



**Welcome!**

**COMADILSON  
CONSTRUCTION**

*Symposium*

# Agenda

- Introductions and Opening Remarks
- Fire & Smoke Protection Features— Jim Sjolander, Building Inspector
- Fire Protection System Updates – Bill Sullivan, Fire Protection Engineer
- Home Fire Sprinklers are the Future— Ed Ruckriegel, Fire Marshal
- Closing Comments

The background features a stylized illustration of a city skyline with several construction cranes. The cranes are depicted in a light blue and yellow color scheme, and the city buildings are in a darker blue. The overall scene is set against a light blue sky.

Ed Ruckriegel

Fire Marshal

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# OPENING REMARKS

## MFD Update

1. Fire Station #14  
Opened at the end of  
December with a  
Paramedic Engine.
2. 2019 MFD will work on  
garnering political  
support for a Medic  
Unit at #14.
3. 2020 purchase of first  
tiller truck.
4. Cancer prevention is  
the hot topic in the fire  
service.



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Jim Sjolander

Building Inspector

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# **BUILDING INSPECTION**

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Bill Sullivan

Fire Protection Engineer

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**FIRE & LIFE SAFETY**



# **ANNUAL INSPECTION, TESTING & MAINTENANCE REPORTING**



# What systems need ITM annually?

- Fire Sprinklers
- Fire Alarm
- Kitchen Suppression
- Fire Extinguishers
- Clean Agent
- Dry Chemical
- Smoke Control
- Smoke & Heat Vents
- Gas Detection
- Kitchen Exhaust Hood



# Do I have to?

- IFC 108.1 Any device, equipment, system, condition, arrangement, level of protection or any other feature that is **required for compliance or otherwise installed**; Shall be continuously maintained.

# Testing & Operation

The background of the slide features a light blue gradient with a faint, semi-transparent image of construction cranes and a city skyline. The cranes are positioned on the left and right sides, and the city skyline is visible in the middle ground.

- IFC 108.2 Equipment requiring periodic testing or operation shall be tested per this code.
- Make any necessary corrections and retest until the system passes.

# Recordkeeping

The background of the slide features a light blue gradient with a faint, semi-transparent image of construction cranes and a city skyline. The cranes are positioned in the foreground, and the city buildings are visible in the distance.

- IFC 108.3
- Records of periodic inspections, tests, servicing and other operations and maintenance shall be maintained on the premises for not less than 3 years or as otherwise prescribed by reference standards.
- Records shall be available for reviewing.
- A copy shall be provided upon request.

# Records filed with MFD

- The fire code official is authorized to require that certain required records be filed with the fire code official.
- MFD only requests copies of the semi-annual/annual ITM or ITM required on a multi-year bases. No need to send us weekly, monthly, or quarterly.
- MFD is working on software for Electronic Filing of completion of ITM.

# Supervision of Maintenance

The background of the slide features a light blue gradient with a faint, semi-transparent image of a construction site. Several tower cranes are visible, along with a silhouette of a city skyline in the distance. The overall aesthetic is clean and professional, typical of a technical or regulatory presentation.

- IFC 108.4
- Maintenance and testing shall be under the supervision of a responsible person.
- Owner or delegated representative

# Standards for ITM

**TABLE 901.6.1**

**FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS**

<b>SYSTEM</b>	<b>STANDARD</b>
Portable fire extinguishers	NFPA 10
Carbon dioxide fire-extinguishing system	NFPA 12
Halon 1301 fire-extinguishing systems	NFPA 12A
Dry-chemical extinguishing systems	NFPA 17
Wet-chemical extinguishing systems	NFPA 17A
Water-based fire protection systems	NFPA 25
Fire alarm systems	NFPA 72
Smoke and heat vents	NFPA 204
Water-mist systems	NFPA 750
Clean-agent extinguishing systems	NFPA 2001

# IFC 901.6.2 Integrated Testing

- Where two or more fire protection or life safety systems are interconnected, the intended response shall be verified when the initiating system is conducted.



