



NATIONAL FIRE PROTECTION ASSOCIATION

The leading information and knowledge resource on fire, electrical and related hazards

AGENDA

NFPA Technical Committee on Building Construction (BLD-BLC)

NFPA 220, 221 and 5000 First Draft Meeting

Monday-Tuesday, July 23-24, 2018

Monday – 8:00-5:00 pm

Tuesday 8:00-12:00 pm

Minneapolis Marriott City Center - Minneapolis, Minnesota

1. **Call to order.** Call meeting to order by Chair Rick Day at 8:00 a.m. on July 23, 2018 at the Minneapolis Marriott City Center, Minneapolis, Minnesota.
2. **Introduction of committee members and guests.** For a current committee roster, see page 2.
3. **Approval of June 20, 2016 second draft meeting minutes.** See page 5.
4. **The process – staff PowerPoint presentation.** See page 8.
5. **Task Group Report on ASCE 7 2016 Edition Update.**
6. **Correlating committee minutes with direction for 2018 editions.** See page 25.
7. **NFPA 220 First Draft preparation.** For Public Input, see page 33.
8. **NFPA 221 First Draft preparation.** For Public Input, see page 42.
9. **NFPA 5000 First Draft preparation.** For Public Input, see page 63.
10. **Other business.**
11. **Future meetings.**
12. **Adjournment.**

Address List No Phone

06/26/2018
Valerie Ziavras
BLD-BLC

Building Construction

Building Code

Richard L. Day Chair Michigan State Fire Marshal's Office 207 Jackson Street Allegan, MI 49010-9156	E 08/17/2015 BLD-BLC	Nasser Ahmed Al Zeyara Principal Qatar Civil Defense 23 Alhilali St Alazizia Doha, 10180 Qatar	E 10/28/2014 BLD-BLC
Farid Alfawakhiri Principal American Iron and Steel Institute 380 Cottonwood Lane Naperville, IL 60540-5020 Alternate: Jonathan Humble	M 7/23/2008 BLD-BLC	David G. Bueche Principal Hoover Treated Wood Products 13768 West Asbury Circle Lakewood, CO 80228 Alternate: Joseph T. Holland	M 11/2/2006 BLD-BLC
Mark Chrisman Principal Henderson Engineers 8345 Lenexa Drive, Suite 300 Lenexa, KS 66214-1777	SE 08/03/2016 BLD-BLC	David S. Collins Principal The Preview Group, Inc. 632 Race Street Cincinnati, OH 45202 American Institute of Architects	SE 7/16/2003 BLD-BLC
Richard J. Davis Principal FM Global 1151 Boston-Providence Turnpike PO Box 9102 Norwood, MA 02062-9102	I 4/3/2003 BLD-BLC	Alan J. Dopart Principal Willis of New Jersey 150 John F. Kennedy Parkway Short Hills, NJ 07078	I 4/3/2003 BLD-BLC
David W. Frable Principal US General Services Administration Public Buildings Service 665 Green Meadow Lane Geneva, IL 60134	U 4/3/2003 BLD-BLC	Sam W. Francis Principal American Wood Council 1 Dutton Farm Lane West Grove, PA 19390 Alternate: Paul D. Coats	M 4/3/2003 BLD-BLC
James W. Gaut Principal Marriott Vacations Worldwide 11667 Acosta Avenue Orlando, FL 32836-8821	U 12/8/2015 BLD-BLC	Kurtis Grant Principal US Department of Health & Human Services Centers for Medicare & Medicaid Services Division of Survey and Certification 61 Forsyth Street SW, Suite 4T20 Atlanta, GA 30303-8909	E 04/08/2015 BLD-BLC
William J. Hall Principal Portland Cement Association 1040 Duprees Store Road Drakes Branch, VA 23937-2516	M 12/08/2015 BLD-BLC	Robert E. Hanson Principal Savannah River Nuclear Solutions 739 Turning Leaf Circle Augusta, GA 30909-6063 Alternate: Joseph Radford Sellers	U 12/08/2015 BLD-BLC

Address List No Phone

06/26/2018
Valerie Ziavras
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Building Construction

Building Code

Khaled Heiza Principal Monofia University 20 Salem Street Agouza Giza, Cairo, 11312 Egypt	SE 03/03/2014 BLD-BLC	Jeffrey M. Hugo Principal National Fire Sprinkler Association, Inc. 1088 West Borton Road Essexville, MI 48732-1541	M 7/26/2007 BLD-BLC
Aaron Johnson Principal Rural/Metro Corporation Specialty Fire Division @ Sikorsky Aircraft 285 SW Ridgecrest Drive Port St. Lucie, FL 34984	E 08/17/2015 BLD-BLC	James Tyler Johnson Principal Justice Institute of British Columbia 20078 Fraser Highway, 406 Langley, BC V3A 0J2 Canada	U 11/30/2016 BLD-BLC
Edward R. LaPine Principal JENSEN HUGHES 360 West 31st Street, Suite 900 New York, NY 10001	SE 10/29/2012 BLD-BLC	Kenneth Lowery Principal Verisk Analytics/Insurance Services Office, Inc. 1948 Greensferry Glen Lawrenceville, GA 30043-1603 Alternate: William Jeffrey Ivans	I 11/30/2016 BLD-BLC
Joe McElvaney Principal City of Phoenix Fire Department 150 South 12th street Phoenix, AZ 85034-2301	E 10/27/2005 BLD-BLC	Brad Schiffer Principal Brad Schiffer/Taxis, Inc. 520 Sugar Pine Lane Naples, FL 34108	SE 4/3/2003 BLD-BLC
Michael Schmeida Principal Gypsum Association 3730 Sharon-Copley Road Medina, OH 44256-9778 Alternate: Timothy Earl	M 12/08/2015 BLD-BLC	Joseph H. Versteeg Principal Versteeg Associates 86 University Drive Torrington, CT 06790 International Fire Marshals Association	E 10/27/2005 BLD-BLC
Peter J. Willse Principal Global Asset Protection Services, LLC 100 Constitution Plaza, 12th Floor Hartford, CT 06103	I 1/1/1988 BLD-BLC	Luke C. Woods Principal UL LLC 146 Nathaniel Drive Whitinsville, MA 01588-1070 Alternate: Richard N. Walke	RT 03/07/2013 BLD-BLC
Felix I. Zemel Principal Town Of Dover 5 Springdale Road Dover, MA 02030	SE 08/17/2017 BLD-BLC	James M. Dalton Voting Alternate Chicago Fire Department R.J. Quinn Fire Academy 558 West De Koven Street Chicago, IL 60607 International Association of Fire Fighters	L 07/29/2013 BLD-BLC

Address List No Phone

06/26/2018
Valerie Ziavras
BLD-BLC

Building Construction

Building Code

William E. Koffel	U 7/16/2003	Paul D. Coats	M 08/17/2015
Voting Alternate Koffel Associates, Inc. 8815 Centre Park Drive, Suite 200 Columbia, MD 21045-2107 Semiconductor Industry Association	BLD-BLC	Alternate American Wood Council 4695 Hannah Drive Rock Hill, SC 29732-9767 Principal: Sam W. Francis	BLD-BLC
Timothy Earl	M 08/17/2017	Joseph T. Holland	M 7/16/2003
Alternate GBH International 6862 Shallowford Way Portage, MI 49024 Gypsum Association Principal: Michael Schmeida	BLD-BLC	Alternate Hoover Treated Wood Products 1225 North Halifax Avenue Daytona Beach, FL 32118-3665 Principal: David G. Bueche	BLD-BLC
Jonathan Humble	M 7/23/2008	William Jeffrey Ivans	I 04/11/2018
Alternate American Iron and Steel Institute 45 South Main Street, Suite 312 West Hartford, CT 06107-2402 Principal: Farid Alfawakhiri	BLD-BLC	Alternate Verisk/Insurance Services Office 545 Washington Boulevard Jersey City, NJ 07310 Principal: Kenneth Lowery	BLD-BLC
Joseph Radford Sellers	U 08/17/2017	Richard N. Walke	RT 08/17/2015
Alternate Consolidated Nuclear Security 5607 Tennyson Drive Knoxville, TN 37909 Principal: Robert E. Hanson	BLD-BLC	Alternate UL LLC 333 Pfingsten Road Northbrook, IL 60062-2096 Principal: Luke C. Woods	BLD-BLC
Valerie Ziavras	7/27/2016		
Staff Liaison National Fire Protection Association (NFPA) One Batterymarch Park Quincy, MA 02169	BLD-BLC		



MINUTES
NFPA Technical Committee on
Building Construction
NFPA 220/221/5000 Second Draft Meeting

Monday, June 20, 2016
Hilton Fort Lauderdale Marina
Fort Lauderdale, Florida

1. **Call to order.** The meeting was called to order by Chair Renato Molina at 8:05 a.m. on June 20, 2016 at the Hilton Fort Lauderdale, Fort Lauderdale, FL.
2. **Introduction of committee members and guests.** Self-introductions were made by Committee Members and Guests.

TECHNICAL COMMITTEE MEMBERS PRESENT

NAME	COMPANY
Renato Molina, Chair	JENSEN HUGHES
Nasser Al Zeyara, Principal	Qatar Civil Defense
Richard Davis, Principal	FM Global
Victor Dubrowski, Principal	Code Consultants, Inc.
Sam Francis, Principal	American Wood Council
William Hall, Principal	Portland Cement Association
Joseph Holland, Principal	Hoover Treated Wood Products
Jeffrey Hugo, Principal	National Fire Sprinkler Association, Inc.
Aaron Johnson, Principal	Rural/Metro Corporation
Vickie Lovell, Principal	InterCode Incorporated Rep.: Fire Safe North America
Joseph Versteeg, Principal	Versteeg Associates Rep.: International Fire Marshals Association
David Bueche, Alt. to J. Holland	Hoover Treated Wood Products
Jonathan Humble, Alt. to F. Alfawakhiri	American Iron and Steel Institute
William Koffel, Alt. to D. Litton	Koffel Associates Inc. Rep.: Semiconductor Industry Association
Edward LaPine, Alt. to R. Battalora	JENSEN HUGHES
Brian O'Connor, NFPA Staff	National Fire Protection Association
Robert Solomon, Staff Liaison	National Fire Protection Association

TECHNICAL COMMITTEE MEMBERS NOT PRESENT
(NOT LISTED WHERE ALTERNATE ATTENDED)

NAME	COMPANY
David Collins, Principal	The Preview Group, Inc. Rep.: American Institute of Architects
Richard Day, Principal	Michigan State Fire Marshal's Office
Alan Dopart, Principal	Willis of New Jersey
Paul Ferro, Principal	Fire Department City of New York Rep.: International Association of Fire Fighters
David Frable, Principal	US General Services Administration
James Gaut, Principal	Marriott
Kurtis Grant, Principal	US Department of Health & Human Services
Robert Hanson, Principal	Savannah River Nuclear Solutions
Khaled Heiza, Principal	Monofia University
Joe McElvaney, Principal	City of Phoenix Fire Department
Thomas McKeon, Principal	Everest National Insurance
Brad Schiffer, Principal	Brad Schiffer/Taxis, Inc.
Robert Wessel, Principal	Gypsum Association
Peter Willse, Principal	Global Asset Protection Services
Luke Woods, Principal	UL LLC

GUESTS

NAME	COMPANY
Marcelo Hirschler	GBH International
Marshall Klein	Klein & Associates, Inc.
Brian O'Connor	National Fire Protection Association

3. **Approval of minutes.** The minutes of the July 28, 2015 First Draft meeting were approved with no modifications.
4. **The process – staff PowerPoint presentation.** Staff used the PowerPoint presentation included in the agenda to discuss the Second Draft phase of the codes and standards development process.
5. **Task Group Reports.**
 - a. Green Roof
 - b. Solar/PV Installation
 - Committee member Richard Davis provided an update on both (Green Roof, PV) for the current cycle. The criteria being proposed will have more of an impact on the chapters that are handled by the committee on structures construction and materials (SCM) and will be dealt with at their second draft meeting on June 21.
 - c. Tall Timber Structures. Committee member Joe Versteeg provided an update on this activity. Language has been proposed that would allow certain residential occupancies comprised of CLT to be constructed up to nine stories in height. (See second draft ballot package for proposed changes to chapter 7 of NFPA 5000). The group also was made aware of two projects from FPRF as well as an upcoming ICC ad hoc meeting on heavy timber structures that is scheduled for July 6-8, 2016 in Chicago.

- 6. NFPA 220 Second Draft preparation.** All public comments and committee inputs were addressed. Additional second revisions were developed as needed. See Second Draft ballot package and draft.
- 7. NFPA 221 Second Draft preparation.** All public comments and committee inputs were addressed. Additional second revisions were developed as needed. See Second Draft ballot package and draft.
- 8. NFPA 5000 Second Draft preparation.** All public comments and committee inputs were addressed. Additional second revisions were developed as needed. See Second Draft ballot package and draft. It was noted by staff that one or more global second revisions is appropriate also be developed to update the extracted text from other NFPA documents. This applies to NFPA 220, NFPA 221 and NFPA 5000.
- 9. Other business.**
 - a.** Several committee members noted some lingering problems with the NFPA Terra system-especially with respect to tables and numbered lists. Formatting in the tables is inadvertently revised and additional or excessive content in the numbered or lettered lists is underlined making it difficult to establish what exactly is being changed. NFPA is aware of these ongoing issues and we are working to improve the functionality of the system and these topics have previously been identified. Another member asked if in the future it may be possible to allow a cut-and-paste function to be developed so as to facilitate submission of public input and public comments. This information will be reinforced with the NFPA Terra team.
 - b.** ASCE 7, 2016 Edition. The American Society of Civil Engineers (ASCE) is working on the 2016 edition of their structural design standard, ASCE 7. The anticipated completion date new addition expected somewhere between September and December of 2016. Given the schedule for the rest of the revision cycle for NFPA 5000, the Correlating Committee of the Building Code is likely to recommend the creation of a task group when they meet for their second draft meeting in November of this year. The task group would be charged with reviewing the new addition of ASCE-7, and suggesting needed changes for the 2018 edition of NFPA 5000. The plan would be to develop a TIA that could be voted on by BLD-SCM, publicly reviewed and ideally issued concurrently with the new edition of the code in August 2017. It is suggested however that one or two members from BLD-BLC also participate on that task group. Dick Davis and Jonathan Humble agreed to participate as necessary.
- 10. Future meetings.** The next meeting of the Committee will be the First Draft meeting for development of the 2021 edition of NFPA 5000 (A-2020 revision cycle) to be held sometime in the summer of 2018.
- 11. Adjournment.** The meeting was adjourned by chair Renato Molina at 3:35 PM on June 20, 2016.



NFPA 101 & NFPA 5000 First Draft Meetings

Minneapolis Marriott City Center
Minneapolis, Minnesota

July 23-27, 2018 & August 20-23, 2018



IT'S A BIG WORLD. LET'S PROTECT IT TOGETHER.™

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NFPA First Draft Meeting

At this and all NFPA committee meetings, we are concerned with your safety.

If the fire alarm sounds, please egress the building.



NFPA First Draft Meeting

Members:

- Please verify/update your contact information on roster attached to sign-in list.
- Members categorized in any interest category who have been retained to represent the interests of ANOTHER interest category (with respect to issues addressed by the TC) shall declare those interests to the committee and refrain from voting on those issues throughout the process.



NFPA First Draft Meeting

Guests:

- All guests are required to sign in and identify their affiliations.
- Participation is limited to TC members or those individuals who have previously requested time to address the committee.
- Participation by other guests is permitted at the Chair's discretion.



NFPA First Draft Meeting

Members and Guests:

- Use of audio recorders or other means capable of reproducing verbatim transcriptions of this meeting is not permitted.



