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2016 CFSC Part IV and the 2012 NFPA 101

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2016 CFSC Part IV and the 2012 NFPA 101 This seminar will focus on the Connecticut Fire Safety Code as it is applied to buildings built or permitted prior to December 31, 2005. Major changes to Part IV of the Code will be discussed, as well as common errors in application and considerations while reviewing and accepting code compliance programs, schedules of compliance, and time extensions. Michael Sinsigalli, Fire Marshal, West Hartford

Community Risk Reduction Program

The 5 E's

- Engineering
- Education
- Enforcement
- Economic Incentives
- Emergency Response

MSV101: Fire

What are the Fire Marshal responsibilities for enforcement of the Codes in existing buildings?



CT General Statutes



- 29-305
 - 29-305 (a) Grants the LFM power to inspect.
 - 29-305 (b) Mandates that the LFM inspect all building regulated under the VFSC an the Ct Fire Prevention Code.
 - 29-305 (c) SFM may inspect upon complaint.
 - 29-305 (d) LFM may inspect upon complaint.
 - 29-305 (e) SFM may adopt an inspection schedule.

Abatement

- 29-306
 - 29-306 (a): LFM abates hazards
 - 29-306 (b): Owner or occupants failure to comply.



(b) **Upon failure of an owner or occupant to abate a hazard or remedy a condition** pursuant to subsection (a) of this section **within a reasonable period of time as specified by the local fire marshal,**

such local fire marshal shall promptly notify in writing the prosecuting attorney having jurisdiction in the municipality in which such hazard exists of all the facts pertaining thereto, and such official shall promptly take such action as the facts may require, and **a copy of such notification shall be forwarded promptly to the State Fire Marshal.**

The local fire marshal may request the chief executive officer or any official of the municipality authorized to institute actions on behalf of the municipality in which the hazard exists,

- 29-306 (c): Order to vacate
 - (1) blocked, insufficient or impeded egress,
 - (2) failure to maintain or the shutting off of any fire protection or fire warning system required by the Fire Safety Code or State Fire Prevention Code,
 - (3) the storage of any flammable or explosive material without a permit or in quantities in excess of any allowable limits pursuant to a permit,
 - (4) the use of any firework or pyrotechnic device without a permit, or
 - (5) exceeding the occupancy limit established by the State Fire Marshal or a local fire marshal

What document directs your activities upon finding fire code and fire prevention code violations?

Directive #3

- Inspection
 - 30 Day Notice*
- Re-inspection
 - Referral to prosecutor
 - Warrant application
 - Notify SFM
- Compliance Choices
 - Voluntary compliance
 - Modifications
 - Time extensions
 - Ignore order

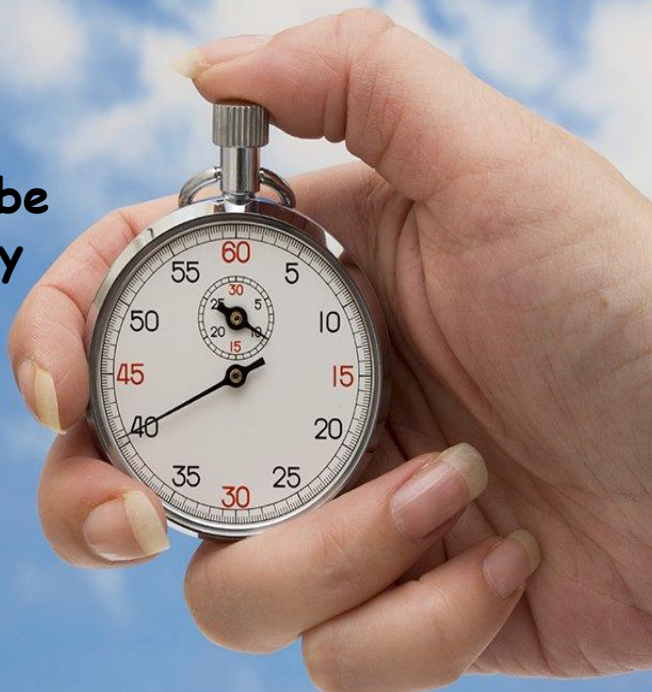
Application Problem



Annual inspection of a four unit apartment building. You note several violations of the CFSC including enclosure of the interior egress stair and lack of separation of the basement tenant storage areas.

