

FCIA Webinar Series

A Look at the 2024 Code Cycle and Proposals

Bill McHugh, Executive Director of FCIA

Bill Koffel, Koffel Associates, Consultant to FCIA

Rich Walke, CTI, Consultant to FCIA

FCIA – Firestop Contractors International Association



- **Fire Exits??**
- **Housekeeping....Phones, Hands off Keyboard!**
- **Thanks to FCIA Members**
 - Firestop Contractors
 - Manufacturers, Consultants
 - Firestop Distributors, Reps, Friends
- **FREE PDF MOP/ Word Doc Spec - Specifiers @**
Architect/Engineering firms, Independent Specifiers, AHJ's with
Municipality Jurisdictions, More

FCIA – Firestop Contractors International Association

- **FREE Life Safety Digest**
- **UL/ULC, FM 4991 Contractor Programs,**
 - DRI's
- **IAS AC 291 Inspection Agency Program**
 - Responsible Individuals / Competence
- **ASTM Inspection Standards – ASTM E2174 & ASTM E2393**
 - High Rise, Category III & IV, R>250 ('21), NFPA 1, NFPA 101 Appx. Specs Worldwide
- **Tools @ FCIA.org** for Specifiers, AHJ's, Building Owners, Firestop Contractors & Inspection Agencies
- **Watch FCIA.org for Webinar Announcements!**



FCIA Actions - 2022

- Conferences - HYBRID
 - FCIA ECA @ Nashville, USA – May 18-20
 - FCIA ME @ Doha, Dubai – June 19-25
 - FCIA CAN @ VANCOUVER – Oct. 3-4
 - FCIA FIC @ Amelia Island, FL – Nov. 2-4
- Webinars & Symposiums
- Code Development & Standards Discussions
- Committee Action
- International Discussions
- ***NEW Education for Careers in Firestopping!!***
 - ***FCIA's Firestop Certificate of Achievement & Education Program***

Systems & Materials....



- ***NEW Education for Careers in Firestopping!!***
 - ***FCIA's Firestop Certificate of Achievement***
 - ***4 Levels***
 - ***Level 1 – General Knowledge Certificate***
 - ***Level 2 – In Depth Materials & Systems Certificate***
 - ***Level 3 – SOON***
 - ***Level 4 - SOON***
 - ***Career Path Education***
 - ***FCIA Education Respected Worldwide***

