

Code Adoption and References

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ACI Code Advocacy Engineer

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THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE



Overview

- ACI's mission for code advocacy & outreach
- State and Local Code Adoption Process – Referencing ACI Standards
- Describe opportunities for local code development and advocacy
- Identify resources for ACI Members and industry partners.

ACI Code Advocacy and Outreach

- **VISION:**

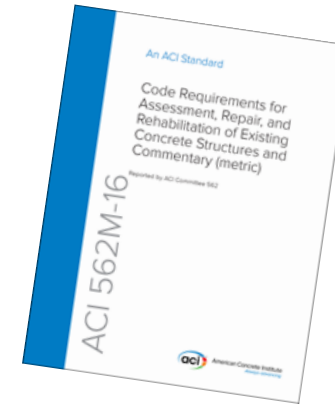
ACI envisions a future where everyone has the knowledge needed to use concrete effectively to meet the demands of a changing world.

- **MISSION:**

ACI develops, disseminates, and advances the **adoption** of its consensus-based knowledge on concrete and its uses.

More than 400 technical documents, including:

- Codes 32 (9)
- Specifications >40
- Reports and Guides hundreds
- References
- *Annual Manual of Concrete Practice*



ACI - NEW Standards in Development

- **Joint ACI-PCI Committee 319 – Precast Concrete Building Code (IBC)**
- **Joint ACI-PTI Committee 320 – Post-Tensioned Structural Concrete Code (IBC)**
- **ACI Committee 321 – Concrete Durability Code (IBC)**
- **ACI Committee 322 – Concrete Pool and Watershape Code (ISPSC)**
- **ACI Committee 323 – Low-Carbon Concrete Code (IgCC)**
- **ACI Committee 365 – Service Life Evaluation Code (IEBC)**
- **ACI Committee 440S – Fiber Reinforced-Polymer Repair and Rehabilitation of Concrete Code (IEBC)**
- **ITG -12 Code Requirements Construction of Additively Constructed Walls (3-D printing-IRC)**

Early Adoption for State or Local Jurisdictions may be warranted!

Certification Programs 30

(Testing, Inspection, Construction Specialists)

- Field Testing Technician
- Flatwork Finisher
- Strength Technician
- Laboratory Technician
- Aggregate Technician
- Concrete Construction Inspector
- Tilt-Up Supervisor and Technician
- Shotcrete Nozzleman
- Adhesive Anchor Installer
- Nondestructive Testing Specialist – Concrete Strength (new)
- Concrete Construction Sustainability and Resilience Assessor (new)



Current ACI Position Statements

- Current Codes
- ACI Standards
- Certification Programs
- Concrete Knowledge
- Enhanced Resiliency
- Sustainability
- Professional Societies
- New Standards
- ACI Chapters
- Construction Volume
- Workforce Development
- Public Good
- Carbon Neutral Concrete
- Engineering Curricula

- Introduction To ACI
- Honors And Awards
- Board of Direction
- Job Openings at ACI
- Annual Report
- Strategic Plan
- International Agreements
- ACI Bylaws
- Position Statements**
- President's Memo
- Sustaining Members

Position Statements

Official positions taken by the ACI Board of Direction in support of the Institute's mission.

CURRENT CODE AND STANDARD ADOPTION

Encourage the adoption and/or use of current building codes and standards.

ADOPTION OF ACI DOCUMENTS WITHOUT MODIFICATIONS

Encourage the adoption and use of ACI products, including but not limited to codes and standards without modification.

ACCEPTANCE OF ACI CERTIFICATION PROGRAMS

Support acceptance of sampling, testing, inspection, and installation of concrete and related products and materials; and encourage the use of certification programs developed and administered by professional societies in lieu of programs developed and administered by other entities; and support mandates or otherwise place preference on accreditation of individuals and entities engaged in providing services related to concrete and concrete products.

QUESTIONS, COMMENTS AND SUGGESTIONS:

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ADVOCATE FOR ACI

Advocacy has become an integral part of ACI's mission. Learn about the progress being made and ways you can get involved.