Annual 2020 Revision Cycle – Key Dates

- Public Input Stage (First Draft):
 - First Draft Meeting: **July 23-27 and August 20-23, 2018**
 - Posting of First Draft for Balloting Date: **before October 17, 2018**
 - Posting of First Draft for Public Comment: **February 27, 2019**
- Comment Stage (Second Draft):
 - Public Comment Closing Date: **May 8, 2019**
 - Second Draft Meeting Period: **TBD - June 1 to July 31, 2019**
 - Posting of Second Draft for Balloting Date: **September 11, 2019**
 - Posting of Second Draft for NITMAM: **January 22, 2020**
- Tech Session Preparation:
 - NITMAM Closing Date: **February 19, 2020**
 - NITMAM / CAM Posting Date: **April 1, 2020**
 - NFPA Technical Meeting: **June 17, 2020 (Orlando)**
- Standards Council Issuance:
 - Issuance of Documents with CAM: **August 14, 2020**



NFPA First Draft Meeting

Voting During the First Draft Meeting:

- Either Principal or Alternate can vote, not both.
- All Principals are encouraged to have an Alternate.
- Voting (simple majority) during meeting is used to establish a base position on First Revisions.
- Voting (simple majority) during meeting is also used to establish Public Input resolution responses and to create Committee Inputs.



NFPA First Draft Meeting

General Procedures:

- Follow Robert's Rules of Order
- Discussion requires a motion



NFPA First Draft Meeting

Committee Member Actions:

- Member addresses the chair.
- Receives recognition from the chair.
- Member introduces the motion.
- Another member seconds the motion.



NFPA First Draft Meeting

Committee Chair Actions:

- Restates the motion
- Calls for discussion
- Ensures all issues have been heard
- Calls for a vote
- Announces the vote result



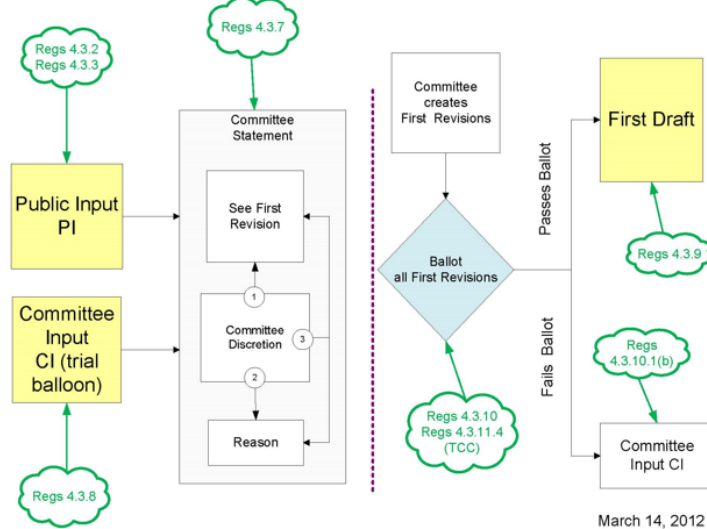
NFPA First Draft Meeting

Motion to End Debate, Previous Question, or to “Call the Question”

- Not in order when another member has the floor
- Requires a second
- Not debatable and DOES NOT automatically stop debate
- 2/3 affirmative vote immediately closes debate, returns to the original motion
- Less than 2/3 allows debate to continue



Standards Development Process – Input Stage Regs §4.3



NFPA First Draft Meeting

Committee Actions and Motions:

- Resolve Public Input (PI)
- Create a First Revision (FR)
- Create a Committee Input (CI) – a placeholder used to solicit Public Comments and permit further work at Second Draft stage



NFPA First Draft Meeting

Resolve a Public Input (PI):

- Committee develops a committee statement to respond to (i.e., resolve) a Public Input.
- Committee indicates in statement its reasons for not accepting the recommendation and/or points to a relevant First Revision.
- PI response does not get balloted.



NFPA First Draft Meeting

Create a First Revision (FR):

- FR is created to change current text or add new text.
- Committee statement is developed to substantiate the change.
- Associated PIs get a committee response, often simply referring to the relevant FR.
- Each FR gets balloted.



NFPA First Draft Meeting

Create a Committee Input (CI):

- Committee is not ready to incorporate a change into the First Draft but wants to receive Public Comment on a topic that can be revisited at Second Draft stage.
- Committee statement is developed to explain committee's intent.
- CI is not balloted.



NFPA First Draft Meeting

Committee Statements:

- All Public Input must receive a Committee Statement.
- A valid technical reason must be provided.
- Vague references to “intent” should not be used.
- Reasons for why the submitter’s substantiation is inadequate should be provided.
- A First Revision should be referenced if it addresses the intent of the submitter’s Public Input



NFPA First Draft Meeting

Formal Voting on First Revisions

- In-meeting votes establish a base committee position on the development of First Revisions (FRs).
- FRs are secured by electronic balloting ($\geq 2/3$ of completed ballots affirmative, and affirmative by $\geq 1/2$ voting members).
- Only the results of the electronic ballot determine the official position of the committee on the First Draft.



NFPA First Draft Meeting

Ballots:

- Only First Revisions (FR) are balloted
 - Public Inputs and Committee Statements not balloted
 - Reference materials are available
 - First Draft, PI, CI, and CS
- Voting options:
 - Affirmative on all FRs
 - Affirmative on all FRs with exceptions specifically noted
- Ballot provides option to vote affirmative with comment
- Vote to reject or abstain requires a reason



NFPA First Draft Meeting

Electronic Balloting:

- Ballot system is web-based.
- Alternates are encouraged to complete ballots.
- Ballot session will time out after 90 minutes.
- Use “submit” to save your work – ballots can be revised until the balloting period is closed.



NFPA First Draft Meeting

- Click link provided in ballot email.
- Sign in with NFPA.org username and password.

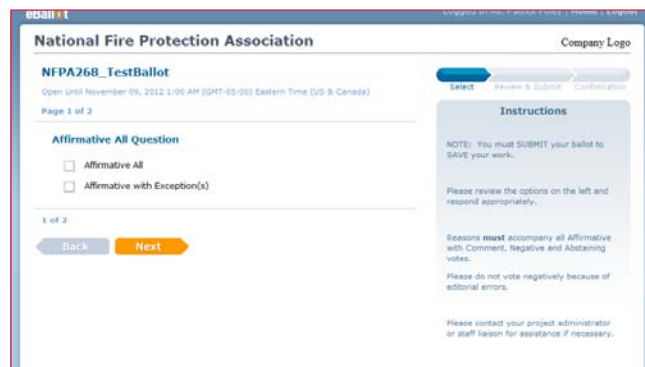


Title	Open until	Your Status	Action
70_A2016_NEC-P10_FDballot	April 01, 2015 11:59 PM (GMT-05:00) Eastern Time (US & Canada)	New	Start
70_NEC-P13_FD_Ballot_A16	April 01, 2015 11:59 PM (GMT-05:00) Eastern Time (US & Canada)	New	Start



NFPA First Draft Meeting

- Select either 'Affirmative All' or 'Affirmative with Exception(s)'.



NFPA268_TestBallot

Open until November 09, 2012 1:00 AM (GMT-05:00) Eastern Time (US & Canada)

Page 1 of 2

Affirmative All Question

Affirmative All

Affirmative with Exception(s)

1 of 2

[Back](#) [Next](#)

Instructions

NOTE: You must **SUBMIT** your ballot to **SAVE** your work.

Please review the options on the left and respond appropriately.

Reasons **must** accompany all Affirmative with Comment, Negative and Abstaining votes.

Please do not vote negatively because of editorial errors.

Please contact your project administrator or staff liaison for assistance if necessary.



NFPA First Draft Meeting

- Use “See FR- #” link to review all First Revisions.
- Use “edit election” to change individual votes or to modify vote after submitting ballot.

National Fire Protection Association

NFPA268_TestBallot

Open Until November 09, 2012 1:05 AM (GMT-05:00) Eastern Time (US & Canada)

Review your selections below

FR-2, New Section after 2.3.2, See FR-2
Affirmative

FR-4, Chapter 10, See FR-4
Affirmative

FR-6, Section No. 11.4, See FR-6
Affirmative

Participant Consent

By checking this box, you are electronically signing this form and verifying that you are the Committee member listed above.

Submit



NFPA First Draft Meeting

- Make selection:
Affirmative with Comment,
Negative, or Abstain
- No selection defaults to
affirmative
- Must include comment
(reason) on each vote
other than Affirmative

FR-4, Chapter 10, See FR-4

Affirmative with Comment

Negative

Abstain

Add Comments

FR-6, Section No. 11.4, See FR-6

Affirmative with Comment

Negative

Abstain

Add Comments

Next



NFPA First Draft Meeting

- To complete ballot, click 'Participant Consent and Submit'.
- Return to edit any votes by ballot due date.



The screenshot shows a web form titled "Participant Consent". Below the title is a checked checkbox followed by the text: "By checking this box, you are electronically signing this form and verifying that you are the Committee member listed above." At the bottom of the form is a green arrow-shaped button labeled "Submit".



NFPA First Draft Meeting

Balloting:

- Initial ballot
- Circulation of negatives and comments – electronic balloting re-opened to permit members to change votes
- Any First Revision that fails ballot becomes a Committee Input (CI)



Legal

Antitrust Matters:

- Must comply with state and federal antitrust laws
- Participants are to conduct themselves in strict accordance with these laws
- Read and understand NFPA's Antitrust Policy which can be accessed at nfpa.org/regs



Legal

Antitrust Matters (cont'd):

- Participants must avoid any conduct, conversation or agreement that would constitute an unreasonable restraint of trade
- Conversation topics that are off limits include:
 - Profit, margin, or cost data
 - Prices, rates, or fees
 - Selection, division or allocation of sales territories, markets or customers
 - Refusal to deal with a specific business entity



Legal

Antitrust Matters (cont'd):

- NFPA's standards development activities are based on openness, honesty, fairness and balance
- Participants must adhere to the *Regulations Governing the Development of NFPA Standards* and the *Guide for the Conduct of Participants in the NFPA Standards Development Process* which can be accessed at nfpa.org/regs
- Follow guidance and direction from your employer or other organization you may represent



Legal

Antitrust Matters (cont'd):

- Manner in which standards development activity is conducted can be important
- The *Guide of Conduct* requires standards development activity to be conducted with openness, honesty and in good faith
- Participants are not entitled to speak on behalf of NFPA
- Participants must take appropriate steps to ensure their statements, whether written or oral and regardless of the setting, are portrayed as personal opinions, not the position of NFPA
- Be sure to ask questions if you have them



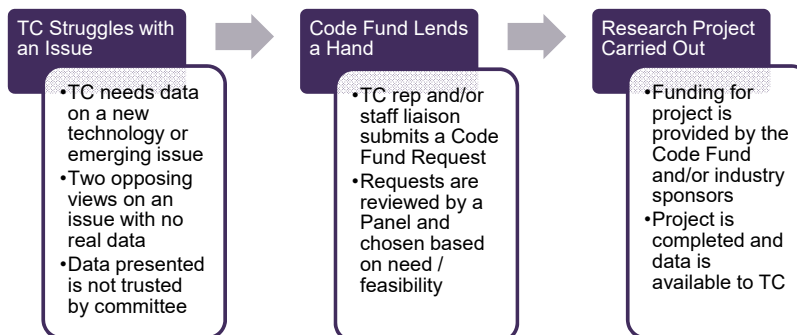
Legal

Patents:

- Disclosures of essential patent claims should be made by the patent holder
- Patent disclosures should be made early in the process
- Others may also notify NFPA if they believe that a proposed or existing NFPA standard includes an essential patent claim
- NFPA has adopted and follows ANSI's Patent Policy
- It is the obligation of each participant to read and understand NFPA's Patent Policy which can be accessed at nfpa.org/regs



THE FIRE PROTECTION RESEARCH FOUNDATION



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Document Information Pages

About	Current and Previous Editions	Next Edition	Technical Committee
<ul style="list-style-type: none">• Document scope• Table of contents• Articles• Research and statistical reports• Latest codes and standards news on NFPA Today blog feed• Free access	<ul style="list-style-type: none">• Issued TIAs, Fls, Errata• Archived revision information such as meeting and ballot information, First Draft Reports (previously ROPs), Second Draft Reports (previously ROCs), and Standards Council and NITMAM information	<ul style="list-style-type: none">• Revision cycle schedule• Posting & closing dates• Submit public input/comments via electronic submission system.• Meeting and ballot information• First Draft Report and Second Draft Report• NITMAM information• Standard Council Decisions• Private TC info (*red asterisk)• Ballot circulations, informational ballots and other committee info	<ul style="list-style-type: none">• Committee name and staff liaison• Committee scope and responsibility• Committee list with private information• Committee documents (codes & standards) in PDF format• Committees seeking members• Online committee membership application



Questions?

NFPA 101 & NFPA 5000 Document Information Pages

- www.nfpa.org/101
- www.nfpa.org/5000





NATIONAL FIRE PROTECTION ASSOCIATION

The leading information and knowledge resource on fire, electrical and related hazards

MINUTES

NFPA Correlating Committee on Building Code (BLD-AAC) NFPA Correlating Committee on Safety to Life (SAF-AAC) NFPA 101 & NFPA 5000 Pre-First Draft Joint Teleconference/Adobe-Connect Meeting April 5, 2018

- 1. Call to order.** The meeting was called to order by BLD-AAC Chair Peter Willse and SAF-AAC Chair Wayne “Chip” Carson at 1:00 p.m. (EDT) from NFPA Headquarters, Quincy, MA.
- 2. Attendance roll-call.** Staff called the roll of BLD-AAC and SAF-AAC and recorded the members who responded as being present.

The following members were in attendance:

NAME	REPRESENTING	BLD-AAC	SAF-AAC
Peter Willse	Global Asset Protection Services, LLC	Chair	
Wayne “Chip” Carson	Carson Associates, Inc.		Chair
Kenneth Bush	Maryland State Fire Marshal’s Office		Principal
Shane Clary	Bay Alarm Company Rep. Signaling Systems Correlating Committee		Non-Voting Alternate
David Frable	US General Services Administration	Principal	
Randy Gaw	DET-CORR Fire Safety Consulting Rep. TC on Detention and Correctional Occupancies	Non-Voting	Non-Voting
Joshua Greene	JENSEN HUGHES Rep. TC on Building Systems	Non-Voting	
Raymond Grill	Arup Rep. TC on Building Service and Fire Protection Equipment	Non-Voting	Non-Voting
Stanley Harbuck	School of Building Inspection Rep. American Public Health Association		Principal

John Harrington	FM Global	Principal	
Howard Hopper	UL LLC	Principal	Principal
Jeffrey Hugo	National Fire Sprinkler Association	Principal	Principal
Chris Jelenewicz	Society of Fire Protection Engineers Rep. TC on Fundamentals	Non-Voting	Non-Voting
Gerald Jones	Rep. Building Seismic Safety Council/Code Resource Support Committee	Principal	
Moriel Kaplan	JENSEN HUGHES Rep. TC on Structures, Construction, and Materials	Non-Voting	
William Koffel	Koffel Associates, Inc. Rep. TC on Health Care Occupancies	Non-Voting	Non-Voting
Josh Lambert	University of Texas at Austin Rep. TC on Assembly Occupancies	Non-Voting	Non-Voting
Scott Laramie	AON Property Risk Rep. American Hotel & Lodging Association	Alternate	
James Lathrop	Koffel Associates, Inc. Rep. TC on Residential Occupancies	Non-Voting	Non-Voting
Maria Marks	Siemens Industry, Inc. Rep. National Electrical Manufacturers Association		Alternate
Jake Pauls	Jake Pauls Consulting Services Rep. American Public Health Association	Alternate	Alternate
Ronald Reynolds	Virginia State Fire Marshal's Office Rep. International Fire Marshals Association		Principal
John Rickard	P3 Consulting Rep. TC on Board and Care Facilities	Non-Voting	Non-Voting
Richard Roberts	Honeywell Fire Safety Rep. National Electrical Manufacturers Association	Principal	
Eric Rosenbaum	JENSEN HUGHES Rep. American Health Care Association		Principal