# Integrated Testing

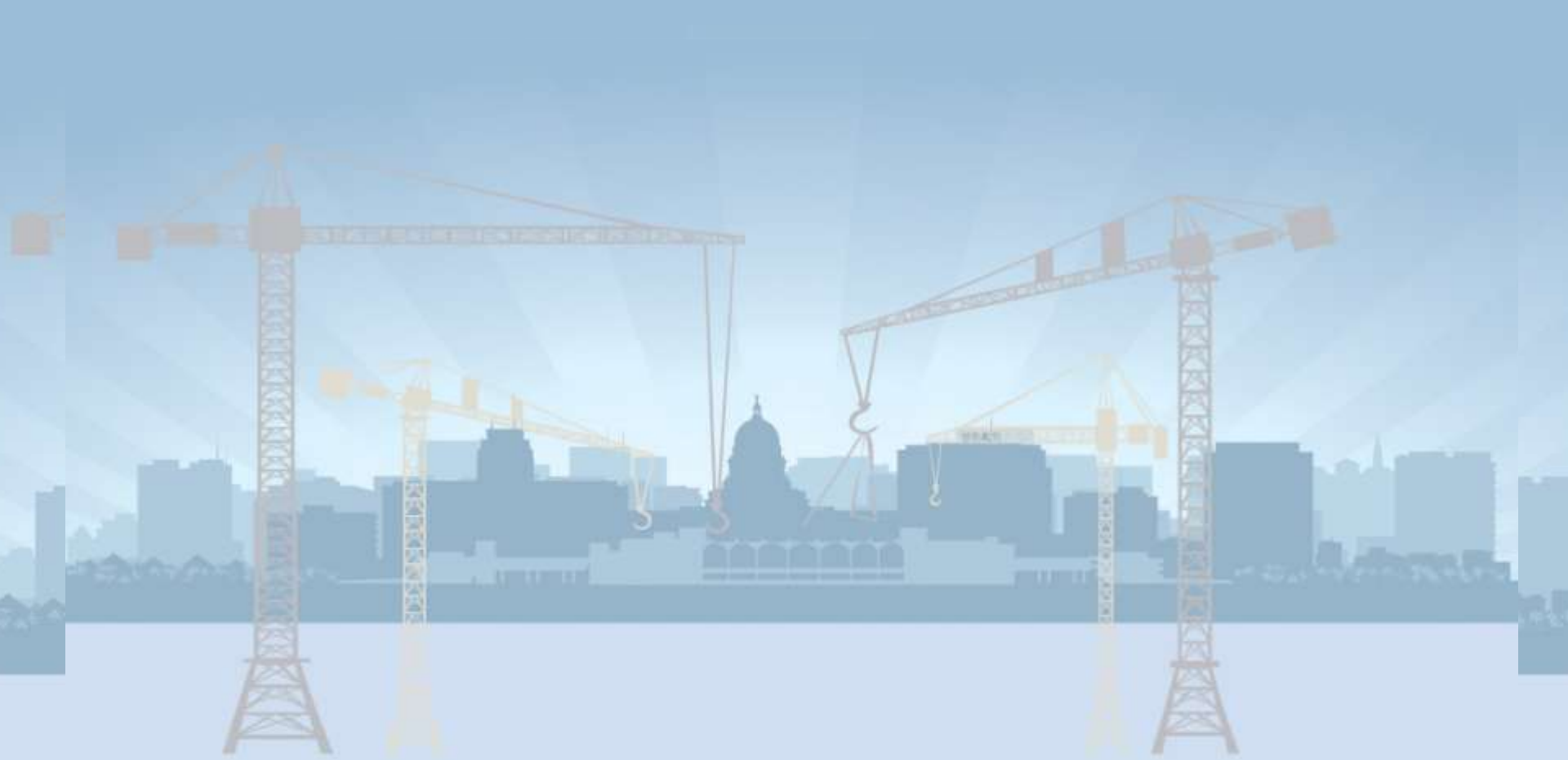
The background of the slide features a light blue gradient with a faint, semi-transparent image of construction cranes and a city skyline. The cranes are positioned on the left and right sides, and the city skyline is visible in the center background.

## High-rise Buildings

- Integrated testing shall comply with NFPA 4.
- Prior to occupancy
- Intervals not exceeding 10 years.

## Smoke Control Systems

- Integrated testing shall comply with NFPA 4.
- Prior to occupancy
- Intervals not exceeding 10 years.



# **OVERVIEW OF THE NFPA CODE EDITIONS**

# MGO 34.01(13)

## Adoption by Reference

- The codes in the International Fire Code and the WI Administrative Codes that are adopted by reference are the most current edition of the referenced code and any subsequent editions of the referenced codes.
- The International Fire Code subject to modification specified in this chapter.