[LEARN MORE »](#)

JOIN AN ADVOCACY GROUP ON LINKEDIN



Strategies of Code Advocacy & Outreach

1. Get ACI standards referenced in **model codes**, state/local building codes and within government agencies
2. Remove provisions from the building code already addressed in ACI standards
3. Keep references current
4. Update existing and develop new standards
5. Collaborate with our ACI member and industry partners, for the good of the industry!

ACI - Code Advocacy Engineers



Steve Szoke, P.E.
F. ACI, F. ASCE, F. SEI, LEED AP



Kerry Sutton, P.E. LEED AP

Code Advocacy Industry Partners

Alliance for Concrete Codes and Standards (ACCS)

American Concrete Institute
American Concrete Pumping Association
American Shotcrete Association
American Society of Concrete Contractors
Concrete Foundation Association
Concrete Reinforcing Steel Institute
Expanded Shale, Clay & Slate Institute
National Precast Concrete Association
Insulating Concrete Forms Manufacturing Association

National Ready Mixed Concrete Association
Neu – Center of Excellence for Carbon Neutral Concrete
Portland Cement Association
Precast/Prestressed Concrete Institute
Post-Tensioning Institute
Slag Cement Association
Tilt-Up Concrete Association
Wire Reinforcement Institute

Other frequent (non industry) supporters : NCSEA, FEMA ATC SCSC, MACS, SEI, AIA.

THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE



Model Code Developers

- **International Code Council (ICC) – I-Codes**

- International Building Code (IBC)
 - International Residential Code (IRC)
 - International Existing Building Code (IEBC)
 - International Energy Conservation Code\ASHRAE (IECC)*
 - International Green Construction Code\ASHRAE (IgCC)*
- *New Venues – different code development processes (continuous maintenance)

- **National Fire Protection Association (NFPA)**

- NFPA Life Safety Code
- NFPA Building Construction and Safety Code

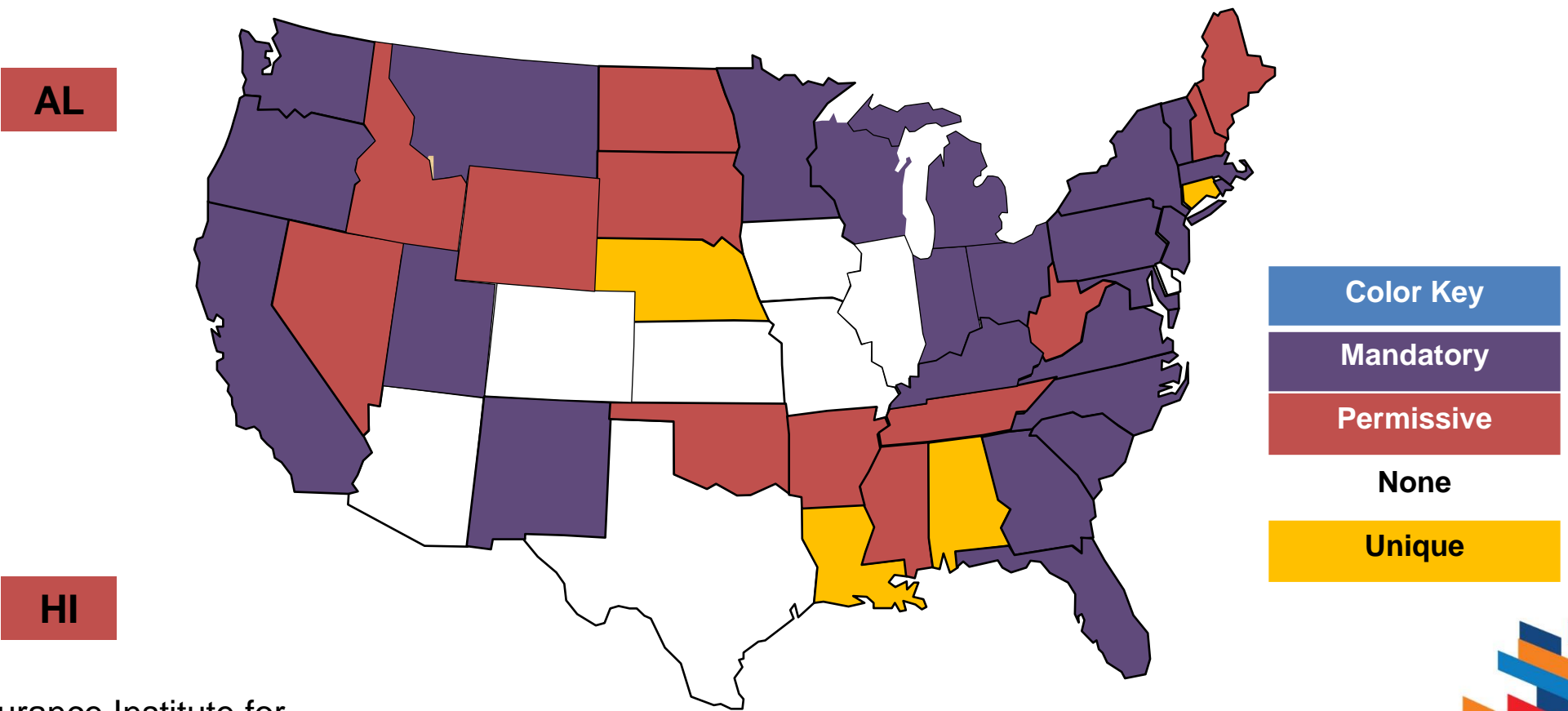
- **International Association of Plumbing and Mechanical Officials (IAPMO)**

