

# FCIA @ CSI/CONSTRUCT2018

## Long Beach, CA

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Slides – [www.FCIA.org](http://www.FCIA.org)

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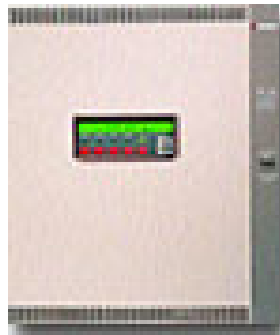
# FCIA – Firestop Contractors International Association

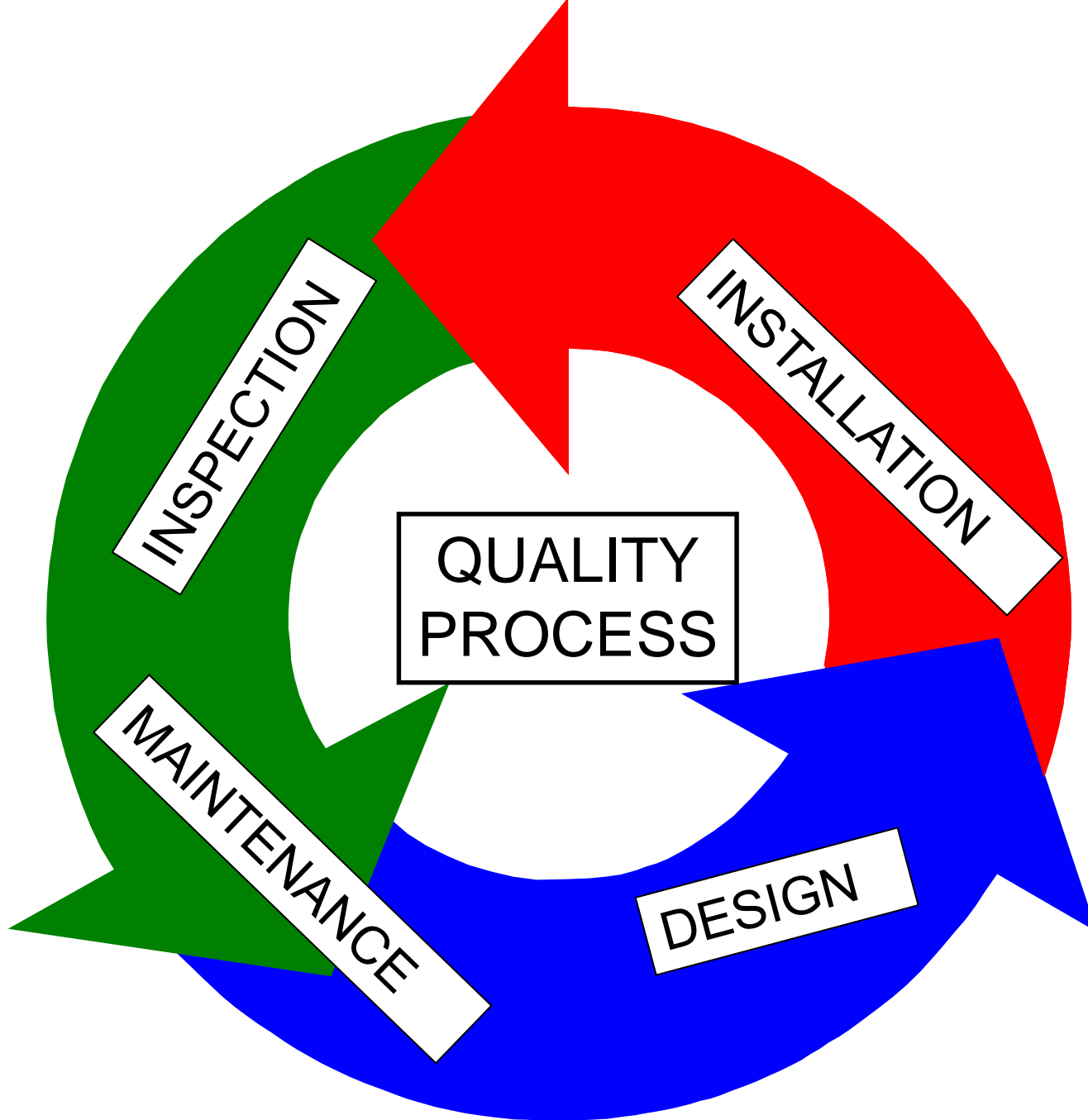
- FCIA Members
  - Firestop Contractors
  - Firestop Manufacturers
  - Firestop Consultants
  - Firestop Distributors, Reps, Friends
- FREE MOP/Spec - Specifiers @ AE, Independent
- FREE Life Safety Digest
- 3<sup>rd</sup> Party Contractor/Inspection Company Accreditation Programs
- Chair, ASTM Inspection Standards
- Tools for Specifiers



# “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





# Building & Fire Code Requirements

- NFPA 5000 – 101- NFPA 1
- National Building Code – Canada
- UAE Fire and Life Safety Code – Chapter
- International Codes –
  - New and Existing Buildings International Building Code – Chapter 7
  - International Fire Code – Chapter 7
- ***Minimum requirements - Construction & Maintenance***

# Building & Fire Code Requirements

- Terminology - Definitions
  - **Ch. 8 – NFPA & Ch. 7 IBC**
    - *IBC & NFPA - ASTM E 119, UL 263 - Fire-resistance-ratings*
    - IBC Ch. 7 - **Fire Barrier** – Hourly Rated
    - IBC Ch. 7 - **Fire Wall** – Fire Rating, structural independence
    - Ch. 7 IBC – **Fire Partition** – Rated, not continuous.
    - Ch. 8 NFPA/NFPA 221–**High Challenge Fire Walls**

# Building & Fire Code Requirements

- Fire Barriers
  - Fire Area Separations
  - Mixed Use Occupancies
  - Incidental Uses
  - Hazardous Area Separations
  - Exit Enclosures
  - Shaft enclosures
  - Horizontal Exits
  - Corridor Walls - NFPA

# Building & Fire Code Requirements

- Compartmentation Codes – US
  - **Smoke Barrier – Firestopping for Continuity**
    - IBC – Hourly Rated, “L” Rating
      - <5cfm/sf (IBC 2006)
      - < 50 cfm, 100sf of Wall Area (IBC 2009)
    - NFPA – ... ‘restricting the passage of smoke’...  
**Quantified “L” Rating ... no Occupancy Chapters**
      - Continuous, Barrier to Barrier, ... through concealed spaces,
      - Not always fire-resistance-rated.
  - **Smoke Partition**
    - IBC – Continuous barrier, not rated...‘retard’.
    - NFPA – Continuous membrane that is designed to form a barrier to *limit the transfer of smoke*....

