NFPA Technical Committee on
Fundamentals of Fire Control
Within a Structure Utilizing
Fire Dynamics

NFPA 1700 Draft Development
Meeting Minutes
December 2-4, 2015
Quincy, MA

Members Present:
Joe Jardin, FDNY, Chair
Ian Bolton, District of North Vancouver Fire & Rescue
Ed Buchanan, Hanover Fire & EMS Department
Sean DeCrane, IAFF (Alternate)
Richard Dyer, IAFC
Gavin Horn, University of Illinois Fire Service Institute
Stephen Kerber, UL
Dan Madrzykowski, NIST
Holly Nelson, San Bruno Fire Department
Ryan O’Donnell, BullEx Inc.
John Schutt, Mesa Fire Medical Department
Devon Wells, ISFSI
Steve White, Prince George’s County Fire Department
Steve Young, Wolf Creek Fire Dept. /Travelers Insurance
Ryan Depew, NFPA

Guests Present:
Sarah Caldwell, NFPA
Ed Conlin, NFPA
Rusty Dunham, NVFC
Edee Edwards, NFPA
Andrew Ellison, Exponent
Gerard Fontana, Boston Fire Department
Dan Gorham, FPRF
Casey Grant, FPRF
Kevin Kuntz, ISO
Peter McBride, Ottawa Fire Service
Tim Merinar, NIOSH/CDC
Dave Quick, Manchester (NH) Fire Department
Sreeni Ranganathan, FPRF
Joy Rodowicz, NFPA
James Walsh, Boston Fire Department
Richard White, JIBC

• Meeting Called to Order December 2, 2015 at 8:00 am

• Welcome and Introductions

• Welcome from Chris Dubay, VP of Engineering, and Ken Willette, Division Manager - Public Fire Protection

• Remarks from the Chair

• Presentations
  o NFPA Morgan Technical Library, Mary Elizabeth Woodruff
  o NFPA Fire Analysis and Research, Nancy Schwartz
- NFPA Forum Overview, Ken Willette
  - Fire Protection Research Foundation, Dan Gorham (Attachment A)

- Draft Development and NFPA Process (Attachment B)

- Group Discussion on Purpose of Meeting:
  - Committee Scope
  - Document Title and Scope
  - Document Content Brainstorming
  - Motion by S. Kerber to Create a NFPA Guide – Unanimous Approval
  - Pursuit of Full Color Document Similar to NFPA 921

- Task Groups Breakouts
  - Reference Materials – NFPA and Other
  - Document Layout – Title, Scope, and Structure

- New Business
  - Research Update
  - FPRF Project Submittal on SOP/SOG’s
  - NFPA E-committee Resource Page
  - NFPA Xchange Overview
  - Chapter 3 Definitions Task Group – Dan Madrzykowski, Chair
  - Chapter 5 Basic Fire Science – Andrew Ellison, Chair
  - Long Term Plan for 2016
  - Goal for Draft Delivery – December 2016
  - Date and Location of Next Meeting – March 21-23, 2016, Southwestern U.S.

- Adjournment on December 4, 2015 at 10:45 am
Research in Support of NFPA Technical Committees

NFPA Technical Committee on Fundamental of Fire Control Within Structures Utilizing Fire Dynamics – Draft Development Meeting

December 2-4, 2015 | Daniel Gorham: Research Project Manager
Agenda

1. Understanding the Foundation
2. Review of Current Projects
3. How the Foundation Supports NFPA TCs
Role of the Foundation

Plan, manage and communicate research in support of the NFPA mission

- Independent charitable organization
  - Formed by NFPA in 1982
  - Intended to provide data to support the needs of NFPA codes & standards
  - Research funds come primarily from:
    - Private and public sector consortia
    - Grants and government sources (e.g. DHS S&T, DOD, FEMA, AFG, NIOSH, NIST, NSF, etc)
    - Multiple other sources (including NFPA)
How the Foundation Operates

I. Benchmarking – state of the art symposia
II. Agenda Setting – research planning in emerging areas
III. Research Programs –
   - Research projects to meet the needs of NFPA Committees and others
   - Projects range from small literature search type studies to major fire testing programs
Research Process (for FPRF projects)

1. Research Projects Initiation:
   – Need for research identified by technical committee, organizations/associations, manufacturers, end user groups, other affected interests

2. Core Planning Meeting:
   – Outline goals, scope, tasks, schedule
   – Develop preliminary work plan
   – Determine likely funding sources and secure sponsors
Research Process (for FPRF Projects)

3. Project Technical Panels:
   – Code enforcers, code writers, subject matter experts, principal sponsors, NFPA staff liaisons
   – Determines technical details of the project, oversees and provides guidance to contractor

4. Research Performed:
   – Primary Contractor selected
   – Sponsors receive early access to program results

5. Research Reports Published:
   – Final reports published and made available to all
Research Process (for “Advisory Service” Projects)

1. Project Technical Panels:
   - Code enforcers, code writers, subject matter experts, principal sponsors, NFPA staff liaisons
   - Determines technical details of the project, oversees and provides guidance to contractor

2. Research Performed:
   - Other organization obtains funding and leads project
   - FPRF in supporting role

3. Research Reports Published:
   - Final reports published and made available to all
Project Participants – Who are They?