ICC Code Development Process

Phase 1 – Code Change Submittals		
Phase 2 – Committee Action Hearings (CAH) Group A in Year 1, Group B in Year 2		
Phase 3 – Public Comment Hearings (PCH) -VOTE		
Phase 5 – Publish Model Code Oct of Year 3		
<i>Oct 2020</i>	<i>Oct 2023</i>	<i>Oct 2026</i>
2021 Editions	2024 Editions	2027 Editions
On-Line Voting by Government Officials	Post Final Action on Proposals	



Statewide Codes – Commercial Buildings (IBC)









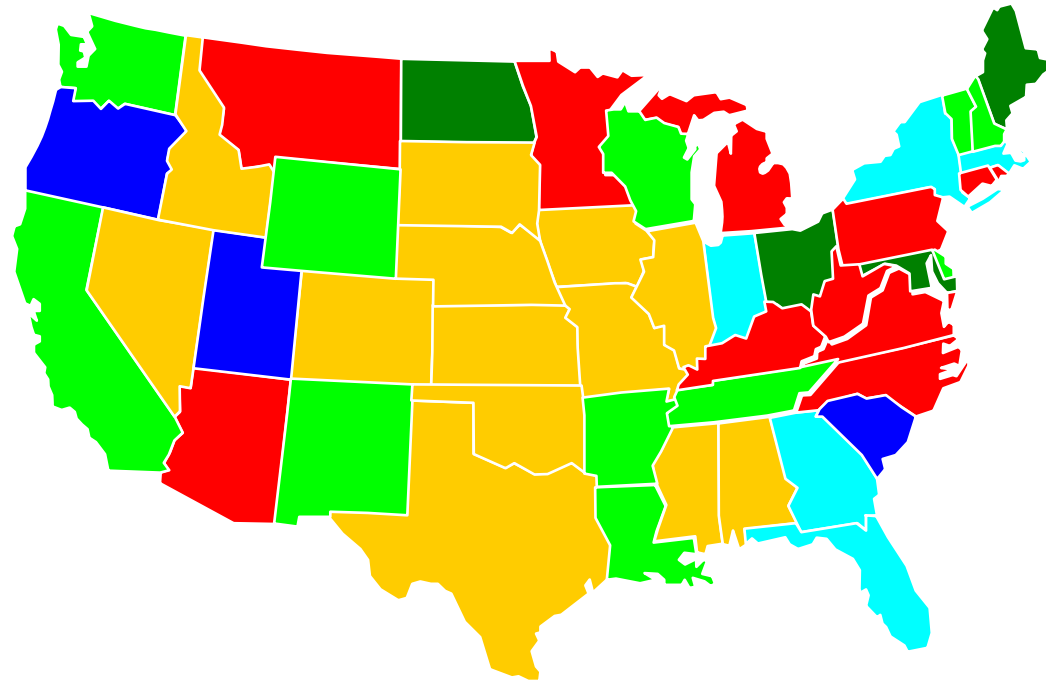
Source: Insurance Institute for Business & Home Safety 2020

THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE



Every State Is Different -

-  Local Jurisdictions May Amend
-  Local Jurisdictions May Make More Stringent
-  Local Jurisdictions Amend with State Approval
-  Local Jurisdictions May Not Amend
-  More Stringent with State Approval
-  Limited Applications, Such as State-Owned Buildings, or No State-Wide Code



Adds Complexity and Opportunity!!!



