



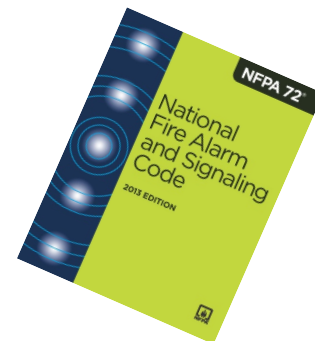
ARE YOU A MEMBER OF AFAA ?

WHY SHOULD YOU BE A MEMBER

BECAUSE YOUR BUSINESS IS IMPORTANT

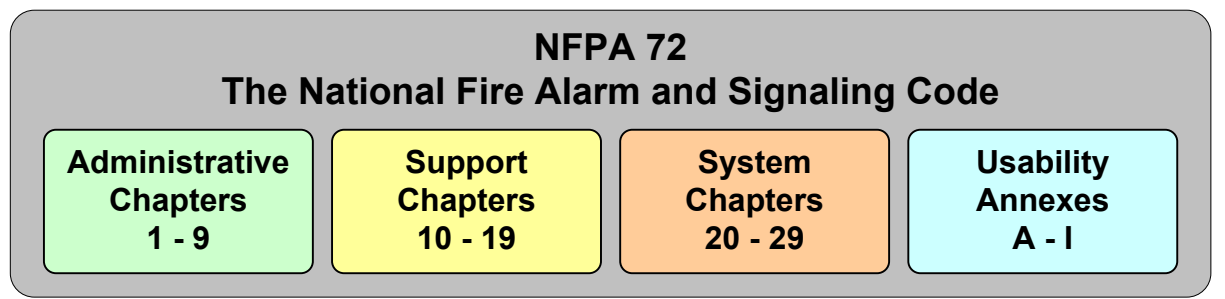
James Mongeau

## The 2013 National Fire Alarm and Signaling Code



## NFPA 72 Organization

- Better organization
- Easier to locate key requirements
- Future growth



## New Definitions (Narratives)

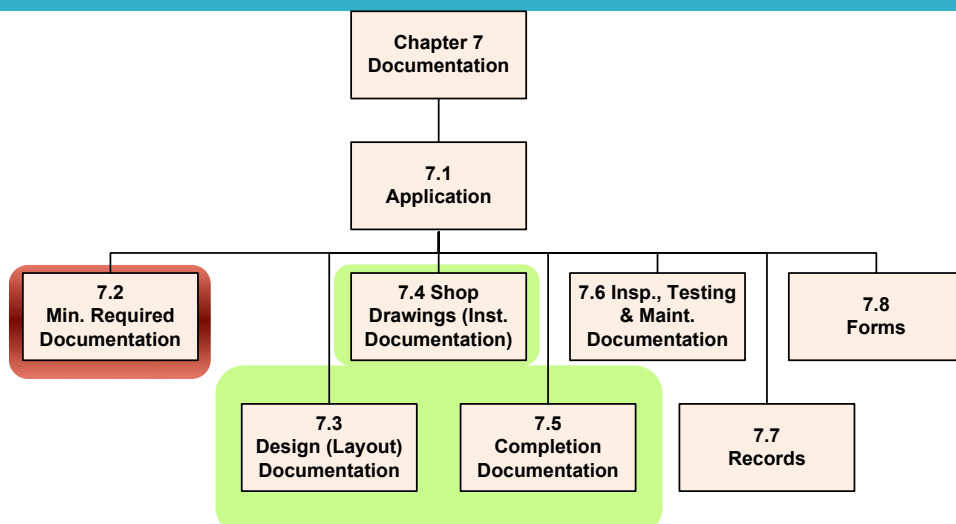
- Unwanted Alarm
  - ▣ Malicious Alarm
  - ▣ Nuisance Alarm
  - ▣ Unintentional Alarm
  - ▣ Unknown Alarm



## Chapter 7 Documentation

- Applies to new system....
  - ▣ Design
  - ▣ Acceptance
  - ▣ Completion
- Applies to existing system...
  - ▣ Alteration
  - ▣ Maintenance
  - ▣ Testing