Funding (Sponsors): Where does it come from?
Manufacturers, trade associations, NFPA, federal agencies, research organizations, nowhere, etc…

Contractors: Who Does the Work?
Consultants, research organizations, test labs, universities, NFPA Fire Analysis, volunteers

Advisory Oversight: Project Technical Panel
Typically small (6 to 15)
Meet at important stages of project (start/end/other)
Project Characteristics and Ideas

- Characteristics of Foundation Projects:
  (collaboration, cost sharing, independence, pipeline to implementation, communications network)

- Project Ideas:
  - TC struggling with an issue, via staff liaison
  - Industry wants to introduce new technology into standard; needs data
  - Two opposing views on an issue and data needed
  - Data presented is not trusted by committee
  - Emerging technical issue – e.g. alternative energy
  - TC establishes ongoing research planning activity

www.NFPA.org/Foundation
Underlying Benefits of Foundation Based Projects

- Independence
- Collaboration
- Cost sharing
- Credibility
- Pipeline to implementation
- Communications network

--- Using the Foundation as a better resource ---
Agenda

1. Understanding the Foundation
2. Review of Current Projects
3. How the Foundation Supports NFPA TCs
General Characteristics of Foundation Projects

Questions asked include:

– What are they about?
– Where do the ideas come from?
– What is funding source?
– Who does the work?
– How does the committee and staff get involved?
– What impact do they have?
Traditional Project Topic Areas

- Hazardous materials – spacing
- Detection and alarm – performance in given fire scenarios
- Sprinklers – fire tests of commodities
- Electrical – performance in place
- Fire service – PPE test methods
- Risk assessment in codes and standards development
2014-2019 Strategic Research Agenda

Focusing on the following seven areas:

• Strategies to reduce residential fire loss
• Strategies for changing social demographics
• Strategies for sustainable, resilient communities
• FF Tactics for emerging technologies
• Cyber physical systems and integrated technologies
• Emerging health and Safety cultures
• Effectiveness of fire protection systems
“NFPA Research Fund” Projects

- Previously known as the “Code Fund”
- Funded directly by NFPA
- Annual evaluation process
- Focus on smaller one-year projects
- Considered when lacking other obvious funding sources
- Intended to stimulate additional research
NFPA Research Fund History

- 2006: 4 Selected Projects (of 13)
- 2007: 3 Selected Projects (of 22)
- 2008: 3 Selected Projects (of 17)
- 2009: 4 Selected Projects (of 17)
- 2010: 7 Selected Projects (of 15)
- 2011: 11 Selected Projects (of 40)
- 2012: 10 Selected Projects (of 74)
- 2013: 16 Selected Projects (of 51)
- 2014: 15 Selected Projects (of 47)
- 2015: 11 Selected Projects (of 50)
NFPA Research Fund Projects

• Previous NFPA Research Fund Projects
2014 NFPA Research Fund Projects

- NFPA 25: Water Based Fire Protection System Tagging Review
- Various Documents: Disaster Resiliency in NFPA Codes and Standards
- NFPA 1144: Geospatial Research Compendium
- NFPA 400: Hazardous Waste Treatment Facility Fire Code Gap Analysis
- NFPA 1851: Non-Destructive Assessment of Outer Shell Degradation for Firefighter Turnouts
2015 NFPA Research Fund Projects

• High number of submittals consistent with recent years
  – Due to growing understanding of FPRF role, growing awareness of funding, TC/TCC Chair training, outreach by FPRF staff
• Review Committee prioritized the list of submittals
  – Attempt to balance selections across National Fire Codes
  – Considered technical relevance, problem magnitude, sense of urgency, likelihood of success, availability of other funding
• Final selections made based on:
  – The priority rankings from the committee
  – Main topic area addressed
  – Potential for outside support
  – Availability of intern or student for smaller, straight-forward selections
2015 NFPA Research Fund Projects

