

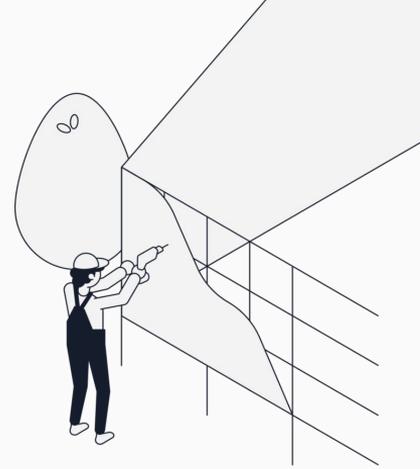
The Role of Codes and Standards in Supporting Safe and Resilient Communities

Shirley Ellis, CBO | Building Official - City of Gonzales, TX
Susanna Pho, CFM | Co-founder & COO - Forerunner



Housekeeping

- This presentation is being recorded.
- The recording will be shared via email after the webinar.
- If you have a question, please post it in the chat.
- At the end of the webinar, complete the attendance survey to receive your 1 ASFPM CEC and .10 ICC CEU. The certificates will be sent via email to you, ASFPM, and ICC next week.
- Please reach out after the webinar for additional questions.

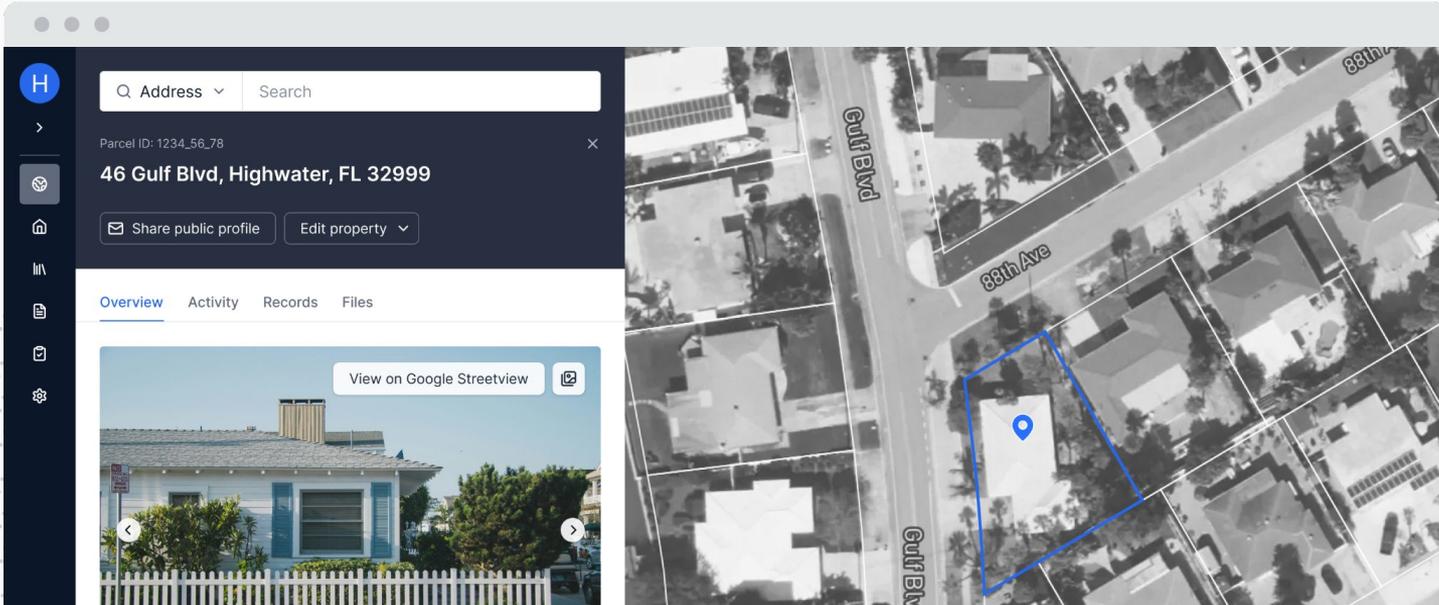


Poll

- 1 Introduction
- 2 Shirley Ellis
- 3 Q&A

Our solution

Forerunner empowers gov. agencies to do more.



Introduction

**Code
enforcement and
building safety
are more critical
than ever.**



We work with over 190 cities, counties, and states throughout the U.S.