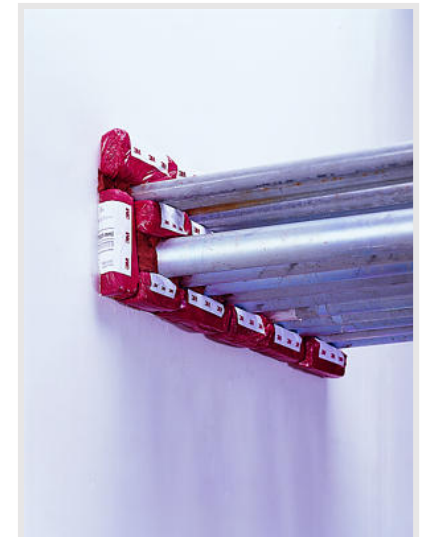


# Building & Fire Code Requirements

- ***Build it Right***
  - **Walls / Horizontal Assemblies – Continuity**
    - Firestop Products Become Firestop Systems
      - Penetrations
      - Joints – Head /Bottom of Wall – Perimeter Joints
    - Fire & Smoke Damper Duct Systems
    - Fire Doors and Hardware Systems
      - Rolling & Swinging
    - Fire Rated Glazing

# Continuity

## Effective Compartmentation Features



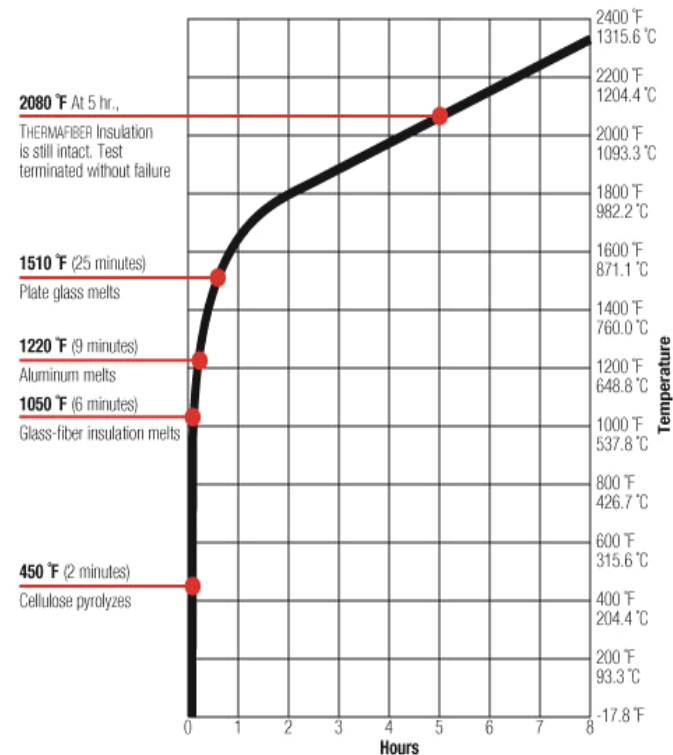
# Facility Budget Line Item?

- Fire-Sprinklers, Pumps, etc...YES
- Fire-Detection & Alarms...YES
- Barriers & Structural Fire Resistance??
  - Structural Elements, Components, Assemblies
  - Penetrations, Doors, Dampers, Glazing, Walls/Floors
  - In-House Staff?
  - Fireproofing & Barriers Services Contractor?

# IBC – Chapter 7

**703.2 Fire-resistance ratings.** The *fire-resistance rating* of building elements, components or assemblies shall be determined in accordance with the test procedures set forth in ASTM E119 or UL 263 or in accordance with Section 703.3. The *fire-resistance rating* of penetrations and *fire-resistant joint systems* shall be determined in accordance Sections 714 and 715, respectively.

**[IBC 2018 703.2]**



# Fire-Resistance Requirement

**703.7 Marking and identification.** *Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall* required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:

1. Be located in accessible concealed floor, floor-ceiling or *attic spaces*;
2. Be located within 15 feet (4572 mm ) of the end of each wall and at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition; and
3. Include lettering **not less than 3 inches (76 mm ) in height with a minimum 3/8 inch (9.5 mm) stroke** in a contrasting color incorporating the suggested wording.

**“FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS”**

or other wording.

**Exception: Walls in Group R-2 occupancies that do**  
not have a removable decorative ceiling allowing  
access to the concealed space.



# Barrier Continuity SYSTEMS

- **Products Become Systems Through....**
- **Test Standard References**
  - **Fire & Smoke Barriers** - ASTM E 119, UL 263
  - **Firestopping** - ASTM E 814 / UL 1479, ULC-S-115, UL 2079, E-1966, E-2307, **E-2837**, ...test method..."
  - **Fire/Smoke Dampers** - UL 555, UL 555S
  - **Swing/Rolling Fire Doors** - UL 10B, 10C
  - **Fire Rated Glazing** - UL 9, NFPA 252
- **SYSTEM Testing = Suitability statement for use of a product in a specific system application**



# Firestopping for Continuity Products become SYSTEMS ... post installation

- **‘Field Erected Construction...Tested to...’**
  - Standards - ASTM E814/UL 1479–UL 2079, ASTM E 1966, ASTM E 2307, ULC S-115, FM 4990
  - **F Rating - Flame**
  - T Rating – Temperature
  - H Rating – Hose
  - **L Rating – Smoke**
  - **W Rating – Water**



Graphics – 3M





# Fire-Resistance Products ... Systems

## Hose Stream = Shock Test for All

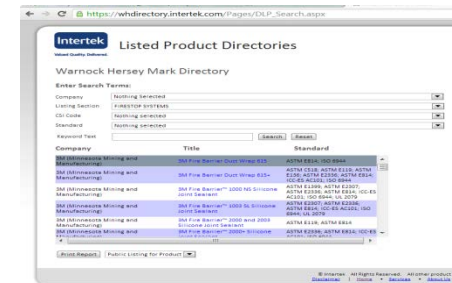




# Barrier Continuity Products become SYSTEMS

- Fire Rated Systems Directories –
  - FM Approvals
  - Intertek
  - UL Fire Resistance Directory

*Systems Selection & Analysis...Not as easy as it looks...*



# Engineering Judgments/EFRRRA

- Variances to Systems at Site ? – Now What...
  - **First Action in Process**
    - Find another system – Same Manufacturer
    - Find another system – Different Manufacturer
    - If no system exists in either case....
  - **Second Action –**
    - *Engineering Judgment – “EJ”*
    - *Equivalent Fire Resistance Rated Assembly – “EFRRRA”*
  - *Based on engineering, IFC Protocol*