## Chapter 7 – Documentation



## Chapter 7

### Minimum Requirement

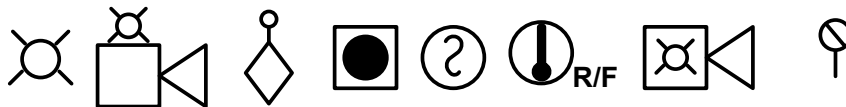
- ❑ Written Narrative
- ❑ Riser Diagram
- ❑ Floor plan
- ❑ Sequence of operation
- ❑ Equipment data sheets
- ❑ Manufacturers instructions

## Chapter 7

- ❑ Battery calculations
- ❑ Voltage drop calculations for NAC's
- ❑ Completed Record of inspection and testing
- ❑ Completed record of completion
- ❑ A copy of Site Specific software
- ❑ Record (as-built) drawing

## Chapter 7

- Identification of the person responsible for design or layout
- USE of NFPA 170 symbols or others acceptable to the AHJ



## Chapter 7 – Documentation Beyond the Minimum Requirements

- Limiting clause added to 7.3, 7.4 and 7.5:  
*The requirements of 7.3 shall apply only where required by other governing laws, codes or standards, other parts of this Code, or by project specifications or drawings.*

## Chapter 7

### Design Documentation

- Ambient noise & audible design sound pressure levels
- Designation of spaces to have visible notification
- Extensive ECS design documentation

## Chapter 10 Fundamentals

- Many changes to incorporate ECS
- Performance limitations to 10.3 equipment
- New 10.4 Installation and Design

In areas that are not continuously occupied, automatic smoke detection shall be provided at the location of

each fire alarm control unit(s)

notification appliance circuit power extender(S)

supervising station transmitting equipment

To provide notification of fire at that location

## Chapter 10

- New 10.8 detection and signaling of conditions
  - ▣ Conditions –Abnormal, Alarm, Pre Alarm, Supervisory, trouble, Normal
- New 10.9 Response
  - ▣ Conditions –Abnormal, Alarm, Pre Alarm, Supervisory, trouble, Normal
- New 10.17 notification appliance circuits and control circuits
  - ▣ Ground-fault, Short circuit fault  
(Shall not affect other notification circuits)

## Chapter 10

- Changes by TMS to personnel requirements (10.5.3)
  - ▣ Inspection personnel
  - ▣ Testing personnel
  - ▣ Service personnel
  - ▣ Programming personnel

(10.5.3.4) programming; personnel programming a system shall be certified by the system manufacturer

*\*\* Evidence of qualification shall be provided to AHJ*

## Chapter 10

### 10.6.5.2 Circuit Identification

- ❑ Circuit Disconnect permanently identified at control unit.
- ❑ Permanently labeled for purpose
- ❑ Circuit disconnect shall have red marking



## Chapter 10 – Fundamentals

### 10.6.7 Secondary Power Supply

- ❑ The secondary power supply for textual visible appliances shall be in accordance with 24.4.4.4.7.1. (10.6.7.2)
  - ❑ Two hours





## Chapter 10

- Impairment reporting
  - ▣ Supervising station must report fire alarm contract terminations to the AHJ (10.21.3)
  - ▣ Service providers (but not owners??) must report any fire alarm system (not ECS?) out of service for more than 8 hours (10.21.4)



## Chapter 12

### Circuits and Pathways

- Monitoring consolidated from CH 10
- Circuit performance requirement consolidated from CH. 23
- All power-limited and non power-limited circuits which enter or exit are now required to have transient protection (12.2.4.2)

## Chapter 12

### New 12.5 shared pathway designations

- **Shared pathway level 0**
  - ▣ Not required to segregate or prioritize life safety data from non life safety data
- **Shared pathway level 1**
  - ▣ Not required to segregate but shall prioritize life safety data from non life safety data
- **Shared pathway level 2**
  - ▣ Shall segregate life safety data from non life safety data
- **Shared pathway level 3**
  - ▣ Dedicated to the life safety system