FDEM
Florida



DWR
California



MEMA
Mississippi



BOI
Maine



Harris County
Texas



Nashville
Tennessee



Corpus Christi
Texas



Palm Beach County
Florida



Port Arthur
Texas



Chatham County
Georgia



Cedar Rapids
Iowa



Raleigh
North Carolina



Bellaire
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Nebraska

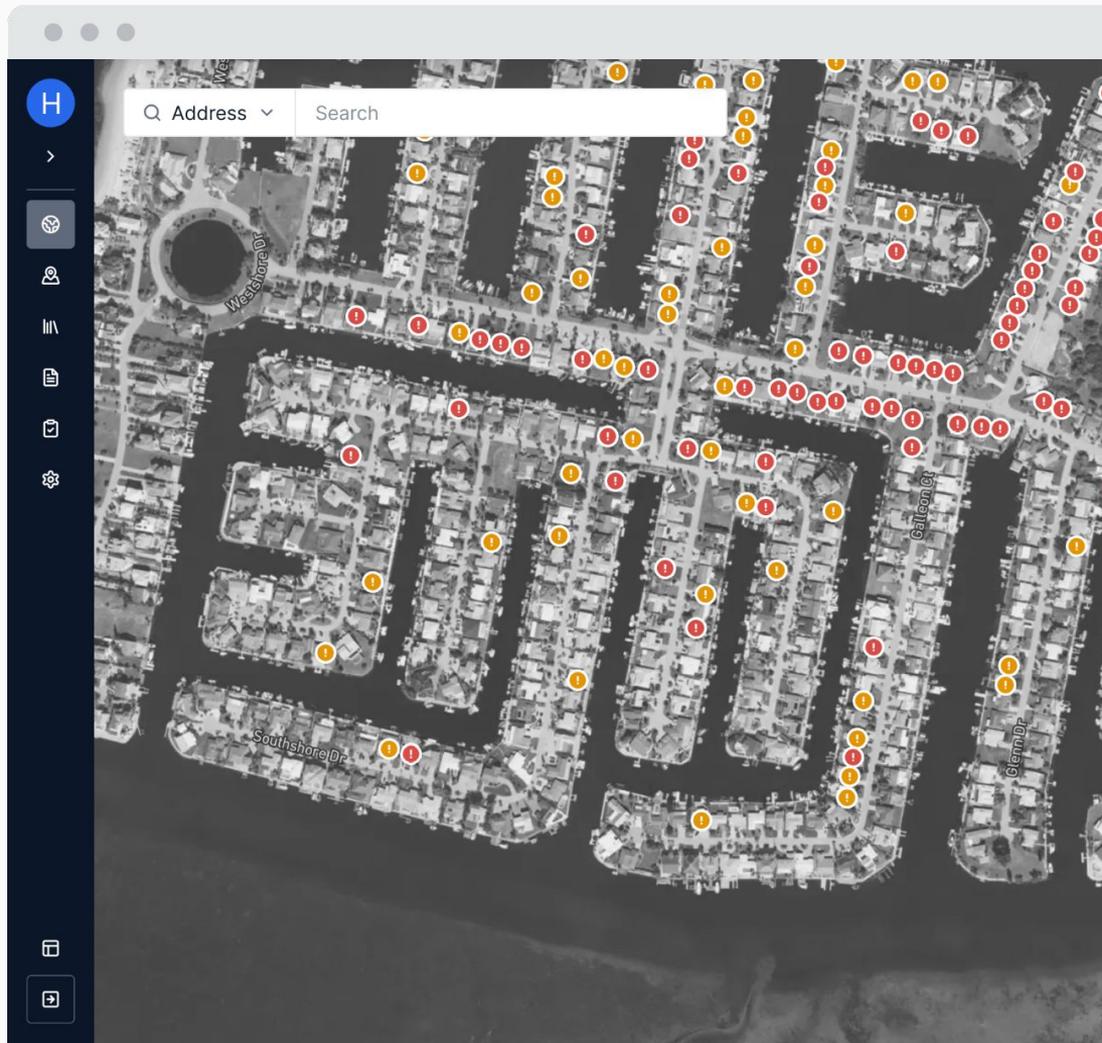


Orange
Texas

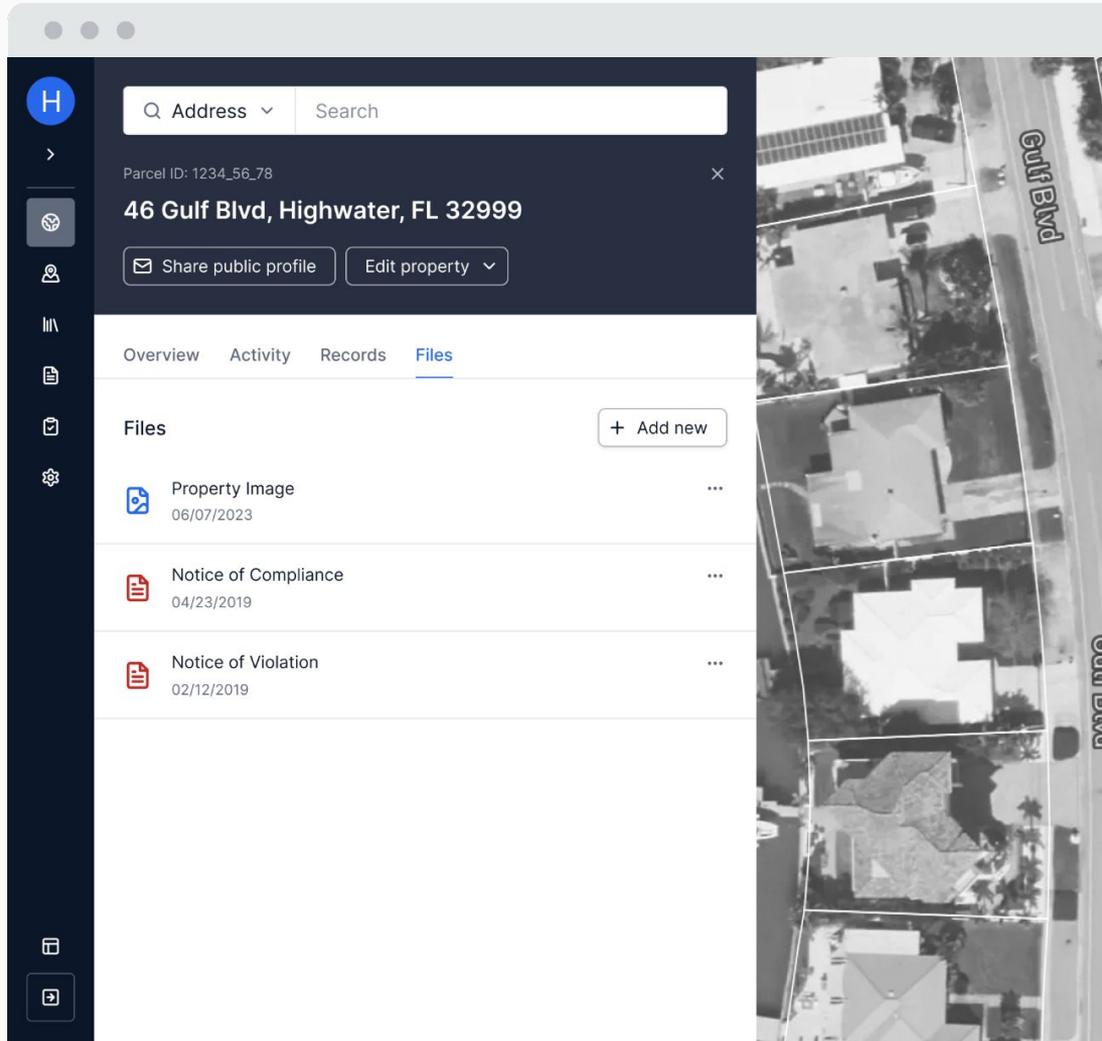


Chattanooga
Tennessee

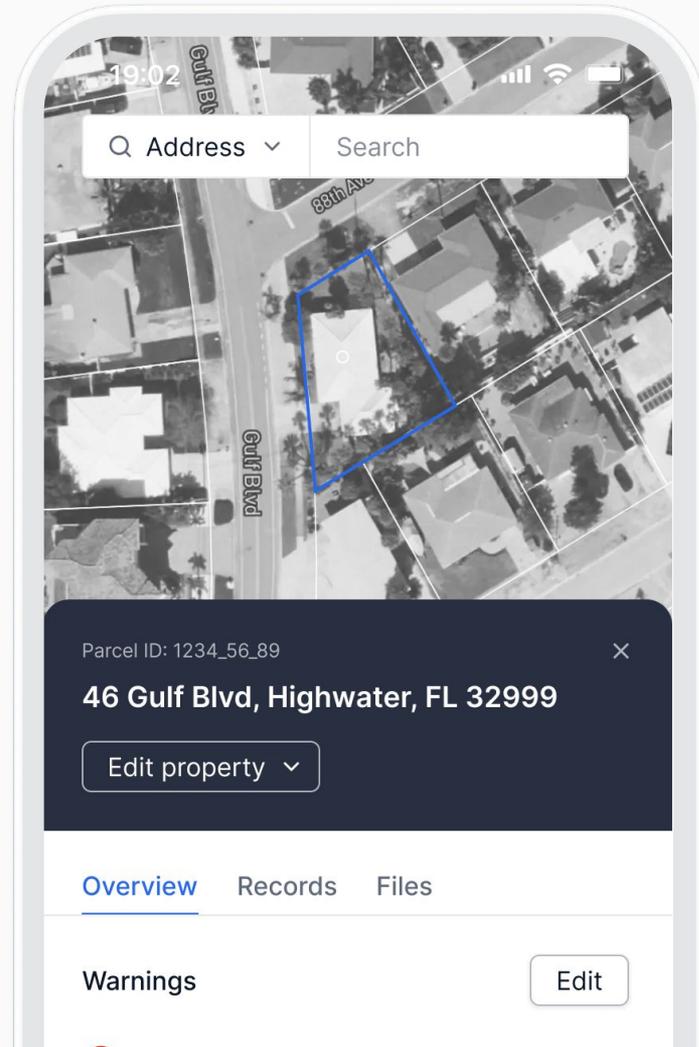
Geospatial dashboard delivers per-property insight.



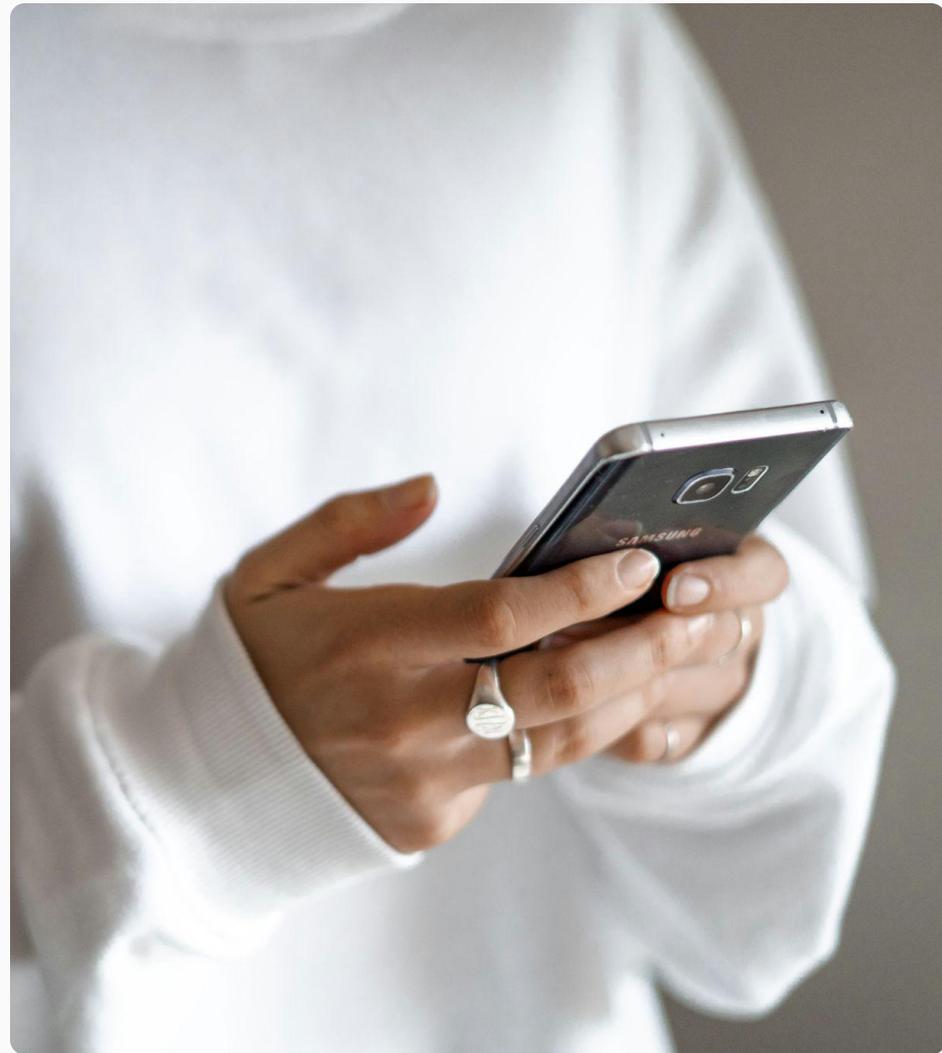
Manage documentation, letters, and files in one place.



Use the mobile app to inspect, flag, and update in the field.



**Use AI to
accelerate
enforcement
while keeping
humans in the
loop.**



- 1 Introduction
- 2 Shirley Ellis**
- 3 Q&A



Shirley Ellis, CBO

Building Official
Gonzales, TX

The International Code Council

WHY, WHO, WHAT, WHERE,
AND HOW

Presenter

▶ Shirley Ellis, CBO

▶ Past Member - ICC Board of Directors

February 25, 2026

Building Official

City of Gonzales, Texas



OVERVIEW

As professionals in this industry, you may think you understand building codes and standards, but do you really?

This session will include who is the ICC, discuss ways codes and standards are similar and more importantly how they differ, including how are codes and standards developed, maintained and your role in the processes will be covered during the session.

WHY

we do what we do?

Buildings need
to be built safe
to protect those
we love, where
they work, live,
learn, and play.





WHO is the International Code Council

A member-focused association, led by a Board of Directors, consisting of 18 Officers and Directors, elected by the governmental voting members.

A membership of over 66,000 – municipal, county, state, federal and international enforcement – building and fire officials, architects, engineers, builders, contractors, elected officials, manufacturers and others in or interested in the built environment or construction industry.

- ▶ ICC is dedicated to developing model codes and standards.
- ▶ ICC subsidizes the development and maintenance of its model codes and standards through revenue generated by product evaluations, certification, accreditation, training and education and sales of publications, both printed and digital.



