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Introduction

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Began Part Time January 9, 1994
Brooklyn, Ohio

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Why is Fire Code Important to Us?

Station Night Club Fire, February 20, 2003

The back cover of John Barylick's 2012 book, *Killer Show*, states:

"The story of the fire, its causes, and its legal and human aftermath is one of lives put at risk by petty economic decisions – by a band, club owners, promoters, building inspectors, and product manufacturers. Any one of those decisions, made differently, might have averted the tragedy."

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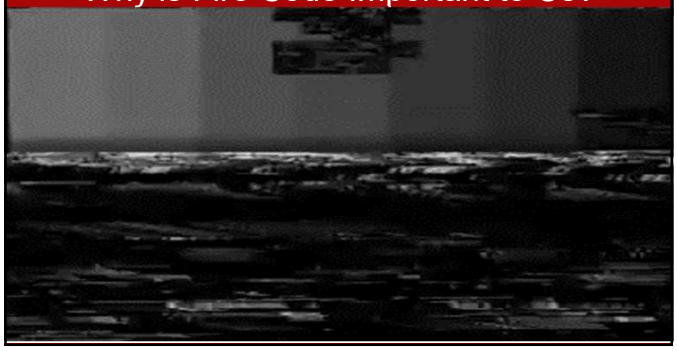
Why is Fire Code Important to Us?



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Risk Reduction/Fire Safety

Fire safety – Home, Office, Industry – Similar

Many of the same hazards and risks in each place

Some specific to each.

Best way to talk about Reducing Risk and Improving Fire Safety is to talk/walk through an inspection.

Discuss common hazards, risks, and non-compliance issues.

Ways to correct or prevent these issues.

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Inspection

Where to start… Front door, outside, roof, basement?

Will we find everything? We're human.

Sometimes we miss simple things.

This must be a team approach.

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Inspection

View the building and property as we approach.

Start at main entry, upon meeting building representative.

Right/Left hand pattern – Offices, production, warehousing.

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What Are We Looking For?

Hazards – these are the items or conditions that can cause harm

Risks – this is how likely the hazards are to cause harm

Preventive Measures - measures to eliminate risks at the source, through technical or organizational means or by providing protection.

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Common Hazards and Risks

Electrical

- Extension cords
- Open electrical boxes
- Blocked electrical panels
- Use of improper power taps/multi-plug adaptors

OFC Section 605 Electrical equipment, wiring and hazards

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Common Hazards and Risks

Heating Devices

- Wax warmers
- Space heaters
- Scent plugins
- Coffee makers
- Toaster ovens

OFC Section 305 Ignition sources
OFC Section 605.10 Portable, electric space heaters
OFC 605.10.1 Listed and labeled.
OFC 605.10.2 Power supply

605.10.4 Prohibited areas. Portable, electric space heaters shall not be operated within 3 feet (914 mm) of any combustible materials. Portable, electric space heaters shall be operated only in locations for which they are listed.

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Common Hazards and Risks

Storage

- Ceiling Clearance
- Combustibles
- Under stairs
- Mechanical rooms
- Near electric panels
- Rags
- Trash
- Storage around sprinkler risers

OFC Section 315 General storage
315.3.2 Means of egress.
315.3.3 Equipment rooms.
315.3.4 Attic, under-floor and concealed spaces.

OFC 315.3.1 Ceiling clearance. Storage shall be maintained 2 feet (610 mm) or more below the ceiling in nonsprinklered areas of buildings or not less than 18 inches (457 mm) below sprinkler head deflectors in sprinklered areas of buildings.

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Common Hazards and Risks

OFC Chapter 10 Means of egress.

Obstructions – ***OFC 1020.3 Obstruction.***

Exit path - ***Section 1003 General means of egress, 1005 Means of egress sizing***

Exit door – ***OFC Section 1010 Doors, gates and turnstiles***

Illumination - ***OFC Section 1008 Means of egress illumination***

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Common Hazards and Risks

Fire Door – ***OFC 703.2 Opening protectives.***

Keep closed – ***OFC 703.2.1 Signs.***

"FIRE DOOR-DO NOT BLOCK."

"FIRE DOOR-KEEP CLOSED."

Hold open devices –

OFC 703.2.2 Hold-open devices and closers.

OFC 703.2.3 Door operation. Swinging fire doors shall close from the full-open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position.

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Common Hazards and Risks

Exit Door

Operates appropriately –

OFC 1010.1.9 Door operations.