Faimeen Shah	Vortex Fire Engineering Consultancy	Principal	
Leon Vinci	Health Promotion Consultants Rep. American Public Health Association	Principal	
Carl Wren	City of Austin Rep. TC on Industrial, Storage, and Miscellaneous Occupancies	Non-Voting	Non-Voting
Gregory Harrington	NFPA		Staff Liaison/Non-Voting Secretary
Robert Solomon	NFPA	Staff Liaison	

The following members were not in attendance (noted only where Alternate was not in attendance):

NAME	REPRESENTING	BLD-AAC	SAF-AAC
Tracey Bellamy	Telgian Corporation Rep. American Fire Sprinkler Association	Principal	
David Collins	The Preview Group Rep. TC on Means of Egress	Non-Voting	Non-Voting
Nicholas Dawe	Cobb County Fire Marshal's Office Rep. TC on Interior Finish & Contents	Non-Voting	Non-Voting
John Devlin	JENSEN HUGHES Rep. TC on Fire Protection Features	Non-Voting	Non-Voting
Sam Francis	American Wood Council	Principal	
Sharon Gilyeat	Koffel Associates, Inc.		Voting Alternate
Raymond Hansen	US Department of the Air Force	Principal	
Stephen Hrustich	Gwinnett County Fire & Emergency Services	Principal	
Jonathan Humble	American Iron and Steel Institute	Principal	
Amy Murdock	Code Consultants, Inc.	Non-Voting	Non-Voting

	Rep. TC on Mercantile & Business Occupancies		
Michael Newman	Johnson & Johnson Rep. NFPA Industrial Fire Protection Section	Principal	
James Quiter	Arup	Principal	Principal
Jerry Wooldridge	Reedy Creek Improvement District	Secretary	

The following guests were in attendance:

NAME	REPRESENTING
Martin Anderson	Siemens Building Technologies, Inc.
Charles Barlow	EverGlow NA, Inc.
Kristin Bigda	NFPA
Valerie Boutin	NFPA
Kevin Carr	NFPA
Daniel Finnegan	Siemens Industry, Inc.
Joseph Graupman	AECOM Technology
Jay Larson	American Iron and Steel Institute
Kathleen Newman	Firetect
Henry Paszczuk	Connecticut Dept. of Public Safety
Jennifer Sisco	NFPA
James Smith	American Wood Council
Michael Szmanda	Certification & Training Corporation
Janet Washburn	City of Hollywood Fire Department

3. Previous meeting minutes.

- a. The minutes of the November 18, 2016 Correlating Committee on Building Code – NFPA 5000 Second Draft Meeting were approved by the BLD-AAC membership as submitted.

- b. The minutes of the November 27, 2017 Correlating Committee on Safety to Life – NFPA 101A Second Draft Meeting were approved by the SAF-AAC membership as submitted.
4. **Subject areas for TC focus during 2021 edition revision cycle (Agenda Item 6).** The correlating committees reviewed the items identified in the agenda and noted the following:
- a. Security/Targeted Violence Incidents: Robert Solomon provided an overview of security-related criteria added to the 2018 editions of NFPA 101 and NFPA 5000. Questions have been raised re. automatic door unlocking provisions on fire alarm activation (e.g., delayed egress locks and access control) in light of recent active shooter events. NFPA will be hosting a building safety and security workshop on May 10 & 11 similar to the school safety codes and security workshop that was held in 2014. A report should be available by early June 2018. A joint task group was established to evaluate the scopes of NFPA 101 and NFPA 5000 as they pertain to security and recommend any needed revisions. The task group members include: John Rickard (TG Chair), Shane Clary, Dan Finnegan, Howard Hopper, Ken Bush, BLD/SAF-MEA rep (TBD), BLD/SAF-FUN rep (TBD), and BLD-BSY rep (TBD).
 - b. Existing Nursing Home FSES 101-101A Correlation: Bill Koffel noted there is no discrepancy between NFPA 101 and 101A with regard to the health care FSES, however the provision requiring sprinkler systems in existing nursing homes is causing some facilities that were able to achieve equivalency using the 2001 edition of NFPA 101A are no longer able to. Eric Rosenbaum noted that PIs will be submitted to address the issue in NFPA 101, which could then be subsequently addressed in NFPA 101A.
 - c. Senior Housing: The TC on Residential Occupancies is to review its provisions to determine whether adequate safety is being afforded to apartment buildings housing older adults, including existing high-rise buildings. The TC on Board and Care Facilities has established a task group to address its provisions related to aging in place and the services provided in assisted living facilities. Task group members include: Peter Larrimer (VA, TG Chair), Scott Allen (Whipple-Allen Real Estate), Rebekah Eaddy (TX HHS Commission), Roland Asp (NFSA), Harry Bradley (MD SFMO), Gayanne Pacholzuk (Kelowna Fire Dept.), Fred Worley (Self), Carter Rierson (Best Defense Fire Protection & Security), and Kendal Nelson (Sagora Senior Living).
 - d. Means of Escape: The TC on Residential Occupancies is to evaluate its requirements for means of escape as they pertain to tub and shower grab bars. A task group was appointed to review the subject and recommend any needed revisions. The task group members include: Chip Carson (TG Chair), Jim Lathrop, Jake Pauls, Leon Vinci, and John Rickard.

- e. Risk Analysis for Mass Notification Systems: A task group is to be appointed to review the thresholds for the subject requirements (number of occupants, stories in height, types of events, etc.). The task group members are to include: Jim Quiter (TG Chair), Dan Finnegan, Leon Vinci, reps from FUN, AXM, END, RES, MER, and BSF (TBD).
- f. Tall Wood Buildings: Jim Smith, American Wood Council, noted that Pls will be submitted on this subject. No CC action.
- g. Accessibility/DOJ: No CC action.
- h. Energy Storage Systems: A task group was appointed to review NFPA 1 and NFPA 855 requirements for inclusion in NFPA 101 and/or NFPA 5000. Task group members include: Howard Hopper (TG Chair), BSF rep (TBD).
- i. Hazardous Materials: No CC action.

5. TC activity/plans updates from TC chairs.

- a. TC on Assembly Occupancies - Josh Lambert: Subjects for review held over from the previous cycle include “escape rooms,” aisle terminations, smoke-protected assembly seating capacity factors, and sightline-constrained railing heights.
- b. TC on Board and Care Facilities – John Rickard: Subjects under consideration by task groups include: board and care suites and adult foster care.
- c. TC on Health Care Occupancies – Bill Koffel: Subjects under consideration by task groups include: portable space heater heating element temperatures and coordination of NFPA 101 and NFPA 99 requirements on fire alarm notification zoning and private operating mode.
- d. TC on Interior Finish, Contents, and Furnishings – Nick Dawe: A task group is reviewing the outdoor use of interior finish materials.

6. Liaison reports (Agenda Item 4).

- a. Sprinkler Project – Bill Koffel: The second drafts of the 2019 editions of NFPA 13, 13D, and 13R are complete and the NITMAM closing date has passed. CAMs will be acted on at the tech session in Las Vegas in June. There shouldn’t be any items pertinent to NFPA 101 or 5000.
- b. Fire Alarm Project – Shane Clary: The second draft of NFPA 72 is complete and the NITMAM closing date has passed. Eight CAMs will be acted on in Las Vegas. NFPA 72 provisions for risk analyses for mass notification systems have been

revised. It is also noted that NFPA 720 has been incorporated into NFPA 72. Staff will note this to the BSF committee, which addresses CO detection requirements.

7. Other business.

- a. Jim Lathrop made a series organization/clean-up motions:
 - i. Direct the occupancy chapter technical committees to review the XX.2.5 subsection of each occupancy chapter and arrange 2.5.1, 2.5.2, 2.5.3 similar to Chapters 38 and 39 such that Section 7.5 is first referenced, then dead-end corridors are addressed, and then common paths of travel are addressed. This would then be followed by any other arrangement issues the chapter has. This is the typical organization, but not followed by all occupancy chapters. It is recognized that in some chapters, such as One-and-Two Family Dwellings and Lodging or Rooming Houses, this will not work. Reason: To make the occupancy chapters parallel on the same subjects. Motion PASSED.
 - ii. Direct the TC on Means of Egress to consider moving the material on dead-end corridors to be located after the common path of travel provisions and before the arrangement of means of egress provisions. Reason: Based on the recommendation in Item i. above. Motion PASSED.
 - iii. Direct the occupancy chapter technical committees to review the provisions of 18.3.5 and 19.3.5 and revise their XX.3.5 subsections so as to provide the “pointers” that the health care chapters provide, such as pointers to construction provisions if any, pointers to high rise provisions if any, etc. The health care chapters do an excellent job of providing pointers so that one does not miss sprinkler requirements that might be elsewhere in the chapter. Reason: To make the Code more use-friendly and more parallel regarding similar material. Motion PASSED.
 - iv. Direct the TC on Fundamentals to provide guidance to each occupancy chapter on how to reference Chapter 11 of NFPA 101. Chapter 11 (with the exception of existing high-rise) applies to ALL occupancies, yet the current way most occupancy chapters’ Section X.4 is written it is misleading. The template that they create would be submitted to each occupancy chapter. Reason: Currently most of the occupancy chapters are misleading, making it look like Chapter 11 only applies to limited-access or underground structures. Chapter 11 is meant to apply to all special structures, other than existing high-rise buildings. Motion PASSED.

- v. Direct the TC on Health Care Occupancies and the TC on Detention and Correctional Occupancies to revise the occupancy definitions to clearly delineate between the two occupancies. Reason: As currently written, a detention and correctional facility could be very easily categorized as a health care occupancy per the health care occupancy definition. Motion PASSED.
 - vi. Direct the TC on Fire Protection Features to either provide footnotes, annex notes, or a separate table to address opening protectives in existing buildings. The current table does very little to help in enforcement within existing buildings, other than to provide the fire protection rating of the door. Items such as size of existing vision panels are very much needed. Even a footnote that typically existing wired-glass vision panels are 100 in.² or 1296 in.² would be very helpful along with material on existing side-lights, etc. Reason: The table is VERY unfriendly to existing buildings. It provides very little guidance to existing buildings and unless one is very knowledgeable about the Code, one could easily think that the “letter codes” are retroactive where other sections of the Code clearly state that they are not. It would also be useful to have an annex note pointing out that most building codes will not allow broken wired glass to be replaced with wired-glass, but must use fire-protection rated glass. Motion PASSED.
- b. Robert Solomon provided an update on NFPA’s community risk reduction initiative and the proposed NFPA 1300, ~~Standard on Community Risk Assessment and Community Risk Reduction Plan Development~~. He also reviewed NFPA’s resiliency initiative, and noted there are two Fire Protection Research Foundation reports on the subject. Additional direction might be forthcoming.
8. **Next meetings.** The next meetings will be tentatively held in the Baltimore/Washington DC area as follows:
- a. CC on Safety to Life: Afternoon of December 4, 2018
 - b. CC on Building Code: Morning of December 5, 2018
9. **Adjournment.** The meeting adjourned at 3:00 p.m. (EDT).



Public Input No. 7-NFPA 220-2018 [Global Input]

Type your content here ...

Remove ANSI from in front of all UL standards referenced in NFPA 220.

Statement of Problem and Substantiation for Public Input

Many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are actually UL standards, not developed by ANSI. There are many other references to standards promulgated by other standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

Submitter Information Verification

Submitter Full Name: Kelly Nicoello

Organization: UL LLC

Street Address:

City:

State:

Zip:

Submittal Date: Tue Jun 26 16:04:16 EDT 2018

Committee:



Public Input No. 8-NFPA 220-2018 [Global Input]

Type your content here ...

Remove the terms "Standard for" or "Subject" from in front of all UL standards referenced in NFPA 220.

Statement of Problem and Substantiation for Public Input

The terms are redundant and unnecessary. This change results in the proper short form name of the referenced document. .

Submitter Information Verification

Submitter Full Name: Kelly Nicoello

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Submittal Date: Tue Jun 26 16:05:17 EDT 2018

Committee:



Public Input No. 4-NFPA 220-2018 [Section No. 2.3.1]

2.3.1 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, 2015a 2018 .

ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, 2014 2018 .

ASTM E136, *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C,- 2012 2016a .*

ASTM E2652, *Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C,- 2012 _ 2016 .*

Statement of Problem and Substantiation for Public Input

date updates

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler

Organization: GBH International

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State:

Zip:

Submittal Date: Mon Jun 18 18:41:45 EDT 2018

Committee:



Public Input No. 9-NFPA 220-2018 [Section No. 2.3.2]

2.3.2 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/UL 263, *Standard for Fire Tests of Building Construction and Materials*, - 2003 - 2011 , revised 2015 2018 .

ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*, - 2008, revised 2013 - 2018 .

Statement of Problem and Substantiation for Public Input

Update the publishing dates for each of the UL standards listed to reflect the most up to date edition.

Submitter Information Verification

Submitter Full Name: Kelly Nicoletto

Organization: UL LLC

Street Address:

City:

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Submittal Date: Tue Jun 26 16:06:34 EDT 2018

Committee:



Public Input No. 3-NFPA 220-2018 [Section No. 5.1.4]

5.1.4

Structural elements required to have a fire resistance rating and that support more than two floors, one floor and roof, a bearing wall supporting more than one floor or roof , or a nonbearing wall more than two stories high shall be individually protected on all sides for their full length with materials providing the required fire resistance rating. [5000:7.2.7.3]

Statement of Problem and Substantiation for Public Input

This section requires individual encasement of elements supporting three or more floors/roofs or merely one floor/roof if it supports any portion of a bearing wall, including short sections of wall or even a shear wall. This seems unnecessarily harsh for buildings where a bearing wall may support one floor plus the bearing wall that supports the roof. For consistency, individual encasement should be reserved for members that support more than two floors or one floor and roof, including where the intermediate support is a bearing wall.

Submitter Information Verification

Submitter Full Name: John Rickard

Organization: P3 Consulting

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Submittal Date: Wed May 23 11:06:35 EDT 2018

Committee:



Public Input No. 1-NFPA 220-2018 [New Section after A.3.2.3]

A3.3.1 Fire Resistance Rating

The purpose of the fire resistance rating is to protect structural elements from exposure to fire. It is not the intent to require protection against fire penetrating from one side of an assembly to the other, as it is for fire barriers. Through-penetrations in fire resistance rated assemblies must be protected to the extent required to ensure the integrity of the structural members. However, elements such as back-to-back electrical boxes and openings for fire extinguisher cabinets, recessed cabinetry, ducts and doors/windows do not require special protection so long as the structural members are properly protected.

Statement of Problem and Substantiation for Public Input

The term "Fire Resistance Rating" is also used in NFPA 221 (and cross-referenced in NFPA 101 and 5000) but no distinction is drawn regarding the purpose of the rating as compared to NFPA 220. NFPA 220 does not intend for all bearing walls, for example, to serve the same function as a fire barrier or fire wall. This annex note clarifies the purpose of the fire resistance rating for assemblies that protect structural elements, including limitations to the application of the term "Fire Resistance Rating" under NFPA 220 as opposed to NFPA 221 and related codes.

Submitter Information Verification

Submitter Full Name: John Rickard

Organization: P3 Consulting

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Submission Date: Wed May 23 10:06:18 EDT 2018

Committee:



Public Input No. 6-NFPA 220-2018 [Section No. A.3.3.2]

A.3.3.2 Flame Spread Index.

Under the criteria of ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, and ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials* the flame spread index is expressed numerically on a scale for which the zero point is fixed by the performance of inorganic-reinforced fiber cement board and the 100 point (approximately) is fixed by the performance of untreated red oak flooring.

Statement of Problem and Substantiation for Public Input

The fiber cement board used for ASTM E84 is no longer an inorganic reinforced cement board but a specific fiber cement board.