ICC Family of Solutions



INTERNATIONAL
CODE
COUNCIL®



ICC
EVALUATION
SERVICE®



INTERNATIONAL
ACCREDITATION
SERVICE®

GENERAL
CODE



S. K. GHOSH
ASSOCIATES®



Alliance for
National & Community
Resilience®



COMMUNITY
DEVELOPMENT
SOLUTIONS®

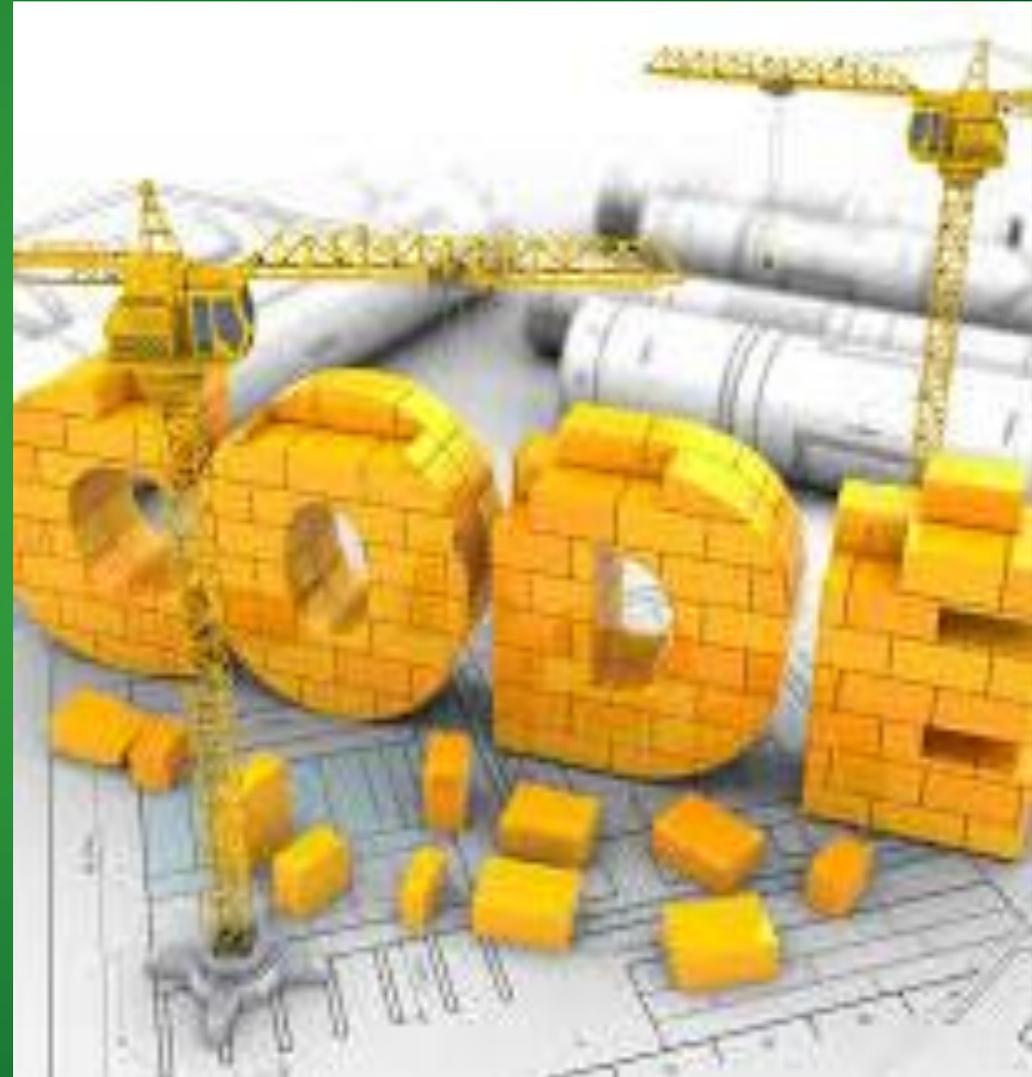


American Legal
Publishing™

WHAT

are codes and standards?

The rules and regulations for how to play the building construction game.





Codes and standards purpose

- ▶ The purpose of codes and standards is to protect the public health, safety and welfare by regulating safe construction.
- ▶ Reduce potential hazards, both fire, structural, and environmental by providing consistent standards in construction, enhance level playing field, and contribute to the well-being of a community.



Codes and standards span every aspect of the life of a building – from the bottom of the foundation to the top of the roof – and everything in between.

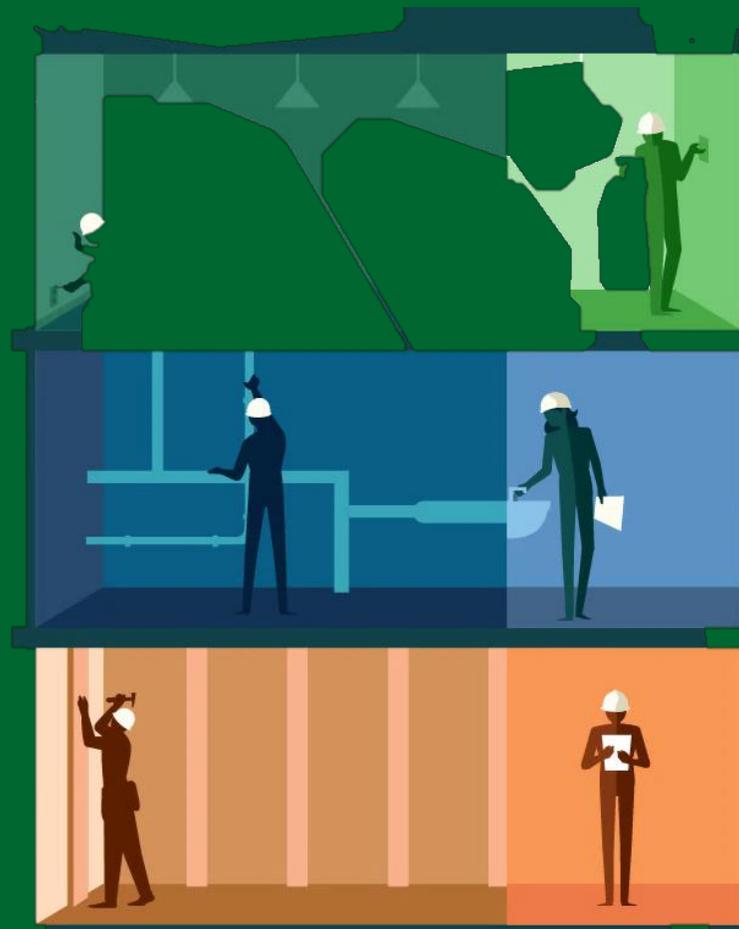
Energy Conservation

Plumbing

Fire

Fuel Gas

Residential



Mechanical

Green Construction

Swimming Pool and Spa

Property Maintenance

Building

Codes, Standards, Guidelines

- ▶ ICC develops the International Codes, a coordinated, modern set of building codes. Changes to the I-Codes are made through a transparent and inclusive consensus-based process that complies with the OMB Circular A-119.
- ▶ ICC also develops a number of standards, including resilience, accessibility, energy, and green construction standards, and is accredited by the American National Standards Institute as a standards developer.
- ▶ ICC Guidelines are in-depth, topic specific technical publications that have global relevancy and may be used internationally.





Is there a difference?

- ▶ A code is a set of rules and specifications for the correct methods and materials used in a certain product, building or process. The main purpose of codes is to protect the public by setting up the minimum acceptable level of safety for buildings, products and processes. Codes can be approved by local, state, federal or international governments and usually carry the force of law.
- ▶ A technical standard is an established norm or requirement. It is usually a formal document that establishes uniform engineering or technical criteria, methods, processes and practices governing issues such as safety, quality, materials and operational principals. Standards alone are not necessarily applicable by law, they are often adopted through code reference and used to govern practices within the industry.
- ▶ Guidelines are different from codes or standards in that they will generally use nonmandatory language and are not adopted by law.

PERIODIC TABLE

INTERNATIONAL CODES®, STANDARDS & GUIDELINES

INTERNATIONAL CODES®							STANDARDS					GUIDELINES	
 IBC International Building Code®	 IFGC International Fuel Gas Code®	 IPMC International Property Maintenance Code®	ICC A117.1 Accessible and Usable Buildings and Facilities (ICC/AS A117) Ref: IBC, IFC, IEBC, IPC, IRC, ISPSG, ICC	ICC 605 Standard for Residential Construction in Regions with Wildfire Hazard (In Development)	ASHRAE/ICC Standard 240 Evaluating Greenhouse Gas (GHG) and Carbon Emissions in Building Design, Construction, and Operations (In Development)	ICC 901/ SRCC 100 Solar Thermal Collector Standard (IS-STSC) Ref: IMC, IPC, IRC, ISPSG, IBC						ICC G1-2010 Guideline for Replicable Buildings	
 IRC International Residential Code®	 IECC International Energy Conservation Code®	 IPSDC International Private Sewage Disposal Code®	ICC 300 Standard on Bleachers, Folding and Telescopic Seating, and Grandstands (IS-BLE) Ref: IBC, IEBC, IFC	ICC 610 Standard for Residential Construction in Regions with Seismic Hazard (Stated for Development)	CSA B805/ ICC 805 Rainwater Harvesting Systems (IS-RCSH) Ref: IPC, IRC	ICC 902/ PHTA 902/ SRCC 400 Solar Pool and Spa Heating System Standard (IS-STSC) Ref: ISPSG	ICC 1150 Standard for 3D Automated Construction Technology for 3D Concrete Walls (In Development)	ICC/MBI 1210 Standard for Mechanical, Electrical Plumbing Systems, Energy Efficiency and Water Conservation in Off-Site Construction (IS-OSMEP)	RESNET/ ACCA/ ICC 310 Standard for Grading the Installation of HVAC Systems Ref: IECC-R			ICC G2-2010 Guideline for Acoustics	
 IFC International Fire Code®	 ICCP ICC Performance Code®	 IZC International Zoning Code®	ICC 400 Standard on the Design and Construction of Log Structures (IS-LOG) Ref: IBC, IRC, IECC	ICC 615 Standard for Residential Construction in Regions with Tsunami Hazard (Stated for Development)	ICC 815 Sizing Water Distribution, Drainage and Venting Standard (In Development)	ICC 903/ SRCC 500 Solar Hot Water Storage Tank Standard (In Development)	ICC 1155 Standard for Low-Carbon Alternative Cements used in Concrete (IS-LCCC) (In Development)	ICC/THIA 1215 Design, Construction, Inspection, and Regulation of Tiny Houses for Permanent Occupancy (IS-OSMTH)	RESNET/ ICC 380 Standard for Testing Airtightness of Building Enclosures, Airtightness of Heating and Cooling Air Distribution Systems, and Airflow of Mechanical Ventilation Systems Ref: IECC-R, IRC			ICC G3-2011 Global Guideline for Practical Public Toilet Design	
 IPC International Plumbing Code®	 IWUIC International Wildland-Urban Interface Code®	 IgCC International Green Construction Code®	ICC/ NSSA 500 Standard for the Design and Construction of Storm Shelters (IS-STM) Ref: IBC, IRC, IEBC, IFC, IECC	ICC 700 National Green Building Standard Ref: IECC-R	ICC 825 Private Sewage Disposal Systems Standard (In Development)	ICC 1100 Standard for Spray-Applied Polyurethane Foam Plastic Insulation (IS-FPI) Ref: IBC	ICC/MBI 1200 Standard for Off-site Construction: Planning, Design, Fabrication and Assembly (IS-OSMC)	ICC 1300 Standard for the Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings (In Development)	RESNET/ ICC 850 Standard Calculation and Labeling of the Water Use Performance of One- and Two-Family Dwellings Using the Water Rating Index			ICC G4-2012 Guideline for Commissioning	ICC G6-2023 Guideline on Advanced Panelization
 IMC International Mechanical Code®	 IEBC International Existing Building Code®	 ISPSG International Swimming Pool and Spa Code®	ICC 600 Standard for Residential Construction in High Wind Regions (MHKCC) Ref: IBC, IRC	ASABE/ ICC 802 Landscape Irrigation Sprinkler and Emitter Standard (IS-IEDC) Ref: IPC	ICC 900/ SRCC 300 Solar Thermal System Standard (IS-STSC) Ref: IMC, IPC, IRC, IBC	ICC 1125 Standard for Classification of Magnesium Oxide Boards in Building and Construction (IS-MGDB) (In Development)	ICC/MBI 1205 Standard for Off-site Construction: Inspection and Regulatory Compliance (IS-OSMC)	RESNET/ ICC 301 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings Using an Energy Rating Index Ref: IECC-R, IRC	RESNET/ ICC 1450 Remote Virtual Inspection for Energy and Water Performance in Buildings (In Development)			ICC G5-2019 Guideline for the Safe Use of ISO Containers	ICC G7-202X Existing Building Safety – Guideline for Inspection (In Development)