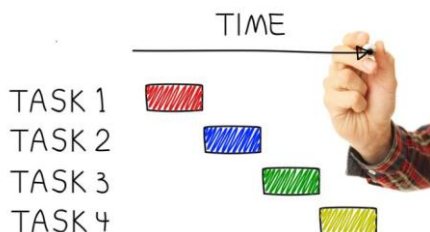
The property owner is willing to comply but needs more time. What are the options?

A time extension should not be an arbitrary granting of additional time.



Schedule of Compliance

- Used in conjunction with a time extension to insure continued progress towards a code compliant building.
- Establishes targets for completion of compliance items.



- Analyze the severity of the violations.
- Obtain compliance with easy items right away.
- Complex violations requiring design and contractors may require months.
- Include permit application dates.

Suggestions

- Means of Egress
- Try to get at least one means of egress in full compliance as soon as possible.
- Note specific deadlines in your calendar and verify that the schedule is being met.
- The schedule must be in writing.
- Make sure that your approval specifies the action that will be taken upon failure to comply with the schedule

Application Problem



Plans are submitted for the renovation of a portion of a 150 year old church in your community. The church is a large, 3 story, mixed use facility with a classroom wing, multi-purpose room, and cafeteria in addition to a sanctuary that seats 400 people.

You determine from the files that the building has not been inspected for several years.

The project consists of:

- *Renovation of the kitchen in the cafeteria.*
- *Replacing windows in the classroom wing with energy efficient windows.*
- *Replacing lighting fixtures in the multi-purpose rooms, cafeteria and classroom areas with energy efficient fixtures.*
- *Replacing carpeting and painting walls.*

What are your concerns?

Should you visit the site prior to performing the plans review?

You determine that violations exist in the existing building.

- 1. Egress stair enclosure doors are not fire rated.*
- 2. The building is not equipped with a fire alarm system.*
- 3. The Sanctuary is not equipped with emergency lights or exit signs.*
- 4. The required egress capacity for the multi-purpose room is 50 people less than the occupant load.*

What is your responsibility with this project?

Can you deny the approval because of the existing violations?

What actions should you take?



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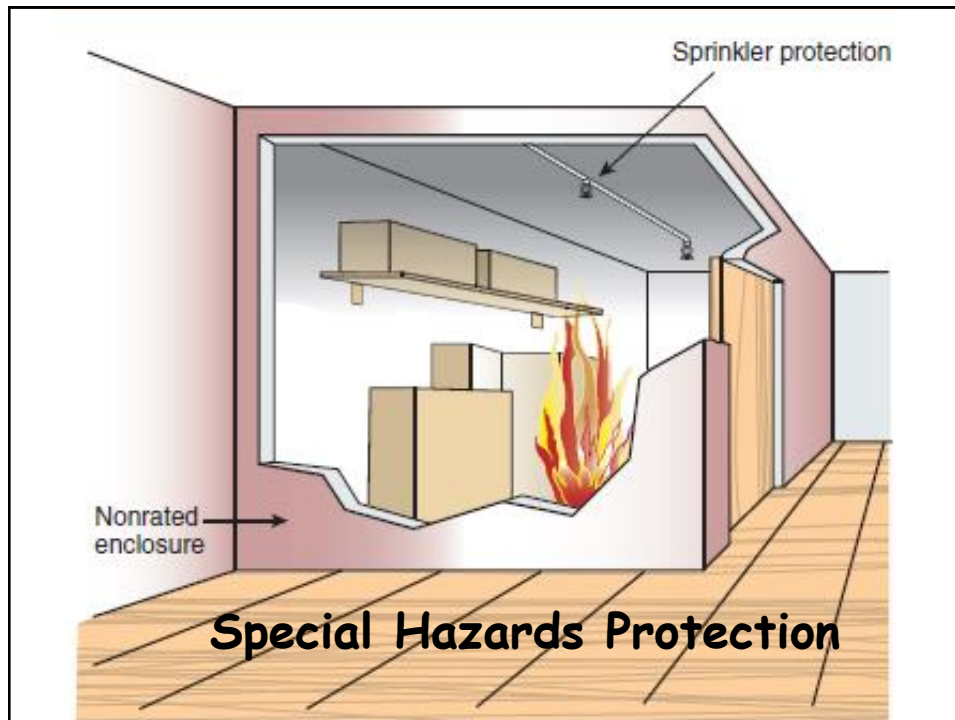
What is a Part IV Building?

