

ACI Impacts Model Code Development

The International Code Council (ICC) develops model building codes commonly referred to as the I-Codes. These model codes serve as the platform for building codes adopted and enforced by authorities having jurisdiction throughout the United States and in countries electing to base their codes on the I-Codes.

ICC code development is on a 3-year cycle. Hearings are held the first 2 years and the third year is reserved for assembling code changes into the respective I-Codes and printing new editions. The key events associated with the typical hearing year schedule are shown in Table 1.

The hearings in 2018 and 2019 will result in revisions to the 2021 editions of the I-Codes. Thousands of code change proposals are on the agenda in the development of the model building codes (I-Codes) during each code development cycle. Due to the sheer number of code change proposals, ICC splits the proposals into two groups. The groups are determined in part by the number of committees that will be required to attend the 2-week long hearings and the trend in volume of code change proposals to be heard by the respective committees.

The grouping by committee is outlined in Table 2. Group B proposals tend to deal with the major section of the I-Codes affecting the concrete industry, so they generally generate a larger number of proposals that affect how ACI information is applied in the building codes.

There are two hearings for each group. In the first hearing, the Committee Action Hearing (CAH), proponents and opponents testify to panels (ICC Code Development Committees) consisting of interested parties and stakeholders in the specific technical field. In the second hearing, the Public Comment Hearing (PCH), proponents and opponents testify to the general audience about public comments proposed to amend or overturn actions made during the CAH. Online voting by qualified government official members of ICC

Table 1:
Typical ICC hearing timeline

Early January	Submit code change proposals
Early Spring	Proposals posted for viewing
Mid-Spring	Committee Action Hearing (CAH)
Late Spring	CAH results posted for viewing
Early Summer	Submit public comments
Mid-Summer	Public comments posted
Mid-Fall	Public Comment Hearing (PCH)
Late Fall	Online voting by officials

following the PCH results in the revisions as they will be incorporated into the model codes. Once the revised model codes are published, state and local jurisdictions use them as the basis for their building codes. Typically, the state and local jurisdictions will incorporate modifications to assure the needs of the public within their respective jurisdictions are adequately addressed.

Most code changes submitted in a typical year are about specific product applications and uses which tend to be outside the purview of ACI activities. Among the 2018 Group A code change proposals, there were five code change proposals on criteria and references related to concrete technology and four of the five specifically addressed technical aspects of criteria also in ACI publications. These proposals and the CAH recommendations are provided in Table 3.

These initial successes relied heavily on the preparation, communications, and coordination with interested parties prior to and during the hearing. Testimony was properly orchestrated to address potential issues, rebut opposition, and respond to questions from the committee. Notable testimony aligned with the action desired by ACI was provided by the Alliance for Concrete Codes and Standards, Concrete Reinforcing Steel Institute, Portland Cement Association, Precast/Prestressed Concrete Institute, and Stephen V. Skalko, PE & Associates. Success was also facilitated by the proposals being concise and not significantly adding, deleting, or reorganizing the I-Codes.

The CAH was the first hearing in the 2018 process. Final decisions on the proposals in Group A will be made via online voting by qualified government officials following the PCH to be held October 24-31, 2018, in Richmond, VA. In addition to influencing the hearing outcome on these five issues, ACI's participation at the hearings helped to further establish ACI as a professional society and a technical resource on concrete.

ACI is considering code change proposals in the 2019 Group B hearings that will significantly alter the content and the organization of Chapter 19 on Concrete in the *International Building Code* (IBC). ACI intends to include references to "Specification for Inspection of Concrete Construction (ACI 311.7)" and "Certification Policies for Concrete Construction Special Inspector (ACI CPP 630.1)" in the IBC and "Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures (ACI 562) and Commentary" in the *International Existing Building Code*. Such proposals will be far more challenging and require significantly more engagement and testimony by interested and affected parties. During The ACI Concrete Convention and Exposition – Spring 2018, ACI staff began sharing and coordinating concepts for proposals for the Group B hearings.

Table 2:
2018-2019 ICC groups for development of 2021 editions of I-Codes

International Code	Chapters and Appendices ¹	Code Development Committee	Group ²
Administrative Provisions	1 ³	Administrative	B
International Building Code (IBC)	10, 11, E	Means of Egress	A
IBC	7, 8, 9, 14, 26	Fire Safety	A
IBC	2-6, 12, 27-33, C, D, K	General	A
IBC	15-25, G, I, J, L, M	Structural	B
International Energy Conservation Code (IECC)—Commercial	All and IEBC 15	Commercial Energy	B
IECC—Residential	All	Residential Energy	B
International Existing Building Code (IEBC)	All except 1	Existing Building	B
International Fire Code (IFC)	All except 1	Fire	A
International Fuel Gas Code (IFGC)	All except 1	Fuel Gas	A
International Mechanical Code (IMC)	All except 1	Mechanical	A
ICC Performance Code (ICCPC) for Buildings and Facilities	Assigned by topic	Assigned by topic	A/B
International Plumbing Code (IPC)	All except 1	Plumbing	A
International Property Maintenance Code (IPMC)	All except 1	Property Maintenance and Zoning	A
International Private Sewage Disposal Code (IPSDC)	All except 1	Plumbing	A
International Residential Code (IRC)	1-10, E, F, G, H, J, K, L, M, O	Residential Building	B
IRC	11	Residential Energy	B
IRC	12-23	Mechanical and Plumbing	A
IRC	25-33, G, I, N, P	Mechanical and Plumbing	A
International Swimming Pool and Spa Code (ISPSA)	All except 1	Swimming Pool and Spa	A
International Wildland-Urban Interface Code (IWUIC)	All except 1	Fire	A
International Zoning Code (IZC)	All except 1	Property Maintenance and Zoning	A

¹General categories; some sections may be heard in the other group

²Grouping may vary with each cycle

³Excludes the administrative sections for Residential, Energy, and Green Construction

Table 3:
Proposals receiving ACI testimony at the 2018 Group A ICC CAH

Proposal designation ¹	Code/Section	Concept	Desired action	Committee action
FS75-18	IBC ² 722.2.3	Post-tensioned slab proposal deviates from ACI 216.1 ³	Disapprove	Disapprove vote: 14-0
FS78-18	IBC ² 722.2.3	Slab criteria deviate from ACI 216.1 ³	Disapprove	Disapprove vote: 14-0
FS79-18	IBC ² 722.2.2	Adds provisions allowing the use of voided concrete slabs, already a permissible structural element where designed in accordance with ACI 318 ⁴	Approve	Approve vote: 14-0
G36-18	IBC ² 406.2.4	Aligns parking garage floor criteria with ACI 362.1R ⁵	Approve	Approve vote: 14-0
PSD2-18	IPSDC ⁶ 504	Updates references to more technically appropriate specifications	Approve	Approve vote: 14-0

¹To see complete code change proposals, visit www.iccsafe.org/codes-tech-support/codes/code-development-process/2018-2019-group-a/

²International Building Code

³ACI 216.1: Code Requirements for Determining Fire Resistance of Concrete and Masonry Construction Assemblies

⁴ACI 318: Building Code Requirements for Structural Concrete

⁵ACI 362.1R: Guide for the Design and Construction of Durable Concrete Parking Structures

⁶International Private Sewage Disposal Code