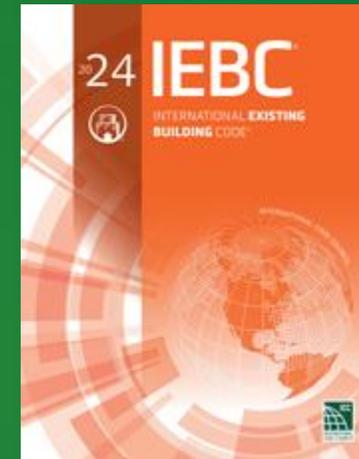
In Development (light blue) / Published (dark blue)

Learn more about the Code Council's codes and standards development process, here: iccsafe.org/codes-standards

Codes



- ▶ Codes are rules and regulations that
 - ▶ Set minimum requirements
 - ▶ Apply to all types of structures
 - ▶ Apply to all levels of construction
 - ▶ Apply to all stages in the life of the building
 - ▶ Address all construction trades





Codes

- ▶ The I-Codes are model codes that form the basis of building and safety regulations meant to be adapted and adopted by regulatory authorities to meet specific climate, geographic, or local needs. There are many variances in code adoption. It is not a one size fits all when it comes to adoption processes.
- ▶ Jurisdictions follow their own processes for review and adoption. They are adopted and/or amended in jurisdictions in all fifty states, District of Columbia, in the U.S. Territories, and in several other countries and are also used by US Federal Agencies.
 - ▶ Some states adopt for statewide use. Home rule states might adopt for state owned or leased buildings and leave it up to local jurisdictions to adopt or not.
 - ▶ Some states and jurisdictions opt to have custom codes published using the I-Codes as their base codes, i.e. California, NYC, Virginia, Chicago, Ohio, Florida, South Carolina, etc.



Standards

- ▶ Standards are referenced in Codes and become a part of the code.
- ▶ Most construction standards are the Method of Measurement or Test type.
- ▶ Design and Practice documents receive the most use by consulting engineers and architects, requests for committee participation, public review comment and adoption by code bodies.

Types of Standards

- ▶ Standard Design

- ▶ Includes basic design procedures and engineering formulas
- ▶ Describes methods of testing that determine the physical, functional or performance characteristics of specific materials or products

- ▶ Standard Rating

- ▶ Address product quality characteristics such as composition, dimension and uniformity

- ▶ Primary

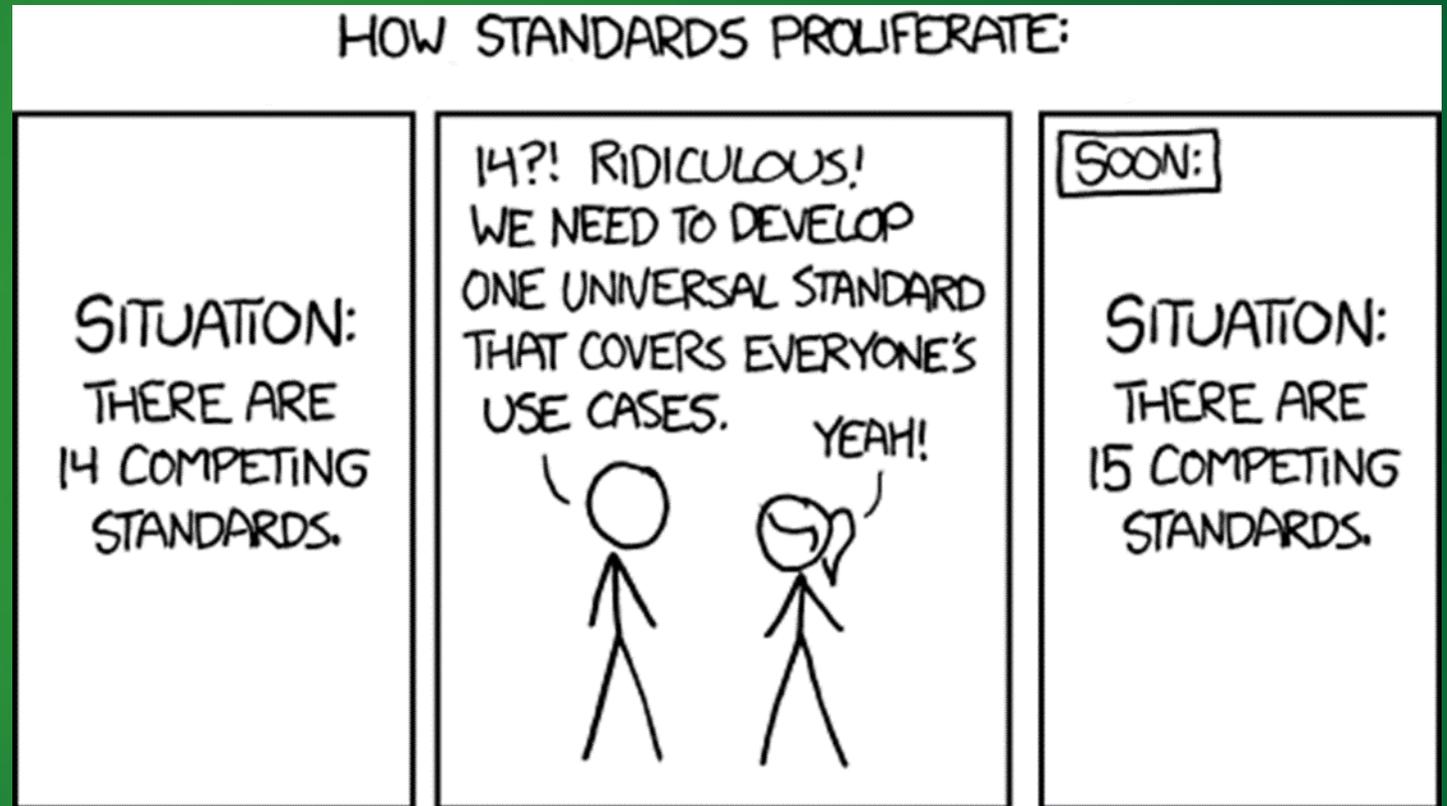
- ▶ Provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly

- ▶ Secondary

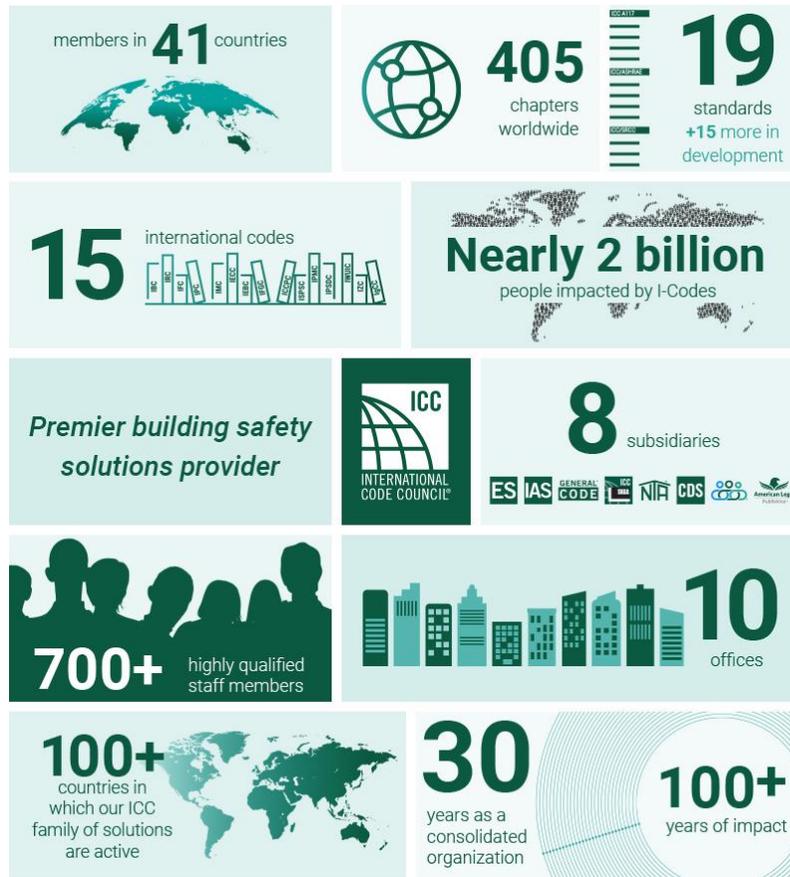
- ▶ Provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings

Standards

- ▶ Generally, an organization in the construction field will develop a standard relating to the best material for specific applications, or the best way to test fire-rated products.