## **IFC Guidelines for Evaluating Engineering Judgment Guidelines**

‘Construction industry professionals, building officials, fire officials, firestop contractors and other stakeholders **need appropriate guidelines for evaluating and using such judgments.**

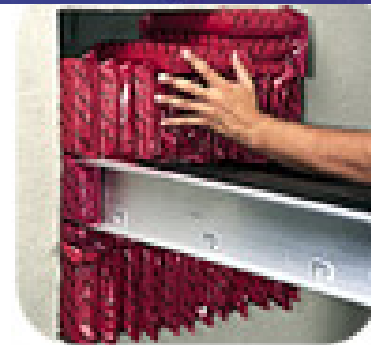
As such, IFC developed *Recommended IFC Guidelines for Evaluating FireStop Systems in Engineering Judgments.*

**NOT ALL DISCIPLINES HAVE EJ's/EFRRAs.....**

# Firestopping for Continuity

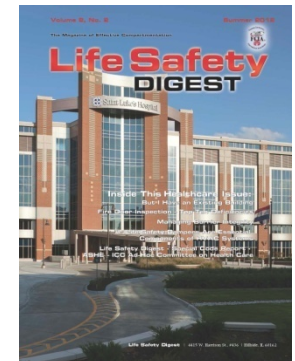
## Firestop Products

- **Sealants**
  - Silicone, Latex, Intumescent
- **Wrap Strips**
  - “Thick, Thin, Wide, Less Wide”
- **Putties**
- **Pillows**
- **Composite Sheets**
- **Bricks / Plugs**
- **Pre Fabricated Kits**
- **Mortar**
- **Spray Products**



# S-Specs – Firestopping – One Section

- **NEW Buildings – 07-8400 Specs**
  - [www.FCIA.org](http://www.FCIA.org)
- **Part I – Focus on**
  - **Systems & Listings**
  - **Not Products**
  - **Manufacturers Installation Instructions**
- **“Single Manufacturer to the greatest extent possible” – EJ’s**



# S-Specs

- **NEW Buildings – 07-8400 Specs**
  - **www. FCIA .org**
- **Part II – Qualifications**
  - **FCIA Member in Good Standing, AND**
  - **FM 4991, Standard for the Approval of Firestop Contractors, **OR****
  - **UL Qualified Firestop Contractor Program**
  - **AND**
  - **Manufacturer Accredited, Approved, Trained**

# S-Specs

- **NEW Buildings – 07-8400 Specs**
  - **[www. FCIA .org](http://www.FCIA.org)**
- **Part II – Qualifications – Special Inspection**
  - **Special Inspection Agency –**
    - **IAS AC 291 Accredited Special Inspection Agencies**
  - **Special Inspector Qualifications - Competence**
    - **FM Firestop Exam**
    - **UL Firestop Exam**
    - **AND**
    - **IFC Exam – ASTM E 3038**

# S-Specs

- **NEW Buildings – 07-8400 Specs**
- **Part III – Execution**
  - **Special Inspection – IBC Chapter 17**
    - ASTM E 2174 - Penetrations
    - ASTM E 2393 – Joints
  - **Special Inspection**
    - SFRM - ASTM E605, E736
    - IFRM - AWCI 12-B
    - SOON, ASTM WK 54597



# Spec Contractor Qualifications

- **FM 4991 – Standard for the Approval of Firestop Contractors**
- **UL Qualified Firestop Contractors**
- ***FM 4991 Approved***
- ***FM & UL/ULC CONTRACTORS UNDERSTAND SYSTEMS & DOCUMENTATION***
- **UL's Master Certificate of Compliance UL QFC's**
- **Other Protectives?**

# Specs - Contractor Qualifications

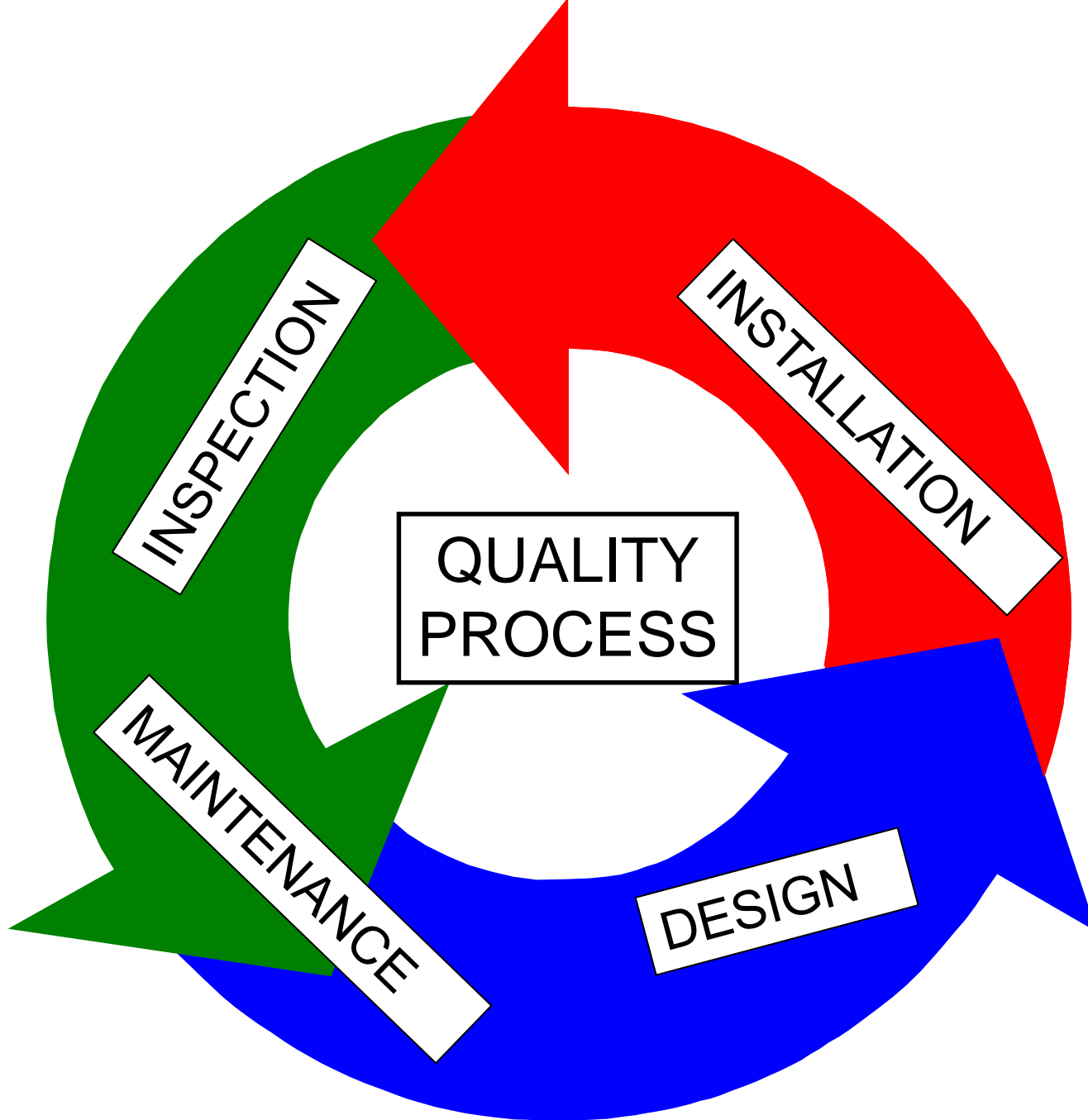
- **Dampers –**
  - **Accreditation for Sheet Metal Union Signatory Contractor**
- **Doors –**
  - **Fire Door Assembly Inspectors – DHI, Others**
- **Walls ?**
  - **AWCI's Education Academies**
- **Horizontal Assemblies ?**
- **Glazing ?**

