially introduce conflicts with the occupancy chapters.

Public Comment No. 11-NFPA 101-2022 [Section No. 11.11.2.1]

11.11.2.1

All tent fabric shall meet the flame propagation performance criteria contained in Test Method 2 of NFPA 701.

Additional Proposed Changes

File Name	Description	Approved
101_A2023_SAF_AAC_CCN_9.pdf	101_Correlating Note No. 9	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 9 appeared in the First Draft Report on First Revision No. 6739.
Clarify what is intended by "all new tent fabric." When is a tent/tent fabric new or existing? Based on manufacture date? Purchase date? Installation date? Also confirm the applicability of Ch. 16 of NFPA 701 to the requirement.

Related Item

• FR-6739

Submitter Information Verification

Submitter Full Name: CC ON SAF_AAC
Organization: NFPA
Street Address:
City:
State:
Zip:
Submittal Date: Thu Mar 17 14:14:12 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6612-NFPA 101-2022
Statement: This change is to clarify to the correlating committee what is considered new fabric.

In response to the correlating committee about the applicability of Chapter 16 of NFPA 701: Chapter 16 of NFPA 701 addresses the weathering requirements for tent fabrics. Chapter 16 of NFPA 701 is an optional section, however, it is important that NFPA 101 contains requirements that the fabrics have been assessed for weathering, to ensure that any flame retardant treatment is not easily washed away.

Correlating Committee Note No. 9-NFPA 101-2022 [New Section after 11.11.2.1]

Submitter Information Verification

Committee: SAF-AAC
Submittal Date: Mon Jan 17 15:05:15 EST 2022

Committee Statement and Meeting Notes

Committee Statement: Clarify what is intended by "all new tent fabric." When is a tent/tent fabric new or existing? Based on manufacture date? Purchase date? Installation date? Also confirm the applicability of Ch. 16 of NFPA 701 to the requirement.

First Revision No. 6739-NFPA 101-2021 [New Section after 11.11.2.1]

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. 6739-NFPA 101-2021 [New Section after 11.11.2.1]

11.11.2.2

All new tent fabric shall comply with the requirements of Chapter 16 of NFPA 701 .

Submitter Information Verification

Committee: SAF-IND
Submittal Date: Wed Aug 11 08:57:29 EDT 2021

Committee Statement and Meeting Notes

Committee Statement: This will ensure that all newly installed tent fabrics have been tested to Chapter 16 of 701. The PI was revised to make it applicable to only new fabric, so that it is not a

retroactive requirement.

Chapter 16 of NFPA 701, which addresses weathering requirements, is an optional section. However, it is important that the code contains a requirement that the fabrics have been assessed for weathering, to ensure that any flame retardant treatment is not easily washed away.

The committee also created CI-6686 and CI-6704 to consider and solicit public input on adding these requirements for other new fabric structures, including temporary and permanent membrane structures.

Response Message: FR-6739-NFPA 101-2021

Public Input No. 178-NFPA 101-2021 [Section No. 11.11.2]

Ballot Results

This item has passed ballot

28 Eligible Voters
5 Not Returned
23 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

Birchler, Donald C.

Dudley, Jeffry T.

Early, Rob

Fiorentini, Luca

McLaughlin, Patrick A.

Affirmative All

Al-Mannai, Ali

Butts, Chris L.

Connor, Michael

Culp, Christopher

Cummings, Ryan

Cusimano, Alberto

Dacus, Sheldon

Dale, Stephen E.

Dawe, Nicholas A.

Desrosier, John

Hanson, Robert E.

Humble, Jonathan

Kendzel, James

Klein, Andrew S.

Laberge, Todd

Lozano-Rosales, Roberto

Olsen, Brian L.

Pruett, Scot

Sajad Hussain, Raja

Sheldon, Steven A.

Skinker, Cleveland B.

Swiecicki, Bruce J.

White, Michael S.

Public Comment No. 135-NFPA 101-2022 [New Section after 40.2.5.3.2]

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.

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 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.

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

Related Item

• PI 358 • 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 18:29:23 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action:	Rejected
Resolution:	Related PC-125 and PC-126 adding this locking arrangement to Chapter 7 and associated definition were rejected by the Technical Committee on Means of Egress, therefore the requirements in the associated cross reference do not exist.

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

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

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

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

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

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

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

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

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. 198-NFPA 101-2022 [New Section after 40.3.4.3.4]

40.3.4.4 Carbon Monoxide Detection

40.3.4.4.1 New and existing industrial occupancies shall be provided with carbon monoxide detection and warning equipment in accordance with Section 9.12 in the locations specified as follows:

(1) On the ceilings of rooms containing permanently installed fuel-burning appliances or fuel-burning fireplaces

(2) Centrally located within occupiable spaces served by the first supply air register from permanently installed fuel-burning HVAC systems

(3)* Centrally located within occupiable spaces adjacent to an attached garage

A.40.3.4.4.1(3) The intent is to require CO detectors in occupiable spaces immediately adjacent, vertically or horizontally, to attached garages, regardless of the presence of openings between the garage and the adjacent occupiable spaces. Other occupiable spaces that are not adjacent to the attached garage do not require CO detectors.

40.3.4.4.2 Carbon monoxide detectors as specified in 40.3.4.4.1 shall not be required in the following locations:

(1) Garages

(2) Occupiable spaces with attached garages that are open parking structures as defined in 3.3.282.8.4

(3) Occupiable spaces with attached garages that are mechanically ventilated in accordance with the mechanical code

Statement of Problem and Substantiation for Public Comment

New and existing industrial occupancies currently lack requirements for CO detection in buildings with known CO hazards, including fuel-burning appliances. A CO source in any building that is not monitored by installed CO detection devices is a life safety hazard to occupants. Existing buildings arguably pose a higher risk of exposure due to aging gas appliances and ventilation systems. High level CO exposure carries the immediate risk of permanent brain injury and death. The addition of a requirement for CO detection for these occupancies will prevent deaths and injuries to occupants in the event of high level CO release within the building.

This public comment is submitted in support of committee action taken in the first revision phase to develop CO detection requirements for this occupancy chapter. The resubmission of the requirement that is currently in place for Chapter 12 is for example purpose only. If this proposed example is not considered adequate, the committee is urged to develop what it considers to be an adequate requirement. Similar action was taken by other 101 committees who created first revisions, committee input, or formed task groups to create CO detection requirements within their respective chapters (see page 7 of the Correlating Committee First Draft Meeting Minutes https://www.nfpa.org/assets/files/AboutTheCodes/101/101_A2023_SAF_AAC_FD_Minutes_1_22.pdf)

Please act to prevent further delay in getting this critical baseline life safety requirement in place to protect occupants of new and existing industrial occupancies.