Hardware -

OFC 1010.1.9.1 Hardware. 1010.1.9.2 Hardware height. 1010.1.9.3 Locks and latches. 1010.1.9.5 Unlatching. 1010.1.10 Panic and fire exit hardware.

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Common Hazards and Risks

Furnishings and Decorations

OFC Chapter 8: Interior finish, decorative materials and furnishings.

- Need we mention candles?
- ***OFC 703.3 Ceilings.*** *The hanging and displaying of salable goods and other decorative materials from acoustical ceiling systems that are part of a fire-resistance-rated horizontal assembly, shall be prohibited.*
- Fire rated furnishings
  - The 4 C's
    - Curtains
    - Carpets
    - Chairs
    - Couches

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Common Hazards and Risks

Furnishings and Decorations

- Decorations include
  - Wall hangings
  - Table/countertop items
- Anything that spruces up the place should not be allowed to ignite the place.
- Use non- or limited- combustible decorations based on what is permitted for your facility.
  - Schools, industry, business office, store front, care facilities may all have different requirements.

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Common Hazards and Risks

Protective systems

Alarm Systems Signals

- Alarm

Ignored/No response

- Trouble

  Ignored

- Supervisory

  Ignored

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Common Hazards and Risks

Protective systems

Fire Sprinkler Systems

Open Valves? Sprinkler head loading?

Painted sprinkler heads?

Appropriate for the hazards protected?

Occupant changes? Use changes?

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Common Hazards and Risks

Sprinkler System – This could be found during a routine inspection.

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Common Hazards and Risks

Protective systems

Fire Extinguishers

Up to date?

Obstructions?

Locatable?

Identifiable?

Appropriate for the hazards protected?

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Common Hazards and Risks

Protective systems

Kitchen Hood Suppression Systems

Same considerations as Extinguishers

Up to date? Obstructions?
Locatable? Identifiable?

Appropriate for the hazards protected?

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Common Hazards and Risks

Fire Department Access Roads and Hydrants

Access Roads/Hydrants
- Obstructed?
- Clear of snow, dumpsters, vehicles, and other obstructions

Hydrants
- When were they last tested?
- How often are they exercised?
- Are they on a looped system?
- Are there any dead-end hydrants?
- Are the hydrant discharges the correct size for your local FD?

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Other Common Hazards and Risks

Hot work
- **Welding**
- **Braising**
- **Soldering**
- **Grinding**
- **Cutting**
- **Open flame torches**
- **And more…**

OFC 3501.3 Restricted areas. *Hot work shall only be conducted in areas designed or authorized for that purpose by the personnel responsible for a "Hot Work Program." Hot work shall not be conducted in the following areas unless approval has been obtained from the fire code official:*

(a) Areas where the sprinkler system is impaired.

(b) Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gases, liquids or vapors are present.

(c) Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.

(d) On board ships at dock or ships under construction or repair.

(e) At other locations as specified by the fire code official.

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Other Common Hazards and Risks

- Large quantities of chemicals
  - Solvents
  - Paints
  - Thinners
  - Inks, and more!
- Only you know what you have.
- Share as you might with the local emergency services, we cannot be expected to memorize all chemicals in our areas.
- You are our best resource in an emergency.

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Other Common Hazards and Risks

Confined Spaces!

- Fires can occur in confined spaces.
- Atmospheric, health issues, and entrapment might be your biggest concerns.
- Permit required?
  - 1910.146 - Permit-required confined spaces
- Who/where is your rescue team?

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Preventive Measures

By now we have already mentioned a lot of preventive measures.

Now let's talk about code required inspection, testing, and maintenance.

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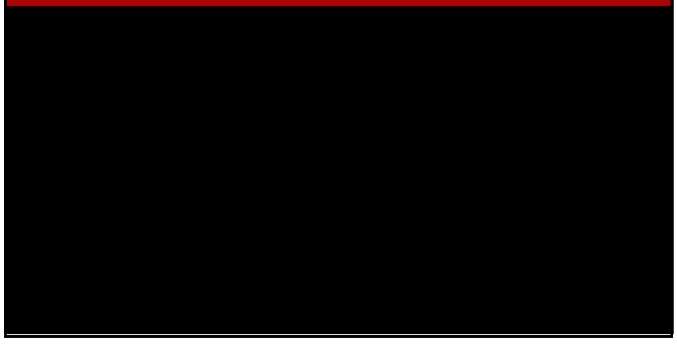
Preventive Measures



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Preventive Measures

Emergency Lighting and Exit Signs

604.8 Exit and emergency lighting equipment. Exit and emergency lighting equipment with self contained battery back-up power shall be inspected and tested in accordance with paragraphs (D)(6)(a)(604.6.1) to (D)(6)(c)(604.6.3) of this rule.

