Housekeeping

- Fire Alarm/Exits
- Pagers & Cell Phones
- Breaks/Lunch
- Restrooms
- Questions?

Overall Seminar Objective

- Attendees will be able to *navigate, locate* and *apply* code provisions and apply them in their daily work to improve their fire enforcement program
Contact Information

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Membership Advisory Services

www.nfpa.org/101
www.nfpa.org/1
### Overview

Membership Advisory Services

- Need code edition
- Need code section
- AHJ from.....
- Response
  - Please note the authority having jurisdiction determines compliance with the Code.
Navigating the code

New or Revised

NEW 2012

REVISED 2009

NFPA 1 Fire Code
Seminar on NFPA 1 *Uniform Fire Code*

Overview

**Practical tool for the field . . .**

Number of Extracts

- NFPA 10 Fire Extinguishers  
  - 132
- NFPA 25 Maintenance Water Based Systems  
  - 78
- NFPA 30 Flammable Liquids  
  - 506
- NFPA 58 Propane  
  - 397
- NFPA 72 Fire Alarm  
  - 144
  - 1507
13.7.2.16.2.4 Emergency Forces Notification. [101:33:3:4.6]  
13.7.2.16.2.4.1* Where the existing fire alarm system does not provide for automatic emergency forces notification in accordance with 13.7.1.4.11, provisions shall be made for the immediate notification of the public fire department by either telephone or other means, or, where there is no public fire department, notification shall be made to the private fire brigade. [101:33:3:4.6.1]  
13.7.2.16.2.4.2 Where a new fire alarm system is installed, or the existing fire alarm system is replaced, emergency forces notification shall be provided in accordance with 13.7.1.4.11. [101:33:3:4.6.2]
Overview

Agenda

- Introduction to NFPA 1 Fire Code
- Part I  Administrative
- Part II  General Fire Safety
- Part III  Occupancy
- Part IV  Processes
- Part V  Equipment
- Part VI  Hazardous Materials
- Annexes
Chapter 1

- Administration
  - 1.1 Scope
  - 1.2* Purpose
  - 1.3 Application
  - 1.3.2* Referenced Standards
  - 1.3.2.4 Retroactivity
  - 1.3.3 Conflicts

Purpose

- Minimum requirements
- Reasonable level of fire and life safety and property protection
- From fire, explosion, and dangerous conditions
Where Would You Find?

- Is a fire watch required for hot work operations?
- What is the Occupancy Classification of a 7-11 store?
- Is a sprinkler system required for a new educational occupancy?

Major Changes

- Several new Chapters
- Several deleted Chapters
- Update referenced standards
- Several new Annexes
- Several deleted Annexes
- Clean up language to clarify existing provisions
New Title

1.1.2 NFPA 1 Uniform Fire Code, of the National Fire Protection Association (NFPA)

New Scope Items

- (6) Design, installation, alteration, modification, construction, maintenance, repairs, servicing, and testing of fire protection systems and equipment
- (7) Installation, use, storage, and handling of medical gas systems
Means of Egress

Arrangement, design, construction and alteration of new and existing means of egress

Medical Gas Systems

1.1.1 (16)

1.1.1 (7)
Retroactivity

- Retroactivity of Referenced Standards to Existing Conditions. Unless otherwise specified by 1.3.2.4.1 through 1.3.2.4.3, the current provisions of the reference standards shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of this Code.

- Where specified by a reference standard for existing occupancies, conditions, or systems, the provisions of the referenced standards shall be retroactive.

1.3.2.4

Retroactivity

- Facilities, equipment, structures, and installations, installed in accordance with a reference standard, shall be maintained in accordance with the edition of the standard in effect at the time of installation.

- In those cases where the AHJ determines that the existing situation constitutes an imminent danger, the AHJ shall be permitted to apply retroactively any portions of the current referenced standards deemed appropriate.

1.3.2.4
New Work in Existing Buildings

1.3.6.3

Minimum Qualifications to Enforce this Code

- The AHJ shall establish and adopt minimum qualifications for all persons assigned the responsibility of administering and enforcing this Code
- Annex N-AHJ Minimum Qualifications and Job Descriptions for Code Enforcement Personnel

1.7.2
Imminent

As used in 1.7.6.4, emergency means circumstances that the AHJ knows, or has reason to believe, exist and that can constitute imminent immediate danger to life and property.