WHERE?



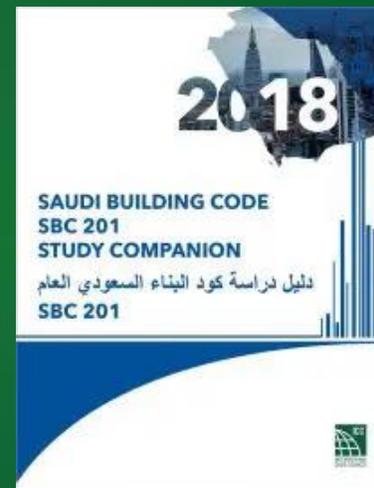
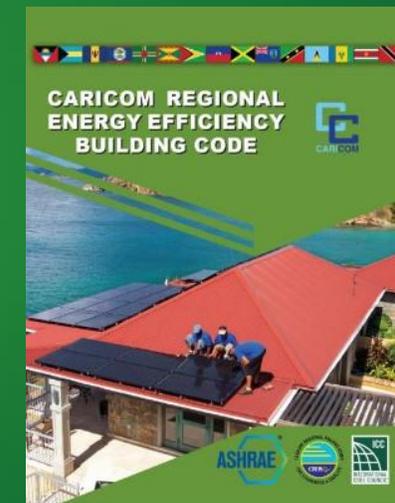
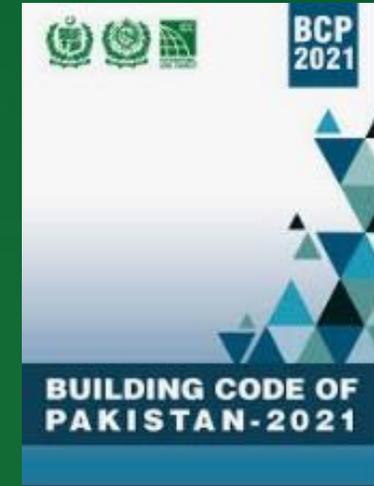
International Code Council



ICC codes and standards are used in the design, construction and compliance process to construct safe, sustainable, affordable and resilient structures.

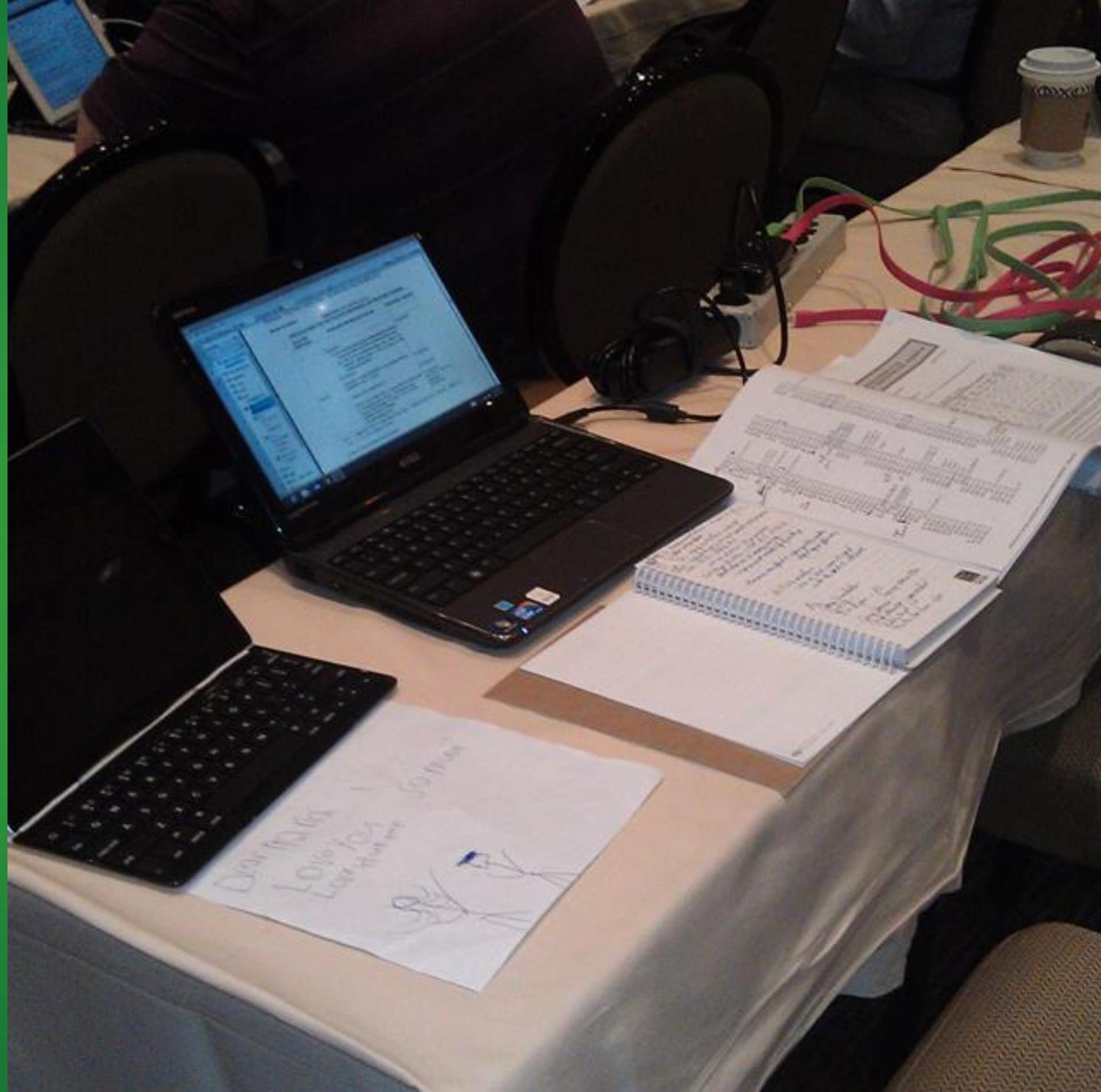
Most U.S. communities and many countries choose the International Codes.

ICC provides building and safety services that support the government entities and private sector stakeholders



HOW to participate in the process?

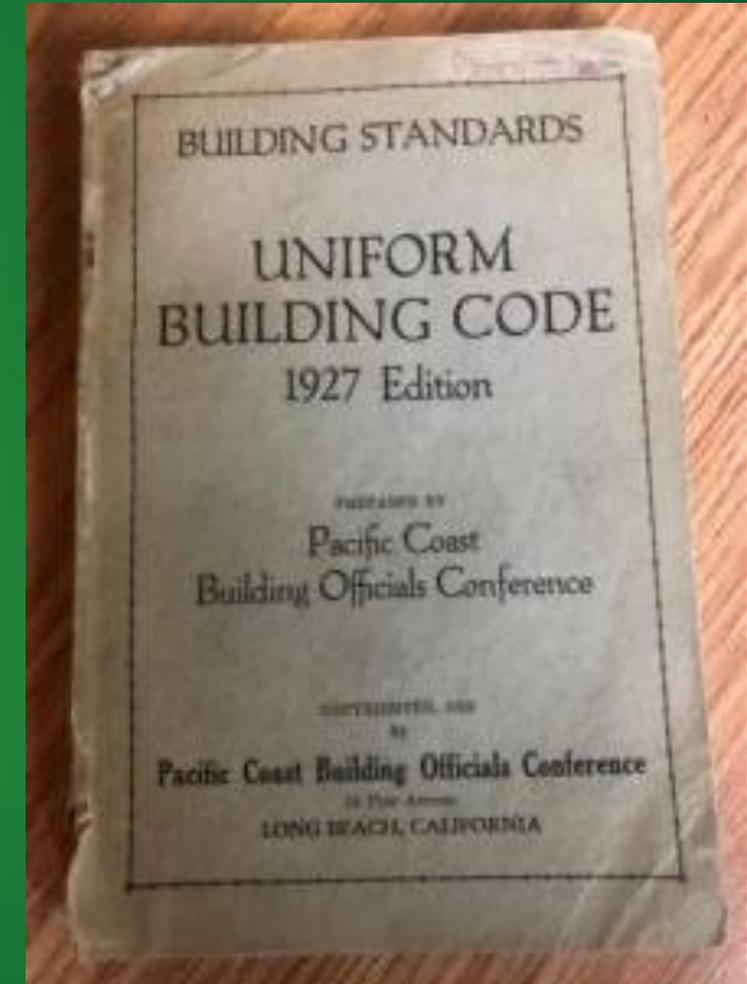
Participation in the
development of
codes and
standards is a
commitment
and/or passion.