Things You Can Do – State and Local Codes/Ordinances

Think

Local



THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE

aci CONCRETE
CONVENTION

Typical Process For State Code Adoption

- What is the state statute?
- Frequency of Code Adoption?
- Does the state allow for proposals to amend?
- When do the Commissions and Technical Committees meet?

Legislative Statute

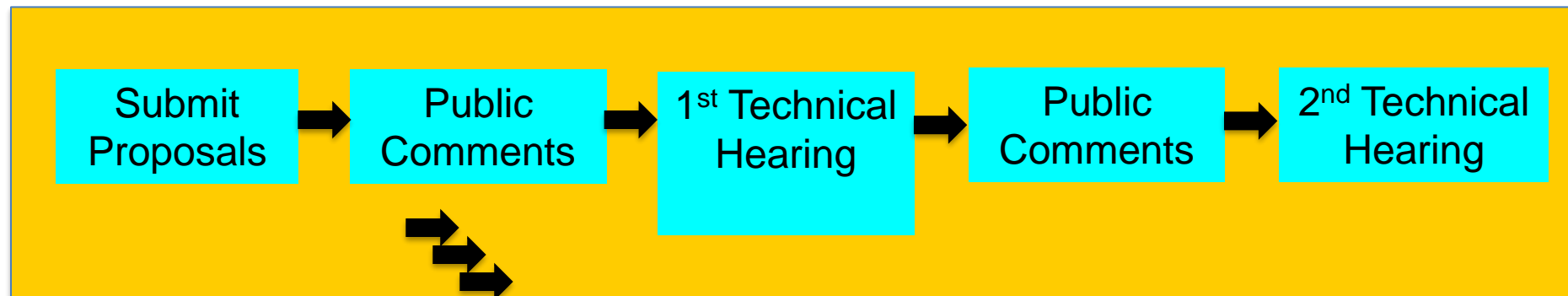
Authority, Frequency, Basis

Technical Review of Code

Existing Code with Current Model Code

Code Development Process

Submittals, Comments, Hearings



Code Advocacy Collaboration Groups

- 563-0P Corrosion
- 563-0Q Repair of Post Tensioned Concrete
- 564 - 3-D Printing With Cementitious Materials

ACI Advocacy Collaboration Groups

- Model Codes Collaboration Group
- State Initiatives Collaboration Group
- International Adoptions Collaboration Group