Plans and Specifications

- Vague language in the 2009 edition
  - New building construction
  - Change of occupancy
  - Modification of fire protection systems or means of egress
Retroactivity

- Facilities, equipment, structures, and installations, installed in accordance with a reference standard, shall be maintained in accordance with the edition of the standard in effect at the time of installation.
- In those cases where the AHJ determines that the existing situation constitutes an imminent danger, the AHJ shall be permitted to apply retroactively any portions of the current referenced standards deemed appropriate.

Stop Work Order

**Stop Work Order.** The AHJ shall have the authority to order an operation, construction, or use stopped and the immediate evacuation of any occupied building or area when such building or area has hazardous conditions that present imminent danger any of the following conditions exists:

(1) Work is being done contrary to provision of this Code.
(2) Work is occurring without a permit required by Section 1.12.
(3) An imminent danger has been created.
Imminent Dangers

1.7.15 Imminent Dangers and Evacuation.
1.7.15.1 When, in the opinion of the AHJ, an imminent danger exists, the AHJ shall be authorized to order the occupants to vacate, or temporarily close for use or occupancy, a building, the right-of-way, sidewalks, streets, or adjacent buildings or nearby areas.
1.7.15.2 The AHJ shall be authorized to employ the necessary resources to perform the required work in order to mitigate the imminent danger.
1.7.15.3 Costs incurred by the AHJ in the performance of emergency work shall be the responsibility of the property owner or other responsible party creating such imminent danger.

Liability

The fire department and AHJ, acting in good faith and without malice in the discharge of the organizations’ public duty, shall not thereby be rendered liable for any damage that could accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of such duties.

1.9.2
Board of Appeals

1.10 Fire Code Board of Appeals.

1.10.1 Establishment of Fire Code Board of Appeals. A Board of Appeals shall be established to rule on matters relating to the fire code and its enforcement.

Fire Code Board of Appeals

- The change rewrites the entire section
- Clarifies irregularities
- Reformats for clearer flow
- Requires “supermajority” to overturn AHJ (2/3)
- Alternates may act
Board of Appeals

Rulings of the boards of appeals shall not be precedent setting.

1.10.3.5

Permits & Certificates of Fitness

1.12.3 1.13.2 Mandatory. The AHJ shall require certificates of fitness and collect fees for individuals or companies performing any of the following activities:

(1) Use of explosive materials
(2) Fireworks displays involving display fireworks, 1.3G

1.13.3 The AHJ shall be responsible for the issuance of certificates of fitness required by the AHJ.

1.13.4 All applications for a certificate of fitness shall be filed with the AHJ on forms provided by the AHJ.
Technical Assistance

The AHJ shall be permitted to require a review by an approved independent third party with expertise in the matter to be reviewed at the submitter’s expense.

Notice of Violation and Penalties

- Clarifies language for service of orders issued
Activity

1. You arrive at Xtreme Softway Development Company’s warehouse to perform a regularly scheduled inspection and the owner refuses to grant you access to the building. He states that it is not convenient to have an inspection at this time and that you must call him back to schedule an inspection.

2. A set of plans has been submitted for your review. The plans include a request for equivalency for the width of exits based on computer generated calculations showing that sufficient capacity is being provided. The computer model used for the calculations in one derived from work at the National Institute of Science and Technology (NIST), but you are not familiar with it.

Chapter 2

Referenced Publications
Chapter 2 Referenced Publications

(1)*Documents referenced in this chapter, or portion of such documents, shall only be applicable to the extent called for within other chapters of this Code.

(2) Where the requirements of a referenced code or standard differ from the requirements of this Code, the requirements of this Code shall govern.

(3)*Existing buildings or installations that do not comply with the provisions of the codes or standards referenced in this chapter shall be permitted to be continued in service, provided that the lack of conformity with these documents does not present a serious hazard to the occupants as determined by the authority having jurisdiction.

Chapter 3 - Definitions
Definitions

**Alcohol-Based Hand Rub.** An alcohol-containing preparation designed for application to the hands for reducing the number of visible microorganisms on the hands and containing ethanol or isopropanol in an amount not exceeding 95 percent by volume.

3.3.10

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Definitions

**Special Amusement Building.** A building that is temporary, permanent, or mobile and contains a device or system that conveys passengers or provides a walkway along, around, or over a course in any direction as a form of amusement arranged so that the egress path is not readily apparent due to visual or audio distractions or an intentionally confounded egress path, or is not readily available due to the mode of conveyance through the building or structure.

3.3.30.10
Definitions

- **Dormitory.** A building or a space in a building in which group sleeping accommodations are provided for more than 16 persons who are not members of the same family in one room, or a series of closely associated rooms, under joint occupancy and single management, with or without meals, but without individual cooking facilities.