Sec. 110 Application

(d) Part IV of this code shall only apply to occupancies and uses located within buildings and structures or portions thereof that existed **prior to December 31, 2005.**

Exceptions:

1. New fire protection systems shall meet the requirements of Chapter 9 of this code.
2. Electrical work shall meet the requirements of the NFPA 70, National Electrical Code.
3. Structural, plumbing and mechanical work shall conform to the requirements of this code.



31.3.2 Protection from Hazards.

31.3.2.1 Hazardous Areas. Any hazardous area shall be protected in accordance with Section 8.7.

31.3.2.1.1 The areas described in Table 31.3.2.1.1 shall be protected as indicated.

31.3.2.1.2 Where sprinkler protection without fire-rated separation is used, areas shall be separated from other spaces by smoke partitions complying with Section 8.4.

Table 31.3.2.1.1 Hazardous Area Protection

Hazardous Area Description	Separation/Protection [†]
Boiler and fuel-fired heater rooms serving more than a single dwelling unit	1 hour or sprinklers
Employee locker rooms	1 hour or sprinklers
Gift or retail shops >100 ft ² (>9.3 m ²)	1 hour or sprinklers [‡]
Bulk laundries	1 hour or sprinklers
Laundries >100 ft ² (>9.3 m ²) outside of dwelling units	1 hour or sprinklers [‡]
Maintenance shops	1 hour or sprinklers
Rooms or spaces used for storage of combustible supplies and equipment in quantities deemed hazardous by the authority having jurisdiction	1 hour or sprinklers
Trash collection rooms	1 hour or sprinklers

[†]Minimum fire resistance rating.

[‡]Where sprinklers are provided, the separation specified in 8.7.1.2 and 31.3.2.1.2 is not required.

What does the AHJ use to judge a condition hazardous?

8.7 Special Hazard Protection

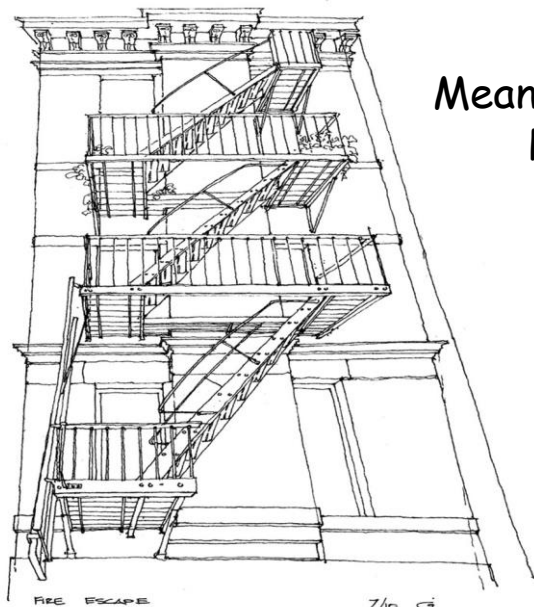
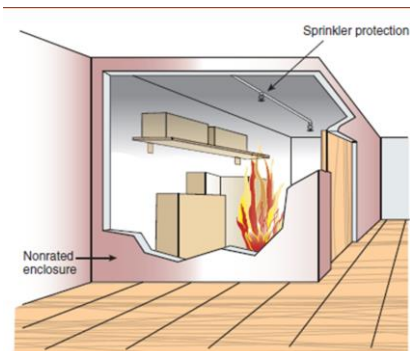
8.7.1 General.