“The lack of an operating alarm can be seen in several of these case studies. Carbon monoxide is colorless and odorless. Its early onset symptoms are not unique or severe, which leads to mistaking them for something else or thinking there is not a serious problem. These symptoms can quickly escalate to severe symptoms, which usually revolves around the victim becoming unconscious. People do not self-rescue when they are able, because they do not realize that they should. If someone does realize there is problem, it is most likely too late. This common sequence combined with CO’s toxicity, and a general negligence, makes CO a very dangerous problem that can happen almost anywhere. Detection is the only safeguard against this problem.”
https://www.nfpa.org/News-and-Research/Data-research-and-tools/Detection-and-Signaling/Carbon-Monoxide-Detection-and-Alarm-Requirements-Literature-Review

Related Item

• PI 291 CO Detection

Submitter Information Verification

Submitter Full Name: Kris Hauschildt
Organization: Jenkins Foundation
Street Address:

City:
State:
Zip:
Submittal Date: Sun May 29 16:25:02 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected

Resolution: The location of CO detectors should be in accordance with NFPA 72. Additionally, is not clear what is meant by “centrally located”.

Public Comment No. 110-NFPA 101-2022 [Section No. 40.3.5]

40.3.5 Extinguishment Requirements.

Where installed, new automatic sprinkler systems shall be in accordance with 9.7.1 and electrically supervised in accordance with 9 . 7.2.

Statement of Problem and Substantiation for Public Comment

Industrial and storage buildings are often built with special purpose exceptions. Building codes and the life safety code allow height and area exceptions because operations and processes often dictates construction that is unconventional. Storage and warehousing are allowed unlimited areas because they have fire sprinkler systems installed throughout. Often, these increases were allowed due to fire sprinkler systems.

Requiring electrical supervision for all initiating devices (tamper and waterflow) would not require full fire alarm systems to be installed for industrial and storage buildings. Only dedicated function systems are installed as is currently for waterflow switches.

Related Item

• FR 6673

Submitter Information Verification

Submitter Full Name: Jeffrey Hugo
Organization: National Fire Sprinkler Associ
Affiliation: NFSA
Street Address:
City:
State:
Zip:
Submittal Date: Wed May 18 13:36:00 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-6613-NFPA 101-2022
Statement: The committee agrees that where sprinklers systems are installed voluntarily, such as for property protection, that there should be no difference from such an installation to where they are required or mandatory in other provisions in order to ensure fire and life safety.

Public Comment No. 194-NFPA 101-2022 [Section No. 40.3.5]

40.3.5 Extinguishment Requirements.

40.3.5.1 Where installed, automatic sprinkler systems shall be in accordance with 9.7.1.

40.3.5.2 Portable fire extinguishers shall be provided in accordance with Section 9.9.

Statement of Problem and Substantiation for Public Comment

To avoid addressing fires in their earliest stages is counter-intuitive, and studies have shown that people will almost always attempt to extinguish a fire if it's small and they believe they can mitigate the hazard. Thus, it is important to give the public the intelligently designed and placed tools intended for their use and not the necessarily firefighters. If a fire extinguisher is not available, people have (and will continue to) use makeshift means to try to extinguish the fire, which is far less safe than using a portable extinguisher that is designed for safe and effective use by novices. (Ref: An Evaluation of the Role of Fire Extinguishers by David Wales)

The Technical Committee should note that by adding this requirement, the committee is not requiring an individual to stay in a building and fight a fire but, is providing an everyday tool for an individual to utilize in the event that a fire is discovered in its incipient stages and allows for the protection of not only life but also the preservation of property. A portable fire extinguisher is an item which allows for small fires to be tackled by members of the public and it is important to appreciate that while different to official assumptions, research shows the public's priorities and judgment for fight or flight are rational and appropriate.

Under the Scope of the Life Safety Code, Subsection 1.1.2 entitled, "Danger to Life form Fire," the Code states the following: "The Code addresses those construction, protection, and occupancy features necessary to minimize danger to life from the effects of fire, including smoke, heat, and toxic gases created during a fire." Further, it states in Subsection 1.1.4 entitled, "Other Fire-Related Considerations," the following: "The Code addresses other considerations that are essential to life safety in recognition of the fact that life safety is more than a matter of egress. The Code also addresses protective features and systems, building services, operating features, maintenance activities, and other provisions in recognition of the fact that achieving an acceptable degree of life safety depends on additional safeguards to provide adequate egress time or protection for people exposed to fire."

Studies of building fires indicate that occupants typically exhibit altruistic behavior toward others. Human response to a threatening situation might follow one of a variety of behaviors. Individuals might choose to investigate, sound an alarm, assist with rescue, seek help, or flee. Such actions constitute normal behavior, even when taken collectively. Most people avoid direct contact with a fire while undertaking another action.

There is a fundamental discrepancy between official/policy assumptions and the public in relation to priorities in the event of a fire. Government and professionals focus on avoiding injuries and see that as the sole aspiration, in the pursuit of which everything else is secondary. In contrast, the public have a wide and largely unrecognized range of priorities when encountering a fire, based on their individual circumstances. These include: the avoidance of embarrassment/inconvenience; mitigating the impact of damage to the property, e.g. avoiding the risk of being unable to remain in their place of business; and their concern for the wellbeing of other people. Each are invested by different aspirations in the fire safety ecosystem.

A desire to achieve their self-appointed tasks is a strong motivation for the public's behavior when encountering a fire. For most, this will involve an active response of on average five actions, although for some it will be as many as 11. This includes investigating the initial cues and tackling the fire, often using improvised means. They are usually successful in doing so, with 70% to 80% of fires dealt with by the public without requiring professional assistance. It is important to note that in doing so, they are willingly acting against official advice and are not being coerced into this. The evidence shows the public to be effective and capable in tackling fires, even in the absence of any professional support, or often without specialized equipment. This is supported by the pioneering studies of the public experience of dwelling fires undertaken by Bryan (1977) and Wood (1972) in the USA and UK, respectively. Their studies supported by their findings that the public did undertake a range of self-appointed tasks including investigating and tackling fires. Recent studies have confirmed similar findings and these behaviors appear consistent over time.

The evidence further identifies that the public is willing and will accept minor consequences in their pursuit of achieving personal humanistic priorities and instinct. Concern for people, pets and possessions are strong and established drivers of behavior in the event of a fire. Therefore, this should be no surprise to see it as an influential feature of most individual's response to a fire.

2013 NFPA Report: "U.S. Experience with Sprinklers" reports that there were 48,460 reported structure fires annually in buildings equipped with sprinkler systems between 2007-2011, and 40,440 (83 percent) never grew large enough to activate the system. Based on this report alone, it's clear that people are reacting to small fires and extinguishing them

prior to sprinkler activation. Limiting a fire to the smallest area within a building is a sensible aspiration.

A 2003 UK survey found that across all categories of location, extinguishers were successful in extinguishing 79.9% of fires. Note: Private houses accounted for only 3.3% of extinguisher use. It reported that 58.6% were operated by trained staff, 36.4% were operated by untrained staff and in 5% of incidents, this was unknown.

Data from the National Association of Fire Equipment Distributors (NAFED) provides even more robust validation of the influence of fire extinguishers as used by 'ordinary civilians. Their research and data indicate, "Of 13,221 fire incidents reported, portable fire extinguishers successfully extinguished 12,505 fires (95%)." (NAFED 2010: 2) The combined results of the 34 years of data are based on the performance of 32,756 fire extinguishers used on 13,453 incidents.