Changing the ICC Codes



- ▶ Constantly changing on a 3-year cycle
- ▶ Developed by Committees
- ▶ Approved by government voting members
- ▶ A set schedule and policies
- ▶ Changing due to
 - ▶ New technologies
 - ▶ New products
 - ▶ Lessons learned
 - ▶ Failures and disasters





2024/2025/2026 ICC CODE DEVELOPMENT SCHEDULE

Originally Published 23.03.17 | Updated 24.03.05

STEP IN CODE DEVELOPMENT CYCLE	DATE		
	2024 – Group A Codes IBC – E, IBC – FS, IFC, IFGC, IMC, IPC, IPSDC, IRC – M, IRC – P, ISPSC, IWUIC	2025 – Group B Codes Admin, IBC – G, IBC – S, IEBC, IgCC (Ch. 1 & App M), IPMC, IRC – B, IZC	2026 - Group A & B Codes Public Comments Posting, Public Comment Hearing, Online Governmental Consensus Vote
DEADLINE FOR RECEIPT OF ONLINE APPLICATIONS FOR ALL CODE DEVELOPMENT COMMITTEES	June 1, 2023 (See Schedule Notes)		
cdpACCESS OPEN FOR CODE CHANGE SUBMITTALS	October 16, 2023 (Tentative)	October 15, 2024	
DEADLINE FOR cdpACCESS ONLINE RECEIPT OF CODE CHANGE PROPOSALS	January 8, 2024	January 10, 2025	
WEB POSTING OF "PROPOSED CHANGES TO THE I-CODES" (Monograph)	February 26, 2024	March 13, 2025	
COMMITTEE ACTION HEARING #1 (CAH #1)	April 7 – 16, 2024	April 27 – May 6, 2025	
cdpACCESS OPEN FOR COMMENT SUBMITTALS TO CAH #1 ACTION	May 16, 2024	June 3, 2025	
WEB POSTING OF "REPORT OF THE COMMITTEE ACTION HEARING #1"	May 16, 2024	June 3, 2025	
DEADLINE FOR cdpACCESS ONLINE RECEIPT OF COMMENTS ON CAH #1 ACTIONS	July 8, 2024	July 15, 2025	
WEB POSTING OF "COMMENTS TO CAH #1"	September 5, 2024	September 10, 2025	
COMMITTEE ACTION HEARING #2 (CAH #2)	October 23 – 31, 2024	October 22 – 30, 2025	
WEB POSTING OF "REPORT OF THE COMMITTEE ACTION HEARING #2"	December 2, 2024	November 25, 2025	
cdpACCESS OPEN FOR PUBLIC COMMENT SUBMITTALS FOR 2026 PCH	January 20, 2025 (Tentative)	November 25, 2025 (Tentative)	

2024/2026 ICC Code Development Cycle

STEP IN CODE DEVELOPMENT CYCLE	DATE		
	2024 – Group A Codes IBC – E, IBC – FS, IFC, IFGC, IMC, IPC, IPSDC, IRC – M, IRC – P, ISPSC, IWUIC	2025 – Group B Codes Admin, IBC – G, IBC – S, IEBC, IgCC (Ch. 1 & App M), IPMC, IRC – B, IZC	2026 - Group A & B Codes Public Comments Posting, Public Comment Hearing, Online Governmental Consensus Vote
DEADLINE FOR cdpACCESS ONLINE RECEIPT OF PUBLIC COMMENTS FOR 2026 PCH	March 14, 2025	January 5, 2026	
WEB POSTING OF "GROUP A & B PUBLIC COMMENT AGENDA"	See 2026	See 2026	March 4, 2026
COMBINED GROUP A & B PUBLIC COMMENT HEARING (PCH)	Combined Group A & B PCH in 2026	Combined Group A & B PCH in 2026	April 19 - 28, 2026
COMBINED GROUP A & B ONLINE GOVERNMENTAL CONSENSUS VOTING (OGCV) PERIOD	Combined Group A & B OGCV in 2026	Combined Group A & B OGCV in 2026	Starts approx. two - three weeks after the last day of PCH.
WEB POSTING OF GROUP A & B FINAL ACTION	See 2026	See 2026	Following Validation Committee certification and ICC Board confirmation.

City of Austin Development Services Dept. LEVEL UP
4/30/24



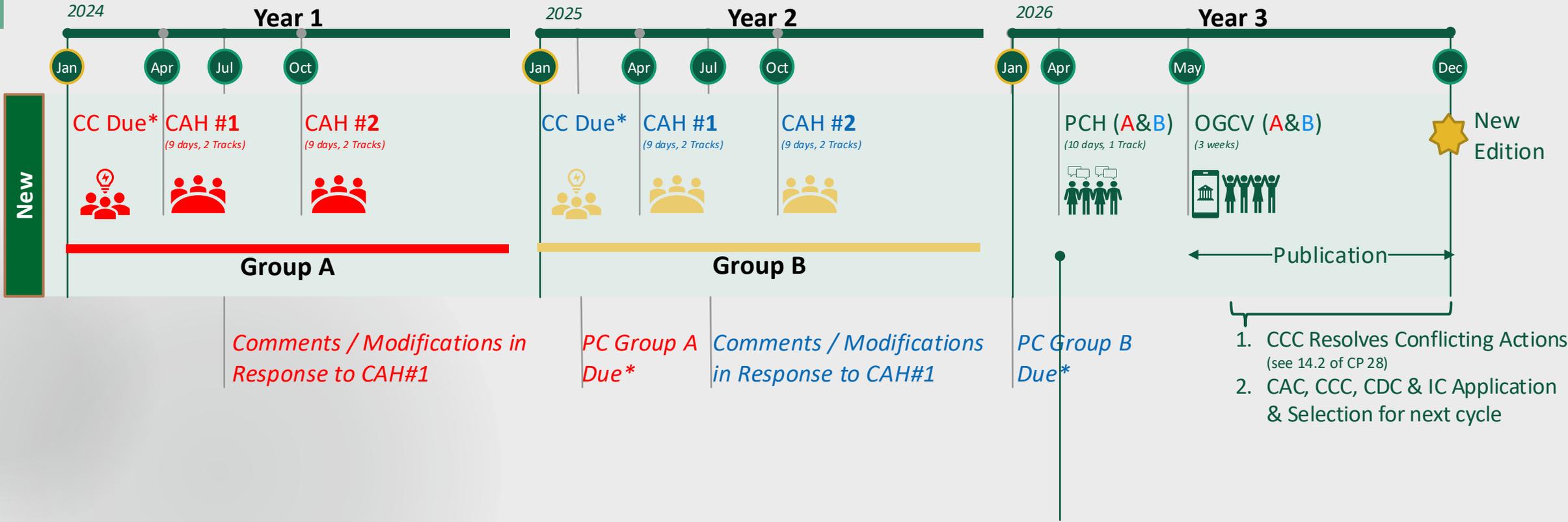
Details

- ▶ Code Change Calendar is published for each cycle.
- ▶ Proposed code changes are submitted on-line through the cdpACCESS, due in January for each Group (A or B).
 - ▶ Anyone can submit a code change.
- ▶ At the beginning of the 3 year cycle a 'Call for Committees' is issued, and the ICC Board of Directors appoint members.
 - ▶ Must be a balance
 - ▶ General: Government regulatory agencies
 - ▶ User: Building owners, designers, insurance companies, private inspection agencies, academics
 - ▶ Producer: builders, contractors, manufactures, distributors.



ICC Change Procedures

Codes Process Discussion



Acronyms

- CAC – Code Action Committees
- CAH – Committee Action Hearing
- CC – Code Changes
- CDC – Code Development Committees
- PC – Public Comments
- PCH – Public Comment Hearing

OGCV – Online Government Consensus Vote

Notes

* via cdpAccess

New Standards Complete NLT

Progression to Consensus or Individual Vote

Final Completed
Action
Year 3 (Group A & B)



Year 1 (Group A) & 2 (Group B)



CAH#1

Comments

in response
to CAH#1

No Comments

"Me Too" Comments (or equivalent) are not considered a triggering comment and will proceed to Consent Agenda.

- 50% + 1 (simple majority) for Approval "As Submitted", "As Modified" or "Disapproved" Recommendation

Comments to the First Committee Action Hearing

Yes

Year 1 (Group A) & Year 2 (Group B)



CAH#2

Public Comments

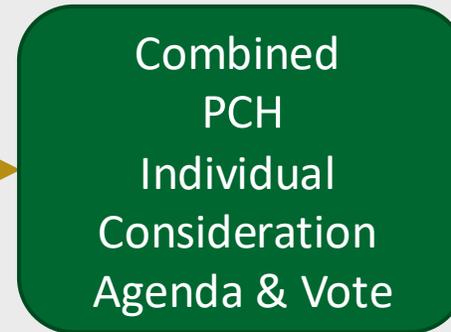
No Comments

- 50% + 1 (simple majority) for Approval "As Submitted", "As Modified" or "Disapproved" Recommendation

Yes

Public Comments close for each group in their respective year.

Year 3 (Group A & B)



- 50% + 1 (simple majority) to concur with CAH#2 action ("As Submitted", "As Modified", or "Disapproval")
- 2/3 for Approval for "As Modified Public Comment" at PCH

Year 3 (Group A & B)



- Two Voting Options (See 11.1 in CP 28)
- Add to PCH votes (cumulative)



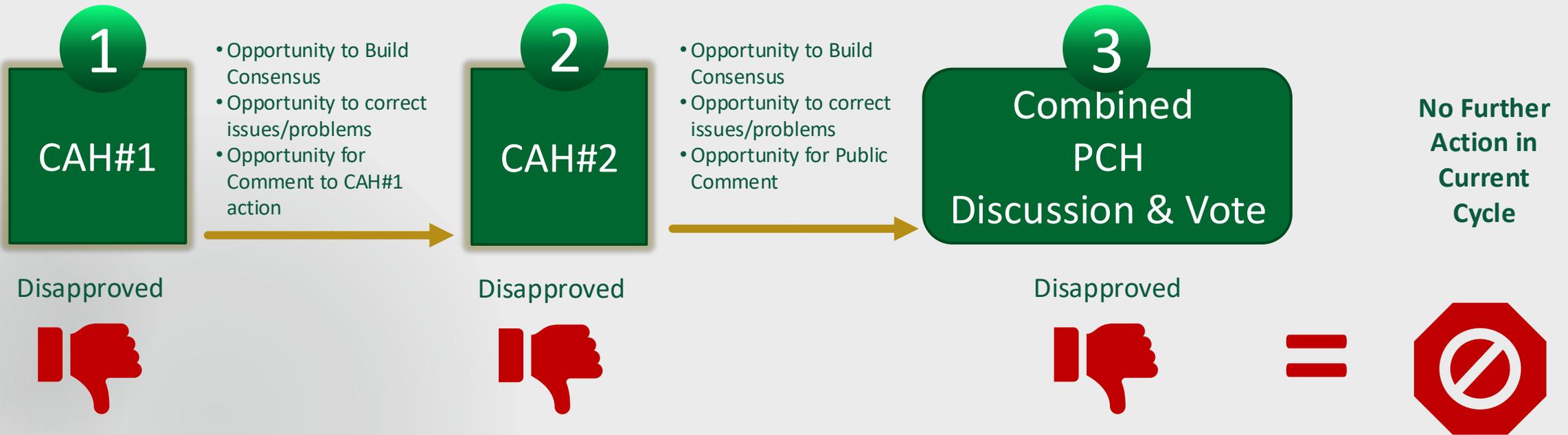
Combined PCH Consent Agenda (Voice Vote)

Group A (Year 1)

Group B (Year 2)

Year 3 (Group A & B PCH and OGCV Combined)

3 Disapprovals Rule





2008 Cincinnati



Code Hearings are not always pretty!!