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler

Organization: GBH International

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City:

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Submittal Date: Mon Jun 18 18:44:45 EDT 2018

Committee:



Public Input No. 2-NFPA 220-2018 [New Section after A.5.1.5]

A5.1.4

The term "all sides" refers to the sides and bottom of members such as structural beams and girder trusses that require individual encasement. It is not intended that the top of beams, trusses, columns and the like, to which the supported loads are applied, be individually protected against fire exposure if the top of the member is within a fire resistance rated assembly.

Statement of Problem and Substantiation for Public Input

The term "all sides" seems to suggest that the top of beams and similar members, where the load is typically applied, must be individually encased under the requirements of this section. Individual encasement is intended to ensure protection of critical structural elements, where failure could lead to a cascading structural collapse. This is unlikely to occur if the fire exposure is only at the top of the member and where that member is within a fire resistance rated assembly. In addition, the marginally increased protection often requires a great deal of unnecessary trigger work, as the protection must be fitted around the members resting on the beam or truss, with fire caulking at the perimeter of the supported members.

Submitter Information Verification

Submitter Full Name: John Rickard

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Submission Date: Wed May 23 10:51:32 EDT 2018

Committee:



Public Input No. 5-NFPA 220-2018 [Section No. B.1.2.1]

B.1.2.1 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, ~~2015a~~ 2018 .

Statement of Problem and Substantiation for Public Input

date update

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler

Organization: GBH International

Street Address:

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Submittal Date: Mon Jun 18 18:42:34 EDT 2018

Committee:



Public Input No. 14-NFPA 221-2018 [Global Input]

Type your content here ...

Remove ANSI from in front of all UL standards referenced in NFPA 221.

Statement of Problem and Substantiation for Public Input

Many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are actually UL standards, not developed by ANSI. There are many other references to standards promulgated by other standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

Submitter Information Verification

Submitter Full Name: Kelly Nicoello

Organization: UL LLC

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Submittal Date: Tue Jun 26 16:08:38 EDT 2018

Committee:



Public Input No. 15-NFPA 221-2018 [Global Input]

Type your content here ...Remove the terms "Standard for" or "Subject" from in front of all UL standards referenced in NFPA 221.

Statement of Problem and Substantiation for Public Input

The terms are redundant and unnecessary. This change results in the proper short form name of the referenced document. .

Submitter Information Verification

Submitter Full Name: Kelly Nicoello

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Submittal Date: Tue Jun 26 16:09:26 EDT 2018

Committee:



Public Input No. 1-NFPA 221-2018 [Section No. 2.3.3]

2.3.3 ASTM Publications.

ASTM International, P.O. Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, 2014 2018 .

ASTM E814, *Standard Test Method for Fire Tests of Through-Penetration Fire Stops*, 2013a (2017) .

ASTM E1966, *Standard Test Method for Fire-Resistive Joint Systems*, 2007, ~~reapproved 2014~~ 2015 .

Statement of Problem and Substantiation for Public Input

date updates

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler

Organization: GBH International

Street Address:

City:

State:

Zip:

Submittal Date: Mon Jun 18 18:46:49 EDT 2018

Committee:



Public Input No. 16-NFPA 221-2018 [Section No. 2.3.5]

2.3.5 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/UL 10C, *Standard for Safety for Positive Pressure Fire Tests of Door Assemblies*, - 2009, revised 2015 2016 .

ANSI/UL 263, *Standard for Safety for Fire Tests of Building Construction and Materials*, 2011, revised 2015 2018 .

ANSI/UL 555, *Standard for Safety for Fire Dampers*, 2006, revised 2014 2016 .

ANSI/UL 1479, *Standard for Safety for Fire Tests of Through-Penetration Firestops*, - 2003, revised 2015 2015 .

ANSI/UL 2079, *Standard for Safety for Tests for Fire Resistance of Building Joint Systems*, - 2004, revised 2015 2015 .

Statement of Problem and Substantiation for Public Input

: Update the publishing dates for each of the UL standards listed to reflect the most up to date edition.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 17-NFPA 221-2018 [Section No. B.1.2.5]	

Submitter Information Verification

Submitter Full Name: Kelly Nicoello

Organization: UL LLC

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Zip:

Submission Date: Tue Jun 26 16:10:38 EDT 2018

Committee:



Public Input No. 12-NFPA 221-2018 [New Section after 3.3.10]

TITLE OF NEW CONTENT

Type your content here ...

High Wind Prone Regions . Locations in hurricane prone regions as defined in ASCE/SEI 7 or in other locations where the allowable roof level wind speed is \geq 100 mph.

Statement of Problem and Substantiation for Public Input

Adding new definition to clarify the application of section 5.13, Roof Surface Protection.

Submitter Information Verification

Submitter Full Name: Richard Davis

Organization: FM Global

Street Address:

City:

State:

Zip:

Submittal Date: Tue Jun 26 15:57:18 EDT 2018

Committee:



Public Input No. 20-NFPA 221-2018 [Section No. 4.4]

4.4 Performance-Based Design.

Analytical methods used to calculate the fire performance of building assemblies or structural elements shall be approved. All walls and their supports shall be designed for loads in accordance with Section 2.5, Load Combinations for Extraordinary Events of ASCE/SEI 7, *Minimum Design Loads for Buildings and Other Structures*, where the lateral load associated with A_k is a uniform lateral load of 8 lbf/ft² (0.24 kPa) applied perpendicular to the face of the wall from either direction.

Analytical methods utilized to determine the performance of structural systems under uncontrolled fire exposure shall comply with 4.4.1 through 4.4.2

4.4.1*

Calculations shall consider the anticipated in-situ thermal conditions from fire and the in-situ system-level performance of the structure. Accordingly, calculations shall not rely on measures of fire resistance as determined in 8.2.4.

A.4.4.1

Since the prescriptive method is an empirical indexing system that excludes consideration of thermal/structural in-situ conditions, measures of fire resistance are incompatible with metrics used to evaluate a performance-based approach.

4.4.2*

Calculations shall be in accordance with ASCE/SEI 7-16 Appendix E (*Performance-Based Design Procedures for Fire Effects on Structures*).

A.4.4.2

SFPE S.01 Standard on Calculating Fire Exposures to Structures provides a methodology on how to estimate the thermal exposure to a structure from a resulting fire. SFPE S.02 Engineering Standard on Calculation Methods to Predict the Thermal Performance of Structural and Fire Resistive Assemblies provides a methodology on how to determine the temperature history within a structure.

Statement of Problem and Substantiation for Public Input

The design of structural fire resistance that is based in a performance-based design requires three major steps: (1) determination of the thermal exposure to a structure resulting from a fire; (2) determination of the temperature history within the structure, or portion thereof; and (3) determination of the structural response. This methodology is outlined in ASCE/SEI 7-16 Appendix E (Performance-Based Design Procedures for Fire Effects on Structures). SFPE S.01 outlines a process to determine Step 1 and SFPE S.02 outlines a process to determine Step 2. Step 3 is described in ASCE/SEI 7-16 Appendix E.

Submitter Information Verification

Submitter Full Name: Chris Jelenewicz
Organization: Society of Fire Protection Eng
Street Address:
City:
State:
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Submission Date: Wed Jun 27 13:57:34 EDT 2018
Committee:



Public Input No. 3-NFPA 221-2018 [New Section after 4.11]

4.12

4.12 Insulation. Insulation and siding applied to the vertical surface and top of HC fire walls and fire walls that extend above the roof surface shall consist of noncombustible materials that have been reported as passing ASTM E136. Flashing and cant materials located at the roof surface, and wood nailers used to secure the cap flashing on top of the HC fire walls and fire walls, shall be exempt from this provision.

Statement of Problem and Substantiation for Public Input

Recent trends with the national model energy codes illustrate that the provisions are being modified to require that fire walls (e.g. such as high challenge fire walls and fire walls that penetrate the roof surface) be insulated in order to mitigate the effects of thermal bridging. Currently NFPA 221 is silent concerning roofing insulations being applied to the fire walls that extend above a roof surface.

This necessitates a modification to the NFPA 221 standard to ensure that said insulations applied to those fire walls do not act as a fire wick thus allowing the fire to traverse from one roof to another via the insulation or siding, thus negating the design intent of fire walls to impede a fire. This proposal recommends the addition of language to NFPA 221, Section 4 "General Requirements", for the insulations to be tested and pass in accordance with ASTM E136 in order for the insulations to be applied to the surfaces of the portions of a fire wall that extends above the roof(s).

The proposal to place this requirement in Section 4 (General) is to ensure that this will apply to all fire walls which penetrate the roof surface.

Submitter Information Verification

Submitter Full Name: Jonathan Humble
Organization: American Iron and Steel Institute
Affiliation: American Iron and Steel Institute
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jun 20 08:29:03 EDT 2018
Committee:



Public Input No. 13-NFPA 221-2018 [Section No. 5.13.1]

5.13.1 Locations Outside High Wind-Prone Regions.

For buildings less than or equal to 60 ft (18 m) in height and located outside hurricane-prone regions, as defined by ASCE/SEI 7, *Minimum Design Loads for Buildings and Other Structures*, the buildings located outside high wind-prone regions, the roof surface adjacent to HC fire walls for at least 25 ft (7620 mm) on each side shall be protected in accordance with 5.13.1.1 or 5.13.1.2.

5.13.1.1

For single-ply membranes, gravel ballast or concrete paver blocks shall provide complete membrane coverage and shall be installed in accordance with ANSI/SPRI RP-4, *Wind Design Standard for Ballasted Single-Ply Roofing Systems*.

5.13.1.2

Built-up and modified bitumen roofs shall be surfaced with gravel or slag applied at a minimum rate of 4 lb/ft² (19 kg/m²) and embedded in a flood coat of hot asphalt or coal-tar.

Statement of Problem and Substantiation for Public Input

To clarify proper roof surface protection without creating windborne debris concerns.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 18-NFPA 221-2018 [Section No. 5.13.2.2]	

Submitter Information Verification

Submitter Full Name: Richard Davis
Organization: FM Global
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jun 26 16:08:24 EDT 2018
Committee:



Public Input No. 10-NFPA 221-2018 [Section No. 5.13.2 [Excluding any Sub-Sections]]

For buildings greater than 60 ft (18 m) in height or located within hurricane-prone regions, as defined by ASCE/SEI 7, *Minimum Design Loads for Buildings and Other Structures*, ~~the~~ located within high wind-prone regions, the roof surface on each side of the roof adjacent to HC fire walls for at least 25 ft (7620 mm) on each side shall be protected in accordance with 5.13.2.1 or 5.13.2.2.

Statement of Problem and Substantiation for Public Input

Wording changed for consistency with new definitions and building code requirements to prevent small windborne debris damage.

Submitter Information Verification

Submitter Full Name: Richard Davis

Organization: FM Global

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City:

State:

Zip:

Submittal Date: Tue Jun 26 15:09:11 EDT 2018

Committee:



Public Input No. 18-NFPA 221-2018 [Section No. 5.13.2.2]

5.13.2.2

Built-up and modified bitumen roofs adjacent to HC fire walls shall be surfaced with gravel or slag embedded in a flood coat of hot asphalt or coal tar and applied at a minimum rate of 4 lb/ft² (19 kg/m²).

5.13.2.2.1 –

Gravel or slag shall be embedded into a double flood coat of hot asphalt or coal tar to ensure full embedment.

5.13.2.2.2 –

After cooling, any loose gravel or slag shall be removed from the roof.

5.13.2.2.3 –

All graveled roofs greater than 60 ft (18 m) in height shall have a minimum parapet height of 24 in. (610 mm).

a coating or topping system that is acceptable to the AHJ.

Statement of Problem and Substantiation for Public Input

The use of roof aggregate in high-wind regions is not allowed by building codes due to the potential damage from small windborne debris.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 13-NFPA 221-2018 [Section No. 5.13.1]</u>	

Submitter Information Verification

Submitter Full Name: Richard Davis
Organization: FM Global
Street Address:
City:
State:
Zip:
Submission Date: Wed Jun 27 09:23:01 EDT 2018
Committee:



Public Input No. 7-NFPA 221-2018 [Section No. A.5.7]

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A.5.7

Table A.5.7 is based on steel framework. This table provides clearances that are conservative for other types of framework materials. It is based on an average temperature of 800°F (427°C) in two adjacent bays.

Adequate clearance should be provided between storage and HC fire walls or fire walls to prevent damage to the wall that might result from swelling of absorbent materials due to contact with water.

Table A.5.7 Minimum Recommended Clearance for Thermal Expansion Between Unprotected Structural Framework and HC Fire Walls or Fire Walls, or Between Double HC Fire Walls

<u>Length of Bay Perpendicular to the HC Fire Wall or Fire Wall</u>		
<u>Minimum Clearance Between Wall and Structural Framework and Between Double Walls</u>		
<u>ft</u>	<u>mm</u>	
	<u>in.</u>	<u>mm</u>
20	6,100	
25	2 ¹ / ₂ 7,600	64
30	3 ¹ / ₄ 9,100	83
35	3 ³ / ₄ 10,700	95
40	4 ¹ / ₂ 12,200	114
45	5 13,700	127
50	5 ³ / ₄ 15,200	146
55	6 ¹ / ₄ 16,800	159
≥60	7 18,300	178
	7 ¹ / ₂	191

Source: FM DS 1-22, *Criteria for Maximum Foreseeable Loss*.

Change in title of reference document. Table contents remain the same.

Submitter Information Verification

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Submittal Date: Tue Jun 26 14:44:34 EDT 2018

Committee:



Public Input No. 8-NFPA 221-2018 [Section No. A.5.8.5]

A.5.8.5

Limited guidance on protection used where material handling systems penetrate HC fire walls or fire walls can be found in NFPA 80. Additional guidance can be found in FM Global Loss Prevention Data Sheet 1-23, *Fire Barriers and Protection of Openings* 22, *Maximum Foreseeable Loss*.

Statement of Problem and Substantiation for Public Input

Information for protection of openings, including for material handling systems was moved into DS 1-22 and 1-23 is now obsolete.

Submitter Information Verification

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Submittal Date: Tue Jun 26 14:48:54 EDT 2018

Committee:



Public Input No. 19-NFPA 221-2018 [New Section after A.5.13.2]

TITLE OF NEW CONTENT

Type your content here ... **A 5.13.2.2** For built-up and modified biumen roofs, where acceptable to the AHJ, gravel or slag applied in accordance with 5.13.1.2, may be embedded into a double flood coat of asphalt or coal tar to ensure full embedment. After cooling, any loose gravel or sag should be removed from the roof. Alternatively, a coating such as the following, should provide comparable exterior roof surface protection to that of gravel or slag:

Bentonite clay, asphalt emulsion coating applied at 9 gals. per square (100 ft²) with 3 lbs. per square (100 ft²) of glass fiber reinforcement.

Statement of Problem and Substantiation for Public Input

This proposal will provide consistency with building code requirements and related PI's to prevent against small windborne debris damage.

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Submittal Date: Wed Jun 27 09:37:17 EDT 2018

Committee:



Public Input No. 11-NFPA 221-2018 [Section No. A.5.13.2]

A.5.13 .2 —

~~For buildings within hurricane-prone areas as~~ in hurricane prone regions or where the allowable wind speed (V_{ASD}) at roof level is greater than or equal to 100 mph as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the presence of roof gravel or slag aggregate is not desirable as recommended as it can become wind damaging wind-borne debris in a high wind event. In such cases, and where acceptable to the authority having jurisdiction, gravel or slag should be embedded into a double flood-coat of asphalt or coal-tar to ensure full embedment. After cooling, any loose gravel or slag should be removed from the roof. Convert the ultimate wind speeds (V) listed in ASCE/SEI 7 to V_{ASD}

as follows:

$$V_{asd} = V(0.6)^{1/2}$$

The wind speeds listed in ASCE/SEI 7 are effective at 33 ft (10 m) above grade in open terrain (Exposure C). To adjust for different roof heights and/or exposures, use Table A.5.13.