- **Mixed Occupancy.** A multiple occupancy where the occupancies are intermingled.

### 3.3.94–3.3.182.18

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Chapter 4 General Requirements
AHJ----Authority

Existing life safety features that exceed the requirements for new buildings shall be permitted to be decreased to that required for new buildings.

General Requirements

4.5.8.4
Module 4
Performance Options

Objectives

- Identify the significant differences between the performance-based option and the prescriptive code option
- Identify four significant features associated with the AHJ’s role when using the performance-based option
Performance-Based Option

- Defining Project Scope (Step 1)
- Identifying Goals (Step 2)
- Defining Stakeholder and Design Objectives (Step 3)
- Developing Performance Criteria (Step 4)
- Developing Design Scenarios (Step 5)
- Developing Trial Design(s) (Step 6)
- Evaluating Trial Design(s) (Step 8)
- Preparing Performance-Based Design Report (Step 11)
- Preparing Specifications, Drawings, and Operations and Maintenance Manual (Step 12)
- Selecting the Final Design (Step 10)
- Prepare Design Documents
- Preparing a Design Brief (Step 7)
- Modifying Designs or Objectives (Step 9)

A.5.1.4

Why Use Performance-Based?

- Prescriptive requirements may not address the complexity of a proposed building or process
Why Use Performance-Based?

- Significant renovations in a building may require it be brought up to current prescriptive code requirements, existing features might make strict compliance difficult.

For historical structures, legislation may prohibit modifying or changing building features.
AHJ’s Role

- AHJ is a stakeholder
  - Involvement from the beginning of the project
- Traditional role of approving design
  - Qualifications of design team
  - Independent review
  - Review data sources
  - Approve safety factors
  - Review and approve documentation

Documentation Requirements

- Fully document the performance-based design through the
  - Fire Protection Engineering Design Brief
  - Performance-based Design Report
  - Specifications
  - Drawings
  - Operations and Maintenance Manual
Annual Certification

- Condition of use for performance-based designed structure
- Annual certification
  - Design features and systems maintained
  - Assumptions still valid
  - Subsequent modifications approved

Module 5
Classification of Occupancy

5.1.11
Objectives

- Classify selected uses into the appropriate occupancy classification
- Apply mixed occupancy or separated occupancy provisions as appropriate
- Determine separation requirements in multiple occupancy buildings

Chapter 6 Classification of Occupancy

- Provides definitions of occupancy (annex notes provide list of common occupancies)
- Table 6.1.14.4.1(a) & (b) gives required occupancy separations (new construction only)
Occupy Classifications

- Fundamental to using fire and building codes
- NFPA 1 *Fire Code* utilizes system defined in NFPA 101

Assembly Occupancies

6.1.2
Educational

Day Care
Health Care

Ambulatory Health Care

6.1.5

6.1.6
Seminar on NFPA 1 *Uniform Fire Code*

Overview

Detention/Correctional

One- and Two-Family Dwellings
Seminar on NFPA 1 *Uniform Fire Code*

Overview

**Lodging/Rooming**

6.1.8.1.2

**Hotels/Dormitories**

6.1.8.1.3 & 6.1.8.1.4
Seminar on NFPA 1 *Uniform Fire Code*

**Overview**

### Apartments

6.1.8.1.5

### Board and Care

6.1.9
Seminar on NFPA 1 *Uniform Fire Code*

**Overview**

**Industrial Occupancy**

**Storage**

*6.1.13*
**Occupancy?**

- Images of various buildings and interiors, including a bicycle shop, a two-story building, a parking lot, and a courtroom.

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**Occupancy?**

- Image of a fire station.
Multiple Occupancies

- ≥ 2 occupancies in a building
- 2 options for compliance
  - Mixed occupancies
  - Separated occupancies

6.1.14.2.1
Seminar on NFPA 1 *Uniform Fire Code*

Overview

**Separated Occupancies**

- Assembly
- Mercantile
- Mercantile
- Business
- Mercantile
- Business

**Mixed Occupancy**

- Equipment shop
- Bunk room (6 bunks)
- Kitchen
- Men
- Women
- Alarm room
- Office
- Assembly hall
- Apparatus floor
Exercise

Determine the following:
  Assuming we want separated occupancies, what is the required separation in new construction between:
  - Educational and Business (NS)?
  - Mercantile and Business (AS)?
  - Health Care and Business (AS)?
Incidental Occupancy

- May be considered part of predominant occupancy
  - Mercantile, business, industrial, storage
  - Non-residential with occupant load fewer than that established by definition

6.1.14.1.3
Chapter 6 Mixed Occupancies

- **6.1.14.3.2** The means of egress facilities, construction type, protection, and other safeguards in the building shall comply with the most restrictive fire and life safety requirements of the occupancies involved unless separate safeguards are approved.