Fortunately, most people encountering a fire will avoid any injury or will be exposed to a low, and often considered risk of a minor injury at worst. This is not a matter of luck but due to a combination of their own abilities and to the low level of risk presented by most fires individuals would choose to fight at the incipient stage. A 2015 study identified that there was a disconnect between the fire service/government and the public in terms of what they referred to as 'risk tolerance'. This was most evident in attitude to injuries. Official policy seems to place avoidance of any injury as its highest priority and assumes this to also be the public's main motivation and enough to dictate any response to the discovery of a fire. However, the same study found that almost all those who incurred a minor injury accepted it as a reasonable cost in relation to pursuing or achieving their personal priorities. Further, they stated, in hindsight, they would do the same again.

It should be noted that numerous every day and discretionary activities carry similar or higher levels of risk to those resulting from using an extinguisher. Do-It-Yourself and sport for example are frequently responsible for injuries or even fatalities. In response, the government and industry seek to help make products safer or provide advice. This is preferred to denying people the option to participate in either activity by withdrawing public access to tools or sports equipment. The benefits achieved by the public using extinguishers are significant, given the potential for a fire to otherwise lead to detrimental and life-changing outcomes. A low and calculated level of personal risk willingly accepted by an individual tackling a fire can avoid, or reduce, a much higher risk to others should they ignore the fire and allow it to develop. Where current guidance discourages the provision of extinguishers in public spaces, this policy is neither supported by the evidence or justifiable through a consensus from the public. Rather it is imposed on them and is inconsistent with other approaches to public health.

The fire service's response time to structure fires has increased significantly over the past 25 years for several reasons like traffic, infrastructures, and lately staffing. Hence, the ability for the early interventions of the public are likely to be the most significant determinant of the outcome of a fire event. Most people do respond appropriately, and the literature confirms that they do not panic. Typically, most people are at risk of a minor injury at worst, due to the low risk from the fire and their own ability to assess and act in accordance with the situation.

A significant amount of data has been collected to support the requirement for portable extinguishers, including: WPI/EKU Study: "Ordinary People and the Effective Operation of Fire Extinguishers", which clearly showed that the vast majority of people who have never used an extinguisher can operate one safely and effectively. This willingness of the public to accept minor injuries to protect individuals, the facility or their personal property is supported by literature and data and shows these to be well established behaviors which policy makers need to work with, rather than against. Reflecting official policy, national and local fire safety messaging has, for some time, urged the public, on discovering a fire in the home, to "Get out, stay out", "Don't put yourself at risk" and 'Leave it to the professionals." This paternalistic messaging confirms the government policy makers and fire services' belief that a professional response is the only intervention capable of safely tackling fires. Again, this starkly contrasts with the reality that between 70% and 80% of dwelling fires are tackled effectively and at low risk, by the public. The policy also fails to accord with the public who have been shown to be tolerant, or accepting, of the incurrence of minor injuries in pursuit of their personal priorities.

Surveys from the National Association of Fire Equipment Distributors (NAFED) in America reveals the same trend of public firefighting, with even higher percentages not needing the fire service. "In both the 1979 and 1985 surveys, the fire department was only called for 13% of the reported fires. In the 1996 survey, the fire department was called in 24% of the reported fires. However, in the 2010 survey the number dropped to 17% of the time'. And 'These results are not unique to NAFED surveys. A 1978 publication by the U.S. Department of Commerce stated that about 90% of fires in households are not reported, based on their survey of 33,000 fires." (NAFED, 2010: 9)

The public are likely to encounter a fire that is relatively small and often contained to the item first ignited. They are often the ones present when fire starts. In summary, there is a significant difference between official assumptions/guidance and actual public behavior. However, the government and FRS seek to deter this behavior, and, in singularly promoting there, "Get out' message," and remove the simple yet potential life saving devices in sprinklered buildings.

A recent study also showed that the public do not just get out, with 49% never leaving the property during the fire. While this may surprise or concern many professionals, it is likely to be explained by a difference between the fire as perceived by professionals and the lived experience of the public. There is nothing to suggest that the public routinely take unnecessary risks. A more likely explanation is that the fire was small and not sufficiently well-developed to pose an imminent injury or life threat. As such, they were able to remain in the premises safely and relatively comfortably, which is supported by the evidence in relation to the majority of fires not spreading beyond the item first ignited or the room of origin. Inclement weather or other factors may also make remaining in the premises a safer or more comfortable option. Fires, like other emergencies, must also be understood in human terms.

The concept of trading off portable extinguishers in sprinklered buildings has been largely abandoned by fire protection principles. NFPA 10 states in subsection 5.1.2, “The selection of extinguishers shall be independent of whether the building is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment.” Other codes, and other occupancy chapters have abandoned this concept in recognition of the fact that portable extinguishers are a valuable, cost-effective layer of fire protection, and are intended for a different purpose than sprinklers. Recognition of the valuable role of extinguishers came from a 2003 report which concluded, ‘Fire extinguishers are designed to prevent relatively minor incidents becoming major conflagrations.’ It is, of course, difficult to prove how many and which fires would have developed to pose a serious risk if not tackled and contained early on. Events such as the Grenfell fire are a reminder of the consequences when this happens.

The National Fire Codes of both NFPA and the ICC require portable fire extinguishers in all occupancy classes including storage which addresses property protection and property loss as well as, the safety of the building occupants. Fire safety is grounded in the engineering discipline which brings many strengths to codes requirements, but it is insufficient, and fire safety effectiveness is limited by ignoring the social sciences of human behavior. It is important to appreciate that while different to official assumptions and desire for evacuation, research shows the public's priorities to be rational and appropriate. The public’s experience of fire is vastly different to that of the professionals involved in the planning for and responding to fire.

Official policy and attitudes of the Technical Committee are most singularly directed at avoiding the risk when the public encounters a fire. This is well meaning but the research has shown that this DOES NOT I REPEAT DOES NOT align with the publics’ attitude or the ability of the general public. The belief that ‘undesirable’ behavior can be changed by advice, campaigns or other measures has been shown to be inaccurate. The paternalistic approach by which government and the building safety regulatory sector seek to change human behavior by removing proven and effective appliances such as portable fire extinguishers is WRONG. However, the building safety regulatory sector continue this approach despite the evidence that public behaviors are safe, effective, and largely unaltered by current guidance and campaigns rather than providing appropriate safety devices for use by the public. A portable fire extinguisher is an effective item of fire protection which allows for small fires to be tackled by the occupants of a building and saves 100s of thousands of dollars in property loss.

Concerns have been indicted regarding the requirement for training. Training in the use of extinguishers is an important issue and one in which opinion appears more influential than the evidence. Whether purchased for a private dwelling or provided through regulatory processes, there is no mandatory requirement for training to use an extinguisher, and studies do not reveal training to be a requirement for their safe or effective use. In fact, the available data and studies demonstrate the opposite to be the case.