Insert table (sent to Valerie)

Statement of Problem and Substantiation for Public Input

Clarifies concerns related to windborne debris that may result from using the wrong type of roof surface protection in high wind-prone regions and provides determination guidance.

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Submittal Date: Tue Jun 26 15:12:34 EDT 2018

Committee:



Public Input No. 4-NFPA 221-2018 [Section No. B.1.2.2]

B.1.2.2 ASCE/SEI Publications.

American Society of Civil Engineers, 1801 Alexander Bell Drive, Reston, VA 20191-4400.

ASCE/SEI 7, *Minimum Design Loads for ~~for~~ and Associated Criteria for Buildings and Other Structures*, 2010_2016.

ASCE/SEI/SFPE 29, *Standard Calculation Methods for Structural Fire Protection*, 2005.

Statement of Problem and Substantiation for Public Input

Updating reference document to current version.

Submitter Information Verification

Submitter Full Name: Richard Davis

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Submittal Date: Tue Jun 26 14:25:15 EDT 2018

Committee:



Public Input No. 2-NFPA 221-2018 [Section No. B.1.2.3]

B.1.2.3 ASTM Publications.

ASTM International, P.O. Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, 2014 2018 .

ASTM E814, *Standard Test Method for Fire Tests of Penetration Firestop Systems*, 2013a (2017) .

ASTM E1529, *Standard Test Methods for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies*, 2014a 2016 e1 .

ASTM E1966, *Standard Test Method for Fire-Resistive Joint Systems*, 2015.

Statement of Problem and Substantiation for Public Input

date updates

Submitter Information Verification

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Submittal Date: Mon Jun 18 18:48:02 EDT 2018

Committee:



Public Input No. 5-NFPA 221-2018 [Section No. B.1.2.4]

B.1.2.4 FM Global Publications.

FM Global, 270 Central Avenue, P.O. Box 7500, Johnston, RI 02919.

Data Sheet 1-22, *Maximum Foreseeable Loss, 2014 2015*.

~~Data Sheet 1-23, *Fire Barriers and Protection of Openings*, 2012.~~

Statement of Problem and Substantiation for Public Input

Updating last revision date of reference document. Deleting reference to DS 1-23 as it has been incorporated into DS 1-22.

Submitter Information Verification

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Submittal Date: Tue Jun 26 14:34:47 EDT 2018

Committee:



Public Input No. 17-NFPA 221-2018 [Section No. B.1.2.5]

B.1.2.5 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/UL 263, *Standard for Safety for Fire Tests of Building Construction and Materials*, - 2015 _ 2018 .

ANSI/UL 1479, *Standard for Safety for Fire Tests of Penetration Firestops*, 2015.

ANSI/UL 1709, *Standard for Rapid Rise Fire Tests of Protection Materials for Structural Steel*, 2014 2017 .

ANSI/UL 2079, *Standard for Safety for Tests for Fire Resistance of Building Joint Systems*, - 2004, ~~revised~~ 2015 2017 .

Statement of Problem and Substantiation for Public Input

Update the publishing dates for each of the UL standards listed to reflect the most up to date edition.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 16-NFPA 221-2018 [Section No. 2.3.5]</u>	

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Committee:



Public Input No. 6-NFPA 221-2018 [Section No. B.2.1]

B.2.1 FM Global Publications.

FM Global, 270 Central Avenue, P.O. Box 7500, Johnston, RI 02919.

Data Sheet 1-21, *Fire Resistance of Building Assemblies*, 2012.

[Approval Guide; Building Materials – Materials and Specification Tested, 2015 an on-line publication .](#)

Statement of Problem and Substantiation for Public Input

Updating title of reference publication. It is now an on-line publication, which is continuously updated.

Submitter Information Verification

Submitter Full Name: Richard Davis

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Submittal Date: Tue Jun 26 14:38:38 EDT 2018

Committee:

**Public Input No. 124-NFPA 5000-2018 [Global Input]**

Type your content here ... **Global change for ASCE7**

8.3.2.7.2 In buildings assigned to Seismic Design Category C, Seismic Design Category D, Seismic Design Category E, or Seismic Design Category F, as determined in accordance with ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, sufficient separation shall be provided between cantilevered HC fire walls and adjacent framing on each side and between double HC fire walls to allow independent movements of the elements without contact. [221:5.7.2]

8.3.2.13.1 Locations Outside High Wind-Prone Regions. For buildings less than or equal to 60 ft (18 m) in height and located outside hurricane prone regions, as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the roof surface adjacent to HC fire walls for at least 25 ft (7620 mm) on each side shall be protected in accordance with 8.3.2.13.1.1 or 8.3.2.13.1.2. [221:5.13.1]

8.3.2.13.2* Locations Within High Wind-Prone Regions. For buildings greater than 60 ft (18 m) in height or located within hurricane prone regions, as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the roof surface on each side of the roof adjacent to HC fire walls for at least 25 ft (7620 mm) on each side shall be protected in accordance with 8.3.2.13.2.1 or 8.3.2.13.2.2. [221:5.13.2]

A.8.3.2.13.2 For buildings within hurricane-prone areas as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the presence of roof gravel or slag is not desirable as it can become wind-borne debris in a high wind event. In such cases, and where acceptable to the authority having jurisdiction, gravel or slag should be embedded into a double flood coat of asphalt or coal-tar to ensure full embedment. After cooling, any loose gravel or slag should be removed from the roof. [221: A.5.13.2]

8.3.3.9.3 In buildings assigned to Seismic Design Category C, Seismic Design Category D, Seismic Design Category E, or Seismic Design Category F, as determined in accordance with ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, sufficient separation shall be provided between cantilevered fire walls and adjacent framing on each side and between double walls to allow independent movements of the elements without contact. [221:6.8.3]

Statement of Problem and Substantiation for Public Input

This is being submitted on behalf of a task group that worked to update the references to ASCE7 to reflect the most current edition of ASCE7 (2016). These proposals are also being submitted as TIAs for the 2018 Edition. NFPA 5000 references an old edition of ASCE/SEI 7. During the development process, the new edition of ASCE/SEI 7 was not available so the reference to the 2010 edition was maintained. The 2016 edition of ASCE/SEI 7 is now available and updates should reference the most current information available. There is a similar proposal to update the reference to ASCE/SEI 7 in NFPA 221. These portions of NFPA 5000 are extracted from NFPA 221 and therefore, also need to be updated.

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Submittal Date:	Tue Jun 26 12:45:14 EDT 2018
Committee:	BLD-BLC



Public Input No. 130-NFPA 5000-2018 [Global Input]

Type your content here ...

Additional Proposed Changes

<u>File Name</u>	<u>Description</u> <u>Approved</u>
221.docx	

Statement of Problem and Substantiation for Public Input

This is being submitted on behalf of a task group that worked to update the references to ASCE 7 to reflect the most current edition of ASCE 7 (2016). These proposals are also being submitted as TIAs for the 2018 Edition. NFPA 221 references an old edition of ASCE/SEI 7. During the development process, the new edition of ASCE/SEI 7 was not available so the reference to the 2010 edition was maintained. The 2016 edition of ASCE/SEI 7 is now available and updates should be made to reference the most current information available.

Submitter Information Verification

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Submittal Date: Tue Jun 26 13:52:42 EDT 2018
Committee: BLD-BLC

2.3.2 ASCE Publications.

ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, ~~2010~~2016.

3.3.14.2 Bearing Wall. Any wall meeting either of the following classifications: (1) any metal or wood stud wall that supports more than 100 lb/linear ft (~~1400-1459~~ N/linear m) of vertical load in addition to its own weight or (2) any concrete or masonry wall that supports more than 200 lb/linear ft (~~2800-2919~~ N/linear m) of vertical load in addition to its own weight. [ASCE/SEI 7:11.2]

4.2.1 All walls and their supports shall be designed for loads in accordance with ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, and to withstand a minimum uniform load of 5 lbf/ft² (0.24 kPa) for allowable stress design or 8 lbf/ft² (0.38 kPa) for strength design. Lateral loads shall be applied perpendicular to the face of the wall from either direction.

4.4 Performance-Based Design. Analytical methods used to calculate the fire performance of building assemblies or structural elements shall be approved. All walls and their supports shall be designed for loads in accordance with Section 2.5, Load Combinations for Extraordinary Events of ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, where the lateral load associated with A_k is a uniform lateral load of 8 lbf/ft² (0.24 kPa) applied perpendicular to the face of the wall from either direction.

5.7.2 In buildings assigned to Seismic Design Category C, Seismic Design Category D, Seismic Design Category E, or Seismic Design Category F, as determined in accordance with ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, sufficient separation shall be provided between cantilevered HC fire walls and adjacent framing on each side and between double HC fire walls to allow independent movements of the elements without contact.

5.13.1 Location Outside High Wind-Prone Regions. For buildings less than or equal to 60 ft (18 m) in height and located outside hurricane prone regions, as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the roof surface adjacent to HC fire walls for at least 25 ft (7620 mm) on each side shall be protected in accordance with 5.13.1.1 or 5.13.1.2.

5.13.2 Location Within High Wind-Prone Regions. For buildings greater than 60 ft (18 m) in height or located within hurricane prone regions, as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the roof surface on each side of the roof adjacent to HC fire walls for at least 25 ft (7620 mm) on each side shall be protected in accordance with 5.13.2.1 or 5.13.2.2.

6.8.3 In buildings assigned to Seismic Design Category C, Seismic Design Category D, Seismic Design Category E, or Seismic Design Category F, as determined in accordance with ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, sufficient separation shall be provided between cantilevered fire walls and adjacent framing on each side and between double walls to allow independent movements of the elements without contact.

A.5.13.2 For buildings within hurricane prone areas as defined by ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, the presence of roof gravel or slag is not

desirable as it can become wind-borne debris in a high wind event. In such cases, and where acceptable to the authority having jurisdiction, gravel or slag should be embedded into a double flood coat of asphalt or coal-tar to ensure full embedment. After cooling, any loose gravel or slag should be removed from the roof.

B.1.2.2

ASCE/SEI 7, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, ~~2010~~2016.



Public Input No. 229-NFPA 5000-2018 [Global Input]

Where Fire-retardant coatings has been added alongside fire-retardant treated wood, "fire-retardant coating" needs to be added in the index.

Statement of Problem and Substantiation for Public Input

To stay consistent with the added wording of fire-retardant coatings where fire-retardant treated wood is present in 5000. Fire-retardant coatings also needs to be reflected in the corresponding areas in the index.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 196-NFPA 5000-2018 [Section No. D.2.3.2.7]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 221-NFPA 5000-2018 [Section No. D.2.3.2.9]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 198-NFPA 5000-2018 [Section No. D.2.4.2.1]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 158-NFPA 5000-2018 [Section No. 7.2.3.2.7]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 159-NFPA 5000-2018 [Section No. 7.2.4.2.1]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 210-NFPA 5000-2018 [New Section after 45.5.16.2]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 213-NFPA 5000-2018 [Section No. 45.5.16.6]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 209-NFPA 5000-2018 [New Section after 45.2.8]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index
Public Input No. 231-NFPA 5000-2018 [Sections 7.2.3.2.9.1, 7.2.3.2.9.2]	fire-retardant coatings have been added to this section and therefore needs to be added to the corresponding areas in the index

Submitter Information Verification

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Submittal Date: Wed Jun 27 09:54:08 EDT 2018

Committee: BLD-BLC



Public Input No. 204-NFPA 5000-2018 [New Section after 3.3]

3.3.408 Mass Timber. Structural elements of Type IV construction which are solid, built-up, panelized or engineered wood products that meet the minimum allowable dimensions of 7.2.5.5.

Statement of Problem and Substantiation for Public Input

This definition is necessary to describe a new concept in construction materials and to make it useful in the code.

Submitter Information Verification

Submitter Full Name: Sam Francis

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Submittal Date: Tue Jun 26 20:52:19 EDT 2018

Committee: BLD-BLC



Public Input No. 21-NFPA 5000-2018 [Section No. 7.1.4.2]

7.1.4.2* Limited-Combustible Material.

A material shall be considered a limited-combustible material where

both

one of the following is met:

(1) The conditions of 7.1.4.2

(+)

.1 and 7.1.4.2

(

.2

)

, and the conditions of either 7.1.4.2.

1 or

3 or 7.1.4.2.

2

4,

are

shall be met

÷

±

(2) The conditions of 7.1.4.2.5 shall be met.

7.1.4.2.1

The material does not comply with the requirements for a noncombustible material in accordance with 7.1.4.1.

7.1.4.2.2

The material, in the form in which it is used, exhibits a potential heat value not exceeding 3500 Btu/lb (8141 kJ/kg), when tested in accordance with NFPA 259.

7.1.4.2.3

The material shall have a structural base of noncombustible material with a surfacing not exceeding a thickness of 1/8 in. (3.2 mm) where the surfacing exhibits a flame spread index not greater than 50 when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*.

7.1.4.2.4

The material shall be composed of materials that in the form and thickness used, neither exhibit a flame spread index greater than 25 nor evidence of continued progressive combustion when tested in accordance with ASTM E84 or UL 723 and are of such composition that all surfaces that would be exposed by cutting through the material on any plane would neither exhibit a flame spread index greater than 25 nor exhibit evidence of continued progressive combustion when tested in accordance with ASTM E84 or UL 723.

7.1.4.2.5

Materials shall be considered limited-combustible materials where tested in accordance with ASTM E2965, *Standard Test for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Combustion Calorimeter*, at an incident heat flux of 75 kW/m² for a 20-minute exposure, and both the following conditions are met:

(1) The peak heat release rate shall not exceed 150 kW/m² for longer than 10 seconds.

(2) The total heat released shall not exceed 8 MJ/m².

7.1.4.2.4 6

Where the term *limited-combustible* is used in this Code, it shall also include the term *noncombustible*.

Statement of Problem and Substantiation for Public Input

The present language in NFPA 5000 does not specifically reference the existing 7.1.4.2.3 (dealing with ASTM E2965). The revision, which simply clarifies the requirements, is consistent with the language in NFPA 101. No technical changes are being made.

The text in NFPA 101 reads as follows:

4.6.14* Limited-Combustible Material. A material shall be considered a limited-combustible material where one of the following is met:

(1) The conditions of 4.6.14.1 and 4.6.14.2, and the conditions of either 4.6.14.3 or 4.6.14.4, shall be met.

(2) The conditions of 4.6.14.5 shall be met.

4.6.14.1 The material shall not comply with the requirements for noncombustible material in accordance with 4.6.13.

4.6.14.2 The material, in the form in which it is used, shall exhibit a potential heat value not exceeding 3500 Btu/lb (8141 kJ/kg) where tested in accordance with NFPA 259.

4.6.14.3 The material shall have the structural base of a noncombustible material with a surfacing not exceeding a thickness of 1/8 in. (3.2 mm) where the surfacing exhibits a flame spread index not greater than 50 when tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723, Standard for Test for Surface Burning Characteristics of Building Materials.

4.6.14.4 The material shall be composed of materials that, in the form and thickness used, neither exhibit a flame spread index greater than 25 nor evidence of continued progressive combustion when tested in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723, Standard for Test for Surface Burning Characteristics of Building Materials, and shall be of such composition that all surfaces that would be exposed by cutting through the material on any plane would neither exhibit a flame spread index greater than 25 nor exhibit evidence of continued progressive combustion when tested in accordance with ASTM E84 or ANSI/UL 723.

4.6.14.5 Materials shall be considered limited-combustible materials where tested in accordance with ASTM E2965, Standard Test Method for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Consumption Calorimeter, at an incident heat flux of 75 kW/m² for a 20-minute exposure and both of the following conditions are met:

(1) The peak heat release rate shall not exceed 150 kW/m² for longer than 10 seconds.

(2) The total heat released shall not exceed 8 MJ/m².