  For example, a common path of travel that occurs wholly in a business tenant space, in a multiple occupancy building containing assembly and business occupancies, should not have to meet the assembly occupancy common path of travel limitation.

### Activity

1. A bed and breakfast with beds for 14 people
2. Conference room with an occupant load of 60 people and located within an office suite
3. Dentist office with treatment rooms for 2 people
4. Classroom used only on Sundays for 2 hours for teenager religious instruction and located within a church building
5. Multi-story office building with retail tenants on the first floor, a restaurant for 150 people on the top floor, and offices on remaining floors
Structural Hazards

Where there is visible damage to structural elements, the AHJ shall be permitted to require a technical analysis prepared in accordance with Section 1.15 to determine if repairs are necessary to restore structural integrity.
Listed and Labeled

**Listed and Labeled.** Listed and labeled equipment, devices, and materials shall be installed and used in accordance with the listing limitations and the manufacturers’ instructions.

10.1.7

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Owner – Occupant Responsibility

- Responsible for:
  - Compliance with Code
  - Abating any unsafe condition
  - Keeping records as required by Code
  - **Notify AHJ of change of occupancy**
Emergency Plans

10.9  Emergency Plans.

10.9.2.1*  Emergency plans shall include the following:

1. Procedures for reporting of emergencies
2. Occupant and staff response to emergencies
3. Evacuation procedures appropriate to the building, its occupancy, and emergencies (see Section 4.3 of NFPA 101)
4. Appropriateness of the use of elevators
5. Design and conduct of fire drills
6. Type and coverage of building fire protection systems
7. Other items required by the AHJ
Emergency Plans

Emergency plans shall be submitted to the AHJ for review when required by the AHJ.

Training

- The entity shall assess training needs and shall develop and implement a training/educational curriculum to support the program. The training and education curriculum shall comply with all applicable regulatory requirements.
- The objective of the training shall be to create awareness and enhance the skills required to develop, implement, maintain, and execute the program.
- Frequency and scope of training shall be identified.
- Personnel shall be trained in the entity’s incident management system.
- Training records shall be maintained.
Open Flame, Candles, Open Fires, Incinerators, and Commercial Fireplaces

- The AHJ shall have the authority to prohibit any or all open flames, and open, recreational, and cooking fire or other sources of ignition or establish special regulations on the use of any form of fire or smoking material where circumstances make such conditions hazardous.
- Outdoor fires shall not be built, ignited, or maintained in or upon hazardous fire areas, except by permit from the AHJ.
- Permanent barbecues, portable barbecues, outdoor fireplaces, or grills shall not be used for the disposal of rubbish, trash, or combustible waste material.

AHJ Authority Open Fires
Open Fires

- For other than one- and two-family dwellings, no hibachi, gas-fired grill, charcoal grill, or other similar devices used for cooking, heating, or any other purpose, shall be used or kindled on any balcony, or under any overhanging portion, or within 10 ft (3 m), of any structure. Listed electric ranges, grills, or similar electrical apparatus shall be permitted.
- Listed equipment permanently installed in accordance with its listing, applicable codes, and manufacturers instructions, shall be permitted.

10.11.6.1

Open Fires

For other than one-and two-family dwellings, no hibachi, grill, or other similar devices used for cooking shall be stored on a balcony.

10.11.6.2
Installation of Patio Heaters

- Patio heaters shall be listed and used in accordance with their listing and the manufacturer’s instructions
- Patio heaters shall not be located within 5 ft of exits from an assembly occupancy
- Patio heaters utilizing an integral LP-Gas container greater than 1.08 lb propane capacity shall comply with 10.11.7.2.2 through 10.11.7.2.3

Seasonal and Vacant Buildings and Premises

10.11.7

10.13
Vacant Buildings

Every person owning or having charge or control of any vacant building, or premises or portion thereof shall remove all combustible storage, waste, refuse, and vegetation and shall lock, barricade, or otherwise secure all windows, doors, and other openings the building or premises to prohibit entry by unauthorized persons.

10.13.1

Vacant Fire Protection

The requirement of 10.13.1 shall not apply to buildings used on a seasonal basis, or the temporary vacancy of a building for tenant change or remodeling purposes.