## Chapter 14

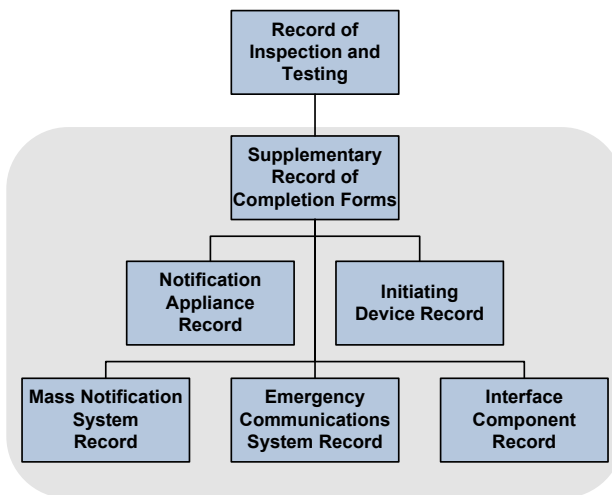
### Inspection, Testing and Maintenance

- **New purpose section (14.2.1)**
  - ▣ Initial and re-acceptance inspections
  - ▣ Initial and re-acceptance tests
  - ▣ Periodic inspections
  - ▣ Periodic tests

## Chapter 14

- Test plan (14.2.10) added
  - ▣ Scope what will be tested
  - ▣ Scope what will not be tested
  - ▣ NFPA 72 includes and stops at the emergency control function interface device
  - ▣ Documentation is a way to warn when an integrated test is not done

## Chapter 14



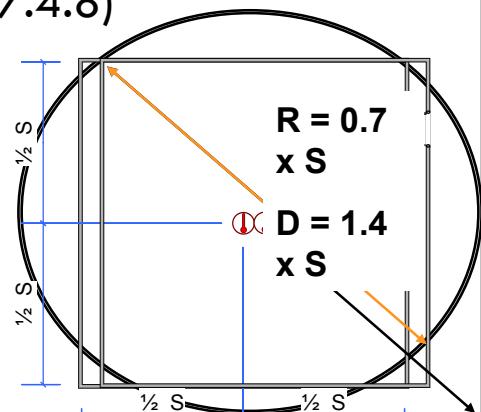
- Records (14.6) unchanged
- Maintenance, Inspection, & Testing Records (14.6.2) unchanged except reference to new Chapter 7 (7.8.2) for forms

## Chapter 14

- Inspection table (14.3.1) now has “method”
- Testing frequency and method tables combined into new table (14.4.3.2)
- Inspection and testing table numbers synchronized

## Chapter 17 Initiating Devices

- Remote alarm indicators must be labeled to indicate location and area protected (17.4.8)
- Nominal 30 ft spacing, 15 ft from walls or partitions  
**OR**
- Coverage radius (0.7 x S)  
[17.7.3.2.3.1 (2)]



## Chapter 17 – Initiating Devices

### 17.7.4 Heating, Ventilating, and Air-Conditioning

- Detectors in air ducts or plenums are permitted to be supervisory or alarm initiating devices. (17.7.4.4)
- Was already permitted to be either in 21.7.4 of 2010
- However 21.7.4 was changed in 2013
  - ▣ Requires supervisory but *permits* alarm if there is no signal to a constantly attended location or supervising station
  - ▣ Requires supervisory but *permits* alarm if required by other governing laws, codes, or standards.

## Chapter 17 – Initiating Devices

### 17.14 Manually Actuated Alarm-Initiating Devices



- Manually actuated alarm-initiating devices for initiating signals other than for fire alarm shall be permitted (17.14.1)
  - ▣ Not red
  - ▣ Must be labeled

## Chapter 17 – Initiating Devices

### 17.14 Manually Actuated Alarm-Initiating Devices

- ❑ Listed protective covers are permitted on single- or double-action manually actuated alarm initiating devices (17.14.7)



## Chapter 18

### Notification Appliances

- ❑ Designer must identify where audible signaling will be provided (18.4.1.4.1)
- ❑ Designer must identify where visible signaling will be provided (18.5.2.1)
- ❑ Designer must document ambient SPL and design SPL
- ❑ Audible notification not required in non-occupiable areas(18.4.1.4.2)(18.5.1.2)