# Why Contractor Qualifications?

- Built right the first time...Start a Trend...
- **SYSTEMS** Selection, Analysis, As-Built **Inventory**
  - F, T, L, W Rated **Firestop** Systems
  - Tolerances - Annular Space Sizes
  - Angles @ **Dampers**
  - **Door** Gap Sizes - Undercuts - Framing
  - Door Frame Anchors - Spacing
  - Door Closers - Activation Sensors
  - Door Hardware
  - **Damper** Breakaway Connections
  - **Wall fastener** Patterns, Stud Spacing
  - Horizontal Assembly Construction



Greenheck Photo

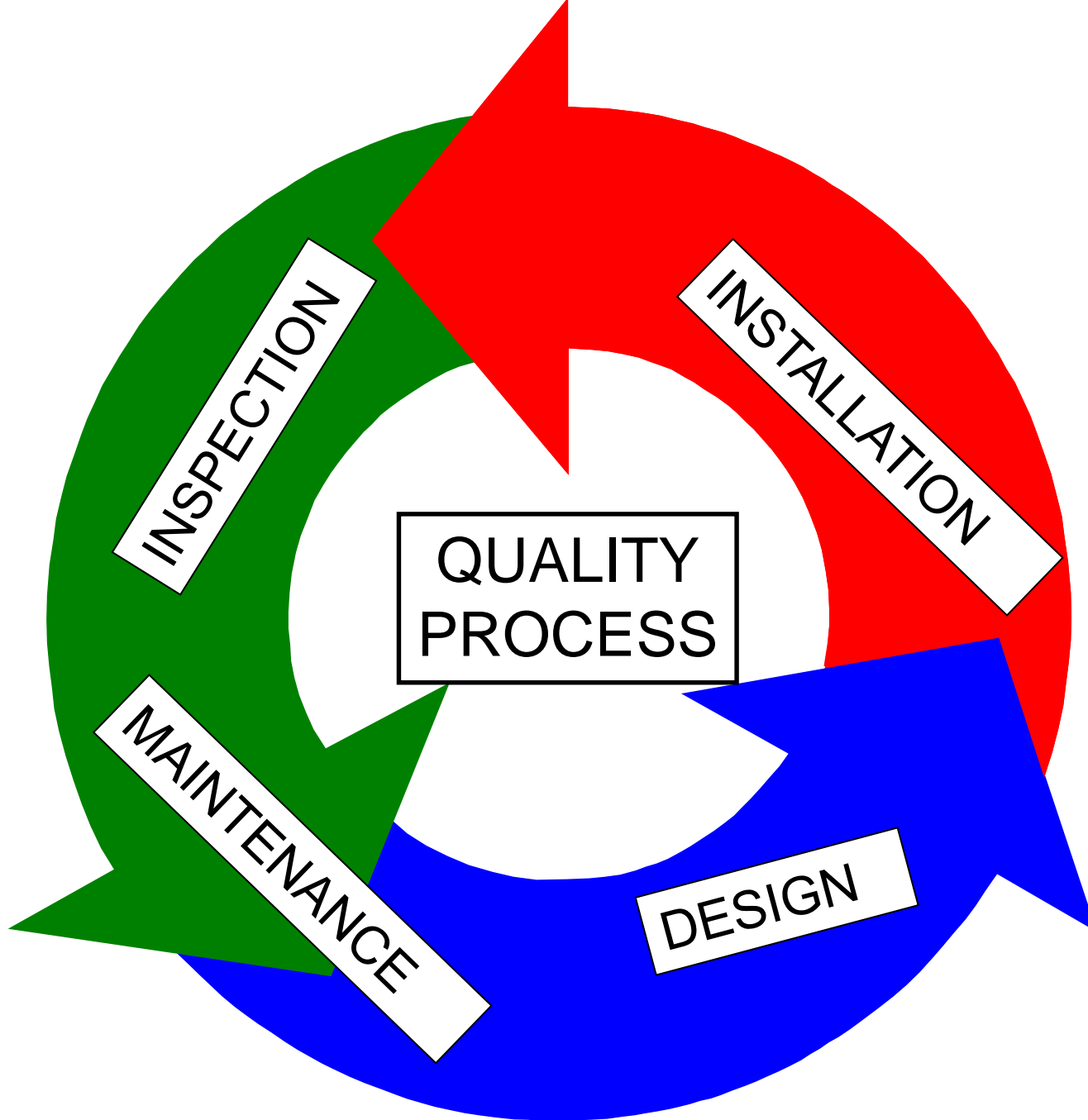


# I – Inspection – Options

- **Contractor Self Inspection**
  - Verify Management System validity
- **Manufacturer Inspection?**
  - Does not exist ... Survey, maybe

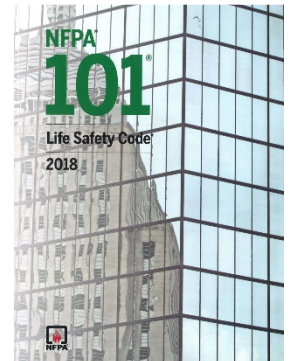
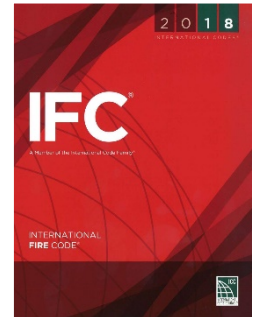
# I – Inspection