10.13.1.1
Combustible Vegetation

- No combustible vegetation or natural cut trees allowed in designated occupancies
- Artificial trees shall be labeled as *flame retardant*
- No obstruction to egress
- Christmas Trees

Provisions for Fire Retardance for Artificial Vegetation

Clarifies that fire retardance is only for artificial vegetation
Outdoor Events

Life Safety Evaluation. The AHJ shall be permitted to order a life safety evaluation in accordance with 10.15.3 12.4.1 of NFPA 101.

Standby Fire Personnel

- Standby Fire Personnel. The AHJ shall be permitted to require standby fire personnel where potentially hazardous conditions exist due to the type of performance, display, exhibit, activity, or the number of persons present.
- Where required by the AHJ, standby fire personnel shall be provided and comply with 1.7.15
Crop Maze

- Permits
- Safety instructions
- Two employees, one on a platform
- F.D. preplanning
- No open flame
- < 200 persons per acre
- Motorized vehicles 75 ft. away
- 20 ft. fuel break
- Public address system
- No obstruction of entrance and exit

10.15.11

Parade Floats

**Decorative Material.** Decorative material on parade floats shall be noncombustible or flame retardant.
Storage of Combustible Materials

- 10.19.3 Ceiling Clearance
- 10.19.4 Means of Egress
- 10.19.5 Equipment Rooms
- 10.19.6 Attic, Under-floor, and Concealed Spaces
- 10.19.7 Fueled Equipment

Activity

1. Non-rated glass in a three-hour fire barrier
2. Smoke dampers protecting duct penetrations of a smoke barrier are not accessible for inspection
3. Door to a 1-hr stair enclosure has a 45-minute fire protection rating
4. A steel pipe transitions to plastic pipe within 12 inches of a rated floor/ceiling assembly
5. A door in a smoke partition contains a ventilation louver
6. Door to a 1-hr corridor is a 1 ¼ in solid bonded wood core door
7. As part of a renovation project a building owner strips off all spray-on fireproofing on all structural elements on the third floor of a building of Type II (222) construction and intends to not replace it.
8. A smoke barrier in a hospital terminates at the suspended ceiling
9. There are many penetrations by metal piping and conduit are observed in a 1-hr rated ceiling constructed of gypsum board on steel runners.
10. Does newly introduced upholstered furniture, have to be resistant to a cigarette ignition?
Indoor Children’s Playground Structures

Structures intended as children’s playgrounds, installed indoors and which exceed 10 feet in height and 160 square feet in area shall comply with specifications in 10.20.1.1

Chapter 11 Building Services
Electrical Fire Safety

- Multiplug Adapters
- Multiplug adapters shall not be used as a substitute for permanent wiring or receptacles

11.1.5
Electrical Fire Safety

- Wiring per NFPA 70, NEC
- Extension cords
  - Not a substitute for permanent wiring
  - Serve one appliance unless approved multi-plug cord
  - Not be affixed to wall
  - Not run under floor coverings

11.1
Seminar on NFPA 1 Uniform Fire Code
Overview
Building Disconnect Access

- Identification of Disconnecting Means
- Each disconnecting means shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident
- The marking shall be of sufficient durability to withstand the environment involved

11.1.9.1

Electrical Fire Safety

Covers. All panel board and switch boards, pull boxes, junction boxes, switches, receptacles, and conduit bodies shall be provided with covers compatible with the box or conduit body construction and suitable for the conditions of use

11.1.10
Elevator Keys

**Standardized Fire Service Elevator Keys.**

Elevators equipped with Phase I Emergency Recall, and Phase II emergency in-car operation, and First Responder Use/Fire Service Access Elevators, shall be equipped to operate with a standardized fire service key approved by the AHJ. Existing buildings shall comply with 11.3.6.5.

11.3.6

Smoke Detectors for Elevator Recall

- All smoke detectors must be operable even if all other detectors on the circuit operate
- Other suitable detectors permitted if ambient conditions preclude the installation of smoke detectors

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Elevator Controls

- Recall for fire fighters’ service
- Elevator operating power shutdown

Portable Generators

- Portable generators shall not be operated or refueled within buildings, on balconies, or on roofs.
- Portable generators shall be permitted to be operated or refueled in a building or room that has been constructed for such use in accordance with the building code.
- Fueling from a container shall be permitted when the engine is shut down and engine surface temperature is below the auto ignition temperature of the fuel.
- Portable generators shall be positioned so that the exhaust is located as follows:
  - (a) At least 5 ft (1.5 m) in any direction away from any openings or air intakes
  - (b) The exhaust shall be directed away from the building.