The Technical Committee should also note that portable fire extinguishers are designed for the novice user. Although, training is recommended for proper use and technique and is wide available through a variety of resources including at online training; there are no specified training requirements even under OSHA unless that is an assigned duty employee by the employer. The proposed requirement is intended as a provision for layered fire protection for the general public and employees for general safety.

Although there is limited data available related to extinguisher use since the removal of portable fire extinguishers in the NIFRS data field, there is little to no data supporting the removal of portable fire extinguishers and sole reliance on building fire sprinkler systems. Limiting a fire to the smallest area within a building is a sensible aspiration.

Cost has been another point of contention. A study by Richard Bukowski in 2014, the life cycle cost of portable fire extinguishers was determined to be between one and a half and four cents per foot annually; if coverage could be maximized to that allowable by code, the cost drops to between a half cent and one cent per foot annually. It’s unlikely that any other layer of fire protection is so cost-effective.

To avoid addressing fires in their earliest stages is counter-intuitive, and studies have shown that people will almost always attempt to extinguish a fire if it’s small and they believe they can mitigate the hazard. Thus, it is important to give the public the intelligently designed and placed tools intended for their use and not the necessarily firefighters. If a fire extinguisher is not available, people have (and will continue to) use makeshift means to try to extinguish the fire, which is far less safe than using a portable extinguisher that is designed for safe and effective use by novices. (Ref: An Evaluation of the Role of Fire Extinguishers by David Wales)

The Technical Committee should note that by adding this requirement, the committee is not requiring an individual to stay in a building and fight a fire but, is providing an everyday tool for an individual to utilize in the event that a fire is discovered in its incipient stages and allows for the protection of not only life but also the preservation of property. A portable fire extinguisher is an item which allows for small fires to be tackled by members of the public and it is important to appreciate that while different to official assumptions, research shows the public’s priorities and judgment for fight or flight are rational and appropriate.

Related Item

- Public Input No. 362-NFPA 101-2021

Submitter Information Verification

Submitter Full Name:	Marvin Garriss
Organization:	Synergy Consortium Group, LLC
Affiliation:	The National Association of State Fire Marshals, The International Fire Marshal's Association - Georgia Chapter / The Georgia Fire Prevention Association and Fire Equipment Manufacturers' Association
Street Address:	
City:	
State:	
Zip:	
Submittal Date:	Sat May 28 18:37:39 EDT 2022
Committee:	SAF-IND

Committee Statement

Committee Action:	Rejected
Resolution:	Requirements for portable fire extinguishers should not be in NFPA 101 as they are not life safety equipment, but should be in building and fire codes. Additionally, this PC does not include any requirements for training of staff on the use of portable fire extinguishers.

Public Comment No. 195-NFPA 101-2022 [Section No. 40.3.5]

40.3.5 Extinguishment Requirements.

40.3.5.1 Where installed, automatic sprinkler systems shall be in accordance with 9.7.1.

40.3.5.2 Portable fire extinguishers shall be provided in accordance with Section 9.9, unless permitted by the following:

(1) Portable fire extinguishers shall be permitted to be located in staff locations only.

(2) Access to portable fire extinguishers shall be permitted to be locked.

Statement of Problem and Substantiation for Public Comment

To avoid addressing fires in their earliest stages is counter-intuitive, and studies have shown that people will almost always attempt to extinguish a fire if it's small and they believe they can mitigate the hazard. Thus, it is important to give the public the intelligently designed and placed tools intended for their use and not the necessarily firefighters. If a fire extinguisher is not available, people have (and will continue to) use makeshift means to try to extinguish the fire, which is far less safe than using a portable extinguisher that is designed for safe and effective use by novices. (Ref: An Evaluation of the Role of Fire Extinguishers by David Wales)

The Technical Committee should note that by adding this requirement, the committee is not requiring an individual to stay in a building and fight a fire but, is providing an everyday tool for an individual to utilize in the event that a fire is discovered in its incipient stages and allows for the protection of not only life but also the preservation of property. A portable fire extinguisher is an item which allows for small fires to be tackled by members of the public and it is important to appreciate that while different to official assumptions, research shows the public's priorities and judgment for fight or flight are rational and appropriate.

Under the Scope of the Life Safety Code, Subsection 1.1.2 entitled, "Danger to Life form Fire," the Code states the following: "The Code addresses those construction, protection, and occupancy features necessary to minimize danger to life from the effects of fire, including smoke, heat, and toxic gases created during a fire." Further, it states in Subsection 1.1.4 entitled, "Other Fire-Related Considerations," the following: "The Code addresses other considerations that are essential to life safety in recognition of the fact that life safety is more than a matter of egress. The Code also addresses protective features and systems, building services, operating features, maintenance activities, and other provisions in recognition of the fact that achieving an acceptable degree of life safety depends on additional safeguards to provide adequate egress time or protection for people exposed to fire."

Studies of building fires indicate that occupants typically exhibit altruistic behavior toward others. Human response to a threatening situation might follow one of a variety of behaviors. Individuals might choose to investigate, sound an alarm, assist with rescue, seek help, or flee. Such actions constitute normal behavior, even when taken collectively. Most people avoid direct contact with a fire while undertaking another action.

There is a fundamental discrepancy between official/policy assumptions and the public in relation to priorities in the event of a fire. Government and professionals focus on avoiding injuries and see that as the sole aspiration, in the pursuit of which everything else is secondary. In contrast, the public have a wide and largely unrecognized range of priorities when encountering a fire, based on their individual circumstances. These include: the avoidance of embarrassment/inconvenience; mitigating the impact of damage to the property, e.g. avoiding the risk of being unable to remain in their place of business; and their concern for the wellbeing of other people. Each are invested by different aspirations in the fire safety ecosystem.

A desire to achieve their self-appointed tasks is a strong motivation for the public's behavior when encountering a fire. For most, this will involve an active response of on average five actions, although for some it will be as many as 11. This includes investigating the initial cues and tackling the fire, often using improvised means. They are usually successful in doing so, with 70% to 80% of fires dealt with by the public without requiring professional assistance. It is important to note that in doing so, they are willingly acting against official advice and are not being coerced into this. The evidence shows the public to be effective and capable in tackling fires, even in the absence of any professional support, or often without specialized equipment. This is supported by the pioneering studies of the public experience of dwelling fires undertaken by Bryan (1977) and Wood (1972) in the USA and UK, respectively. Their studies supported by their findings that the public did undertake a range of self-appointed tasks including investigating and tackling fires. Recent studies have confirmed similar findings and these behaviors appear consistent over time.

The evidence further identifies that the public is willing and will accept minor consequences in their pursuit of achieving personal humanistic priorities and instinct. Concern for people, pets and possessions are strong and established drivers of behavior in the event of a fire. Therefore, this should be no surprise to see it as an influential feature of most individual's response to a fire.

2013 NFPA Report: “U.S. Experience with Sprinklers” reports that there were 48,460 reported structure fires annually in buildings equipped with sprinkler systems between 2007-2011, and 40,440 (83 percent) never grew large enough to activate the system. Based on this report alone, it’s clear that people are reacting to small fires and extinguishing them prior to sprinkler activation. Limiting a fire to the smallest area within a building is a sensible aspiration.