- **Special Inspection – 1705.1-1705.12**
  - **Schedule of Special Inspections - Division 1**
  - Independent 3<sup>rd</sup> Party
  - Destructive, Non Destructive, Specified Frequency
  - **Firestopping**– ASTM E2174, E2393
    - Inspection Agency Accreditation – IAS AC 291
    - Inspector Competence – FM, UL or IFC Firestop Exams
  - **Fireproofing** – IBC Ch. 17, ASTM E605, E736, AWCI 12B
  - **Dampers** – NFPA 80, at Commx'g, yr. 1, yr. 4 or 6.
  - **Doors** – Annual Visual Inspection
  - **Walls?**
  - **Horizontal Assemblies**
    - Steel, Concrete, Wood @ Chapter 17



# Fire Codes Require Maintenance

- International Fire Code
- NFPA 1
- NFPA 101
- Minimum Requirements Stated
- Frequency





# National Fire Protection Association - NFPA 101

- **4.6.12 Maintenance, Inspection, and Testing.**
  - 4.6.12.1 *Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this Code, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained... in accordance with *applicable NFPA requirements* ....*
- [101:4.6.12.1, emphasis added]

# National Fire Protection Association - NFPA 101

- **4.6.12.2** No existing life safety feature shall be removed or reduced where such feature is a requirement for new construction.
- **4.6.12.3\*** Existing life safety features obvious to the public, if not required by the Code, shall be either maintained or removed.
- [101:4.6.12.3]

# National Fire Protection Association - NFPA 101

- **4.6.12.4** Any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature requiring periodic testing, inspection, or operation to ensure its maintenance shall be tested, inspected, or operated as specified elsewhere in this Code or as directed by the AHJ.

# National Fire Protection Association - NFPA 101

- **4.6.12.5** Maintenance, inspection, and testing shall be performed under the supervision of a responsible person who shall ensure that testing, inspection, and maintenance are made at specified intervals in accordance with applicable NFPA standards or as directed by the AHJ.

# National Fire Protection Association - NFPA 1-2018

- **12.2\* Construction.**
- 12.2.2 Fire safety construction features for new and existing occupancies shall comply with **this Code and the referenced edition of NFPA 101.**
- **12.3 Fire-Resistive Materials and Construction.**
- 12.3.1 The design and construction of fire walls and fire barrier walls that are required to separate buildings or subdivide a building to prevent the spread of fire shall comply with Section 12.3 and NFPA 221.

# National Fire Protection Association - NFPA 1-2018

- 12.3.3\* Maintenance of Fire-Resistive Construction, Draft-Stop Partitions, and Roof Coverings.

**12.3.3.1 Required fire-resistive construction,** including fire barriers, fire walls, exterior walls due to location on property, fire-resistive requirements based on type of construction, draftstop partitions, and roof coverings, *shall be maintained and shall be properly repaired, restored, or replaced where damaged, altered, breached, penetrated, removed, or improperly installed.*

# National Fire Protection Association - NFPA 1-2018

- 12.3.3.2 Where required, **fire-rated gypsum wallboard** walls or ceilings that are damaged to the extent that through openings exist, the damaged gypsum wallboard shall be **replaced or returned to the required level of fire resistance using a listed repair system or using materials and methods equivalent to the original construction.**
- 12.3.3.3 Where readily accessible, required fire-resistance rated assemblies in high-rise buildings shall be visually inspected for integrity at least once every 3 years.

# National Fire Protection Association - NFPA 1-2018

- 12.3.3.3.1 The person responsible for conducting the visual inspection shall demonstrate appropriate **technical knowledge and experience in fire-resistance-rated design and construction** acceptable to the AHJ.
- **12.3.3.3.2 A written report prepared by the person responsible for conducting the visual inspection shall be submitted to the AHJ documenting the results of the visual inspection.**



# 2015 International Fire Code Maintenance

## SECTION 703 FIRE-RESISTANCE-RATED CONSTRUCTION

**703.1 Maintenance.** The required *fire-resistance rating* of **fire-resistance-rated construction**, including, but not limited to, walls, firestops, shaft enclosures, partitions, *smoke barriers*, floors, **fire-resistive coatings and sprayed fire-resistant materials** applied to structural members and fire-resistant joint systems, shall be maintained. Such elements **shall be visually inspected by the owner annually and properly repaired, restored or replaced where damaged, altered, breached or penetrated.** Records of inspections and repairs shall be maintained..



# 2015 International Fire Code Maintenance

## SECTION 703 FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. (continued) *Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible* by the removal or movement of a panel, access door, ceiling tile or similar movable entry to the space. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason **shall be protected with *approved* methods** capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self- or automatic-closing doors of *approved* construction meeting the fire protection requirements for the assembly.



# 2018 International Fire Code

- **701.1 Scope.** The provisions of this chapter shall govern the **inspection and maintenance of the materials, systems and assemblies used for structural fire resistance, fire-resistance rated construction separation of adjacent spaces** and construction installed to resist the passage of smoke to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings. New buildings shall comply with the *International Building Code*. **[IFC 2018]**

# 2018 International Fire Code

- ***701.2 Fire-Resistance Rated Construction***
  - **Structural Members**
  - Exterior Walls
  - Fire Walls, Fire Barriers, Fire Partitions
  - Horizontal Assemblies
  - Shaft Enclosures

# NASFM's Post 9/11 Building Survey



## MEMORANDUM

To: Partnership for Safer Buildings Date: 27 February 2003

From: Walter Smittle III, Chairman *on behalf of the On-Site Inspections Subcommittee*

Re: Initial Findings of the On-Site Inspections Subcommittee

In October 2002, the Codes Assessment Subcommittee (CAS) issued its preliminary report, which identified several areas of concern with regard to the fire protection provisions of the *International Building Code*®(IBC).<sup>1</sup> The On-Site Inspections Subcommittee (OSIS) was then charged with conducting site visits to determine whether the problems identified by the CAS related to hazards in the real world or whether additional concerns relevant to Partnership objectives could be identified.<sup>2</sup> Members of the subcommittee worked in cooperation with the chief of code enforcement at the New Hampshire State Fire Marshal's office to establish a list of criteria for the inspections. The checklist served as a "basic protocol" for the inspections since the OSIS conducted site visits in several different states and jurisdictions. The *Inspection Checklist* is attached to this memo.