11.7.2
Emergency Power

- Emergency and **Legally Required Standby Power Systems**
  - Comply with NFPA 110

### Fire Department Communication


**11.10.1** In all new and existing buildings, minimum radio signal strength for fire department communications shall be maintained at a level determined by the AHJ.

**11.10.2** Where required by the AHJ, two-way radio communication enhancement systems shall comply with NFPA 72.

**11.10.3** Where a two-way radio communication enhancement system is required and such system, components, or equipment has a negative impact on the normal operations of the facility at which it is installed, the AHJ shall have the authority to accept an automatically activated responder system.
Photovoltaic Systems

New photovoltaic systems shall be installed in accordance with Section 11.12 and NFPA 70.

Features of Fire Protection

11.12

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132
Building Construction

12.2.1
Quality Assurance

- **Quality Assurance for Penetrations and Joints.**
  
  In new buildings three stories or greater in height, a quality assurance program for the installation of devices and systems installed to protect penetration and joints shall be prepared and monitored by the RDP responsible for design. Inspections of firestop systems and fire-resistive joint systems shall be in accordance with 12.3.2.1 and 12.3.2.2.

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Fire Doors and Fire Windows

**NFPA 80**

Standard for Fire Doors and Fire Windows

2010 Edition
Doors

Despite the speed of the fire, closed doors made a life-saving difference. The closed doors protected rooms from heat and fire.
Fire Doors and Fire Windows

- **Care and Maintenance of Fire Doors and Other Opening Protectives**
- **This section shall cover the care and maintenance of fire doors and other opening protectives**
Fire Doors and Fire Windows

In cases where a field modification to a fire door or a fire door assembly is desired, the laboratory with which the product or component being modified is listed shall be contacted and a description of the modifications shall be presented to the laboratory.

Quality Assurance for Penetrations and Joints

In new buildings three stories or greater in height, a quality assurance program for the installation of devices and systems installed to protect penetration and joints shall be prepared and monitored by the RDP responsible for design. Inspections of firestop systems and fire-resistive joint systems shall be in accordance with 12.3.2.1 and 12.3.2.2.
"Please be careful when you put revision clouds on your drawings, some of the contractors do not understand."
Contents and Furnishings

Furnishings, contents, decorations, and treated finishes in buildings and structures shall meet the requirements of NFPA 101, and this Code

12.6.1

Interior Wall and Ceiling Finish

12.5.2.3
**Activity--Determine if a deficiency exists**

1. Non-rated glass in a three-hour fire barrier
2. Smoke dampers protecting duct penetrations of a smoke barrier are not accessible for inspection
3. Door to a 1-hr stair enclosure has a 45-minute fire protection rating
4. A steel pipe transitions to plastic pipe within 12 inches of a rated floor/ceiling assembly
5. A door in a smoke partition contains a ventilation louver

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**Chapter 13 Fire Protection Systems**

![Fire Protection Systems Image]
**NFPA 13 Sprinkler Systems**

Allows stock furnishings and equipment to be as close as 18 inches to standard spray sprinklers or as close as 36 inches to other types of sprinklers such as ESFR and large drop sprinklers.

Objects against walls are permitted to ignore the minimum spacing rules as long as the sprinkler is not directly above the object.
General System Requirements

An approved clear and unobstructed path shall be provided and maintained for access to the fire department inlet connections

13.1.4.1

General System Requirements

All fire protection systems and devices shall be maintained in a reliable operating condition and shall be replaced or repaired where defective or recalled

13.1.7
General System Requirements

The AHJ shall have the authority to require Locking Fire Department Connection (FDC) plugs or caps on all water-based fire protection systems

Sprinkler Placement

Extracts tables from NFPA 13 for sprinkler head placement adjacent to high heat sources
Seminar on NFPA 1 *Uniform Fire Code*

**Overview**

**Sprinklers in Fire, Rescue or Ambulance Facilities**

New buildings housing emergency fire, rescue, or ambulance services shall be protected throughout by approved automatic sprinkler systems.

13.3.2.3

**General System Requirements**

New buildings three or more stories in height above grade shall be protected throughout by an approved automatic sprinkler system in accordance with Section 13.3 unless otherwise permitted by 13.3.2.5.

Stand-alone open parking structures that are detached from other occupancies shall not be required to be protected by an automatic sprinkler system.

13.3.2.4—13.3.2.5
General System Requirements

Exterior Roofs and Canopies, and Porte—
Cocheres. In buildings protected throughout by
automatic sprinklers in accordance with NFPA 13,
am automatic sprinkler protection shall be provided
for the exterior spaces in accordance with
13.3.2.6.

