## American Concrete Institute



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## **NFPA Model Code Development**

Last updated September 2018

The National Fire Protection Association (NFPA) develops model building codes and referenced standards. Generally, the NFPA model codes that have provisions related to structural concrete design and construction are not generally used as the basis for building codes, as most authorities having jurisdiction (AHJs) base these type of requirements on the model codes developed by the International Code Council. NFPA uses a committee process with procedures similar to those used by ACI regarding processing proposed revisions.

## Shown here are:

<u>NFPA-codes</u> with an indication of relevance to ACI committee activities <u>Process</u> for development of NFPA codes is described <u>Engagement</u> by ACI members and staff

<u>NFPA codes</u>: NFPA develops and maintains 32 model codes. As the name suggests, most NFPA codes are related to fire protection in specific applications or occupancies. Portions of codes most relevant to ACI committee activities are indicated in Table 1.

Table 1 - NFPA Model Codes and Current Relevance to ACI Committee Activities

ICC Model Code		Most Relevance to ACI	ACI Committees
NFPA 1	Fire Code	Limited or no relevance	None
NFPA 2	Hydrogen Technology Code	Limited or no relevance	None
NFPA 30	Flammable and Combustible Liquids Code	Limited or no relevance	None
NFPA 30A	Code for Motor Fuel Dispensing Facilities and Repair Garages	Limited or no relevance	None
NFPA 30B	Code for the Manufacture and Storage of Aerosol Products	Limited or no relevance	None
NFPA 42	Code for the Storage of Pyroxylin Plastic	Limited or no relevance	None
NFPA 52	Vehicular Natural Gas Fuel Systems Code	Limited or no relevance	None
NFPA 54	National Fuel Gas Code	Limited or no relevance	None
NFPA 55	Compressed Gases and Cryogenic Fluids Code	Limited or no relevance	None



Table 1 – NFPA Model Codes and Current Relevance to ACI Committee Activities (continued)

ICC Model Code		Most Relevance to ACI	ACI Committees
NFPA 58	Liquefied Petroleum Gas Code	Limited or no relevance	None
NFPA 59	Utility LP-Gas Plant Code	Chapter 6 – Refrigerated Containers	376
NFPA 70	National Electrical Code	Limited or no relevance	None
NFPA 70A	National Electrical Code® Requirements for One- and Two-Family Dwellings	Limited or no relevance	None
NFPA 72	National Fire Alarm and Signaling Code	Limited or no relevance	None
NFPA 99	Health Care Facilities Code	Limited or no relevance	None
NFPA 101	Life Safety Code	Chapter 8 – Features of Fire Protection	216
NFPA 101A	Code for Means of Egress for Buildings and Structures	Limited or no relevance	None
NFPA 301	Code for Safety to Life from Fire on Merchant Vessels	Limited or no relevance	None
NFPA 400	Hazardous Materials Code	Limited or no relevance	None
NFPA 430	Code for the Storage of Liquid and Solid Oxidizers	Limited or no relevance	None
NFPA 432	Code for the Storage of Organic Peroxide Formulations	Limited or no relevance	None
NFPA 434	Code for the Storage of Pesticides	Limited or no relevance	None
NFPA 490	Code for the Storage of Ammonium Nitrate	Limited or no relevance	None
NFPA 495	Explosive Materials Code	Limited or no relevance	None
NFPA 900	Building Energy Code	Chapter 4 – Technical Provisions for All Buildings Except Low-rise Residential Buildings Chapter 5 – Technical Provisions for Low-rise Residential Buildings	122 122
NFPA 909	Code for the Protection of Cultural Resource Properties - Museums, Libraries, and Places of Worship	Limited or no relevance	None



Table 1 – NFPA Model Codes and Current Relevance to ACI Committee Activities (continued)

	ICC Model Code	Most Relevance to ACI	ACI Committees
NFPA 914	Code for Fire Protection of Historic Structures	Limited or no relevance	None
NFPA 1122	Code for Model Rocketry	Limited or no relevance	None
NFPA 1123	Code for Fireworks Display	Limited or no relevance	None
NFPA 1125	Code for the Manufacture of Model Rocket and High-Power Rocket Motors	Limited or no relevance	None
NFPA 1127	Code for High Power Rocketry	Limited or no relevance	None
NFPA 5000	Building Construction and Safety Code	Chapter 1 – Administrative Chapter 8 – Features of Fire Protection Chapter 15 – Building Rehabilitation Chapter 36 – Soils Foundations and Retaining Walls Chapter 40 – Quality Assurance During Construction Chapter 41 – Concrete Chapter 51 – Energy Efficiency	311, 318 216 562 311, 318 311, 318 318, 506 122

<u>Process:</u> NFPA code development is on a 3-year cycle. The cycles for the codes having relevance to current ACI committee activities are shown in Table 2.