• NFPA 1851: Investigation of Turnout Clothing Contamination and Validation of Cleaning Procedures
• Various Documents: Hazards Assessment of Lithium Ion Batteries Used in Energy Storage Systems (ESS)
• NFPA 14: Fire Department Connection (FDC) Inlet Flow Requirements
• NFPA 68, 86: Effectiveness of Oven and Furnace Explosion Relief Requirements
• Data and Resources on Mobile Integrated Healthcare and Community Paramedicine
Agenda

1. Understanding the Foundation
2. Review of Current Projects
3. How the Foundation Supports NFPA TCs
Technical Reports

All Reports (and other information) are posted on the Foundation website: www.nfpa.org/foundation
New Projects

Work with Staff Liaison to consider
NFPA Research Fund Submittal(s)

NFPA Research Fund Website:
http://www.nfpa.org/research/fire-protection-
research-foundation/nfpa-research-fund
New Projects

- Project Planning Groups
  - Automatic Sprinkler
  - Fire Alarm and Detection
  - Electrical
  - Emergency Responder PPE
  - Emergency Responder Health and Safety
  - Property Insurance Research Group (PIRG)
Questions
Thank You
ATTACHMENT B
NFPA 1700 Draft Development Meeting

NFPA Process Overview

December 2-4, 2015 | Ryan Depew: Emergency Services Specialist
NFPA Draft Development Meetings

At this and all NFPA committee meetings we are concerned with your safety. If the fire alarm sounds, please proceed to an exit.
NFPA Draft Development Meetings

• Members, please verify/update your contact information

• Use of tape recorders or other means capable of reproducing verbatim transcriptions of this or any NFPA meeting is not permitted
NFPA Draft Development Meetings

• Guests
  • All guests are required to sign in and identify their affiliations.
  • Participation is at the discretion of the Chair, and otherwise limited to those individuals who have previously requested time to address the committee on a particular subject.
Overview

• About NFPA

• NFPA Structure
  – Board of Directors
  – Standards Council
  – Technical Committees
  – Rules of Order

• New Projects - How We Got Here
Overview

- Draft Development Process
- Document Types
- Standards Development Process
- Document Information Pages
About NFPA

- Founded in 1896

- Codes and Standards, Research, Training, Education, Outreach and Advocacy

- Mission Driven: Information and Knowledge Organization

- First Responder Community Key Focus Area
About NFPA

Our Vision:

Elimination of Death, Injury, Property, and Economic Loss Due to Fire, Electrical, and Related Hazards

Our Mission:

Help Save Lives and Reduce Loss with Information, Knowledge, and Passion
NFPA Structure

Guiding Principles:
• Due process
• Openness
• Lack of dominance
• Seek society’s balance between:
  – Acceptable risk
  – Commitment of resources
The Participants

• 1) The public
• 2) ~80,000 Members
• 3) Board of Directors
  – Approximately 23 members
  – Elected by Membership
• 4) Standards Council
• 5) Technical Committees
• 6) NFPA Staff
Board of Directors

• Appoint Standards Council Members
• Governance (Revise Regulations)
• Petitions
Standards Council

- 13 Members
- Appointed by Board
- Responsibilities:
  - A) Adjudicate appeals
  - B) Issue documents & TIAs
  - C) Appoint Committee members
  - D) Assign Committee scopes
- Typically meet 3 times/year
Technical Committees

- “Consensus bodies” in system
- Typical maximum size of 30
  - Can petition for larger size
- Overall; ~ 8,000 Volunteers
- ~ 300 Technical Committees, balanced by interest categories
- ~ 325 Codes & Standards
Technical Committees

- Carefully balanced by 9 interest categories
  - (1) Applied Research/Testing Laboratory
  - (2) Consumer
  - (3) Enforcing Authority
  - (4) Installer/Maintainer
  - (5) Insurance
  - (6) Labor
  - (7) Manufacturer
  - (8) Special Expert
  - (9) User
Technical Committees

Committee Membership

• Principal
• Alternate

Other Designations

• Voting Alternate
• Nonvoting
• Member Emeritus
Technical Committee

Safeguard against dominance

• 1/3 Balance Rule:
  A committee can never have more than 1/3 of its membership from any one interest category

• Consensus Requirement:
  – Minimum 2/3 on all changes
  – Some situations require ¾ majority
Technical Committees

• Membership is continually monitored
  – All members reappointed annually
  – Inactive members removed
  – Always accepting applications
  – Applications reviewed quarterly

• Don’t need to be general NFPA Association member to be a TC member
Technical Committees

• Change of Status – 3.1.3.2 Rules & Regulations
  – Changing Employment, Organization Represented, Funding Source
  – Individual’s Membership Automatically Terminates