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Submission Date: Wed May 30 17:14:22 EDT 2018

Committee: BLD-BLC



Public Input No. 158-NFPA 5000-2018 [Section No. 7.2.3.2.7]

7.2.3.2.7 Fire-Retardant-Treated Wood and Fire-Retardant Coated Platforms.

Fire-retardant-treated wood, wood, and Fire-Retardant Coatings shall be permitted for permanent platforms that do not exceed 3000 ft² (278 m²), that are not more than 30 in. (760 mm) above the floor, and that do not occupy more than 50 percent of the floor area of the room or space in which they are located.

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 229-NFPA 5000-2018 [Global Input]	

Submitter Information Verification

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Submittal Date: Tue Jun 26 16:26:18 EDT 2018
Committee: BLD-BLC



Public Input No. 231-NFPA 5000-2018 [Sections 7.2.3.2.9.1, 7.2.3.2.9.2]

Sections 7.2.3.2.9.1, 7.2.3.2.9.2

7.2.3.2.9.1

Fire-retardant-treated wood and fire-retardant coated wood members shall be permitted to be used for unprotected members specified in 7.2.3.2.8.

7.2.3.2.9.2

Fire-retardant-treated wood- wood and fire-retardant coated wood shall be permitted for roof construction, including girders and trusses, under the following conditions:

- (1) In Type II buildings
- (2) In Type I buildings where the number of stories is two or fewer
- (3) In Type I buildings where the number of stories is three or more when the vertical distance from the floor to the roof is 20 ft (6100 mm) or more

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 229-NFPA 5000-2018 [Global Input]</u>	

Submitter Information Verification

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Committee: BLD-BLC



Public Input No. 186-NFPA 5000-2018 [Section No. 7.2.3.2.11.2]

7.2.3.2.11.2

Interior nonbearing walls required to have a fire resistance rating of 2 hours or less shall be permitted to be fire-retardant-treated wood or fire-retardant coated wood enclosed within noncombustible or limited-combustible materials, provided that such walls are not used as shaft enclosures.

Statement of Problem and Substantiation for Public Input

Fire-retardant Coatings should not be excluded. No need to limit opportunities for the consumer as long as the treatment has been tested to the proper standards.

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Submittal Date: Tue Jun 26 18:01:27 EDT 2018

Committee: BLD-BLC



Public Input No. 159-NFPA 5000-2018 [Section No. 7.2.4.2.1]

7.2.4.2.1 Fire-Retardant-Treated Wood and Fire-Retardant Coatings .

Approved fire-retardant-treated wood and Fire-Retardant Coated framing shall be permitted within the assembly of exterior walls having a required fire resistance rating of 2 hours or less and a horizontal separation of not less than 60 in. (1525 mm), provided that the fire resistance rating is maintained and the exposed outer and inner faces of such walls are constructed of limited-combustible or noncombustible materials.

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 229-NFPA 5000-2018 [Global Input]	

Submitter Information Verification

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Submittal Date: Tue Jun 26 16:29:15 EDT 2018
Committee: BLD-BLC



Public Input No. 65-NFPA 5000-2018 [Section No. 7.2.4.2.3]

7.2.4.2.3 Exterior Nonbearing Walls.

Exterior nonbearing walls tested in accordance with, and meeting the conditions of acceptance of NFPA 285 or the 16 ft parallel panel test as described in ANSI/FM 4880 shall be permitted.

7.2.4.2.3.1 When window openings are provided within the installed wall assembly, they shall be covered as follows:

(1) When the assembly was tested per NFPA 285, provide protection as provided for the actual test.

(2) When the assembly was tested per ANSI/FM 4880 provide minimum 20 gage (.0595 in, 0.9 mm) steel flashing around the window opening fastened at a maximum spacing of 16 in. (406 mm) on center into the wall structure using minimum no. 10 (5 mm) screws.

Statement of Problem and Substantiation for Public Input

ANSI/FM 4880 is a consensus fire test standard that can be used to test fire exposure to the interior or exterior side of exterior walls. The 16 ft parallel panel test as described in ANSI/FM 4880 is an acceptable alternative to NFPA 285. Protection against fire exposure to the wall assembly cross-section around window openings must be provided in the installation.

Submitter Information Verification

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Submission Date: Fri Jun 22 13:32:19 EDT 2018

Committee: BLD-BLC



Public Input No. 205-NFPA 5000-2018 [Section No. 7.2.5.2]

7.2.5.2 Exterior Wall Separation.

7.2.5.2.1 Exterior walls greater than 30 ft (9.1 m) from the property line shall be permitted to be of heavy timber construction, provided that the 2-hour rating as required by Table 7.2.1.1 is maintained and such walls contain no combustible concealed spaces.

7.2.5.2.2 Exterior walls of buildings utilizing 7.2.5.6.1.1 or 7.5.6.1.2 shall be permitted to be located any distance from the property line and shall be constructed as required therein, including permitted concealed spaces.

Statement of Problem and Substantiation for Public Input

This is the first of a series of modifications based upon inclusion of Mass Timber in the code.

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Committee: BLD-BLC



Public Input No. 206-NFPA 5000-2018 [Sections

7.2.5.6.1, 7.2.5.6.2, 7.2.5.6.3, 7.2.5.6.4, 7.2.5....]

Sections 7.2.5.6.1, 7.2.5.6.2, 7.2.5.6.3, 7.2.5.6.4, 7.2.5.6.5, 7.2.5.6.6, 7.2.5.6.7, 7.2.5.6.8

7.2.5.6.1 Structural Elements.

Structural elements shall be of heavy timber members (sawn or glued-laminated), cross-laminated timber, or fire resistance-rated construction as set forth in Table 7.2.1.1 when materials other than heavy timber or cross-laminated timber are used.

7.2.5.6.1.1 In buildings protected throughout with an approved automatic sprinkler system in accordance with 55.3.1.1(1), Type IV Construction with mass timber construction elements having the fire resistance-ratings as required for Type I(332) shall be permitted as follows:

(1) Fire resistance of construction elements and connections shall be provided as specified in the following sections of AWC TR 10-2018, *Calculating the Fire Resistance of Exposed Wood Members*.

(a) Two-thirds of the required fire resistance rating of construction elements shall be provided by gypsum wall board in accordance with section 4.4.2.

(b) Wood connections, including connectors, fasteners and members, shall be protected from fire exposure for the required fire resistance time in accordance with section 4.5.

(2) when utilizing this section, all elements of the exterior wall, other than mass timber elements and the water resistive barrier, shall be noncombustible or limited combustible materials, and the provisions of section 7.2.5.6.8 shall not be permitted.

(3) When utilizing this section, in buildings greater than 85 feet but not exceeding 180 feet in height, exit enclosures and elevator shafts shall be permitted to be constructed of mass timber elements.

(4) In buildings exceeding 180 feet but not exceeding 270 feet in height, exit enclosures and elevator shafts shall be constructed of noncombustible or limited combustible materials.

7.2.5.6.1.2 In buildings protected throughout with an approved automatic sprinkler system in accordance with 55.3.1.1(1), Type IV Construction with mass timber construction elements having the fire resistance-ratings as required for Type II (222) shall be permitted as follows:

(1) The fire resistance rating of construction elements and connections shall be provided as specified in Chapter 4 of AWC TR 10-2018, *Calculating Fire Resistance of Exposed Wood Members*.

(2) When utilizing this section, in buildings greater than 85 feet but not exceeding 180 feet in height, exit enclosures and elevator shafts shall be permitted to be constructed of mass timber elements.

(3) When utilizing this section, all elements of the exterior wall, other than mass timber elements and the water resistive barrier, shall be noncombustible or limited combustible materials, and the provisions of 7.2.5.6.8 shall not be permitted.

7.2.5.6.2 Columns, Arches, Beams, and Roof Decking.

7.5.2.5.6.2.1 Where horizontal separation of 20 ft (6100 mm) or more is provided, wood columns, arches, beams, and roof decking conforming to the requirements for heavy timber in 7.2.5.5 shall be permitted to be used on the exterior of the building.

7.5.2.5.6.2.2 Mass timber elements of columns, beams, roof decking and exterior walls of buildings utilizing 7.2.5.6.1.1 or 7.2.5.6.2.1.2 shall be permitted where the building is of any separation distance.

7.2.5.6.3 Partitions.

7.2.5.6.3.1 Permanent partitions shall be permitted to be of solid wood construction formed by not less than two layers of matched boards of 1 in. (25 mm) nominal thickness or of 1-hour fire resistance-rated construction as set forth in Table 7.2.1.1.

7.2.5.6.3.2 Permanent partitions of buildings utilizing 7.2.5.6.1.1 or 7.2.5.6.1.2 shall have partitions of mass timber, limited combustible or noncombustible materials.

7.2.5.6.4 Floors.

7.2.5.6.4.1 Floors shall be permitted to be of heavy timber, masonry, concrete, wood, or steel and shall be constructed as required in Chapter 8.

7.2.5.6.4.2 Floors of buildings utilizing 7.2.5.6.1.1 shall be of mass timber covered with a minimum of 1 inch of noncombustible materials or be constructed of noncombustible material.

7.2.5.6.5 Roofs.

7.2.5.6.5.1 Roofs of 1-hour fire resistance-rated construction shall be permitted.

7.2.5.6.5.2 Roofs of buildings utilizing 7.2.5.6.1.1 or 7.2.5.6.1.2 shall be of mass timber or of noncombustible or limited combustible materials.

7.2.5.6.6 Stairways.

7.2.5.6.6.1 ~~Stairways shall be permitted to be constructed with wood treads and risers of not less than 2 in. (51 mm) nominal thickness.~~

7.2.5.6.6.2 Stairways of buildings utilizing 7.2.5.6.1.1 or 7.2.5.6.1.2 shall be permitted to be constructed with treads and risers of solid mass timber.

7.2.5.6.6.3 Where built-on, laminated, or plank inclines are required for floors, stairways shall be permitted to be 1 in. (25 mm) nominal thickness or shall be permitted to be constructed as required for buildings of Type I or Type II construction.

7.2.5.6.7 Exterior Walls. Exterior walls shall meet at least one of the following:

(1) Exterior walls having a required fire resistance rating of 2 hours or less shall be permitted to be constructed with any of the following materials:

- (1) Noncombustible material shall be permitted.
- (2) Limited-combustible material shall be permitted.
- (3) Fire-retardant-treated wood shall be permitted. Approved fire-retardant-treated wood framing shall be permitted within the assembly of exterior walls having a horizontal separation of not less than 60 in. (1525 mm), provided that the fire resistance rating is maintained and the exposed outer and inner faces of such walls are constructed of limited-combustible or noncombustible materials.
- (4) Cross-laminated timber complying with 45.5.7 shall be permitted provided the exterior surface of the cross-laminated timber is protected by one of the following:
 - (5) Fire-retardant-treated wood not less than $\frac{15}{32}$ in. (12 mm) thick
 - (6) Gypsum board not less than $\frac{1}{2}$ in. (12.7 mm) thick
 - (7) Noncombustible material

(2) Exterior walls complying with 7.2.5.6. 1.1 and having a required fire resistance rating of 3 hours or less shall be permitted to be constructed with any of the following materials:

- (a) Noncombustible material
- (b) Limited combustilbe material
- (c) Mass tmber complying with Chapter 45, provided the exterior surface of the mas timber is protected by at least one layer of 5/ 8

~~– Exterior Nonbearing Walls.~~

~~Exterior nonbearing walls shall be permitted when
inch Type X gypsum wall board~~

~~(3) Exterior walls complying with 7.2.5.6.1.2 and having a required fire resistance rating of 2 hours or less shall be permitted to be constructed with any of the following materials:~~

- ~~(a) Noncombustible material~~
- ~~(b) Limited combustilbe material~~
- ~~(c) Mass timber complying with Chapter 45, provided the exterior surface of the mass timber is protected by at least on layer of 5/8 inch Type X gypsum wall board~~

7.2.5.6.8 Exterior Walls.

Exterior walls shall be tested in accordance with and meeting meet the conditions of acceptance of NFPA 285.

Statement of Problem and Substantiation for Public Input

Last cycle, a proposal for a taller, mass timber building was submitted. The committee rejected the second draft revisions and the concept stating, in part "wait for the results of the committees looking into it". ICC created a Tall Wood Building Ad Hoc Committee (TWB) which, for about two years, has been studying the science of taller mass timber buildings. The TWB reviewed information, publications, testing and testimony. They submitted a series of proposals to the ICC code change process to permit taller mass timber buildings. The Code Development Committee approved these proposals 13-1.

Now this creates a disconnect between that code and the NFPA 101 Life Safety Code, particularly for Health Care types of occupancies. This proposal is similar to the TWB proposal but it has distinctive differences. It is intended to mollify those differences so that little or no differences exist between the documents.

First, it does not propose to create new types of construction. Instead it introduces "Special Requirements" for the new mass timber construction. Within the existing section on Special Requirements, two conditions are described:

one in which the fire resistive rating of the Type IV mass timber is similar to Type I (332) and which requires limited combustible material protecting the mass timber and a second, which is similar to Type II (222) but requires no gypsum wall board (except on outside of exterior walls) to achieve its fire resistance rating.

Second, this proposal is consistent with the TWB draft proposal which was voted upon by the TWB and published on its web page at the ICC web site. It is acknowledged that at its last meeting, just days before the deadline, the TWB changed some of the values for height in stories and area permitted in hopes of assuaging concerns. This proposal does not reflect those last minute attempts attempts.

The supporting material, including video of the various fire tests and the final report on those tests, E119 reports, and many of the research papers available at the TWB site are also available at www.awc.org/tallmasstimber .

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 234-NFPA 5000-2018 [New Section after 7.5]	
Public Input No. 235-NFPA 5000-2018 [New Section after 7.6.1]	

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Committee: BLD-BLC



Public Input No. 161-NFPA 5000-2018 [Section No. 7.2.5.6.7]

7.2.5.6.7 Exterior Walls.

Exterior walls having a required fire resistance rating of 2 hours or less shall be permitted to be constructed with any of the following materials:

- (1) Noncombustible material shall be permitted.
- (2) Limited-combustible material shall be permitted.
- (3) Fire-retardant-treated wood and fire-retardant Coatings shall be permitted. Approved fire-retardant-treated wood and fire-retardant coated framing shall be permitted within the assembly of exterior walls having a horizontal separation of not less than 60 in. (1525 mm), provided that the fire resistance rating is maintained and the exposed outer and inner faces of such walls are constructed of limited-combustible or noncombustible materials.
- (4) Cross-laminated timber complying with 45.5.7 shall be permitted provided the exterior surface of the cross-laminated timber is protected by one of the following:
 - (5) Fire-retardant-treated wood not less than $\frac{15}{32}$ in. (12 mm) thick
 - (6) Gypsum board not less than $\frac{1}{2}$ in. (12.7 mm) thick
 - (7) Noncombustible material

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

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Public Input No. 203-NFPA 5000-2018 [Section No. 7.2.5.6.8]

7.2.5.6.8 Exterior Nonbearing Walls.

Exterior ~~nonbearing~~ walls shall be ~~permitted when~~ tested in accordance with and ~~meeting~~ meet the conditions of acceptance of NFPA 285.

Statement of Problem and Substantiation for Public Input

Certain alternative wall types introduced in previous cycles were outside the scope of NFPA 285. The Fire Tests Committee is revising 285 to accommodate those materials. This change will allow the building code to rely upon the most recent fire test.

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Submittal Date: Tue Jun 26 20:45:01 EDT 2018

Committee: BLD-BLC



Public Input No. 66-NFPA 5000-2018 [Section No. 7.2.5.6.8]

7.2.5.6.8 Exterior Nonbearing Walls.

Exterior nonbearing walls shall be permitted when tested in accordance with and meeting the conditions of acceptance of NFPA 285 or the 16 ft parallel panel test as described in ANSI/FM 4880 .

7.2.5.6.8.1 When window openings are provided within the installed wall assembly they shall be covered as follows:

(1) When the assembly was tested per NFPA 285, provide protecton as provided for the actual test.