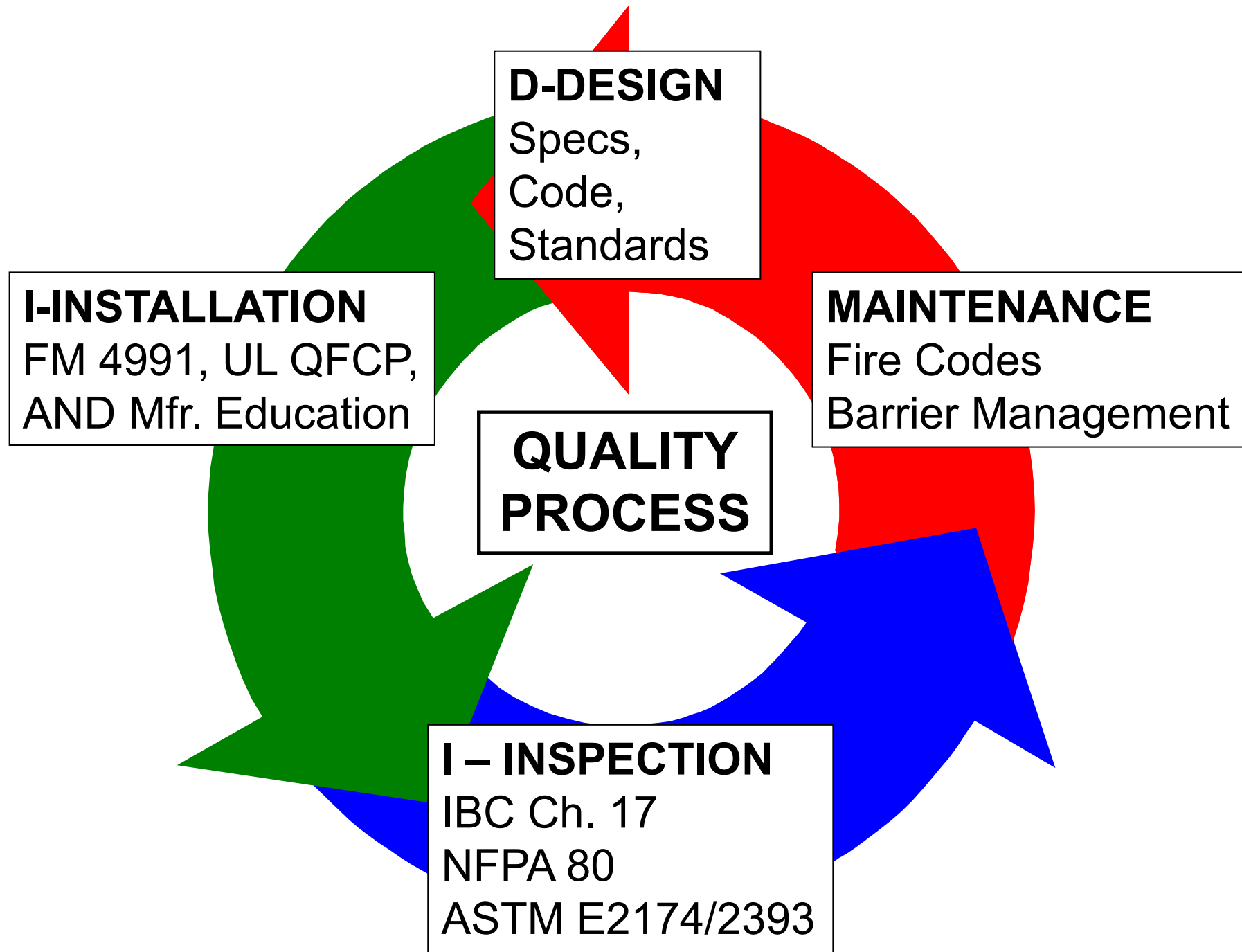
FCIA – Firestop Contractors International Association



- **Thanks FCIA Members**
 - Firestop Contractors
 - Manufacturers, Consultants
 - Firestop Distributors, Reps, Friends
- **FREE PDF MOP/ Word Doc Spec** - Specifiers @ AE, Independents, AHJ's with Jurisdictions, More

“TOTAL FIRE PROTECTION”

- Effective Compartmentation
 - Fire Barriers, Fire Walls, Floors, Smoke Barriers
 - Firestopping, Fire Dampers, Swinging and Rolling Fire Doors, Fire Rated Glazing
- Detection & Alarm Systems
- Sprinkler Suppression Systems
- Education & Egress –
 - Building Owners & Managers, Building Occupants and Firefighters



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A Look at the 2024 Code Cycle and Proposals

Bill McHugh, FCIA Executive Director

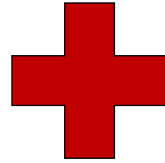
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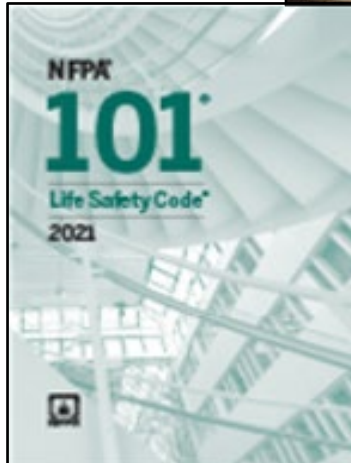
FCIA Firestopping Code Development Team