A 2003 UK survey found that across all categories of location, extinguishers were successful in extinguishing 79.9% of fires. Note: Private houses accounted for only 3.3% of extinguisher use. It reported that 58.6% were operated by trained staff, 36.4% were operated by untrained staff and in 5% of incidents, this was unknown.

Data from the National Association of Fire Equipment Distributors (NAFED) provides even more robust validation of the influence of fire extinguishers as used by ‘ordinary civilians. Their research and data indicate, “Of 13,221 fire incidents reported, portable fire extinguishers successfully extinguished 12,505 fires (95%).” (NAFED 2010: 2) The combined results of the 34 years of data are based on the performance of 32,756 fire extinguishers used on 13,453 incidents.

Fortunately, most people encountering a fire will avoid any injury or will be exposed to a low, and often considered risk of a minor injury at worst. This is not a matter of luck but due to a combination of their own abilities and to the low level of risk presented by most fires individuals would choose to fight at the incipient stage. A 2015 study identified that there was a disconnect between the fire service/government and the public in terms of what they referred to as ‘risk tolerance’. This was most evident in attitude to injuries. Official policy seems to place avoidance of any injury as its highest priority and assumes this to also be the public’s main motivation and enough to dictate any response to the discovery of a fire. However, the same study found that almost all those who incurred a minor injury accepted it as a reasonable cost in relation to pursuing or achieving their personal priorities. Further, they stated, in hindsight, they would do the same again.

It should be noted that numerous every day and discretionary activities carry similar or higher levels of risk to those resulting from using an extinguisher. Do-It-Yourself and sport for example are frequently responsible for injuries or even fatalities. In response, the government and industry seek to help make products safer or provide advice. This is preferred to denying people the option to participate in either activity by withdrawing public access to tools or sports equipment. The benefits achieved by the public using extinguishers are significant, given the potential for a fire to otherwise lead to detrimental and life-changing outcomes. A low and calculated level of personal risk willingly accepted by an individual tackling a fire can avoid, or reduce, a much higher risk to others should they ignore the fire and allow it to develop. Where current guidance discourages the provision of extinguishers in public spaces, this policy is neither supported by the evidence or justifiable through a consensus from the public. Rather it is imposed on them and is inconsistent with other approaches to public health.

The fire service’s response time to structure fires has increased significantly over the past 25 years for several reasons like traffic, infrastructures, and lately staffing. Hence, the ability for the early interventions of the public are likely to be the most significant determinant of the outcome of a fire event. Most people do respond appropriately, and the literature confirms that they do not panic. Typically, most people are at risk of a minor injury at worst, due to the low risk from the fire and their own ability to assess and act in accordance with the situation.

A significant amount of data has been collected to support the requirement for portable extinguishers, including: WPI/EKU Study: “Ordinary People and the Effective Operation of Fire Extinguishers”, which clearly showed that the vast majority of people who have never used an extinguisher can operate one safely and effectively. This willingness of the public to accept minor injuries to protect individuals, the facility or their personal property is supported by literature and data and shows these to be well established behaviors which policy makers need to work with, rather than against. Reflecting official policy, national and local fire safety messaging has, for some time, urged the public, on discovering a fire in the home, to “Get out, stay out”, “Don’t put yourself at risk” and ‘Leave it to the professionals.” This paternalistic messaging confirms the government policy makers and fire services’ belief that a professional response is the only intervention capable of safely tackling fires. Again, this starkly contrasts with the reality that between 70% and 80% of dwelling fires are tackled effectively and at low risk, by the public. The policy also fails to accord with the public who have been shown to be tolerant, or accepting, of the incurrence of minor injuries in pursuit of their personal priorities.

Surveys from the National Association of Fire Equipment Distributors (NAFED) in America reveals the same trend of public firefighting, with even higher percentages not needing the fire service. “In both the 1979 and 1985 surveys, the fire department was only called for 13% of the reported fires. In the 1996 survey, the fire department was called in 24% of the reported fires. However, in the 2010 survey the number dropped to 17% of the time’. And ‘These results are not unique to NAFED surveys. A 1978 publication by the U.S. Department of Commerce stated that about 90% of fires in households are not reported, based on their survey of 33,000 fires.” (NAFED, 2010: 9)

The public are likely to encounter a fire that is relatively small and often contained to the item first ignited. They are often the ones present when fire starts. In summary, there is a significant difference between official assumptions/guidance and actual public behavior. However, the government and FRS seek to deter this behavior, and, in singularly promoting there, “Get out’ message,” and remove the simple yet potential life saving devices in sprinklered buildings.

A recent study also showed that the public do not just get out, with 49% never leaving the property during the fire. While this may surprise or concern many professionals, it is likely to be explained by a difference between the fire as perceived by professionals and the lived experience of the public. There is nothing to suggest that the public routinely take unnecessary risks. A more likely explanation is that the fire was small and not sufficiently well-developed to pose an imminent injury or life threat. As such, they were able to remain in the premises safely and relatively comfortably, which is

supported by the evidence in relation to the majority of fires not spreading beyond the item first ignited or the room of origin. Inclement weather or other factors may also make remaining in the premises a safer or more comfortable option. Fires, like other emergencies, must also be understood in human terms.

The concept of trading off portable extinguishers in sprinklered buildings has been largely abandoned by fire protection principles. NFPA 10 states in subsection 5.1.2, “The selection of extinguishers shall be independent of whether the building is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment.” Other codes, and other occupancy chapters have abandoned this concept in recognition of the fact that portable extinguishers are a valuable, cost-effective layer of fire protection, and are intended for a different purpose than sprinklers. Recognition of the valuable role of extinguishers came from a 2003 report which concluded, ‘Fire extinguishers are designed to prevent relatively minor incidents becoming major conflagrations.’ It is, of course, difficult to prove how many and which fires would have developed to pose a serious risk if not tackled and contained early on. Events such as the Grenfell fire are a reminder of the consequences when this happens.

The National Fire Codes of both NFPA and the ICC require portable fire extinguishers in all occupancy classes including storage which addresses property protection and property loss as well as, the safety of the building occupants. Fire safety is grounded in the engineering discipline which brings many strengths to codes requirements, but it is insufficient, and fire safety effectiveness is limited by ignoring the social sciences of human behavior. It is important to appreciate that while different to official assumptions and desire for evacuation, research shows the public's priorities to be rational and appropriate. The public’s experience of fire is vastly different to that of the professionals involved in the planning for and responding to fire.

Official policy and attitudes of the Technical Committee are most singularly directed at avoiding the risk when the public encounters a fire. This is well meaning but the research has shown that this DOES NOT I REPEAT DOES NOT align with the publics’ attitude or the ability of the general public. The belief that ‘undesirable’ behavior can be changed by advice, campaigns or other measures has been shown to be inaccurate. The paternalistic approach by which government and the building safety regulatory sector seek to change human behavior by removing proven and effective appliances such as portable fire extinguishers is WRONG. However, the building safety regulatory sector continue this approach despite the evidence that public behaviors are safe, effective, and largely unaltered by current guidance and campaigns rather than providing appropriate safety devices for use by the public. A portable fire extinguisher is an effective item of fire protection which allows for small fires to be tackled by the occupants of a building and saves 100s of thousands of dollars in property loss.