8.7.1.1* Protection from any area having a degree of hazard **greater than that normal to the general occupancy of the building** or structure shall be provided by one of the following means:



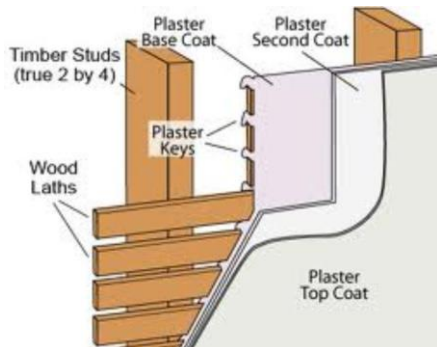
When you determine protection is required:

- Enclosure
- Sprinkler Protection
- Modification



Means of Egress Protection Capacity

Protection



- **A.7.1.3.2.1(1)** In existing buildings, existing walls in good repair and consisting of lath and plaster, gypsum wallboard, or masonry units can usually provide satisfactory protection for the purposes of this requirement where a 1-hour fire resistance rating is required.
- Further evaluation might be needed where a 2-hour fire resistance rating is required.

Doors in Exit Enclosures

- **Minimum Rating**
 - 45 minutes, non high rise.
- **Alternative**
 - 20 minute rated or, 1 $\frac{3}{4}$ inch solid wood
 - Hardwood frame
- **Alternative**
 - 20 minute rated or solid wood door
 - Hardwood frame
 - Detection or Sprinkler

In lieu of 1-hour rated assembly.

(Amd) Table 8.3.4.2 Minimum fire protection ratings for opening protectives in fire-resistance-rating assemblies.

Component	Walls and Partitions (hr)	Fire Door Assemblies (hr)	Fire Window Assemblies (hr)
Elevator hoistways	2 1	1½ 1	NP NP
Vertical shafts (including stairways, exits, and refuse chutes)	2	1½	NP
	1	1	NP (3/4 in other than exits)
	½	1/3	NP (1/3 in other than exits)
Fire barriers	2	1½	NP
	1	¾	¾
Horizontal exits	2	1½	NP
Exit access corridors ¹	1	1/3	¾
	½	1/3	1/3
Smoke barriers ¹	½	1/3	¾
Smoke partitions ^{1,2}	½	1/3	1/3

Note: NP = not permitted.

¹ Fire doors are not required to have a hose stream test per NFPA 252.

² For residential board and care, see Section 33.2.3.1.1.

You have cited exit stair doors as not being 45 minute rated. The property owner has elected to replace the doors. Since the doors and frames are being replaced, must they comply with Part III mandating 1-hour rated assemblies?

Compliance Theory

"Bring the building up to the condition that you would have accepted going in."

2016 CT State Building Code

(Add) 105.1.3 **Connecticut State Fire Safety Code abatement.**

Where conflicts exist between the requirements of this code and the requirements of Connecticut State Fire Safety Code abatement orders issued in writing by the local fire marshal with respect to existing buildings, the requirements of that portion of the **Connecticut State Fire Safety Code that regulates existing buildings shall take precedence.**

Exit Access Corridors

- Corridor rating requirements found within occupancy chapters:
 - (Amd) **39.3.6. Corridors.** Where access to exits is limited to corridors, such corridors shall be separated from use areas by fire barriers having a fire resistance rating of not less than 1 hour in accordance with Section 8.3, except under any of the following conditions:
 - (1) Where exits are available from an open floor area.
 - (2) Within a space occupied by a single tenant.
 - (3) When the building is protected throughout by an approved supervised automatic sprinkler system installed in accordance with Section 9.7.1.
 - (4) Building construction for which a building permit was issued prior to September 1, 1981.
- Openings in corridor partitions required to have a fire resistance rating shall be protected in accordance with 8 Section.3.

When a corridor is not required to be fire rated, does that allowance extend to hazardous areas?

Is a fire watch sufficient protection to allow an increase in occupant load beyond that when calculated by the area/density method?

Occupant Load vs Egress Capacity

- Occupant load calculations primarily to establish egress capacity.
- Occupant loads established by the area/density method (7.3.1.2).
- Occupant load may be increased provided that *ALL* of the code requirements based upon the increased number are met (7.3.1.3.1)

- If you permit an increase in occupant load:
 - Require that a revised floor plan be submitted (7.3.1.3.2)
 - Re-evaluate the means of egress to insure sufficient capacity for the increased occupancy (7.3.1.1.1)

Do not permit an occupant load greater than the egress capacity!



How does the public see you?