## Chapter 18

- Distinctive evacuation signal
  - ▣ Now permitted for relocation
- Asserted that intelligibility is not required to be measured (18.4.10.4 & 5)
- Clarification that Low frequency signal is only required when it is needed to awaken sleeping occupants – not all sleeping occupancies (18.4.5.3)

## Chapter 18 – Notification Appliances

### 18.9 Textual and Graphical Visible Appliances

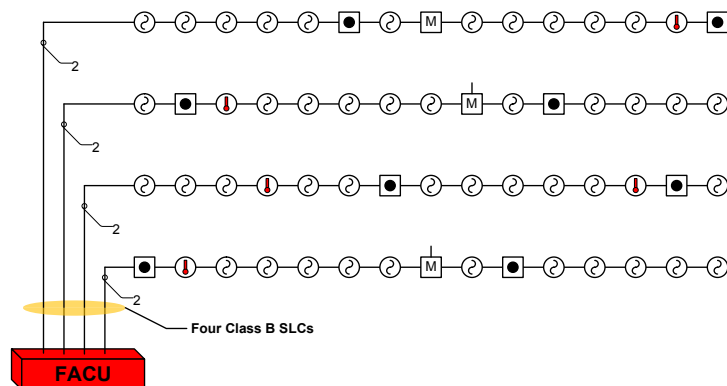
- Textual and Graphical Visible Appliances
  - ▣ Does not apply to exit signs, etc. (18.9.1.2)
  - ▣ Static, flashing or scrolling (18.9.1.3)
  - ▣ Desktop or surface (18.9.2.3)
  - ▣ Locate for private mode (18.9.2.1) or public mode (18.9.2.2)

## Ch. 21 – Emergency Control Function Interfaces

- Requirement to test systems outside the scope of NFPA 72 was removed: (2010 ed.)
  - ▣ **21.2.12** The operation of all fire safety emergency control functions shall be verified by an operational test at the time of system acceptance.
- Elevator control and shutdown clarifications

## Ch. 23 – Protected Premises Fire Alarm Systems Circuit Performance

**23.6.1\*** A single fault on a pathway connected to the addressable devices shall not cause the loss of more than 50 addressable devices.





## Ch. 23 – Protected Premises Fire Alarm Systems

- Smoke alarms connected to a PPFAS – supervisory only (23.8.3.2)
- CO detectors or detection systems connected to a PPFAS shall: (23.8.4.8)
  - ▣ Initiate a CO alarm signal (Temporal – 4)
  - ▣ And shall indicate as “Carbon Monoxide Alarm”
  - ▣ Exception: May indicate as supervisory if in accordance with emergency plans.
  - ▣ Label as CO
  - ▣ Response in accordance with emergency plans

## Chapter 24

### Emergency Communication Systems

- Mass notification layers (24.3.8)
  - ▣ Layer 1 in building
  - ▣ Layer 2 outside wide area
  - ▣ Layer 3 Distributed recipient MNS
  - ▣ Layer 4 Public measure-
    - Broadcast, radio, TV, etc

## Chapter 24

- ❑ Extensive documentation requirements
- ❑ Colored strobes are NOT required but permitted
- ❑ Emergency Command Center defined and explained in annex(24.6.1)

## Chapter 26

### Supervising Station Alarm Systems

- ❑ Alarm Signal Pre- verification(26.2.2)
- ❑ Point ID permitted, but not required (26.2.4)
- ❑ Supervising station must report fire alarm contract terminations to the AHJ (26.2.7.5)

## Chapter 26

- Single communications path option
  - ▣ Requires < 60 min test intervals
- Multiple communication path option
  - ▣ Requires < 6 hours test intervals

## Chapter 26

- Digital Alarm Communicator Transmitter(DACT)  
(26.6.3.2)
  - ▣ Elimination of phone line for 2<sup>nd</sup> transmission means
  - ▣ Three options
    - One way private radio
    - Two way RF system
    - Performance based
- Testing interval reduced from 24 hours to 6 hours (for each transmission means)



Thank you for your time

Time is not something you can borrow so I truly hope I did not waste yours.