FCIA Works with Others...Including AHJ's



Firestopping Code Development



Firestopping Code Development Schedule

- ICC Code Development Process – Cycles A and B
 - January Proposals
 - April Hearings
 - July Public Comments
 - Sept/Oct. Public Comment Hearings
 - Nov. Online Governmental Consensus Vote (OGCV)
 - ICC Board, Council Appeals, Review
 - Summer '23 – Publish
 - **Cycle A completed Dec., 2021; Cycle B started Jan., 2022...**



Firestopping Code Development

- International Code Council
- NFPA
- NBCC - Canada
- UAE, Qatar, India
- New Zealand/Australia
- **FCIA CODE Focus —**
“MEMBERS, DIIM, SYSTEMS & MII”
- NEW & EXISTING BUILDINGS
- 2018, 2021 Fire Code; NFPA 1; NFPA 101, India, Canada, UK, NZ....



Past Firestopping Code Development Success

- FCIA PROPONENT...
 - **FM 4991, UL QFCP in IBC???**
 - 2009 Cycle for 2012 CODE – **LOST BY ONE VOTE**
 - **ASTM E2174 & ASTM E2393 in '12, '15, '18', 21, '24 IBC**
 - **Special Inspections based on ASTM E2174 & ASTM E2393**
 - High Rise Buildings – '12, etc. IBC
 - Risk Category III & IV - Table 1604.5 – '12, etc. IBC
 - **Multi-family Occupancies, > 250 Occupants – '21 IBC**
 - **About 50,000 SF**



Past Firestopping Code Development Success

- **ICC – Joints**

- FROM - “Install so as not to dislodge....”
- TO – “Install so as not to dislodge in accordance with the listing and the manufacturers installation instructions”

- **ICC Penetrations**

- Install in accordance with the Listing and Manufacturers Installation Instructions



Past Firestopping Code Development Success

- **ICC/NFPA – Special inspections based on ASTM E2174/E2393 Inspection Standards**
 - High Rise
 - Risk Category III & IV - Table 1604.5
 - Residential > 250 Occupants, about 50,000 SF
- **ICC/NFPA & Contractor Programs & Inspection**
 - NFPA 1 – References specifying a “Quality Control Program”
 - NFPA 101 – Appendix mentioned Inspection, Contractor Programs
- ICC – Photoluminescent Markings in Stairwells

Systems & Materials ...

Structural & Effective Compartmentation



Firestopping Code Development Supporters

- Colorado Chapter, ICC – Occupiable Roofs
- NASFM – Occupiable Roofs
- BOMA – Contractor Programs
- University – Labelling



Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

- ICC - Performance Based Structural Fire Design – 2x
- Occupiable Rooftops & Fire-Resistance – 2x
 - New Construction & Existing Buildings
- NEW Definitions SFRM & IFRM
- Fire-Resistance & Sprinklers – ASTM E119, UL 263 Full Scale, with Load Applied, NO WATER WASH
- ICC 104.11 – Fire Resistance & Fire Safety – ADM13...



Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

ADM13-22 & ADM14-22 – Alternate materials, design and methods of construction and equipment

- Rewrite of Section 104.11 for all I-codes
- Removed direct reference to 'fire-resistance' in lieu of general reference to 'fire safety'
- Multiple other related proposals addressing components of ADM13-22 and ADM14-22
- **ADM13-22 & ADM14-22 – APPROVED AS MODIFIED**
 - Must still be confirmed at Public Comment Hearing (PCH) and by Online Governmental Consensus Vote (OGCV)

Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

104.2.3.4 Equivalency criteria. An alternative material, design or method of construction shall, for the purpose intended, be not less than the equivalent of that prescribed in this code with respect to all the following, as applicable:

1. Quality
2. Strength
3. Effectiveness
- ~~4. Fire Resistance~~
4. Durability
5. Safety, other than Fire Safety
- ~~6. Fire Safety~~



Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

104.2.3.4.1 Fire safety equivalency. Determination of safety equivalency, with respect to fire, shall be based on an analysis that includes applicable fire safety performance properties, such as but not limited to flame spread, heat release rate, heat of combustion, smoke development and fire resistance.



Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

- **Marcello Hirschler, 'Fire-Resistance is Eliminated'**
- **Bill McHugh, 'What Marcello was referring to, is that the term 'fire-resistance' has been changed to 'fire-safety', and Section 104.11 sends the user back to individual disciplines for alternative method determination, Chapter 7 for fire-resistance.'**
- **Bill M, 'Fire-Resistance HAS NOT BEEN ELIMINATED'**

Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

ADM34-22 – AIA – AM

- [A]104.11 Alternative materials, design and methods of construction and equipment.
- Exception: Performance-based alternative materials, designs or methods of construction and equipment complying with the ICC Performance Code. This exception shall not apply to alternative structural materials or to alternative structural designs.



Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

ADM53-22 – RESILIENCE – FSNA (Koffel) – D 12-1

The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, health and general welfare through structural strength, means of egress, stability, sanitation, light and ventilation, energy conservation, **resilience** and for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions, and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

ADM53-22 – RESILIENCE – FSNA (Koffel) – D 12-1

- COMMITTEE:
 - “Un-Necessary Expansion of Scope”
 - “Bring Technical Aspects ... not Definition without”
 - “Resilience goes beyond Building Specific Issues”
 - “Is this the Term of the Month?”
- Opposition
 - “Where is the rest of the package?” Marcello Hirschler
 - The reason we have Fire Sprinklers is for this – NMHC
 - This is not a Resilience Code – FEMA
 - Too Broad....NAHB
 - Support concept, but not this way...the purpose of this code is Life Safety, not sell products - NCSEA



Firestopping Code Development Success Group B, 2021-2023 Code Cycle

EB46-22 – Occupiable Roofs on Existing Buildings

EB84-22 – NEEDS Accessible Means of Egress

EB94-22 – Not triggered if <50 occupants



Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

EB46-22 – Occupiable Roofs on Existing Buildings

- **502.1 General.** Additions to any building or structure shall comply with the requirements of the International Building Code for new construction. Alterations to the existing building or structure shall be made to ensure that the existing building or structure together with the addition are not less complying with the provisions of the International Building Code than the existing building or structure was prior to the addition. An existing building together with its additions shall comply with the height and area provisions of Chapter 5 of the International Building Code. **Where a new occupiable roof is added to a building or structure, the occupiable roof shall comply with the provisions of the International Building Code.**
- EB46-22 – Approved As Submitted

Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

EB94-22 – Occupiable Roofs on Existing Buildings

- **1002.1 Compliance with the building code.** Where an existing building or part of an existing building undergoes a change of occupancy to one of the special use or occupancy categories as described in Chapter 4 in the International Building Code, the building shall comply with all of the requirements of Chapter 4 of the International Building Code applicable to the special use or occupancy.
 - **Exception:** Where construction of a new occupiable roof on an existing building results in a high rise building classification, compliance with Section 403 of the International Building Code shall not be required. The construction of the occupiable roof shall comply with Section 1011.
- **EB94-22 - Approved as Modified** – Committee added occupancy load of less than 50 to Exception

Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

S134-22 – Performance Based Fire Design

- Similar to FS107-21, Disapproved under Group A
- **1616.1 General.** Where the structural fire protection of structural elements is designed considering system-level behavior or realistic fire exposures, the design shall be in accordance with ASCE 7. Where the structural fire protection is designed per this section, all other provisions of Chapter 7 shall apply.
- **S134-22 – DISAPPROVED – AISC, Many others...**
- **AISC referenced their AISC 360 PBD**