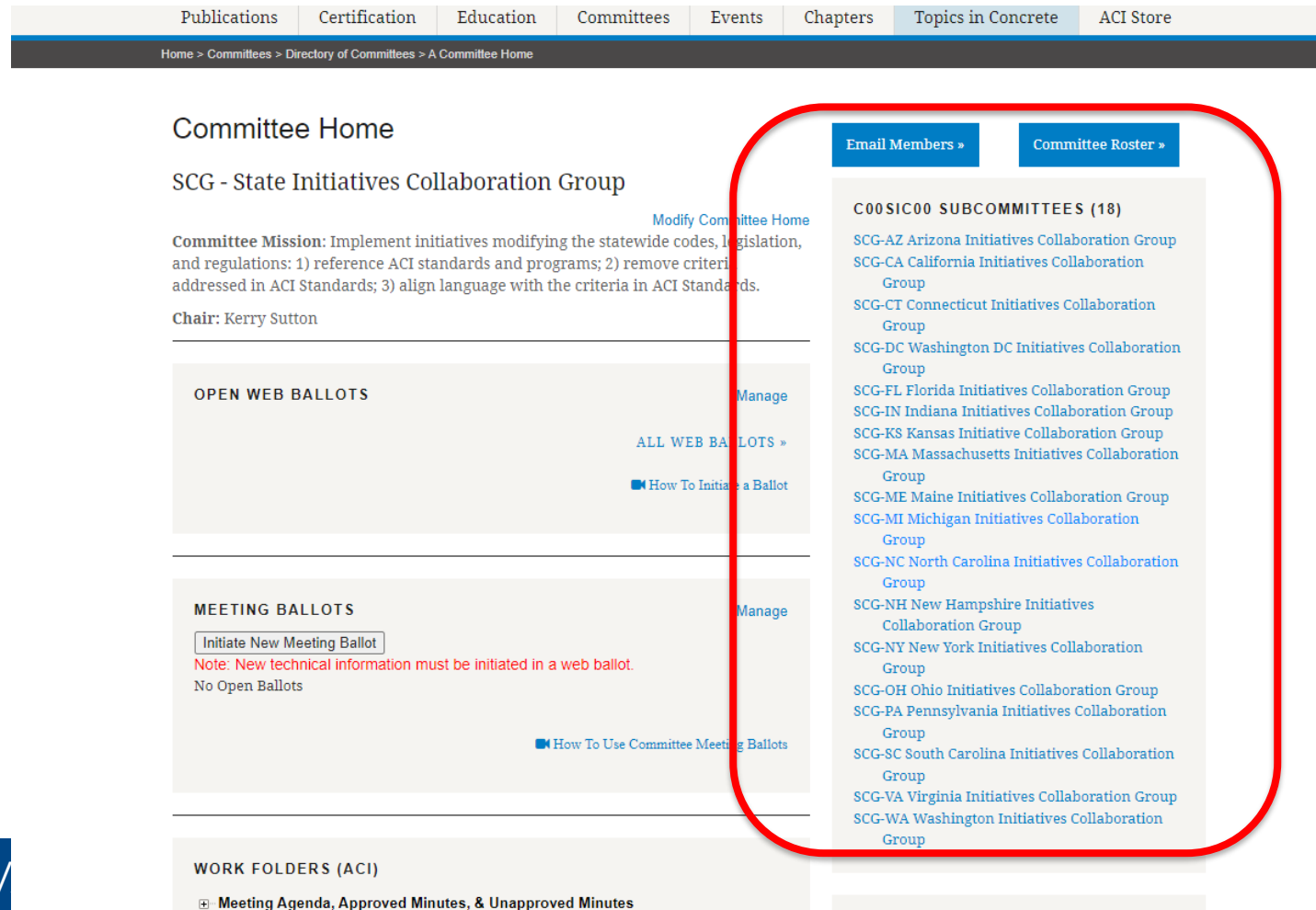
US TAG: ISO TC 71/SC4 Performance Requirements for Structural Concrete

US TAG: ISO TC 71/SC5 Simplified Design Standard for Concrete Structures

US TAG: ISO TC 71/SC6 Non-Traditional Reinforcing Materials for Concrete Structure

US TAG: ISO TC 71/SC7 Maintenance Repair of Concrete Structures

US TAG: ISO TC 71/SC8 Environmental Management for Concrete



Publications Certification Education Committees Events Chapters Topics in Concrete ACI Store

Home > Committees > Directory of Committees > A Committee Home

Committee Home

SCG - State Initiatives Collaboration Group

[Modify Committee Home](#)

Committee Mission: Implement initiatives modifying the statewide codes, legislation, and regulations: 1) reference ACI standards and programs; 2) remove criteria addressed in ACI Standards; 3) align language with the criteria in ACI Standards.

Chair: Kerry Sutton

OPEN WEB BALLOTS

[Manage](#)

[ALL WEB BALLOTS >](#)

[How To Initiate a Ballot](#)

MEETING BALLOTS

[Manage](#)

[Initiate New Meeting Ballot](#)

Note: New technical information must be initiated in a web ballot.