We ask that the Partnership keep the following points in mind when reading this report:

- The purpose of this exercise was to inspect buildings to determine whether implementation of the codes, as currently written, allowed for situations that might endanger both building occupants and first responders should there be a fire. Therefore, the OSIS did *not seek to identify actual code violations*.
- While a criteria checklist was drafted to keep the inspection focused on the issues identified in the CAS report, the OSIS was also asked to report *any additional safety issues* that might be uncovered during the course of the inspection.
- The site visits were organized by type of occupancy. Buildings were chosen for the inspection based upon the categories determined during the first Partnership meeting. A

<sup>1</sup> Note: At the time of the Codes Assessment Subcommittee's original inquiry, the other major building code, NFPA 5000 *Building Construction & Safety Code*™, had not been published. Therefore, the CAS report dealt solely with the IBC. The CAS is now in the process of conducting a similar investigation of the NFPA code.

<sup>2</sup> Note: While the CAS report examined the IBC, the site inspections were not necessarily conducted on buildings built to this code since it is relatively new. However, since the IBC tends to be a compilation of the least restrictive elements of each of the three model codes, problems in buildings built to any of these codes might also exist in the IBC.



Slide #3



Slide #4



Slide #7



Slide #8



Slide #9



Slide #10

# 2018 International Fire Code

- **701.6 Records of inspections and repairs** shall be maintained. Where concealed, such elements shall not be required to be visually inspected by the owner *unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile* or similar movable entry to the space.

[IFC 2018]

# 2018 International Fire Code

## INVENTORY REQUIRED...FROM D1

- **701.6 Owner's responsibility.** The owner shall maintain an inventory of all required fire-resistance-rated and smoke resistant construction, and the construction included in Sections 703 through 707 and such construction shall be visually inspected by the *owner annually and properly repaired, restored or replaced where damaged, altered, breached or penetrated.*

# M–Barrier Management Systems

## ICC's IPMC

### **IPMC SECTION 703**

**[F] 703.1 Fire-resistance-rated assemblies.** The required fire-resistance rating of fire-resistance-rated walls, fire stops, shaft enclosures, partitions and floors shall be maintained.

**[F] 703.2 Opening protectives.** Required opening protectives shall be maintained in an operative condition. Fire and smokestop doors shall be maintained in operable condition. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable.

**International Existing Building Code**



# UAE Fire and Life Safety Code of Practice

## Maintenance & Management

### Chapter 1, SECTION 21 Firestopping

**21.15.2** The required fire resistance rating of installed firestop systems shall be **visually inspected by the owner or owner's inspection agency annually.** Damaged, altered or breached firestop systems shall be properly repaired, restored or replaced to comply with applicable codes as per the guidelines of Civil defense.

**21.15.3** Any new **Openings** made therein for the passage of through penetrants, **shall be protected with approved firestop system** to comply with applicable codes as per the guidelines of Civil defense.

# National Fire Code of Canada

## National Fire Code of Canada

- ***Division B – Part 2, Building and Occupant Fire Safety***

**2.2.1.2 – Damage to Fire Separations** – where *fire separations* are damaged so as to affect their integrity, they shall be repaired so that the integrity of the *fire separation* is maintained...

- **FCIA Manual of Practice – Appendix, Maintenance**

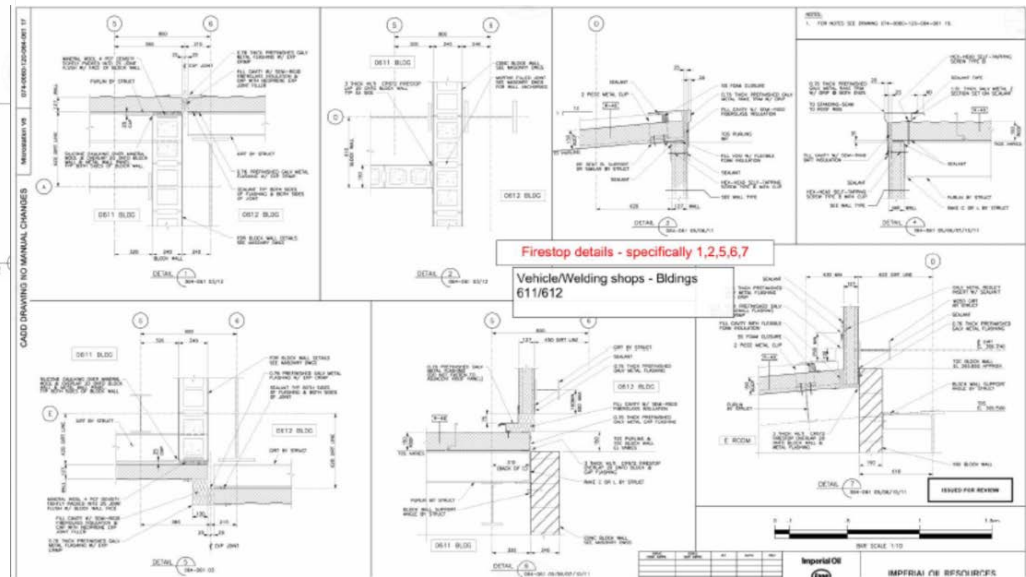
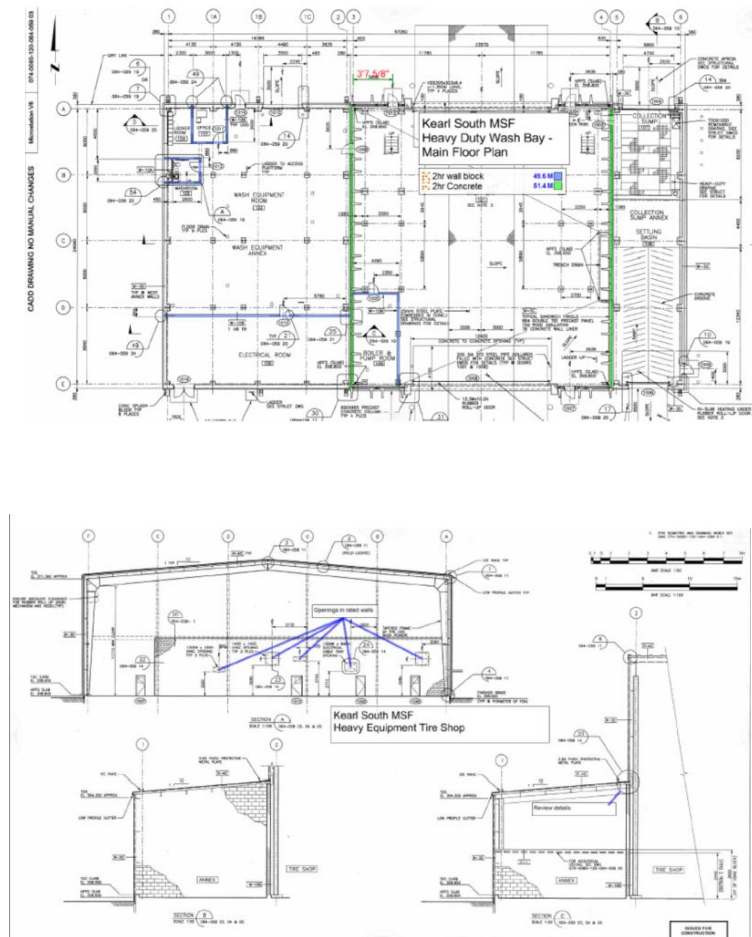
FCIA recommends Barrier Management for Effective Compartmentation and Structural Protection