Firestopping Code Development Success

Group B, 2021-2023 Code Cycle

RB55-22 – Allow penetrations through common wall of townhouse

- Proposal added exception which would specifically allow mechanical and plumbing penetrations through the common townhouse wall if protected with a firestop
- Not sure if this is needed as there is nothing stating it is not permitted already. You just can't have items within cavity of wall.
- **RB55-22 – DISAPPROVED**

Firestopping Code Development Success

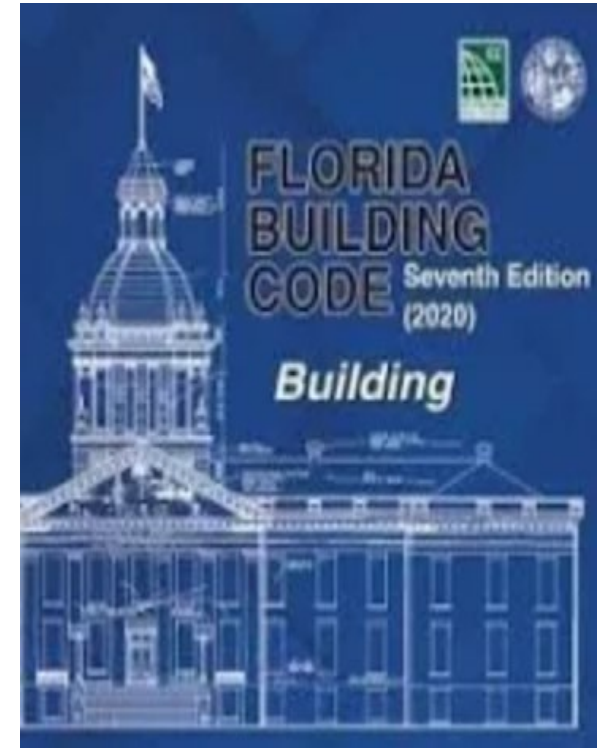
Group B, 2021-2023 Code Cycle

RB67-22 – Protection of sprinkler pipe penetrations in IRC Structures

- Proposed that water filled plastic sprinkler pipe be protected with a firestop system instead of using ASPM
- Proposed removal of provision to allow protection of a membrane penetration by a water filled sprinkler piping with a metal escutcheon plate. Result would have been metallic pipes could be protected by ASPM or concrete, grout or mortar, and plastic pipes by a firestop system.
- **RB67-22 – DISAPPROVED**

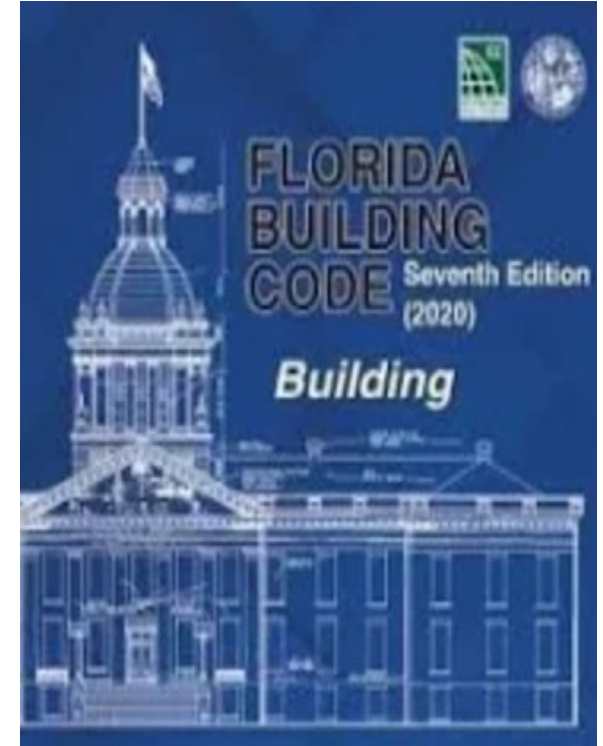
Firestopping Code Development Success Ongoing