No Open Ballots

[How To Use Committee Meeting Ballots](#)

WORK FOLDERS (ACI)

[Meeting Agenda, Approved Minutes, & Unapproved Minutes](#)

Committee Roster >

C00SIC00 SUBCOMMITTEES (18)

- SCG-AZ Arizona Initiatives Collaboration Group
- SCG-CA California Initiatives Collaboration Group
- SCG-CT Connecticut Initiatives Collaboration Group
- SCG-DC Washington DC Initiatives Collaboration Group
- SCG-FL Florida Initiatives Collaboration Group
- SCG-IN Indiana Initiatives Collaboration Group
- SCG-KS Kansas Initiative Collaboration Group
- SCG-MA Massachusetts Initiatives Collaboration Group
- SCG-ME Maine Initiatives Collaboration Group
- SCG-MI Michigan Initiatives Collaboration Group
- SCG-NC North Carolina Initiatives Collaboration Group
- SCG-NH New Hampshire Initiatives Collaboration Group
- SCG-NY New York Initiatives Collaboration Group
- SCG-OH Ohio Initiatives Collaboration Group
- SCG-PA Pennsylvania Initiatives Collaboration Group
- SCG-SC South Carolina Initiatives Collaboration Group
- SCG-VA Virginia Initiatives Collaboration Group
- SCG-WA Washington Initiatives Collaboration Group

State Initiatives – Example ACI 562 Repair Code Amendment to the 2018 NC Existing Building Code (2018 IEBC)

North Carolina Collaboration Group

- ACI Carolinas Chapter members
- ACI 562 Committee members
- International Concrete Repair Institute (National/Local)
- NRMCA (National/Local)
- Industry supporters (Simpson Strong Tie, Titan Cement)

Doug Allen
Bill Brickley

Tim Cook

Jackie Flemming

Bill Horne

Jeff Jezzard

Chris Johnson

Kenny Johnson

Cecil Jones

Keith Kesner

Eric Koehler

Mark Lemay

Kenneth Lozen

Calvin McCall

John McDougall

Matt Miltenberger

Tien Peng

Sami Rizkalla

Randy Shackelford

Caroline Sutton

Dave Tepke

David Whitmore

Kerry Sutton

Steve Szoke

State Initiatives - Example

North Carolina Collaboration Group Success:

- In 2020 submitted an Amendment to the 2018 NC Existing Building Code to reference ACI 562 Repair Code. Effective date: 1/1/2022
- Ongoing discussion with the NC Building Code Council (BCC) and the NC SEA on references for ACI Certifications in the NC Building Code.
- Ongoing education opportunities with NC Building Officials Association and NC State Construction Office.
- Developed relationship and credibility with the NC BCC.

State Initiatives - Example

North Carolina Collaboration Group Success:

- In 2023 submitted an Amendment to the 2021 NC Building Code to reference ACI 440.11 GFRP reinforcement in structural concrete.
- Added to our collaboration group ACI 440 committee members, local industry experts, supporters from academia.
- Success: Effective Date 1/1/2025.

State Initiatives – Example ACI 440.11 and ACI-TMS 122.1

Ohio Collaboration Group

- ACI Ohio Chapter members
- Ohio Concrete members
- ACI 440 Committee members
- ACI-TMS 122 Committee member
- Industry supporters (Owens Corning)

Matthew Carter
Alvin Ericson
Will Gold
Doug Gremel
Ronald Kral
Wayne Moening
Mark Pardi

Jay Pease
Tom Rozsits
Andrea Salyer
Martha VanGeem
Mikhail Vorobiev
Matt
Miltenberger

Kerry Sutton
Steve Szoke



State Initiatives - Example

Ohio Collaboration Group Success:

- In 2023 submitted amendments to the 2021 Ohio Building Code (reference ACI 440.11) and the Ohio Energy Code (reference ACI-TMS 122.1)
- ACI-TMS 122.1 Thermal Bridge Mitigation for Buildings having Concrete and Masonry Walls and Veneers. Effective date: 3/14/2024
- ACI 440.11 GFPR Rebar proposal was not approved in 2023 but re-evaluated in 2024. Effective date: Fall 2024.
- Ongoing education opportunities with Ohio ACI Chapters, Building Officials Association and Structural Engineers.
- Developed relationship and credibility with the Ohio Board of Building Standards (BBS).