City of Gonzales Community Development



4/30/2024



Committee Action Hearing Procedures

Step 1 Getting Ready

- Changes to the Hearing Agenda
- Proponents and Opponents line up
- Proposal is called to the hearing floor
- Testimony begins

Step 2 Testimony

- **The 2-minute drill**
- Proponents – 2 minutes
- Opponents – 2 minutes
- Rebuttal*
- Proponents – 1 minute
- Opponents – 1 minute
- * Rebuttal on testimony only

Step 3 Committee Action

- Discussion among committee
- Motion and Second
- Recommendation
 - ▶ Approval
 - ▶ Approval as amended
 - ▶ Disapproval

Public Comment Hearing Procedures

Step 1 Getting Ready

- Consent agenda approved by vote
- Changes to the Hearing Agenda
- Proponents and Opponents line up
- Proposal is called to the hearing floor
- Testimony begins

Step 2 Testimony

- **The 2-minute drill**
- Proponents – 2 minutes
- Opponents – 2 minutes
- Rebuttal*
- Proponents – 1 minute
- Opponents – 1 minute
- * Rebuttal on testimony only

Step 3 Action

- Vote on Recommendation from the Committee
- New motion, if the Committee is overturned

ICC Code Changes

► By the numbers



1,341
CODE CHANGES



2,261
VOTERS



367,345
VOTES CAST

VOTING REPRESENTATIVES

Number of **Government Agency** Members: **8,574**

Number of **Private Sector** Members: **55,549**

Total # of governmental member voting representatives*: **15,362**



*Numbers based off 2019 Code Cycle

Standard Development

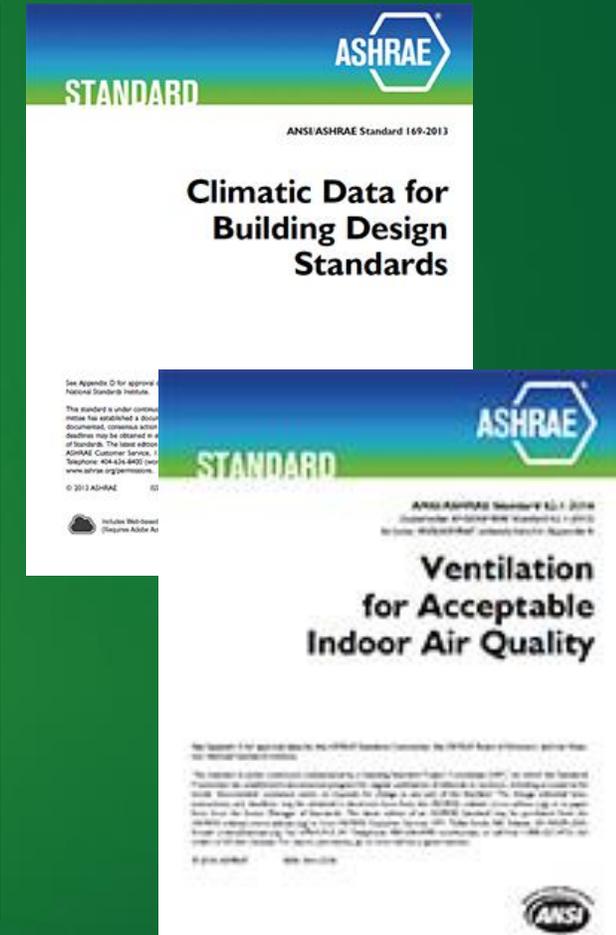
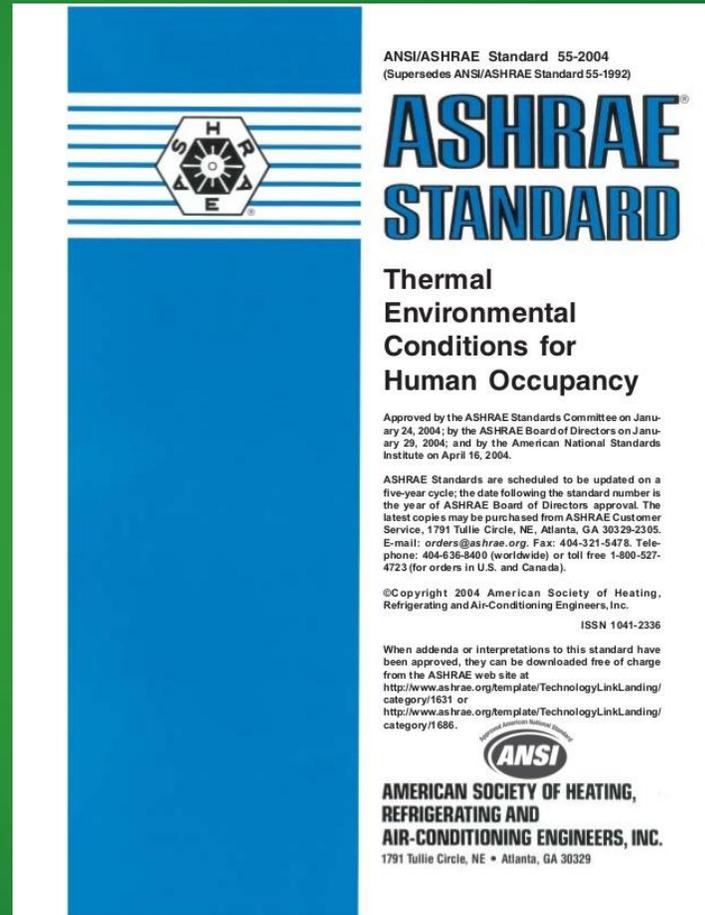


Many types of organizations are involved in developing construction industry standards. Some of these groups, such as the International Organization for Standards (ISO) develop standards used all over the world. Other global standards groups include the International Code Council, which focuses on testing standards for materials and building techniques. In the United States, engineering groups like the American Society of Heating, Refrigeration and Air Conditioning Engineers or the American Society of Mechanical Engineers are heavily involved in standards development within their specific fields.



Committee Standard Development

- ▶ Continuous maintenance
- ▶ Published on a 3-year cycle
- ▶ Developed by Committees
- ▶ Changing due to
 - ▶ New technologies
 - ▶ New products
 - ▶ Lessons learned
 - ▶ Failures and disasters





Continuous Maintenance

- ▶ Under continuous maintenance anyone may propose changes at any time. All submittals are acknowledged and forwarded to the appropriate committee.
- ▶ Each change will be considered by the committee according to a definite schedule and the submitter will be informed of the disposition of their substantive proposals.

Committee Standard Development



Standards Development Procedure

Step 1

- Committee appointed
- Work plan established, with staff secretariat
- Conduct meetings
- Follow ICC Consensus Procedures

Step 2

- Initial draft or previous edition is made available for input by committee or interested parties
- Becomes the Public Comment draft and is posted publicly for a defined comment period

Step 3

- Public comments are organized, considered by committee, which may become revisions to create a second draft
- Second draft posted on revisions only
- Repeat Step 3 until no technical or substantive comments

Step 4

Committee is balloted for final approval, the approved committee response is conveyed to the proposer and published.

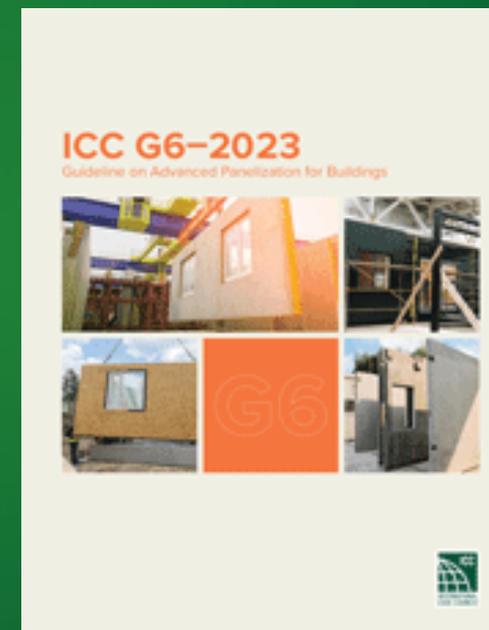
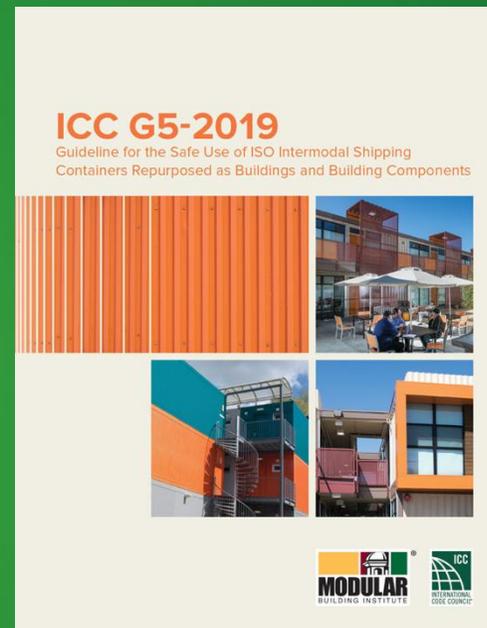


Committee Review

- ▶ The committee shall respond with a written response that is limited to one of the following, include reasons on the last 3:
 - ▶ Proposed change accepted for public review without modification
 - ▶ Proposed change accepted for public review with modification
 - ▶ Proposed change accepted for further study
 - Study must be completed within 7 months
 - ▶ Proposed change rejected.
- ▶ Further study will require an additional response when completed.