- **2023 Florida Building Code**
 - Will be based on 2021 IBC
 - **Multiple proposals submitted by FCIA**
 - **Include Special Inspections** of firestop systems and joints systems based on 2021 IBC requirements
 - **Include Contractor Programs**
 - **Require Joint Systems** between fire barriers and all other rated walls



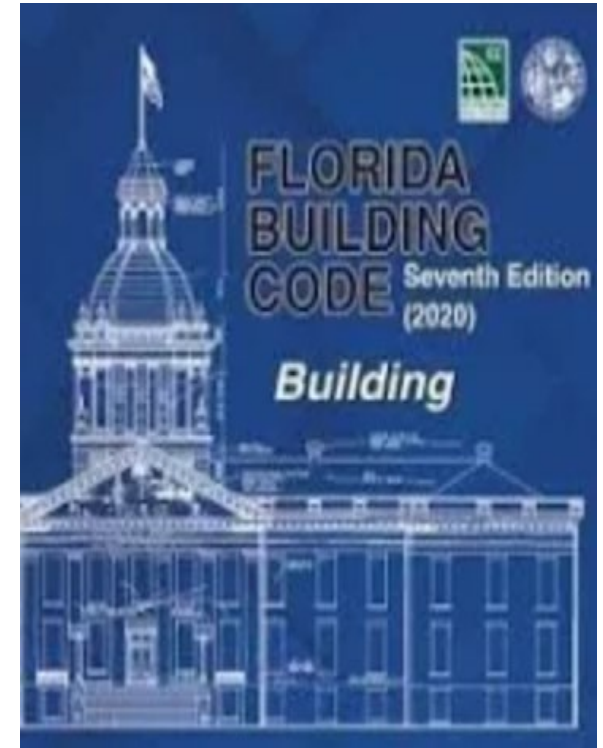
Firestopping Code Development Success Ongoing

- **Special Inspections of firestop systems and joint systems based on 2021 IBC**
- Disapproved 10-0 – Not needed in Florida
 - “Our inspectors are better trained in Florida than in rest of country”
 - “We do a good job so third party inspections are not needed”
 - We have a good track record”



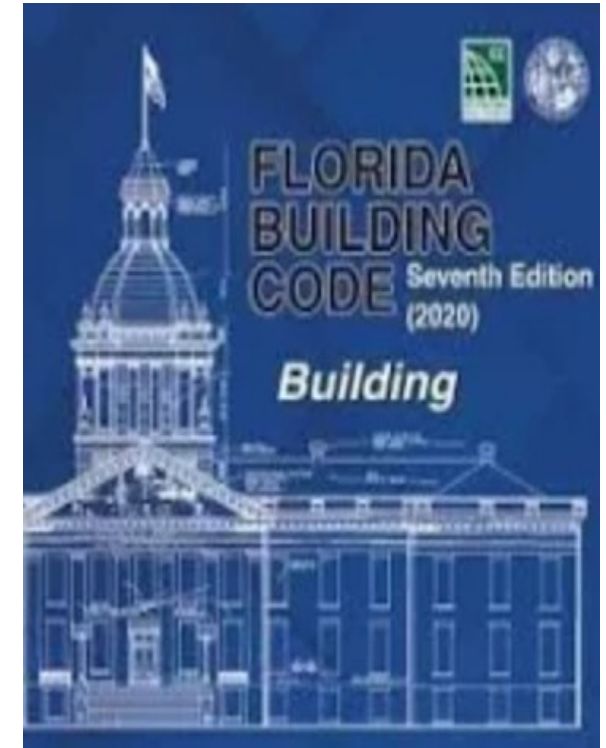
Firestopping Code Development Success Ongoing

- **Require FM / UL Contractors for installation of firestop systems and joint systems**
- Disapproved 10-0
 - “This is a state licensing issue, not a code issue”