Unless the requirements of 13.3.2.6.2, 13.3.2.6.3,
or 13.3.2.6.4 are met, sprinklers shall be installed
under exterior roofs, canopies, porte-cocheres,
balconies, decks, or similar projections exceeding
4 feet in width.

New Assembly Occupancies

- Bars with live entertainment
- Dance halls
- Discotheques
- Nightclubs
- Festival seating

13.3.2.6.1

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13.3.2.7

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Existing Assembly Occupancies

- Where the occupant load exceeds 100, the following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system:
  - Bars with live entertainment
  - Dance halls
  - Discotheques
  - Nightclubs
  - Festival seating

Addressing Changes in Hazards

Where changes in the occupancy, hazard, water supply, storage commodity, storage arrangement, building modification, or other condition that affects the installation criteria of the system are identified, the property owner or designated representative shall promptly take steps to evaluate the adequacy of the installed system in order to protect the building or hazard in question.

Where the evaluation reveals that the installed system is inadequate to protect the building or hazard in question, the property owner or designated representative shall make the required corrections.
Fire Extinguishers

- Persons performing maintenance and recharging of extinguishers shall be certified.

A.13.6.9.1.2.1 Persons performing maintenance and recharging of extinguishers should meet one of the following criteria:

1. Factory training and certification for the specific type and brand of portable fire extinguisher being serviced
2. Certification by an organization acceptable to the AHJ
3. Registration, licensure, or certification by a state or a local AHJ

Chapter 13  Fire Protection Systems

13.7.3.3.9 When fire alarm systems are not monitored, an approved permanent sign shall be installed adjacent to each manual fire alarm box. The sign shall read:

LOCAL ALARM ONLY:
1. ACTIVATE ALARM
2. EXIT BUILDING
3. CALL FIRE DEPARTMENT
High Rise Buildings

New High-Rise Buildings

Chapter 14 Means of Egress

13.7.2.27.2

167

168
Obstructions

Clear Means of Egress?
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Overview

**Blocked Exit?**

![Image of a blocked exit](image1.jpg)

![Image of another blocked exit](image2.jpg)
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Overview

**Exit Signs**

14.14.1.8
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Overview

14.14.8.3

**NO exit**

14.14.8.3
Exit Sign Problems

Exit Enclosure Use
Means of Egress

Electrically Controlled Egress Door Assemblies.

Door assemblies in the means of egress shall be permitted to be electrically locked if equipped with approved, listed hardware that incorporates a built-in switch, provided that the following conditions are met:

14.5.2.6
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**Overview**

**Doors**

**Locks & Latches**
One Releasing Operation

Special Locking Arrangements
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Overview

**Delayed Egress Locks**

- [Image of Delayed Egress Locks]

**Access Control**

- [Image of Access Control]
Elevator Lobby Security

Means of Egress

Elevator Lobby Exit Access Door Assemblies Locking.

Where permitted in Chapters 11 through 43 of NFPA 101, door assemblies separating the elevator lobby from the exit access required by 14.9.1.6.1 shall be permitted to be electronically locked, provided that all the following criteria are met:

14.5.3.3
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Overview

**Powered Doors**

**Revolving Doors**
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Overview

**Exit Passageways**

**Fire Escape Stairs**
Means of Egress Terminology

- Means of Egress
- Exit access
- Exit
- Exit discharge
- Public way

Exit Discharge
Exit Discharge
Remoteness

Where two exits, exit **accesses, or exit discharges** are required, they shall be located at a distance from one another not less than one-half the length of the maximum overall diagonal dimension of the building or area to be served, measured in a straight line between the nearest edge of the exits, exit accesses, or exit discharges, unless otherwise provided in 14.10.1.3.3 through 14.10.1.3.5.

*14.10.1.3.2*  

Exiting

**Exit Discharge Through Interior Building Areas.**

Exits shall be permitted to discharge through interior building areas, provided that all of the following are met:

*14.11.2*
Pictograms

Where approved by the AHJ, pictograms in compliance with NFPA 170, Standard for Fire Safety and Emergency Symbols, shall be permitted.

14.14.3.2*

Chapter 15 Fire Department Service Delivery Concurrency Evaluation

- **15.1 Application.**
- **15.1.1** The AHJ shall be permitted to require a proposed development in the jurisdiction undergo a fire department service delivery concurrency evaluation.
- **15.1.1.1** Proposed developments that would increase the fire department's service population by less than 1 percent or increase the fire department's total protected building square footage by less than 1 percent shall not be subject to a fire department service delivery concurrency evaluation.
Chapter 17 Wildland Urban Interface

17.1 General.
The planning, construction, maintenance, education, and management elements for the protection of life and property from wildfire shall comply meet the requirements of this chapter and NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire.