604.8.1 Activation test. - Monthly for 30 seconds

604.8.2 Duration test. – Annually for 90 Minutes

604.8.3 Test records. A written record of all inspection, testing and maintenance of exit and emergency lighting equipment shall be documented and available for review by the fire code official.

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Preventive Measures

Fire Doors:

NFPA 80: *Standard for Fire Doors and Other Opening Protectives*

Chapter 5 Inspection, Testing, and Maintenance

5.2.4.1 Periodic inspections and testing shall be performed not less than annually*

5.5.1 Repairs shall be made, and defects that could interfere with operation shall be corrected without delay.*

Close before you dose!

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Preventive Measures

Fire Alarms, Fire Suppression Systems, Portable Fire Extinguishers

OFC 901.6 Inspection, testing and maintenance. *Fire detection, alarm and extinguishing systems, mechanical smoke exhaust systems, and smoke and heat vents shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Nonrequired fire protection systems and equipment shall be inspected, tested and maintained or removed. Any discontinuance or removal of nonrequired fire protection equipment shall be approved by the fire code official. Such approval shall be conditioned upon receipt of verification of building official determination that such fire protection equipment is nonrequired.*

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Preventive Measures

Fire Alarms, Fire Suppression Systems, Portable Fire Extinguishers

OFC 901.6.2 Records. Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained.

OFC 901.6.3 Annual inspection tag for fire protection systems.

- There are many systems.
- Each will have its own inspection, testing and maintenance procedures.
- NFPA documents will dictate what procedures and how often testing should take place.
- Must be certified technician to perform most of these functions.

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Preventive Measures

- **NFPA 72:** National Fire Alarm and Signaling Code®
- **NFPA 25:** Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
- **NFPA 10:** Standard for Portable Fire Extinguishers
- **NFPA 12:** Standard on Carbon Dioxide Extinguishing Systems
- **NFPA 13:** Standard for the Installation of Sprinkler Systems
- **NFPA 14:** Standard for the Installation of Standpipe and Hose Systems
- **NFPA 17:** Standard for Dry Chemical Extinguishing Systems
- **NFPA 20:** Standard for the Installation of Stationary Pumps for Fire Protection
- **NFPA 22:** Standard for Water Tanks for Private Fire Protection

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Preventive Measures

Kitchen Hood Systems

NFPA 17A: Standard for Wet Chemical Extinguishing Systems

1.3 Application.
Minimum requirements are specified for restaurant, commercial, and institutional hoods, plenums, ducts, and associated cooking appliances

7.3.3 *
At least semiannually and after any system activation, maintenance shall be conducted in accordance with the manufacturer's design, installation, and maintenance manual.

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Preventive Measures

Section 503 Fire Apparatus Access Roads

OFC 503.1.1 Buildings and facilities. *Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction which are not readily accessible from a public and/or private street. The fire apparatus access road shall comply with the requirements of this paragraph and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.*

OFC 503.1.2 Additional access. *The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.*

OFC 503.4 Obstruction of fire apparatus access roads. *Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles.*

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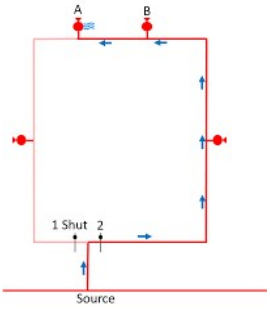
Preventive Measures

Hydrants

NFPA 24: Standard for the Installation of Private Fire Service Mains and Their Appurtenances

14.1 General.
A private fire service main and its appurtenances installed in accordance with this standard shall be properly inspected, tested, and maintained in accordance with NFPA 25 to provide at least the same level of performance and protection as designed.



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Bringing It All Together

- Scratched the surface today
- Fire Code can help us maintain a safe environment at work and home
- Best way to improve safety at home and work, is to walk around and do your own inspection.
- Fire Safety Inspectors are available to help.

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Bringing It All Together

By following the code, we can

Stop Fires Before They Start.

This is the meaning of

Protection through Prevention!

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Can You Prevent This Situation?

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Contact

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