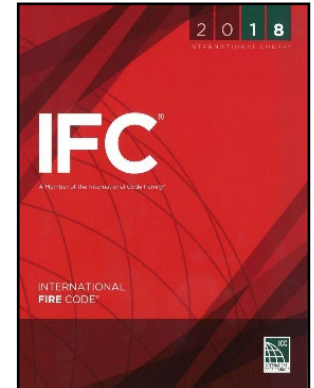
Firestopping Code Development Success Ongoing

- **Require protection of all joints between fire barriers and all other rated walls based on 2021 IBC**
 - 707.8 Joints made in or between *fire barriers*, and joints made at the intersection of *fire barriers* with the underside of a fire-resistance-rated floor or roof sheathing, slab or deck above, and ~~the exterior vertical wall intersection with other fire-resistance-rated wall assemblies~~ shall comply with Section 715.
 - “You’re removing the requirement to protect intersections with non-rated exterior walls”
- Disapproved 10-0



Firestopping Code Development Success

- **ICC Fire Code**
 - Photoluminescent Markings in Stairwells
 - Rewrite of Chapter 7 – Maintenance of Fire and Smoke Protection Features
- **INVENTORY of Fire-Resistance**
- Visually Inspect – Compare to Listing



Future Firestopping Code Development

- **NBCC – 2020....to 2025 Goals**
 - Firestop Inspection
 - Fire-Resistance Rated Roofs
- Maintain Protection (2027....)
 - National Fire Code of Canada
 - NFPA 1
 - NFPA 101
- Special Inspection – States, Provinces??

Firestopping Code Development Success

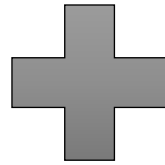


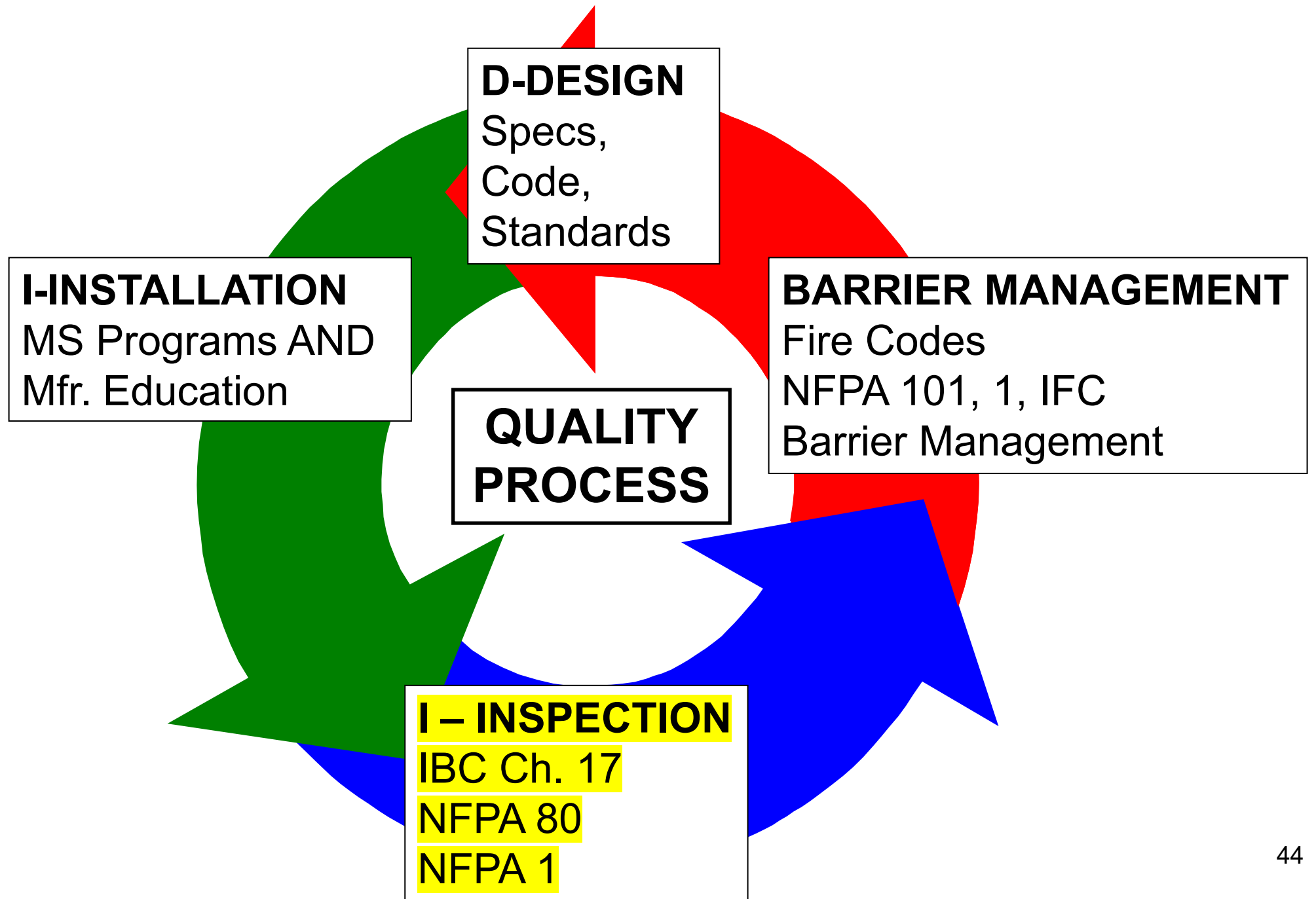
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Structural & Effective Compartmentation