• Notify NFPA Staff Liaison
• Submit New Application for Membership
• May Result in Classification Change
Rules of Order

General Procedures

• Follow Robert’s Rules of Order
• Discussion requires a motion
• Chair’s Discretion
Rules of Order

Committee member actions:

- Member addresses the chair
- Receives recognition from the chair
- Introduces the motion
- Another member seconds the motion
Rules of Order

Committee chair actions:

• States the motion.
• Calls for discussion.
• Ensures all issues have been heard.
• Takes the vote.
• Announces the result of the vote.
New Projects

• New Project Request to Standards Council
  – Anyone can request a new project
  – SC requests input and renders a decision
  – Assigned to a committee or a new committee established
  – Committee develops draft document for public review and enters revision cycle
How We Got Here

• Initial Project Request to Standards Council – April 2015

• Standards Council Request for Input by June 21, 2015

• 22 Responses Received
  – 19 Letters in Support
  – 2 Letters of Concern
  – 1 Letter – Editorial Note
How We Got Here

- Common Thread - Interest in Committee Participation

- Opened Committee Application Process

- June 1, 2015 through July 22, 2015

- 38 Applications Received by Initial Deadline
How We Got Here

• Standards Council Review – August 2015
• 22 Letters of Response
• 38 Applications
• Proposed Startup Roster
  – 1 Chair
  – 14 Principle Members
  – 2 Alternate Members

• Project Approved
Technical Committee Balance

- Technical Committee on Fundamentals of Fire Control within Structures Utilizing Fire Dynamics (FCO-AAA)
  - Enforcers, 5 Members: 33%
  - Insurance, 1 Member: 7%
  - Installer/Maintainer, 0 Members: 0%
  - Labor, 1 Member: 7%
  - Manufacturers, 1 Member: 7%
  - Research & Testing, 3 Members: 20%
  - Special Experts, 1 Member: 7%
  - Users, 2 Members: 13%
  - Consumer, 1 Member: 7%
How We Got Here

- Project Approved – August 2015

**COMMITTEE TITLE:**
Technical Committee on Fundamentals of Fire Control Within a Structure Utilizing Fire Dynamics (FCO-AAA)

**COMMITTEE SCOPE:**
This Committee shall have primary responsibility for documents relating to techniques and methods used in firefighting based on accepted scientific principles and research in the field of fire dynamics.
Draft Development Process

Draft Development Meetings
- First Meeting - December 2015
- Anticipate 2-3 Draft Development Meetings in 2016
  - 2-3 Days each
  - Dates and locations TBD this week
- Draft Document for Development by end of 2016
Draft Development Process

- Draft Development Meetings
  - Committee Title/Committee Scope
  - Identify Type of Document
  - Document Scope and Framework
  - Document Language

- Draft Development Resources
  - NFPA Manual of Style
  - Glossary of Terms
  - NFPA Staff
Draft Development Process

• Final Draft Document
  – Informational Ballot Requiring 2/3 Majority
  – NFPA Standards Council for Approval
  – Published as Proposed Standard
  – Enters NFPA Revision Cycle/Standards Development Process Sometime 2017
**Chapter 1 Administration**

1.1* Scope.

This standard contains minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by substantially all career fire departments.

1.1.1

The requirements address functions and objectives of fire department emergency service delivery, response capabilities, and resources.

1.1.2

This standard also contains general requirements for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning.

1.1.3

This standard addresses the strategic and system issues involving the organization, operation, and deployment of a fire department and does not address tactical operations at a specific emergency incident.
NFPA Document Type

- Code
- Standard
- Recommended Practice
- Guide
NFPA Document Type

- **Code** — A standard that is an extensive compilation of provisions covering broad subject matter or that is suitable for adoption into law independently of other codes and standards.

- “You must do…”
NFPA Document Type

• **Standard** — An NFPA Standard, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted In the NFPA Manuals of Style.

• “How to…”
NFPA Document Type

• **Recommended Practice** — An NFPA Standard similar in content and structure to a code or standard but that contains only nonmandatory provisions using the word “should” to indicate recommendations in the body of the text.

• “You should...”
NFPA Document Type

- **Guide** — An NFPA Standard that is advisory or informative in nature and that contains only nonmandatory provisions. A guide may contain mandatory statements such as when a guide can be used, but the NFPA Standard as a whole is not suitable for adoption into law.