(2) When the assembly was tested per ANSI/FM 4880 provide minimum 20 gage (0.03595 in, 0.9 mm) steel flashing around the window opening fastened at a maxium spacng of 16 in. (406 mm) on center into the wall structure using minimum no. 10 (5mm) screws.

Statement of Problem and Substantiation for Public Input

ANSI/FM 4880 is a consensus fire test standard that can be used to test fire exposure to the interior or exterior side of exterior walls. The 16 ft parallel panel test as described in ANSI/FM 4880 is an acceptable alternative to NFPA 285. Protection against fire exposure to the wall assembly cross-section around the window openings must be provided in the installation.

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Submittal Date: Fri Jun 22 13:53:41 EDT 2018

Committee: BLD-BLC



Public Input No. 20-NFPA 5000-2018 [New Section after 7.3.2.2]

7.3.2.3

The fire resistance rating requirements of Table 7.3.2.1 shall not apply where the exterior wall of the adjacent building consists of discontinuous portions of exterior walls that are less than five feet long, such as open porches or canopies.

Statement of Problem and Substantiation for Public Input

The intent of this requirement is to protect buildings against a significant fire in an adjacent building. Where the adjacent building is unenclosed, such as a porte cochere or covered patio, the fuel load is limited, the upward flame spread is not contained within walls, allowing much of the heat to dissipate in directions away from the building, the small width of the vertical wall surface greatly limits the radiant thermal energy transfer to the building, and the fire is unlikely to be able to threaten the building being protected.

Submitter Information Verification

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Committee: BLD-BLC



Public Input No. 31-NFPA 5000-2018 [Section No. 7.3.2.2]

7.3.2.2

The fire resistance rating requirements of Table 7.3.2.1 shall not apply to exterior walls of one- and two-family dwellings protected throughout with an automatic sprinkler system in accordance with Section 22.3.5.2 having a horizontal separation of more than ~~60 in~~ 36 in . (1525 mm). For residential subdivisions where all dwellings are equipped throughtout with an automatic sprinkler system installed in accordance with 22.3.5.2, the fire separation distance for exterior walls not fire-resistance reated and for fire-resistance-rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides and open setback yard that is 6 feet or more in width on the opposite side of the property line.

Statement of Problem and Substantiation for Public Input

This change correlates to the IRC, Table R302.1(2) footnote a. and provide the same level of protection for sprinklered dwelling and subdivisions in areas not using the IRC.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 30-NFPA 5000-2018 [Section No. 22.5]	Correlation with IRC
Public Input No. 32-NFPA 5000-2018 [Section No. 8.13.2.1]	

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Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]

7.3.5.5

The area of unprotected openings permitted by Table 7.3.5(a) and Table 7.3.5(b) shall be permitted to be doubled under either of the following conditions:

- (1) Where the building is protected throughout with an approved ~~electrically supervised~~ automatic sprinkler system in accordance with NFPA 13, NFPA 13D, and NFPA 13R 55.3.1.1 and electrically supervised in accordance with 55.3.2.
- (2) Where the openings are protected with a fire window assembly or other listed opening protectives having a fire protection rating in accordance with Table 7.3.5.5

Table 7.3.5.5 Minimum Fire Protection Ratings for Exterior Opening Protectives

<u>Wall Fire Resistance</u>	<u>Fire Protection</u>
<u>Rating</u>	<u>Rating</u>
<u>(hr)</u>	<u>(hr)</u>
2	1½
1	¾

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and not the specific sprinkler installation standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 123-NFPA 5000-2018 [Section No. 7.4.1.4.3]	
Public Input No. 133-NFPA 5000-2018 [Section No. 7.4.3.6.2]	
Public Input No. 135-NFPA 5000-2018 [Section No. 7.4.3.6.3]	
Public Input No. 141-NFPA 5000-2018 [Section No. 7.4.3.6.5]	
Public Input No. 144-NFPA 5000-2018 [Section No. 7.5.2]	
Public Input No. 146-NFPA 5000-2018 [Section No. 7.6.2.2]	
Public Input No. 147-NFPA 5000-2018 [Sections 7.6.3.2, 7.6.3.3, 7.6.3.4, 7.6.3.5, 7.6.3.6, 7.6.3...]	
Public Input No. 148-NFPA 5000-2018 [Section No. 11.2.2.5.2.4]	
Public Input No. 149-NFPA 5000-2018 [Sections 11.13.2, 11.13.3]	
Public Input No. 153-NFPA 5000-2018 [Section No. 37.2.2.3]	

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Committee: BLD-BLC



Public Input No. 123-NFPA 5000-2018 [Section No. 7.4.1.4.3]

7.4.1.4.3 Small Board and Care Occupancies.

For board and care occupancies, the values in Table 7.4.1 for sprinklered buildings shall also apply to buildings four or fewer stories in height above grade plane that are protected throughout with an approved, electrically supervised _ sprinkler system in accordance with NFPA 13R, 55.3.1.1 (2) and electrically supervised in accordance with 55.3.2.

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and not the specific sprinkler installation standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13 and NFPA 13R) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]	correlation
Public Input No. 133-NFPA 5000-2018 [Section No. 7.4.3.6.2]	
Public Input No. 135-NFPA 5000-2018 [Section No. 7.4.3.6.3]	
Public Input No. 141-NFPA 5000-2018 [Section No. 7.4.3.6.5]	

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Public Input No. 133-NFPA 5000-2018 [Section No. 7.4.3.6.2]

7.4.3.6.2 Aircraft Hangars.

The height of one-story aircraft hangars shall not be limited where the building is surrounded by public space, streets, or permanent open yards not less in width than 1½ times the height of the building and where the building is protected with an approved ~~electrically supervised~~ sprinkler system in accordance with NFPA 13 55.3.1.1 (1) and ~~electrically supervised~~ in accordance with 55.3.2 . . (*See Chapters 29 and 30 for special occupancy requirements.*)

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and sprinkler installation standard section. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]	
Public Input No. 123-NFPA 5000-2018 [Section No. 7.4.1.4.3]	
Public Input No. 135-NFPA 5000-2018 [Section No. 7.4.3.6.3]	
Public Input No. 141-NFPA 5000-2018 [Section No. 7.4.3.6.5]	

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Public Input No. 135-NFPA 5000-2018 [Section No. 7.4.3.6.3]

7.4.3.6.3* Low Hazard Industrial Processes Requiring Unusual Heights.

Buildings and structures of Type I or Type II construction, or buildings and structures protected throughout with an approved ~~electrically supervised~~ automatic sprinkler system in accordance with NFPA 13, 55.3.1.1(1) and electrically supervised in accordance with 55.3.2 that are designed to house low hazard industrial processes that require unusual heights to accommodate craneways or special machinery and equipment shall be permitted to be unlimited in height.

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and sprinkler system section within the document, not the specific sprinkler installation standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]	
Public Input No. 123-NFPA 5000-2018 [Section No. 7.4.1.4.3]	
Public Input No. 133-NFPA 5000-2018 [Section No. 7.4.3.6.2]	
Public Input No. 141-NFPA 5000-2018 [Section No. 7.4.3.6.5]	

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Submission Date: Tue Jun 26 14:02:48 EDT 2018
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Public Input No. 141-NFPA 5000-2018 [Section No. 7.4.3.6.5]

7.4.3.6.5 Enclosed Parking Structures with Occupancies Above.

A basement or first story above grade plane of a building shall be considered as a separate and distinct building for the purpose of determining the limitation on number of stories and construction type, provided that all of the following conditions are met:

- (1) The basement or first story above grade plane shall be of Type I construction and shall be separated from the building above with a horizontal assembly having a minimum 3-hour fire resistance rating.
- (2) Shaft, stairway, ramp, or escalator enclosures through the horizontal assembly shall comply with either of the following conditions:
 - (3) The enclosures shall have not less than a 2-hour fire resistance rating with opening protectives in accordance with Table 8.7.2.2 .
 - (4) Where the walls below the horizontal assembly have a minimum 3-hour fire resistance rating with opening protectives as required for walls forming a 3-hour fire barrier, the enclosure walls extending above the horizontal assembly shall be permitted to have a 1-hour fire resistance rating, provided that all of the following conditions are met:
 - (5) The building above the horizontal assembly is not required to be of Type I construction.
 - (6) The enclosure connects less than four stories above the horizontal assembly.
 - (7) The enclosure opening protectives above the horizontal assembly have a minimum 1-hour fire protection rating.
- (8) The building above the horizontal assembly shall contain only business, mercantile, storage, or residential occupancies or assembly occupancies having an assembly room with an occupant load of less than 300.
- (9) The building below the horizontal assembly shall be an enclosed or open parking structure used for the parking and storage of private motor vehicles, unless otherwise permitted by the following:
 - (10) Entry lobbies, mechanical rooms, and similar uses incidental to the operation of the building shall be permitted.
 - (11) Business, mercantile, and assembly occupancies having an assembly room with an occupant load of less than 300 shall be permitted in addition to those uses incidental to the operation of the building (including storage areas), provided that the entire structure below the horizontal assembly is protected throughout by an

approved, electrically supervised automatic
 - (a) approved automatic sprinkler system installed in accordance with NFPA 13.
 - (a) 55.3.1.1(1) and electrically supervised in accordance with 55.3.2.
- (12) The maximum building height in feet shall not exceed the limits set forth in Table 7.4.1 for the least restrictive type of construction involved.

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and sprinkler system section within the document, not the specific sprinkler installation

standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]	
Public Input No. 123-NFPA 5000-2018 [Section No. 7.4.1.4.3]	
Public Input No. 133-NFPA 5000-2018 [Section No. 7.4.3.6.2]	
Public Input No. 135-NFPA 5000-2018 [Section No. 7.4.3.6.3]	

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Public Input No. 234-NFPA 5000-2018 [New Section after 7.5]

ADD New Section:

7.5.3 Type IV Mass Timber Increase.

7.5.3.1 Type IV Mass Timber Buildings complying with 7.2.5.6.1.1 shall be permitted to have the following increases:

- (1) Allowable building height shall not exceed 270'
- (2) Allowable number of stories in accordance with Table 7.4.1 shall not exceed one of the following:
 - (a) 4 times the number of stories permitted for Type IV (2HH) or,
 - (b) Apartment Buildings, Hotels and Dormitory Occupancies shall not exceed 5 times the number of stories permitted for Type IV (2HH).

7.5.3.2 Type IV Mass Timber Buildings complying with 7.2.5.6.1.2 shall be permitted to have the following increases:

- (1) Allowable building height shall not exceed 180'
- (2) Allowable number of stories in accordance with Table 7.4.1 shall not exceed one of the following:
 - (a) 2 times the number of stories permitted for Type IV (2HH) or,
 - (b) Apartment Buildings, Hotels and Dormitory Occupancies shall not exceed 2.4 times the number of stories permitted for Type IV (2HH).

Statement of Problem and Substantiation for Public Input

Supporting Statement: ICC created a Tall Wood Building Ad Hoc Committee (TWB) which, for about two years, has been studying the science of taller mass timber buildings. The TWB reviewed information, publications, testing and testimony. They submitted a proposal to the ICC code change process to permit taller mass timber buildings. The Code Development Committee approved these proposals 13-1. However, this creates a disconnect with the NFPA Life Safety Code, particularly for Health Care types of occupancies. This proposal is similar to the TWB proposal but it has distinctive differences. It is intended to mollify those differences so that little or no differences exist between these documents.

First, it does not propose to create new types of construction. Instead it introduces "Special Requirements" for the new mass timber construction. Within the existing section on Special Requirements, two conditions are described: one in which the fire resistive rating of the Type IV mass timber is similar to Type I(332) and which requires limited combustible material protecting the mass timber and a second which is similar Type II(222) but requires no gypsum wall board to achieve its fire resistance rating.

Second, this proposal is consistent with the TWB draft proposal which was voted upon by the TWB and published on its webpage at the ICC web site. It is acknowledged that at its last meeting, just days before submittal deadline, the TWB changed some of the values for height in stories and area permitted. This proposal does not reflect those last minute changes.

The AWC website has the supporting documentation, including videos of full scale, multistory fire tests, test reports of the full scale tests, E119 tests, E814 tests and testing to validate the use of gypsum as a limited combustible (the I-Codes call it noncombustible) protection and the resulting fire performance. Other documents are also available. www.awc.org/tallmasstimber

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 206-NFPA 5000-2018 [Sections 7.2.5.6.1, 7.2.5.6.2, 7.2.5.6.3, 7.2.5.6.4, 7.2.5....]</u>	the construction necessary to permit the height increases in Section 7.5

[Public Input No. 201-NFPA 5000-2018 \[Section No. 45.5.8\]](#)

this add important requirements for adhesive performance for mass timber.

[Public Input No. 235-NFPA 5000-2018 \[New Section after 7.6.1\]](#)

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Committee: BLD-BLC



Public Input No. 144-NFPA 5000-2018 [Section No. 7.5.2]

7.5.2 Residential Sprinkler Increase.

For buildings classified as residential occupancies provided with an approved ~~electrically supervised~~ automatic sprinkler system in accordance with NFPA 13R, ~~55.3.1.1(2)~~ and ~~electrically supervised in accordance with 55.3.2,~~ the allowable height for nonsprinklered buildings shall be permitted to be increased by 20 ft (6.1 m), and the allowable number of stories for nonsprinklered buildings shall be permitted to be increased by one story, provided that the building does not exceed 60 ft (18 m) in height above grade plane, and the number of stories does not exceed four.

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and sprinkler system section within the document, not the specific sprinkler installation standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]</u>	

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Public Input No. 235-NFPA 5000-2018 [New Section after 7.6.1]

7.6.1.3 Type IV Mass Timber Increase.

7.6.1.3.1 The allowable area per story of Type IV Mass Timber Buildings complying with 7.2.5.6.1.1 shall be permitted to be increased by 3.0 times the allowable area permitted for Type IV (2HH).

7.6.1.3.2 The allowable area per story of Type IV Mass Timber Buildings complying with 7.2.5.6.1.2 shall be permitted to be increased by 2.0 times the allowable area permitted for Type IV (2HH).

Statement of Problem and Substantiation for Public Input

Supporting Statement: ICC created a Tall Wood Building Ad Hoc Committee (TWB) which, for about two years, has been studying the science of taller mass timber buildings. The TWB reviewed information, publications, testing and testimony. They submitted a proposal to the ICC code change process to permit taller mass timber buildings. The Code Development Committee approved these proposals 13-1.

However, this creates a disconnect with the NFPA Life Safety Code, particularly for Health Care types of occupancies. This proposal is similar to the TWB proposal but it has distinctive differences. It is intended to mollify those differences so that little or no differences exist between these documents.

First, it does not propose to create new types of construction. Instead it introduces "Special Requirements" for the new mass timber construction. Within the existing section on Special Requirements, two conditions are described: one in which the fire resistive rating of the Type IV mass timber is similar to Type I(332) and which requires limited combustible material protecting the mass timber and a second which is similar Type II(222) but requires no gypsum wall board to achieve its fire resistance rating.