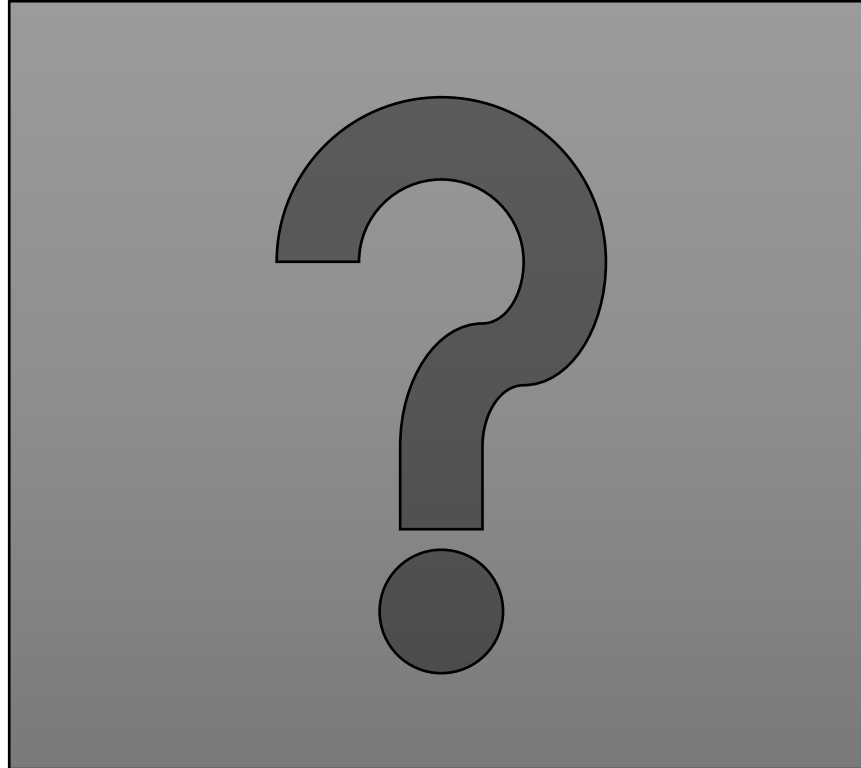


FCIA at ICC, NFPA, FBC & SCC





Questions??



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