# Fire-Resistance & Barrier Management Systems Policy Topics

- **Inventory – What's That?**
  - **Life Safety Drawings**
  - Designs, Systems and Assemblies - **Listings**
  - **Manufacturers Installation and Maintenance Instructions**
  - Paper & Files
  - Spreadsheets
  - Software

# Firestopping & Compartmentation for Safety



# S-Specs

- **Division 1 - General Requirements for “Operations & Maintenance”**
  - Repair, Rehabilitation, Replacement, Restoration
  - Refer over to Sections in Div. 02-49
  - COORDINATE with Sections in Related Divisions
  - **Fire-Resistance Divisions**

# S-Specs

- Reference **01-78-00 Closeout Submittals**
  - O&M Manuals
  - Project Record Documents
  - General Requirements
  - BACK TO INDIVIDUAL SECTIONS....
- Why Not 01-90-00?
  - Commissioning not for all Fire-Resistance

# 2018 International Fire Code

## Means D-1 Specs, Fire-Resistance

- **IFC 701 – “Annual Visual Inspection, Repair, Replace, where breached, penetrated, damaged” ....**
- **IFC 702 – Structural Elements, Components, Assy’s.**
  - **Walls –**
    - **09-21-00 – Plaster and Gypsum Board Assemblies**
      - **GA225 – Patching Fire-Resistance Gypsum Board**
      - **Patch to original assembly.**
    - **04-20-00 – Unit Masonry...**
      - **Patch to original assembly**
  - **Horizontal Assy’s**
    - **03-00-00 – Concrete**
      - **Patch to original assembly**
    - **06-00-00 – Wood**
      - **??**
  - **Structural SFRM/IFRM – 07-81-00**
    - **Patch to Manufacturers Installation Instructions & Listings**

# 2018 International Fire Code Means D-1 Specs, Fire-Resistance

- **IFC 703–Penetrations & 704 Joints, Voids- 07-84-00**
  - Annual Patch to Listing, Manufacturers Instructions
- **IFC 705 – Door and Window Openings – NFPA 80**
  - Doors and Frames - 08-10-00
  - Hardware – 08-70-00
  - Glazing – 08-80-00
- **IFC 706–Duct and Air Transfer Openings–23-30-00**
  - NFPA 80
  - Fire Dampers – 23-33-13.16
  - Smoke Dampers – 23-33-13.39



Greenheck Image



Door Safety, LLC Image

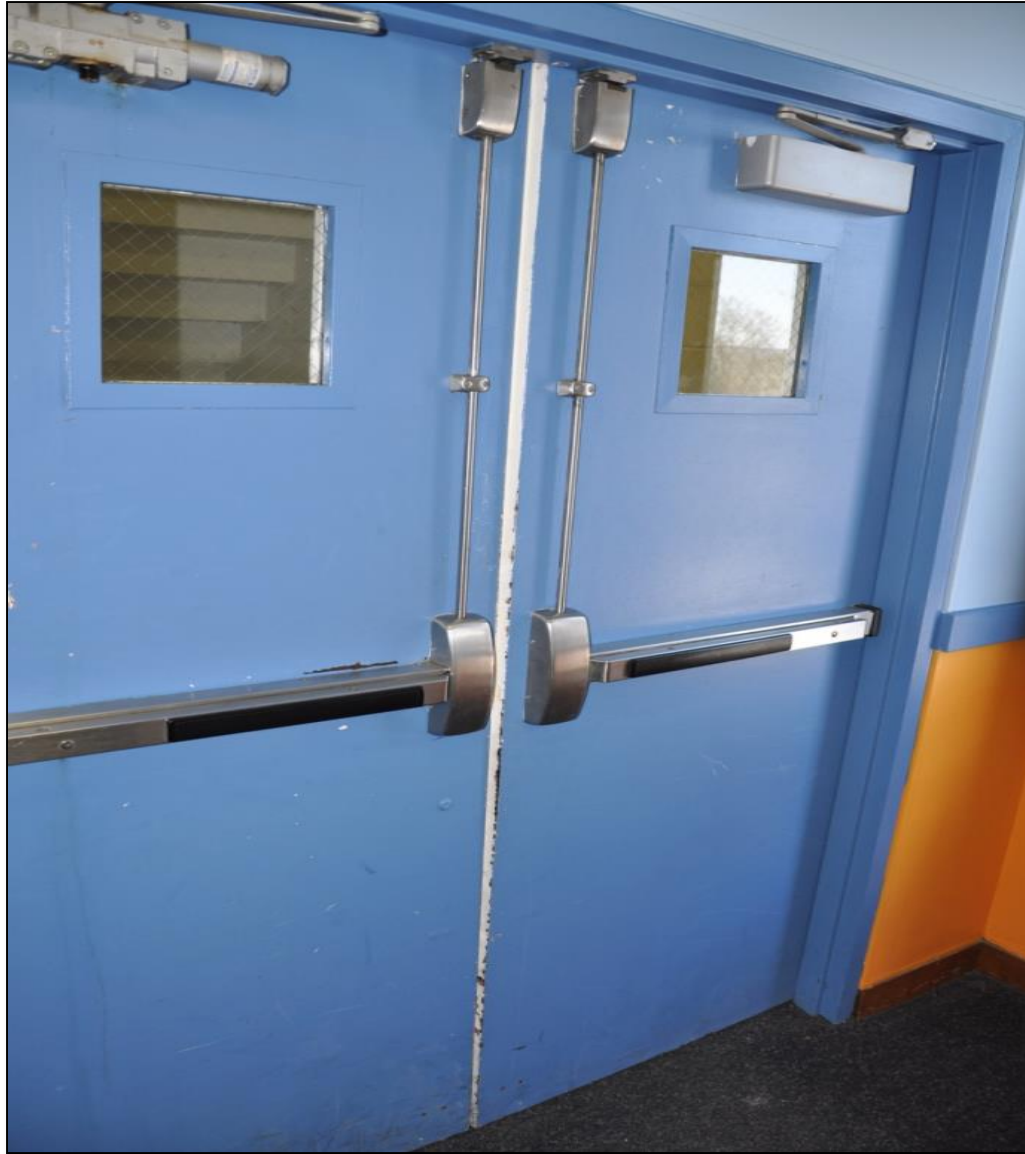


# Built Right = Maintain Right Starts with SPECS

- **Reference 01-78-00 Closeout Submittals**
  - **01 78 13 Completion and Correction List**
  - **01 78 19 Maintenance Contracts**
    - Annual Survey (Visual Inspection)??
  - **01 78 23 Operation and Maintenance Data**
    - Manufacturers Instructions & Listings
  - **01 78 23.13 Operation Data**
  - **01 78 23.16 Maintenance Data**
    - Doors – How many cycles before replacement? (08-01-10)
    - Dampers – When to replace?
    - Firestop Systems?
    - Patching requirements for Fire-Resistance-Rated Assemblies?
  - **01 78 23.19 Preventative Maintenance Instructions**