Concerns have been indicted regarding the requirement for training. Training in the use of extinguishers is an important issue and one in which opinion appears more influential than the evidence. Whether purchased for a private dwelling or provided through regulatory processes, there is no mandatory requirement for training to use an extinguisher, and studies do not reveal training to be a requirement for their safe or effective use. In fact, the available data and studies demonstrate the opposite to be the case.

The Technical Committee should also note that portable fire extinguishers are designed for the novice user. Although, training is recommended for proper use and technique and is wide available through a variety of resources including at online training; there are no specified training requirements even under OSHA unless that is an assigned duty employee by the employer. The proposed requirement is intended as a provision for layered fire protection for the general public and employees for general safety.

Although there is limited data available related to extinguisher use since the removal of portable fire extinguishers in the NIFRS data field, there is little to no data supporting the removal of portable fire extinguishers and sole reliance on building fire sprinkler systems. Limiting a fire to the smallest area within a building is a sensible aspiration.

Cost has been another point of contention. A study by Richard Bukowski in 2014, the life cycle cost of portable fire extinguishers was determined to be between one and a half and four cents per foot annually; if coverage could be maximized to that allowable by code, the cost drops to between a half cent and one cent per foot annually. It’s unlikely that any other layer of fire protection is so cost-effective.

To avoid addressing fires in their earliest stages is counter-intuitive, and studies have shown that people will almost always attempt to extinguish a fire if it’s small and they believe they can mitigate the hazard. Thus, it is important to give the public the intelligently designed and placed tools intended for their use and not the necessarily firefighters. If a fire extinguisher is not available, people have (and will continue to) use makeshift means to try to extinguish the fire, which is far less safe than using a portable extinguisher that is designed for safe and effective use by novices. (Ref: An Evaluation of the Role of Fire Extinguishers by David Wales)

The Technical Committee should note that by adding this requirement, the committee is not requiring an individual to stay in a building and fight a fire but, is providing an everyday tool for an individual to utilize in the event that a fire is discovered in its incipient stages and allows for the protection of not only life but also the preservation of property. A portable fire extinguisher is an item which allows for small fires to be tackled by members of the public and it is important to appreciate that while different to official assumptions, research shows the public’s priorities and judgment for fight or flight are rational and appropriate.

This proposal is to provide for the Technical Committee the ability to at a minimum place the requirement for portable fire extinguishers into hazardous areas only or to be placed in locked cabinets.

Related Item

• Public Input No. 362-NFPA 101-2021

Submitter Information Verification

Submitter Full Name:	Marvin Garriss
Organization:	Synergy Consortium Group, LLC
Affiliation:	The National Association of State Fire Marshals, The International Fire Marshal's Association - Georgia Chapter / The Georgia Fire Prevention Association and Fire Equipment Manufacturers' Association
Street Address:	
City:	
State:	
Zip:	
Submittal Date:	Sat May 28 18:45:21 EDT 2022
Committee:	SAF-IND

Committee Statement

Committee Action:	Rejected
Resolution:	Requirements for portable fire extinguishers should not be in NFPA 101 as they are not life safety equipment, but should be in building and fire codes. Additionally, this PC does not include any requirements for training of staff on the use of portable fire extinguishers. Portable fire extinguishers are for use in the incipient phase of a fire. Locating portable fire extinguishers in industrial occupancies with high hazard contents at a distance away from the high hazard contents could pose a life safety hazard for personnel attempting to use the fire extinguisher.

Public Comment No. 231-NFPA 101-2022 [New Section after 40.7.2]

TITLE OF NEW CONTENT

40.7.3 Modular Rooms

40.7.3.1

Modular rooms installed in indoor locations shall comply with Section 10.7.

40.7.3.2*

Where provided in areas covered by an occupant notification system, the audible and visible signals shall extend into the interior of the modular room.

A.40.7.3.2

Extending the audible and visible signals into the interior does not necessarily mean additional devices need to be installed. Where occupant notification systems installed to serve the area where the modular booth is to be located provide the required audible and visible signals within the modular booth additional devices are not necessary. If the occupant notification systems installed to serve the area where the modular booth is to be located do not provide the required audible and visible signals, then additional devices would be required to be installed within the modular booth.

Statement of Problem and Substantiation for Public Comment

: The Committee Statement for the resolution of Public Input No. 313 stated that the committee was unclear if this proposed requirement applied to modular rooms that were being manufactured in the industrial occupancy. The requirements in this PC are intended to apply to modular rooms that are installed in an industrial facility such as a lactation booth, private office, or conference room. This public comment simplifies the intent of Public Input No. 313 that where modular rooms are installed in areas covered by an occupant notification system the audible and visible signals must extend into the interior of the modular room. This public comment uses similar language to that approved with FR-6632 that created a new Section 36.4.4.12, 36.4.4.12.1 and 36.4.4.12.2. A new Annex section was added to clarify that extending the audible and visible signals into the interior of the modular does not necessary require the installation of a device in the interior of the modular room.

Related Item

• PI 313

Submitter Information Verification

Submitter Full Name: Howard Hopper
Organization: UL LLC
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 17:30:28 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected

Resolution: This public comment does not address industrial processes occurring within modular rooms. The use of modular rooms for industrial processes introduces potential life safety hazards which are not addressed by the public comment not have been reviewed by the technical committee. The use of these spaces for office space or other uses can be addressed by utilizing the provisions for the applicable occupancy.

Public Comment No. 136-NFPA 101-2022 [New Section after 42.2.5]

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.

Statement of Problem and Substantiation for Public Comment

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 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.

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

Related Item

• PI 359 • 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 18:32:42 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected

Resolution: Related PC-125 and PC-126 adding this locking arrangement to Chapter 7 and associated definition were rejected by the Technical Committee on Means of Egress, therefore the requirements in the associated cross reference do not exist.

Public Comment No. 196-NFPA 101-2022 [Section No. 42.3.5]

42.3.5 Extinguishment Requirements.~~(Reserved)~~

Portable fire extinguishers shall be provided in accordance with Section 9.9

Statement of Problem and Substantiation for Public Comment

To avoid addressing fires in their earliest stages is counter-intuitive, and studies have shown that people will almost always attempt to extinguish a fire if it's small and they believe they can mitigate the hazard. Thus, it is important to give the public the intelligently designed and placed tools intended for their use and not the necessarily firefighters. If a fire extinguisher is not available, people have (and will continue to) use makeshift means to try to extinguish the fire, which is far less safe than using a portable extinguisher that is designed for safe and effective use by novices. (Ref: An Evaluation of the Role of Fire Extinguishers by David Wales)

The Technical Committee should note that by adding this requirement, the committee is not requiring an individual to stay in a building and fight a fire but, is providing an everyday tool for an individual to utilize in the event that a fire is discovered in its incipient stages and allows for the protection of not only life but also the preservation of property. A portable fire extinguisher is an item which allows for small fires to be tackled by members of the public and it is important to appreciate that while different to official assumptions, research shows the public's priorities and judgment for fight or flight are rational and appropriate.