ICC Guidelines

- ▶ Guides are not codes or standards.



Guide Development Process



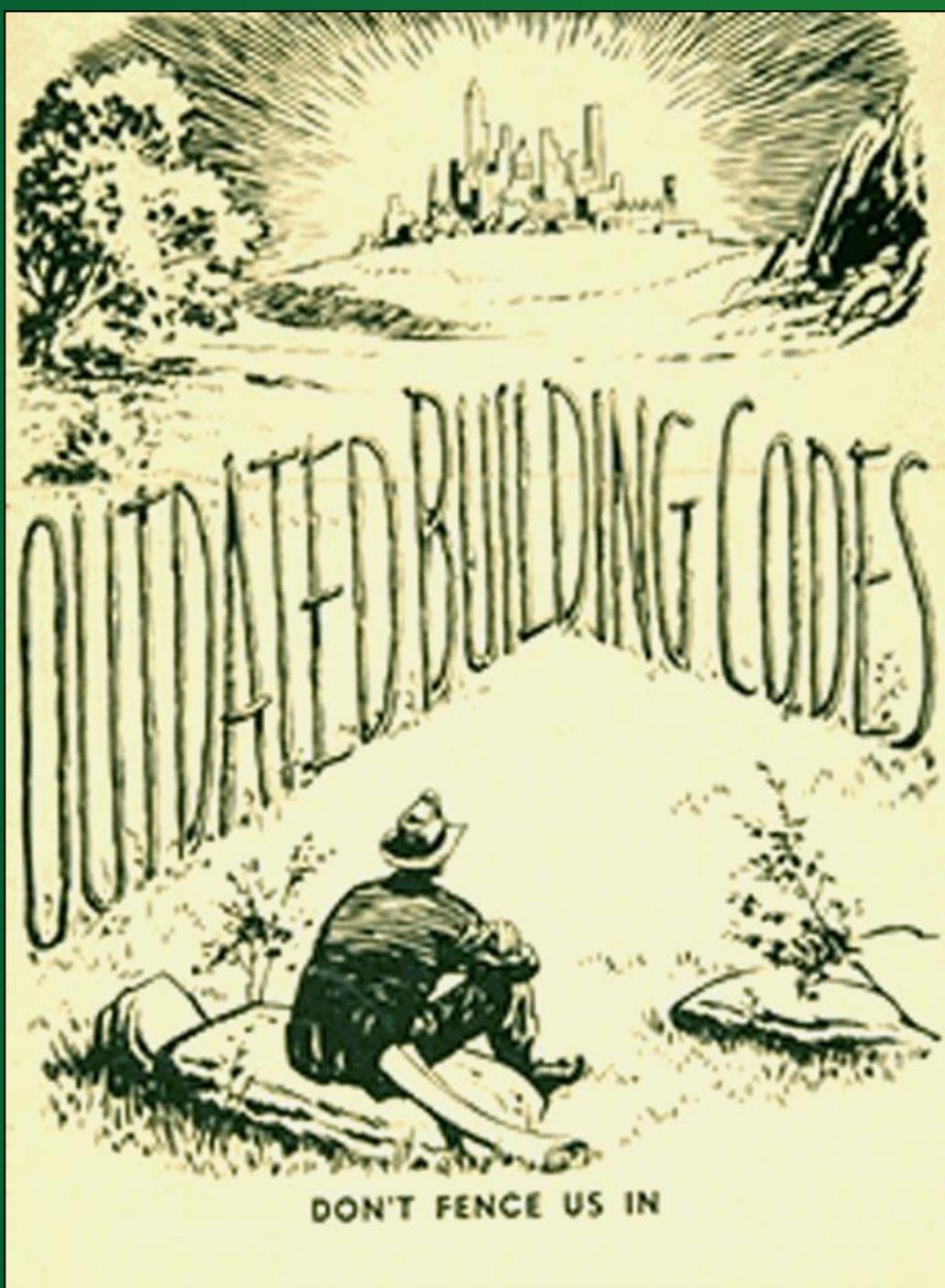
Source: CP 33-08 | 2022



Next Step

THE WAY TO GET
STARTED IS TO QUIT
TALKING AND
BEGIN DOING.

Walt Disney



WHAT'S NEXT?



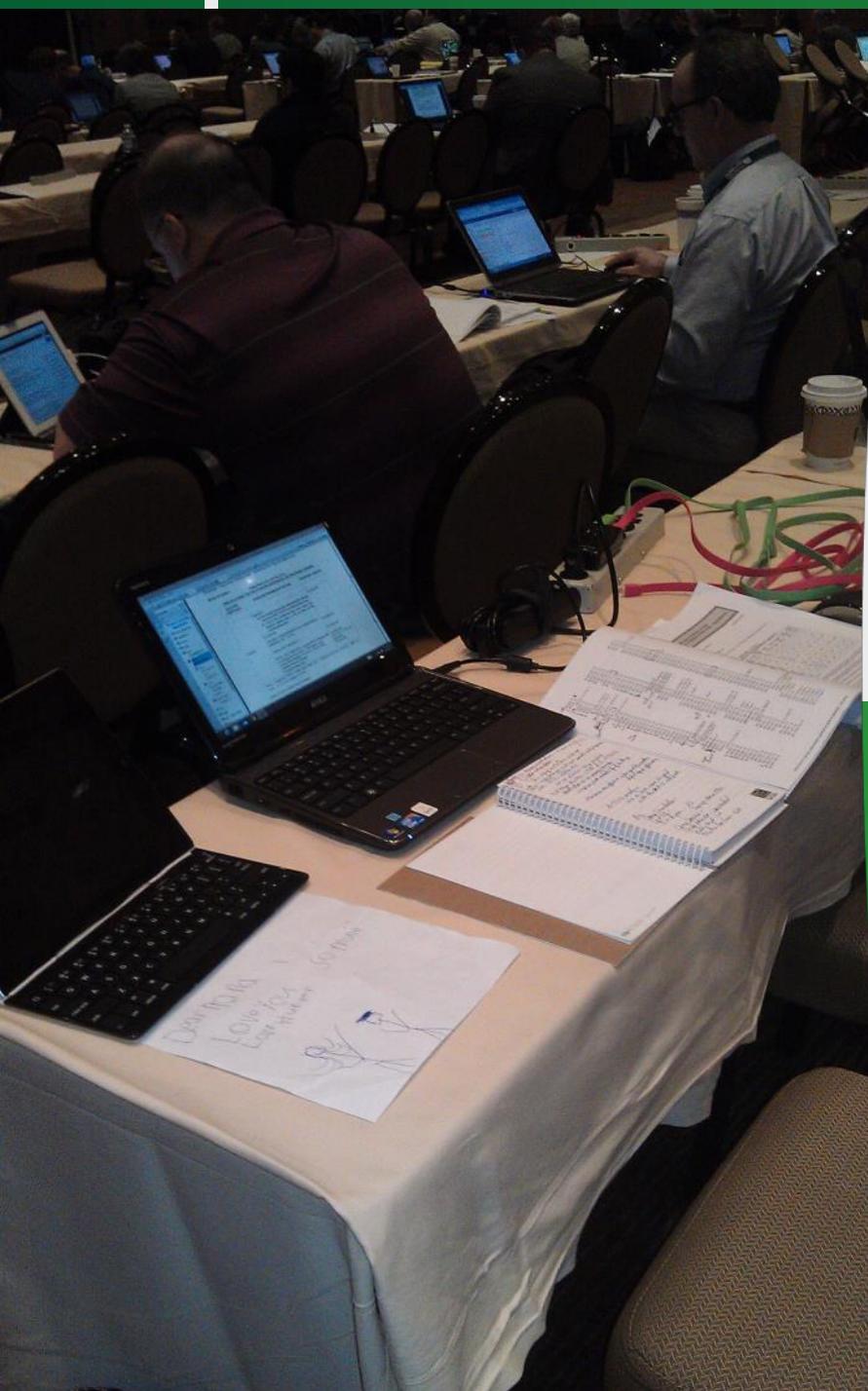
- ▶ How to apply what you've learned today....better informed code personnel provide better service to their community.

- The codes do not fix themselves
 - If there are code conflicts in your jurisdiction there in others as well
- Attend (or watch) the PCH hearings in Hartford, Conn. beginning April 19, at 1:00 pm
- If attending in person, find a mentor to explain the action and help you negotiate the process.
- TESTIFY – all opinions have value
 - They don't bite, I promise!!
 - If unable to attend, watch on the web.
- Review proposals, the monographs are available on-line...for free!!
- ICC Code Commentaries are your friend!

ICC – iccsafe.org



- ▶ Membership – join ICC and/or national, state and local chapters
- ▶ Professional Development – training, certification, job board
- ▶ Products and Services – code development, consulting, software
- ▶ Resources and News – Off-site construction, PMG, WUIC
- ▶ Store
- ▶ Codes – free I-Codes, standards, commentaries, resources
 - ▶ Click “Codes” tab, click ‘I-codes” select year, click cover



See you
in the
hearing
room



THANK
YOU

Collaborative Code Enforcement: Strategies for Strengthening Local Compliance and Resilience

Christylla Miles

Assistant Director of Code Compliance
City of Dallas, TX

Tuesday, March 10 @ 12 pm ET
1 ASFPM CEC | .10 ICC CEU



- 1 Introduction
- 2 Shirley Ellis
- 3 **Q&A**

Thank you!



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