Table 2 – Scheduled Editions of NFPA Codes Currently Relevant to ACI Committees

	Model Code	Current Edition	Next Edition	Subsequent Edition	Subsequent Edition
NFPA 59	Utility LP-Gas Plant Code	2018	2021	2024	2027
NFPA 101	Life Safety Code	2018	2021	2024	2027
NFPA 900	Building Energy Code	2016	2019	2022	2025
NFPA 5000	Building Construction and Safety Code	2018	2021	2024	2027

The schedule for the development of codes standards is unique for each code or standard but linked to the appropriate annual NFPA technical committee meetings. As an example, the basic steps of the process for the 2021 edition of NFPA 5000 are shown in Table 3.



Table 3 – Basic Steps in the NFPA Codes and Standards Development Process

Activity	Cycle for 2021 Edition of NFPA 5000	
Step 1: Public Input Period closing date		Jun 27, 2018
Step 2: Committee Develops First Draft	Jun 27, 2018	Jan 23, 2019
- Committee meetings	Jun 22, 2018	Jul 27, 2018
- Committee meetings	Aug 20, 2018	
Step 3: First Draft balloted by committees	Jan 23, 2019	Feb 23, 2019
- Technical Committee meeting held prior to		Sep 5, 2018
- Correlating Committee meeting held prior to	Jan 2, 2019	
Step 4: First Draft Public Review Period		
A. If no public comments, document moves to Step 7	Feb 27, 2019	May 8, 2019
B. If public comments are received, document moves to Step 5		
Step 5: Second Draft Balloted by Committees	May 9, 2019	Jan 15, 2020
Technical Committee meeting held prior to		Jul 31, 2019
Correlating Committee meeting held prior to		Nov 27, 2019
Step 6: Second Draft available for Notice of Intent To Make A Motion (NITMAM)	lan 22, 2020	Feb 19, 2020
A. If no NITMAM, document moves to Step 7	Jan 22, 2020	
B. If NITMAM is received, document moves to Step 9		
Step 7: Appeals deadline for Consent Standards		Apr 16, 2020
Step 8: Standards Committee issues Consent Standard [Process Ends]		Apr 26, 2020
Step 9: Certified Amending Motions (CAMs) and Consent Standards posted		Apr 1, 2020
Step 10: Association meeting for Standards with CAMs		Jun 17, 2020
Step 11: Appeals closing date for Standards with CAMs		Jul 8, 2020
Step 12: Standards committee issues standards with CAMs [Process Ends]		Aug 14, 2020

Engagement: ACI member and staff engagement in the development of relevant NFPA codes and standards is important to assure that NFPA codes and standards appropriately address the recommendations and requirements developed via the ACI committee processes. The NFPA codes currently relevant to ACI committee work are shown in <a href="Table 2">Table 2</a>. The determination of member engagement and the development of ACI documents appropriate for reference in NFPA codes and standards resides with the individual ACI committees. In addition to the currently relevant NFPA codes, there may be opportunities for other committee work to be incorporated by reference in NFPA documents—for example, committee work by ACI 376 on Concrete Structures for Refrigerated Liquefied Gas Containment might be applicable to NFPA 58 on Liquefied Petroleum Gas Code as well as NFPA 59 on Utility LP-Gas Plant Code. New work being considered by ACI Committees 216, Fire Resistance and Fire Protection of Structures (Joint with The Masonry Society), and 440, Fiber-Reinforced Polymer Reinforcement, may be appropriate for NFPA 914 Code for Fire Protection of Historic Structures. In addition to the 32 codes currently developed, NFPA also develops about 350 standards intended as reference standards, requirements in construction documents, or are standards for other than building



applications. Over 60 NFPA standards are referenced in the International Code Council's *International Building Code*.

There are multiple opportunities for ACI members to facilitate the coordination between NFPA and ACI committee work: adoption by reference of ACI requirements in NFPA model codes and standards and identifying new work items for ACI committees to address needs or voids in NFPA documents. ACI provides member only access to resources on the ACI Standards Adoption page. The resources include a LinkedIn group, ACI Model Code Development, which serves as a conduit for expressing interest, communicating actions, and reporting potential opportunities

(https://www.concrete.org/publications/standards/standardsadoption.aspx).

- Where relevance to ACI committee work already exists, ACI members participating or willing to
  participate in the NFPA codes and standards development process should make that known to the
  appropriate ACI committee and consider posting that information on LinkedIn.
- Where relevance to ACI committee work has yet to be established, ACI members recognizing a potential role for ACI committee work to be coordinated or referenced in NFPA documents should express that role to the appropriate ACI committee Chair and post the opportunity on LinkedIn.