Under the Scope of the Life Safety Code, Subsection 1.1.2 entitled, "Danger to Life form Fire," the Code states the following: "The Code addresses those construction, protection, and occupancy features necessary to minimize danger to life from the effects of fire, including smoke, heat, and toxic gases created during a fire." Further, it states in Subsection 1.1.4 entitled, "Other Fire-Related Considerations," the following: "The Code addresses other considerations that are essential to life safety in recognition of the fact that life safety is more than a matter of egress. The Code also addresses protective features and systems, building services, operating features, maintenance activities, and other provisions in recognition of the fact that achieving an acceptable degree of life safety depends on additional safeguards to provide adequate egress time or protection for people exposed to fire."

Studies of building fires indicate that occupants typically exhibit altruistic behavior toward others. Human response to a threatening situation might follow one of a variety of behaviors. Individuals might choose to investigate, sound an alarm, assist with rescue, seek help, or flee. Such actions constitute normal behavior, even when taken collectively. Most people avoid direct contact with a fire while undertaking another action.

There is a fundamental discrepancy between official/policy assumptions and the public in relation to priorities in the event of a fire. Government and professionals focus on avoiding injuries and see that as the sole aspiration, in the pursuit of which everything else is secondary. In contrast, the public have a wide and largely unrecognized range of priorities when encountering a fire, based on their individual circumstances. These include: the avoidance of embarrassment/inconvenience; mitigating the impact of damage to the property, e.g. avoiding the risk of being unable to remain in their place of business; and their concern for the wellbeing of other people. Each are invested by different aspirations in the fire safety ecosystem.

A desire to achieve their self-appointed tasks is a strong motivation for the public's behavior when encountering a fire. For most, this will involve an active response of on average five actions, although for some it will be as many as 11. This includes investigating the initial cues and tackling the fire, often using improvised means. They are usually successful in doing so, with 70% to 80% of fires dealt with by the public without requiring professional assistance. It is important to note that in doing so, they are willingly acting against official advice and are not being coerced into this. The evidence shows the public to be effective and capable in tackling fires, even in the absence of any professional support, or often without specialized equipment. This is supported by the pioneering studies of the public experience of dwelling fires undertaken by Bryan (1977) and Wood (1972) in the USA and UK, respectively. Their studies supported by their findings that the public did undertake a range of self-appointed tasks including investigating and tackling fires. Recent studies have confirmed similar findings and these behaviors appear consistent over time.

The evidence further identifies that the public is willing and will accept minor consequences in their pursuit of achieving personal humanistic priorities and instinct. Concern for people, pets and possessions are strong and established drivers of behavior in the event of a fire. Therefore, this should be no surprise to see it as an influential feature of most individual's response to a fire.

2013 NFPA Report: "U.S. Experience with Sprinklers" reports that there were 48,460 reported structure fires annually in buildings equipped with sprinkler systems between 2007-2011, and 40,440 (83 percent) never grew large enough to activate the system. Based on this report alone, it's clear that people are reacting to small fires and extinguishing them prior to sprinkler activation. Limiting a fire to the smallest area within a building is a sensible aspiration.

A 2003 UK survey found that across all categories of location, extinguishers were successful in extinguishing 79.9% of fires. Note: Private houses accounted for only 3.3% of extinguisher use. It reported that 58.6% were operated by trained staff, 36.4% were operated by untrained staff and in 5% of incidents, this was unknown.

Data from the National Association of Fire Equipment Distributors (NAFED) provides even more robust validation of the influence of fire extinguishers as used by 'ordinary civilians. Their research and data indicate, "Of 13,221 fire incidents reported, portable fire extinguishers successfully extinguished 12,505 fires (95%)." (NAFED 2010: 2) The combined results of the 34 years of data are based on the performance of 32,756 fire extinguishers used on 13,453 incidents.

Fortunately, most people encountering a fire will avoid any injury or will be exposed to a low, and often considered risk of a minor injury at worst. This is not a matter of luck but due to a combination of their own abilities and to the low level of risk presented by most fires individuals would choose to fight at the incipient stage. A 2015 study identified that there was a disconnect between the fire service/government and the public in terms of what they referred to as 'risk tolerance'. This was most evident in attitude to injuries. Official policy seems to place avoidance of any injury as its highest priority and assumes this to also be the public's main motivation and enough to dictate any response to the discovery of a fire. However, the same study found that almost all those who incurred a minor injury accepted it as a reasonable cost in relation to pursuing or achieving their personal priorities. Further, they stated, in hindsight, they would do the same again.

It should be noted that numerous every day and discretionary activities carry similar or higher levels of risk to those resulting from using an extinguisher. Do-It-Yourself and sport for example are frequently responsible for injuries or even fatalities. In response, the government and industry seek to help make products safer or provide advice. This is preferred to denying people the option to participate in either activity by withdrawing public access to tools or sports equipment. The benefits achieved by the public using extinguishers are significant, given the potential for a fire to otherwise lead to detrimental and life-changing outcomes. A low and calculated level of personal risk willingly accepted by an individual tackling a fire can avoid, or reduce, a much higher risk to others should they ignore the fire and allow it to develop. Where current guidance discourages the provision of extinguishers in public spaces, this policy is neither supported by the evidence or justifiable through a consensus from the public. Rather it is imposed on them and is inconsistent with other approaches to public health.

The fire service's response time to structure fires has increased significantly over the past 25 years for several reasons like traffic, infrastructures, and lately staffing. Hence, the ability for the early interventions of the public are likely to be the most significant determinant of the outcome of a fire event. Most people do respond appropriately, and the literature confirms that they do not panic. Typically, most people are at risk of a minor injury at worst, due to the low risk from the fire and their own ability to assess and act in accordance with the situation.

A significant amount of data has been collected to support the requirement for portable extinguishers, including: WPI/EKU Study: "Ordinary People and the Effective Operation of Fire Extinguishers", which clearly showed that the vast majority of people who have never used an extinguisher can operate one safely and effectively. This willingness of the public to accept minor injuries to protect individuals, the facility or their personal property is supported by literature and data and shows these to be well established behaviors which policy makers need to work with, rather than against. Reflecting official policy, national and local fire safety messaging has, for some time, urged the public, on discovering a fire in the home, to "Get out, stay out", "Don't put yourself at risk" and 'Leave it to the professionals." This paternalistic messaging confirms the government policy makers and fire services' belief that a professional response is the only intervention capable of safely tackling fires. Again, this starkly contrasts with the reality that between 70% and 80% of dwelling fires are tackled effectively and at low risk, by the public. The policy also fails to accord with the public who have been shown to be tolerant, or accepting, of the incurrence of minor injuries in pursuit of their personal priorities.