Current ACI Priorities - State Level

- Adopt current ACI codes
 - Adoption by reference **ACI CODE 562: Assessment, Repair, and Rehabilitation of Existing Concrete Structures.**
 - Adoption by reference **ACI CODE 440.11** Building Code Requirements for Structural Concrete Reinforced with Glass Fiber-Reinforced Polymer (GFRP) Bars
 - Adoption by reference **ACI-TMS CODES** (122.1, 122.2, 122.3): Thermal Bridge Mitigation for Buildings and Masonry Walls and Masonry Veneer and Thermal Mass calculations for residential and commercial buildings.
 - Education on upcoming **NEW ACI CODE 323** Low Carbon Concrete
- Remove duplicative language
- Add requirements for certified personnel

6 Key Things You Can Do – State Codes

- 1) Fact Finding
- 2) Relationships
- 3) Proposal development opportunity?
- 4) Proponent/Co-proponent?
- 5) Testify?
- 6) Public Comments



General Advocacy

- Establish ACI and our industry partners as a resource
 - Educate building officials, Structural Engineers, Architects, Contractors
 - Alert officials to ACI resources
- Create general awareness
 - Attend ICC Chapter meetings
 - Partner with other organizations for joint meetings (ICRI, AIA, SEA)
 - Build relationships
 - Share information
- Support Building Safety Month
- Update and develop new ACI standards

ACI Participation in Educational Events

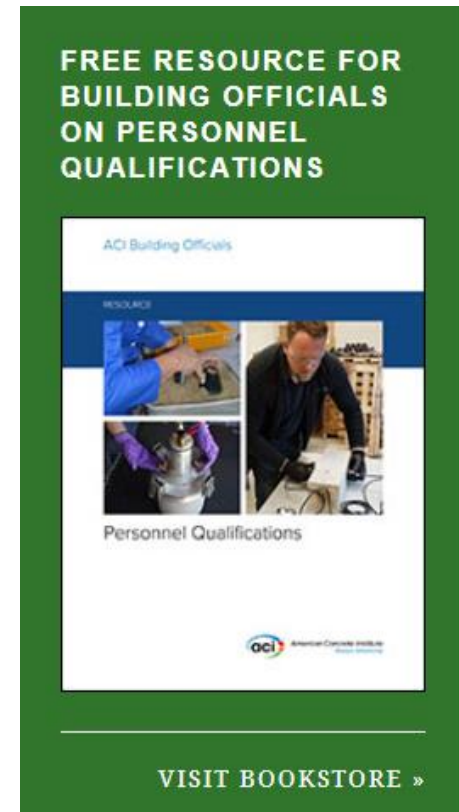
Table 2:

Recent code official and professional society conference presentation/exhibit opportunities for ACI collaboration group members

Partnering organization	Event/Topic	Location
Building Code Officials/ICC	Presentation—Code Requirements for Sampling, Testing, and Inspecting Structural Cast-in-Place Concrete	Webinar
Building Code Officials/ICC	Presentation—Structural Concrete Repair Webinar for Building Officials	Webinar
American Institute of Architects (AIA) Detroit Chapter	Presentation—ACI 562: What you need to know about the Concrete Repair Code	Webinar
Commonwealth Building Officials (Pennsylvania)	Presentation—ACI 562; Special Inspector and Technician Qualifications	Webinar
New England Building Officials Conference	Presentation—ACI 562	Amherst, MA, USA
North Carolina Qualification Board	Presentation—ACI 562	Webinar
North Texas Building Professionals Institute (BPI)	Presentation—ACI 318 and ACI 562	Irving, TX, USA
Pennsylvania Building Officials Conference (PENBOC)	Presentation—ACI 562	Webinar
Structural Engineers Association of Michigan (SEAMi)	Presentation—ACI 562; Exhibit	East Lansing, MI, USA
South Carolina Building Officials Association	Exhibit	Myrtle Beach, SC, USA
Southeastern Massachusetts Building Officials Association (SEMBOA)	Presentation—ACI 562	Webinar
Washington Association of Building Officials (WABO)	Presentations—ACI 318, ACI 562, Special Inspector, and Technician Qualifications	Lynnwood, WA, USA

Making It Easier – Resources

- Position Statements
- [State](#) Advocacy Collaboration Groups – not just for ACI members and advocacy!
- ACI Advocacy Portal/ACI Building Officials Portal
- Complimentary Copies of ACI Codes to Building Officials/Governmental Agencies
- Free Building Officials Personnel Document
- Social Media – LinkedIn Code Advocacy



Thank You

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