Firestop Southwest Photo



Door Safety Security Foundation, DHI Photo

# Built Right = Maintain Right WHEN SPECIFIED

- **Reference 01-70-00 Closeout Submittals**
  - 01 78 29 Final Site Survey
  - 01 78 33 Bonds
  - 01 78 36 Warranties
  - **01 78 39 Project Record Documents (INVENTORY)**
  - 01 78 43 Spare Parts
  - **01 78 46 Extra Stock Materials**
  - 01 78 53 Sustainable Design Closeout Documentation

# M—Barrier Management Systems

- **Why Manage Barriers & Structural Elements?**
  - International Fire Code
  - International Property Maintenance Code
  - NFPA 101
  - NFPA 1
- **It makes Fire and Life Safety Sense**

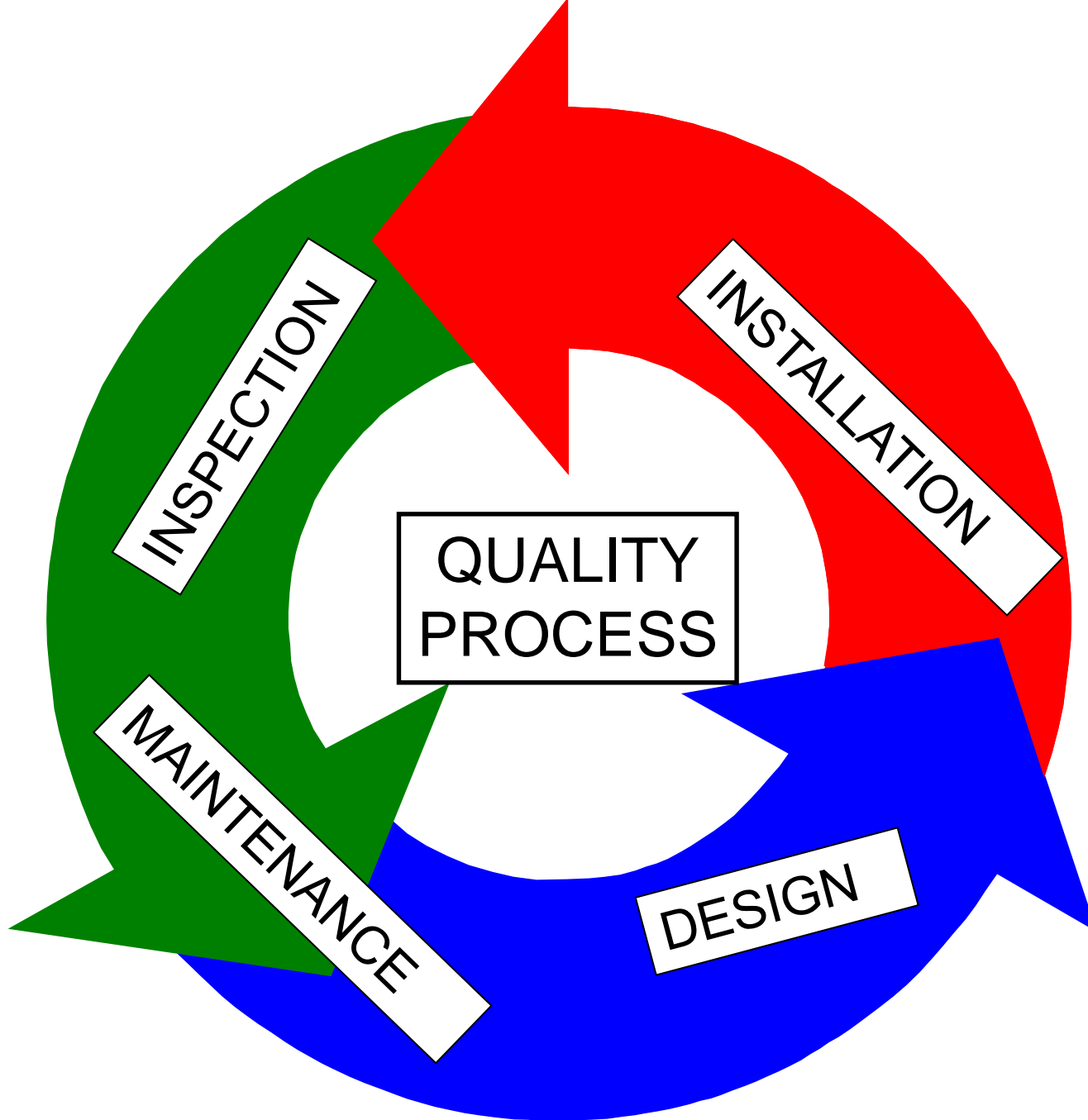
# M–Barrier Management Systems

## Policy Topics

- **Advise Clients – Create a Budget to Meet Code Requirements**
- **Inventory – What Info?**
- **Implement Fire Resistance Management**
  - In House (Rules)
  - Outside Contractor (Rules)
- **Monitor Process**

# “DIIM”

- Barriers are for Safety – DIIM
  - Properly **Designed** and Specified
    - **Tested and Listed Systems** – Directories,
  - Professional **Installation** - Companies
  - Properly **Inspected** – Commissioned
  - **Maintained** - Annually –
    - NFPA 101, NFPA 1
    - International Fire Code
    - International Property Maintenance Code



# FCIA – Firestop Contractors International Association

- FREE MOP/Spec - Specifiers @ AE, Independent
- FREE Life Safety Digest
- FREE Spec @ [www.FCIA.org](http://www.FCIA.org)
- Presentation @ [www.FCIA.org](http://www.FCIA.org)
- Tools for Specifiers





# FCIA @ CSI/CONSTRUCT2018

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