Surveys from the National Association of Fire Equipment Distributors (NAFED) in America reveals the same trend of public firefighting, with even higher percentages not needing the fire service. "In both the 1979 and 1985 surveys, the fire department was only called for 13% of the reported fires. In the 1996 survey, the fire department was called in 24% of the reported fires. However, in the 2010 survey the number dropped to 17% of the time'. And 'These results are not unique to NAFED surveys. A 1978 publication by the U.S. Department of Commerce stated that about 90% of fires in households are not reported, based on their survey of 33,000 fires." (NAFED, 2010: 9)

The public are likely to encounter a fire that is relatively small and often contained to the item first ignited. They are often the ones present when fire starts. In summary, there is a significant difference between official assumptions/guidance and actual public behavior. However, the government and FRS seek to deter this behavior, and, in singularly promoting there, "Get out' message," and remove the simple yet potential life saving devices in sprinklered buildings.

A recent study also showed that the public do not just get out, with 49% never leaving the property during the fire. While this may surprise or concern many professionals, it is likely to be explained by a difference between the fire as perceived by professionals and the lived experience of the public. There is nothing to suggest that the public routinely take unnecessary risks. A more likely explanation is that the fire was small and not sufficiently well-developed to pose an imminent injury or life threat. As such, they were able to remain in the premises safely and relatively comfortably, which is supported by the evidence in relation to the majority of fires not spreading beyond the item first ignited or the room of origin. Inclement weather or other factors may also make remaining in the premises a safer or more comfortable option. Fires, like other emergencies, must also be understood in human terms.

The concept of trading off portable extinguishers in sprinklered buildings has been largely abandoned by fire protection

principles. NFPA 10 states in subsection 5.1.2, “The selection of extinguishers shall be independent of whether the building is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment.” Other codes, and other occupancy chapters have abandoned this concept in recognition of the fact that portable extinguishers are a valuable, cost-effective layer of fire protection, and are intended for a different purpose than sprinklers. Recognition of the valuable role of extinguishers came from a 2003 report which concluded, ‘Fire extinguishers are designed to prevent relatively minor incidents becoming major conflagrations.’ It is, of course, difficult to prove how many and which fires would have developed to pose a serious risk if not tackled and contained early on. Events such as the Grenfell fire are a reminder of the consequences when this happens.

The National Fire Codes of both NFPA and the ICC require portable fire extinguishers in all occupancy classes including storage which addresses property protection and property loss as well as, the safety of the building occupants. Fire safety is grounded in the engineering discipline which brings many strengths to codes requirements, but it is insufficient, and fire safety effectiveness is limited by ignoring the social sciences of human behavior. It is important to appreciate that while different to official assumptions and desire for evacuation, research shows the public's priorities to be rational and appropriate. The public’s experience of fire is vastly different to that of the professionals involved in the planning for and responding to fire.

Official policy and attitudes of the Technical Committee are most singularly directed at avoiding the risk when the public encounters a fire. This is well meaning but the research has shown that this DOES NOT I REPEAT DOES NOT align with the publics’ attitude or the ability of the general public. The belief that ‘undesirable’ behavior can be changed by advice, campaigns or other measures has been shown to be inaccurate. The paternalistic approach by which government and the building safety regulatory sector seek to change human behavior by removing proven and effective appliances such as portable fire extinguishers is WRONG. However, the building safety regulatory sector continue this approach despite the evidence that public behaviors are safe, effective, and largely unaltered by current guidance and campaigns rather than providing appropriate safety devices for use by the public. A portable fire extinguisher is an effective item of fire protection which allows for small fires to be tackled by the occupants of a building and saves 100s of thousands of dollars in property loss.

Concerns have been indicted regarding the requirement for training. Training in the use of extinguishers is an important issue and one in which opinion appears more influential than the evidence. Whether purchased for a private dwelling or provided through regulatory processes, there is no mandatory requirement for training to use an extinguisher, and studies do not reveal training to be a requirement for their safe or effective use. In fact, the available data and studies demonstrate the opposite to be the case.

The Technical Committee should also note that portable fire extinguishers are designed for the novice user. Although, training is recommended for proper use and technique and is wide available through a variety of resources including at online training; there are no specified training requirements even under OSHA unless that is an assigned duty employee by the employer. The proposed requirement is intended as a provision for layered fire protection for the general public and employees for general safety.

Although there is limited data available related to extinguisher use since the removal of portable fire extinguishers in the NIFRS data field, there is little to no data supporting the removal of portable fire extinguishers and sole reliance on building fire sprinkler systems. Limiting a fire to the smallest area within a building is a sensible aspiration.

Cost has been another point of contention. A study by Richard Bukowski in 2014, the life cycle cost of portable fire extinguishers was determined to be between one and a half and four cents per foot annually; if coverage could be maximized to that allowable by code, the cost drops to between a half cent and one cent per foot annually. It’s unlikely that any other layer of fire protection is so cost-effective.

To avoid addressing fires in their earliest stages is counter-intuitive, and studies have shown that people will almost always attempt to extinguish a fire if it’s small and they believe they can mitigate the hazard. Thus, it is important to give the public the intelligently designed and placed tools intended for their use and not the necessarily firefighters. If a fire extinguisher is not available, people have (and will continue to) use makeshift means to try to extinguish the fire, which is far less safe than using a portable extinguisher that is designed for safe and effective use by novices. (Ref: An Evaluation of the Role of Fire Extinguishers by David Wales)

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Related Item

• Public Input No. 351-NFPA 101-2021

Submitter Information Verification

Submitter Full Marvin Garriss

Name:
Organization: Synergy Consortium Group, LLC
Affiliation: The National Association of State Fire Marshals, The International Fire Marshal's Association - Georgia Chapter / The Georgia Fire Prevention Association and Fire Equipment Manufacturers' Association
Street Address:
City:
State:
Zip:
Submittal Date: Sat May 28 18:55:25 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Rejected
Resolution: Requirements for portable fire extinguishers should not be in NFPA 101 as they are not life safety equipment, but should be in building and fire codes. Additionally, this PC does not include any requirements for training of staff on the use of portable fire extinguishers.

Public Comment No. 167-NFPA 101-2022 [Section No. 42.8.3.5]

42.8.3.5 Extinguishing Requirements. ~~(Reserved)~~

Automatic sprinkler systems shall be installed in all new parking structures.

Statement of Problem and Substantiation for Public Comment

This is to align with a change that was published in the 2023 edition of NFPA 88A, Section 6.4.1. The committee additionally clarified this only applies to new parking structures, as the scope of NFPA 88A is not retroactive to existing parking structures.

Related Item

• PI 382 • CI 6677

Submitter Information Verification

Submitter Full Name: Jeffrey Hugo
Organization: National Fire Sprinkler Association (NFSA)
Affiliation: NFSA
Street Address:
City:
State:
Zip:
Submittal Date: Fri May 27 10:45:03 EDT 2022
Committee: SAF-IND

Committee Statement

Committee Action: Accepted
Resolution: SR-6614-NFPA 101-2022
Statement: The addition of this text aligns with the NFPA Extract Policy in which when you extract portions of text you are to extract the entirety of that text. This section was previously reserved but brought in the new requirement due to a change in NFPA 88A. This change also correlates with a similar change in NFPA 5000.