Chapter 18 FD Access and Water Supply
Application

- **18.1.1.1** This chapter shall apply to public and privately owned fire apparatus access roads.
- **18.1.1.2** This chapter shall apply to public and privately owned fire hydrant systems.

FD Access

- **Access Box(es).** The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security. The access box(es) shall be of an approved type listed in accordance with UL 1037.
Water Supplies

- All facilities, buildings or portions of buildings
  - Hereafter constructed or moved into the jurisdiction
- Annex H is one method for determining fire flow

Fire Department Access and Water Supply

Clear Space Around Hydrants. A 3 foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.
Fire Flow Requirements for Buildings

**18.4.1.1** The procedure determining fire flow requirements for buildings hereafter constructed shall be in accordance with Section 18.4.

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**Annex H**

- Not enforceable unless adopted
- Intended for municipal-type water systems
- Based on Insurance Service Organization Guide
Seminar on NFPA 1 *Uniform Fire Code*

**Overview**

### Means of Egress Inspection

The building owner or agent shall inspect the means of egress to ensure it is maintained free of obstructions, and correct any deficiencies found, prior to each opening of the building to the public. 

*(Assembly & Educational)*

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**20.1.5.1.1**

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### Inspection Records

The building owner or agent shall prepare and maintain records of the date and time of each inspection on approved forms, listing any deficiencies found and actions taken to correct them.

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**20.1.5.1.2**

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Crowd Managers

- Assembly occupancies shall be provided with a minimum of one trained crowd manager or crowd manager supervisor.
  - Occupant load exceeds 250, additional trained crowd managers or crowd manager supervisors shall be provided
  - This requirement shall not apply to assembly occupancies used exclusively for religious worship
  - The ratio of trained crowd managers to occupants shall be permitted to be reduced where, in the opinion of the AHJ

Activity Day Care (50 clients)

1) How frequently are fire drills required?
2) What are the restrictions regarding combustible decorations?
3) What are the restrictions regarding upholstered furniture?
4) What are the limitations regarding portable space heaters?
5) What are the requirements regarding portable extinguisher training?
Grandstands/Tents Chapter 25

Motion Picture and Television Production Studio
Chapter 32
New chapter provides fire protection and fire alarm requirements
Soundstages and Approved Production Facilities

This change inserts Chapter 4 from NFPA 140 as extract text and placed into Chapter 32 as a new section. The Committee acknowledges that there are certain practices that are unique to the motion picture and television industries that require the application of NFPA 140, Standard on Motion Picture and Television Production Studio Soundstages and Approved Production Facilities.

Chapter 33 Outside Storage of Tires
Chapter 34 General Storage

The provisions of NFPA 230 are incorporated into this new chapter for regulations of general and high-piled storage facilities.

34.1.1.2 (1) Unsprinklered buildings, except certain rack storage arrangements protected by high-expansion foam systems in accordance with this chapter.
Chapter 35 Animal Housing Facilities

General. All animal housing facilities shall comply with NFPA 150, Standard for Fire and Life Safety in Animal Housing Facilities and Chapter 35.

Chapter 36 Telecommunication

36.1 General.
36.1.1 Telecommunication facilities shall comply with NFPA 76, Standard for the Fire Protection of Telecommunications Facilities.
36.1.2 Information technology equipment and information technology equipment areas shall comply with NFPA 75, Standard for the Protection of Information Technology Equipment.
Chapter 37 Fixed Guideway Transit

37.1 General.

Fixed guideway transit and passenger rail system facilities shall comply with NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems.

Chapter 40 Dust Explosion and Fire Prevention


REVISED 2009
Chapter 41 Welding Cutting, and Other Hot Work Operations

Chapter 42 Refueling

- 42.7.2.5.4 Signs
  - Discharge your static electricity before fueling by touching a metal surface away from the nozzle
  - Do not re-enter your vehicle while gasoline is pumping
  - If a fire starts, do not remove nozzle—back away immediately
  - Do not allow individuals under licensed age to use the pump
Chapter 43 Spraying, Dipping, and Coating Using Flammable or Combustible Materials

- 43.1.4 Electrical/other sources of ignition
- 43.1.7 Protection
- 43.1.8 Operations and Maintenance

Chapter 60 Hazardous Materials

- The renumbering of the chapter revision
  the application of the requirements by pr
  revised appropriate numbering
- New Annex B Classifications
- Revised extracting sections for NFPA 400