- “You may/can…”
Two Revision Cycles per Year

- Annual (June)
  - 101 weeks (2 years)
- Fall (November)
  - 141 weeks (receives amending motion)
The Four Steps

- Step 1 Input Stage
- Step 2 Comment Stage
- Step 3 Association Technical Meeting
- Step 4 Council Appeals and Issuance
The Standards Development Process:

1. **First Draft Report Posted**
2. **Comment Stage**
   - First Draft Meeting
   - Second Draft Meeting
   - Ballot First Draft
   - Ballot Second Draft
   - No Public Comments Received
   - No Second Revisions by Committee
3. **STEP 3 Association Technical Meeting**
   - Consent Standard
   - No NITMAM Received or NITMAM not Certified
   - NITMAM Received and Certified
4. **STEP 4 Council Appeals and Issuance of Standard**
   - Ballot Closing Date
   - NITMAM Closing Date
   - NITMAM Received and Certified
Step 1 Input Stage

- Document Open for Public Review
- Acceptance of Public Input
- TC First Draft Meeting
  - Review Public Inputs
  - Create First Revisions
- Committee ballot on First Draft
  - 2/3 Affirmative Vote
- First Draft Report posted
The Standards Development Process

1. Input Stage
   - First Draft Meeting
   - Public Input Closing Date
   - Second Draft Meeting
   - Ballot
   - Second Draft Report Posted

2. Second Stage
   - No Public Comments Received
   - No Second Revisions by Committee
   - Consent Standard
   - NITMAM Closing Date
   - NITMAM Received or NITMAM not Certified

3. Third Stage
   - NITMAM Received and Certified

4. Final Stage
   - Council Appeals and Issuance of Standard
Step 2 Comment Stage

- Document Open for Public Review
- Acceptance of Public Comment
- TC Second Draft Meeting
  - Review Public Comments
  - Create Second Revisions
- Committee Ballot on Second Draft
  - 2/3 Affirmative Vote
- Second Draft Report Posted
The Standards Development Process

STEP 1
Input Stage
- First Draft Report Posted
- Ballot First Draft
- First Draft Meeting
- Public Input Closing Date
- Last Edition Published

STEP 2
Comment Stage
- Second Draft Meeting
- Ballot Second Draft
- Second Draft Report Posted
- No Public Comments Received
- No Second Revisions by Committee
- Comment Closing Date

STEP 4
Council Appeals and Issuance of Standard
- Consent Standard
Step 3 NFPA Technical Meeting
(Tech Session)

- Notice of Intent to Make a Motion (NITMAM) to be submitted to NFPA and Certified by Motions Committee.
- Motions based on First Draft Report and Second Draft Report
- Certified Amending Motions Addressed at NFPA Annual Meeting
The Standards Development Process

**STEP 1**
Input Stage
- First Draft Report Posted
- Ballot First Draft
- First Draft Meeting
- Public Input Closing Date
- Last Edition Published

**STEP 2**
Comment Stage
- Second Draft Meeting
- Ballot Second Draft
- Second Draft Report Posted
- Comment Closing Date
- No Public Comments Received
- No Second Revisions by Committee
- NITMAM Closing Date
- No NITMAM Received or NITMAM not Certified
- NITMAM Received and Certified
- Consent Standard

**STEP 3**
Association Technical Meeting

- NITMAM
- NITMAM Received and Certified
Step 4 Council Appeals/Issuance of Standard

• Consent Standard
  – No Certified Amending Motions
  – No Public Comments
    – Sent to Standards Council for Issuance

• Council Appeals
  – Standards Council considers and hears appeals
  – Decision of Standards Council is final and becomes effective 20 days after issuance.
# Document Information Pages

www.nfpa.org/1700

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<th>About</th>
<th>Current and Previous Editions</th>
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| • Document scope  
• Table of contents  
• Articles  
• Research and statistical reports  
• Latest codes and standards news on NFPA Today blog feed  
• Free access | • Issued TIAs, FIs, Errata  
• Archived revision information such as meeting and ballot information, First Draft Reports, Second Draft Reports, and Standards Council and NITMAM information | • 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 | • 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 |
In Summary

• NFPA Structure and Technical Committees
  – Openness and Lack of dominance
  – BOD and Standards Council
  – Balanced Consensus Body TC’s

• New Projects
  – How We Got Here
    • Project Request through Project Approval

• Draft Development Process
  – 2-3 Meetings in 2016
  – Draft Document by end of 2016
In Summary

• Document Types
  – Code, Standard, Recommended Practice, Guide

• Standards Development Process
  Revision Cycles
  1) Input Stage
  2) Comment Stage
  3) Association Technical Meeting
  4) Standards Council Appeals/Issuance of Standards

• Document Information Pages
Questions