Second, this proposal is consistent with the TWB draft proposal which was voted upon by the TWB and published on its webpage at the ICC web site. The areas proposed by the Ad Hoc remained unchanged from its drafts through its submittal. These numbers reflect those areas.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 234-NFPA 5000-2018 [New Section after 7.5]	these are the related heights for the construction referenced herein.
Public Input No. 206-NFPA 5000-2018 [Sections 7.2.5.6.1, 7.2.5.6.2, 7.2.5.6.3, 7.2.5.6.4, 7.2.5....]	these are the conditions of construction upon which these proposed areas are based.,

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Public Input No. 146-NFPA 5000-2018 [Section No. 7.6.2.2]

7.6.2.2 Automatic Sprinkler System Protection Increase.

Buildings other than those containing high hazard contents requiring Protection Level 1 or Protection Level 2, as specified in Chapter 34, and protected with an approved ~~electrically supervised~~ automatic sprinkler system in accordance with ~~NFPA 13 55.3.1.1(1) and electrically supervised in accordance with 55.3.2~~, shall be permitted to have the following automatic sprinkler system protection increase (I_s) applied to the allowable area per story:

- (1) 200 percent ($I_s = 200$) for buildings where the number of stories is two or more
- (2) 300 percent ($I_s = 300$) for one-story buildings

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and sprinkler system section within the document, not the specific sprinkler installation standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]	

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**Public Input No. 147-NFPA 5000-2018 [Sections****7.6.3.2, 7.6.3.3, 7.6.3.4, 7.6.3.5, 7.6.3.6, 7.6.3...]****Sections 7.6.3.2, 7.6.3.3, 7.6.3.4, 7.6.3.5, 7.6.3.6, 7.6.3.7, 7.6.3.8, 7.6.3.9****7.6.3.2 Sprinklered One-Story Building.****7.6.3.2.1**

A one-story building used for business, industrial occupancies with ordinary hazard contents, or mercantile occupancies, and assembly uses intended for viewing of indoor sporting events with spectator seating, shall not be limited in area where the building is provided with an ~~approved, electrically supervised~~ approved automatic sprinkler system in accordance with ~~NFPA 13- 55.3.1.1(1) and~~ electrically supervised in accordance with 55.3.2, and is surrounded and adjoined by public ways or yards not less than 60 ft (18 m) in width.

7.6.3.2.2

Sprinkler protection specified in 7.6.3.2.1 shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming, and equestrian activities, provided that the following conditions are met:

- (1) Exit doors directly to the outside are provided for occupants of the participant sports areas.
- (2) The building is equipped with a fire alarm system with manual fire alarm boxes installed in accordance with Section 55.2.

7.6.3.3 Sprinklered One- or Two-Story Storage Building.

A one- or two-story building used for storage of ordinary hazard contents shall not be limited in area, provided that both of the following requirements are met:

- (1) The entire building is protected throughout with an approved ~~, electrically supervised-~~ automatic sprinkler system ~~installed in accordance with NFPA 13- Section 55.3.1.1(1) and-~~
- (2) electrically supervised in accordance with 55.3.2.
- (3) The exterior walls face public ways or yards not less than 60 ft (18 m) in width.

7.6.3.4 Sprinklered Two-Story Building.

A two-story building used for business, industrial, or mercantile occupancies shall not be limited in area where the building is provided with an approved ~~, electrically supervised-~~ automatic sprinkler system installed in accordance with ~~NFPA 13 and 55.3.1.1(1) and~~ electrically supervised and in accordance with 55.3.2, is surrounded and adjoined by public ways or yards not less than 60 ft (18 m) in width.

7.6.3.5 Reduced Open Space.

The permanent open space of 60 ft (18 m) required in 7.6.3.1 through 7.6.3.4, 7.6.3.8, and 7.6.3.9 shall be permitted to be reduced to not less than 40 ft (12.2 m), provided that the following requirements are met:

- (1) The reduced open space shall not be permitted for more than 75 percent of the perimeter of the building.
- (2) The exterior wall facing the reduced open space shall have a minimum fire resistance rating of 3 hours.
- (3) Openings in the exterior wall, facing the reduced open space, shall have opening protectives with a fire protection rating of 3 hours.

7.6.3.6 High Hazard Contents.

High hazard contents required to comply with Protection Level 2, Protection Level 3, Protection Level 4, or Protection Level 5 in accordance with Chapter 34, other than deflagration hazards that are required to be stored in detached buildings, shall be permitted in unlimited area buildings in accordance with the limitations of 7.6.3.6.1 through 7.6.3.6.4.

7.6.3.6.1

Fire areas located at the perimeter of the unlimited area building shall not exceed 10 percent of the area of the building nor the area limitations specified in Table 7.4.1, as modified by Section 7.6, based on the percentage of the perimeter of the fire area that fronts on a street or other unoccupied space.

7.6.3.6.2

Fire areas other than those specified in 7.6.3.6.1 shall not exceed 25 percent of the area limitations specified in Table 7.4.1.

7.6.3.6.3

Fire resistance rating requirements of fire barrier assemblies shall be in accordance with Table 34.3.2.3.

7.6.3.6.4

High hazard contents required to comply with Protection Level 2, Protection Level 3, Protection Level 4, or Protection Level 5 shall not be located higher than the height limits specified in Table 7.4.1.

7.6.3.7 Sprinklered One-Story Educational Building.

A one-story building of Type II (111), Type II (000), Type III (211), or Type IV construction used for educational occupancies shall not be limited in area where the following criteria are met:

- (1) Each classroom shall have not less than two means of egress, with one of the means of egress being a direct exit to the outside of the building.
- (2) The building shall be equipped throughout with an approved ~~electrically supervised~~ automatic sprinkler system in accordance with ~~NFPA 13- 55.3.1.1(1) and electrically supervised in accordance with 55.3.2.~~
- (3) The building shall be surrounded and adjoined by public ways or yards not less than 60 ft (18 m) in width.

7.6.3.8 Sprinklered One-Story Motion Picture Theaters.

One-story motion picture theaters in buildings of Type II or Type III (211) construction shall not be limited in area where the buildings is provided with an approved ~~electrically supervised~~ automatic sprinkler system throughout in accordance with ~~NFPA 13- 55.3.1.1(1) and electrically supervised in accordance with 55.3.2,~~ and is surrounded and adjoined by public ways or yards not less than 60 ft (18 m) in width.

7.6.3.9 Sprinklered One-Story Assembly Building.

A one-story assembly building used as an auditorium, church, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor swimming pool, or tennis court of Type II construction shall not be limited in area where all the following criteria are met:

- (1) The building shall not have a theatrical stage other than a raised platform.
- (2) The building shall be equipped throughout with an approved
~~electrically supervised~~
- (3) automatic sprinkler system in accordance with
~~NFPA 13.~~
- (4) 55.3.1.1(1) and electrically supervised in accordance with 55.3.2.
- (5) The assembly floor shall be located as follows:
 - (6) At, or within, 21 in. (535 mm) of the level of the exterior exit discharge accessible from the main entrance/exit
 - (7) Within 21 in. (535 mm) of the level of the exterior exit discharge accessible from any of the required exits for buildings that do not have a main entrance/exit
- (8) All exits and exit discharges shall be level or provided with ramps to a public way.
- (9) The building shall be surrounded and adjoined by public ways or yards not less than 60 ft (18 m) in width.

Statement of Problem and Substantiation for Public Input

This correlates with other sections of NFPA 5000 and other model building and life safety codes as it points to the supervision section and sprinkler system section within the document, not the specific sprinkler installation standard. This allows for uniform enforcement by eliminating an interpretation of permitting locking valves open (permitted by NFPA 13) and provides for consistent installation.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 122-NFPA 5000-2018 [Section No. 7.3.5.5]	

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Public Input No. 63-NFPA 5000-2018 [New Section after 8.3.2.15]

8.3.2.16

8.3.2.16 Roof insulation. Insulation(s) and siding applied to the vertical surface and top of HC fire walls and fire walls that extend above the roof surface shall consist of noncombustible materials that have been reported as passing ASTM E136. Flashing and cant materials located at the roof surface, and wood nailers used to secure the cap flashing on top of the HC fire walls and fire walls, shall be exempt from this provision. [221: 4.12]

(Renumber the remaining sections)

Statement of Problem and Substantiation for Public Input

A companion proposal was made to NFPA 221 where the reason statement stated:

Recent trends with the national model energy codes illustrate that the provisions are being modified to require that fire walls (e.g. such as high challenge fire walls and fire walls that penetrate the roof surface) be insulated in order to mitigate the effects of thermal bridging. Currently NFPA 221 is silent concerning roofing insulation(s) being applied to the fire walls that extend above a roof surface.

This necessitates a modification to the NFPA 221 standard to ensure that said insulations applied to those fire walls do not act as a fire wick thus allowing the fire to traverse from one roof to another via the insulation or siding, thus negating the design intent of fire walls to impede a fire. This proposal recommends the addition of language to NFPA 221, Section 4 "General Requirements", for the insulations to be tested and pass in accordance with ASTM E136 in order for the insulations to be applied to the surfaces of the portions of a fire wall that extends above the roof(s).

The proposal to place this requirement in Section 4 (General) is to ensure that this will apply to all fire walls which penetrate the roof surface.

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Public Input No. 162-NFPA 5000-2018 [Section No. 8.3.3.7.4.1]

8.3.3.7.4.1

Fire walls shall be permitted to terminate at the underside of roof sheathing or deck provided that all of the following criteria are met:

- (1) The roof assembly within 48 in. (1220 mm) of each side of the fire wall is of fire-retardant-treated wood or fire-retardant coated wood .
- (2) The roof is provided with not less than a Class B roof covering.
- (3) Openings in the roof are not located within 48 in. (1220 mm) of the fire wall. [221:6.6.4.1]

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

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Committee: BLD-BLC



Public Input No. 164-NFPA 5000-2018 [Section No. 8.3.3.7.4.2]

8.3.3.7.4.2

Fire walls shall be permitted to terminate at the underside of the roof sheathing where the roof sheathing or deck is constructed of approved noncombustible or limited-combustible materials ~~or of~~ fire-retardant-treated wood, or of fire-retardant coated wood for a distance of 48 in. (1220 mm) on both sides of the wall. [221:6.6.4.2]

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

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Committee: BLD-BLC



Public Input No. 196-NFPA 5000-2018 [Section No. D.2.3.2.7]

D.2.3.2.7 Fire-Retardant-Treated Wood and Fire-Retardant Coated Wood Platforms.

Fire-retardant-treated wood and fire-retardant coated wood shall be permitted for permanent platforms that do not exceed 3000 ft² (278 m²) in area, that are not more than 30 in. (760 mm) above the floor, and that do not occupy more than 50 percent of the floor area of the room or space in which they are located.

Statement of Problem and Substantiation for Public Input

There are currently approved fire-retardant coatings on the market today that comply with building codes. New products may be developed to comply with these requirements. If products comply with testing for the installation required, they should not be excluded.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 229-NFPA 5000-2018 [Global Input]	

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Committee: BLD-BLC



Public Input No. 221-NFPA 5000-2018 [Section No. D.2.3.2.9]

D.2.3.2.9 Fire-Retardant-Treated and Fire-Retardant Coated Wood Roof.

D.2.3.2.9.1

Fire retardant-treated and fire-retardant coated wood members shall be permitted to be used for unprotected members specified in D.2.3.2.8.

D.2.3.2.9.2

Fire-retardant-treated and fire-retardant coated wood shall be permitted for roof construction, including girders and trusses, under the following conditions:

- (1) In Type II buildings
- (2) In Type I buildings where the number of stories is two or fewer
- (3) In Type I buildings where the number of stories is three or more where the vertical distance from the floor to the roof is 20 ft (6100 mm) or more

Statement of Problem and Substantiation for Public Input

There are currently approved fire-retardant coatings on the market today that comply with building codes. New products may be developed to comply with these requirements. If products comply with testing for the installation required, they should not be excluded.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 229-NFPA 5000-2018 [Global Input]	

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Public Input No. 197-NFPA 5000-2018 [Section No. D.2.3.2.11.2]

D.2.3.2.11.2

Interior nonbearing walls required to have a fire resistance rating of 2 hours or less shall be permitted to be fire-retardant-treated wood or fire-retardant coated wood enclosed within noncombustible or limited-combustible materials, provided that such walls are not used as shaft enclosures.

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

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Public Input No. 222-NFPA 5000-2018 [Section No. D.2.3.2.12.1]

D.2.3.2.12.1

Fire-retardant-treated wood and fire-retardant coatings shall be permitted in exterior nonbearing walls where such walls are not required to have fire resistance ratings.

Statement of Problem and Substantiation for Public Input

There are currently approved fire-retardant coatings on the market today that comply with building codes. New products may be developed to comply with these requirements. If products comply with testing for the installation required, they should not be excluded.

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Committee: BLD-BLC



Public Input No. 198-NFPA 5000-2018 [Section No. D.2.4.2.1]

D.2.4.2.1 Fire-Retardant-Treated Wood and Fire-Retardant Coated Wood .

Approved fire-retardant-treated wood or fire-retardant coated wood framing shall be permitted within the assembly of exterior walls having a required fire resistance rating of 2 hours or less and a horizontal separation of not less than 60 in. (1525 mm), provided that the fire resistance rating is maintained and the exposed outer and inner faces of such walls are constructed of limited-combustible or noncombustible materials.

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 229-NFPA 5000-2018 [Global Input]</u>	

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Public Input No. 199-NFPA 5000-2018 [Section No. D.2.5.6.7]

D.2.5.6.7 Exterior Walls.

Approved fire-retardant-treated wood or fire-retardant coated wood framing shall be permitted within the assembly of exterior walls having a required fire resistance rating of 2 hours or less and a horizontal separation of not less than 60 in. (1525 mm), provided that the fire resistance rating is maintained and the exposed outer and inner faces of such walls are constructed of limited-combustible or noncombustible materials.

Statement of Problem and Substantiation for Public Input

Fire-retardant coatings should not be excluded. There are currently approved flame-retardant coatings on the market today that comply with building codes. New products including flame-retardant coatings may be developed to comply with these requirements. Excluding flame-retardant coatings or any other product is limiting opportunities for fair trade and the consumer.

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Committee: BLD-BLC



Public Input No. 64-NFPA 5000-2018 [New Section after 3.3.696]

3.4 General Acronyms

<u>ACM</u>	= Aluminum Composite Panel
<u>AHJ</u>	= Authority Having Jurisdiction
<u>ALS</u>	= Assistive Listening System
<u>BFE</u>	= Base Flood Elevation
<u>DFE</u>	= Design Flood Elevation
<u>FBFM</u>	= Flood Boundary and Floodway Map
<u>FHBM</u>	= Flood Hazard Boundary Map
<u>FIRM</u>	= Flood Insurance Rate Map
<u>HPM</u>	= Hazardous Production Material
<u>HRR</u>	= Heat Release Rate
<u>I</u>	= Importance Factor
<u>LFL</u>	= Lower Flammable Limit
<u>LP-Gas</u>	= Liquefied Petroleum Gas
<u>MCM</u>	= Metal Composite Panel
<u>OSB</u>	= Oriented Strand Board
<u>p</u>	= Design Pressure
<u>PEL</u>	= Permissible Exposure Limit
<u>RDP</u>	= Registered Design Professional
<u>SIED</u>	= Special Industrial Explosive Device
<u>V</u>	= Wind Speed

Statement of Problem and Substantiation for Public Input

Statement of Problem and Substantiation for Public Input:

New Section 3.4:

We have become liberal over the years as TC members in the application of terms versus acronyms. When examining the publication the use of the full text of the term and its associated acronym are inconsistent throughout. In addition, while we have generated acronyms nowhere is there a listing where a user can easily refer to said acronym for reference.

We are proposing that a new Section 3.4 be added to Chapter 3. This will be a section dedicated for acronyms which are used in the document. While the current document illustrates the acronym following the term, most users of the document have trouble finding same since they view the acronym first and then must hunt for the association with the actual term. By creating this list in a separate section will make the document more user friendly.

Assignment for Technical Committees:

We are asking each of the technical committees to perform an assessment of their respective chapters and proposed modifications to follow the NFPA manual of style (Shown below) by replacing the text version of a definition which has been assigned an acronym with the appropriate acronym.

“3.2.5.1 Acronyms and Uncommon Abbreviations.

3.2.5.1.1 All acronyms and any abbreviations that are not in common use shall be spelled out with the acronym or abbreviation following in parentheses for the first use of the term in the document.

3.2.5.1.2 Each subsequent use shall be the acronym or abbreviation only.”

(Source: "NFPA Manual of Style for NFPA Technical Committee Documents", July 2004 Edition)

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Committee: BLD-FUN

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