# Hard Date?

- MFD does not have a hard date of implementation of the referenced standards.
- Our copies are on order.
- Target is June or July of the edition year.
- Begin bidding projects in June based on the latest editions.
- Will be flexible typically based on the date the building plans are submitted.
- Can't pick limited sections.

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Fire Marshal

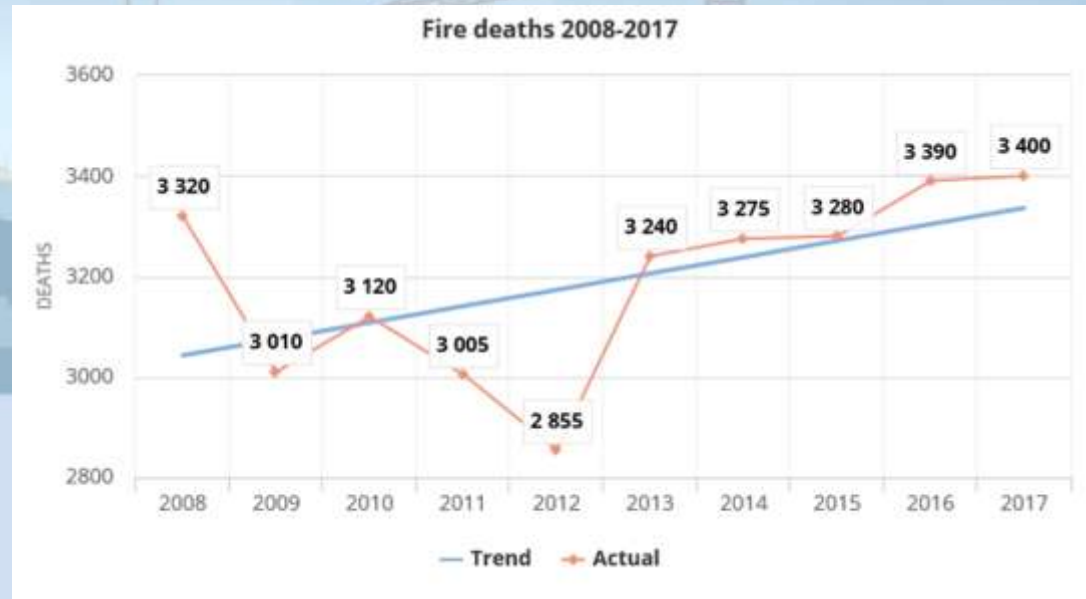
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# **FUTURE INITIATIVES AND WRAP-UP**

## Fire Loss Data

1. Today compared to 1980.
2. What are the three leading causes of fires in the United States?
3. We must change perceptions!



# The Nature of Home Fires in 2019

- Modern Homes - Flashover occurs in three minutes
- Legacy homes – Flashover occurred in 17 minutes
- Larger open floor plans
- Light-weight construction materials
- More energy efficient building envelope
- Plastics and synthetics are everywhere!



# Modern Homes

## The “Perfect Storm”

- UL’s research - Scientists and engineers have identified that the modern home fire is a “perfect storm” of conditions and outcomes: larger homes + open house geometries + increased fuel loads + new construction materials = faster fire propagation, shorter time to flashover, rapid changes in fire dynamics, shorter escape times and shorter structural collapse times.

## Home Fires – A Solution

1. Home fire sprinklers
2. Multi-purpose piping systems
3. Building code incentives
4. Reasonable installation costs
5. Assessed values
6. Insurance savings
7. Change perceptions to create a value added upgrade.
8. Discussion



*Pendent Sprinkler*



*Concealed Sprinkler*



*Sidewall Sprinkler*



*Concealed Sidewall Sprinkler*

## Fire Prevention Update

1. Safety/Security Interface
2. School Safety and Barricade Devices
3. Polar Vortex and Fire Sprinkler Systems (and plumbing systems)
4. Key vault update
5. 2009-2019 smoke alarm replacement



# Closing Remarks

The background of the slide features a light blue gradient with a faint, semi-transparent illustration of a city skyline and several construction cranes. The cranes are depicted in a stylized, geometric manner, with their jibs extending horizontally. The city skyline consists of various rectangular shapes representing buildings, some with pointed tops. The overall aesthetic is clean and professional, typical of a corporate or organizational presentation.

- The presentation will be on the MFD website.
- Future Madison Construction Symposium events.
- Questions
- Thanks you for attending?