

The 2020 Life Safety Forum

March 2nd, and 3rd, 2020
Hyatt Regency Hotel - Columbus, Ohio

Schedule of events and Program Descriptions

Sunday March 1, 2020

Sunday - 6:30pm - 12:00am

Franklin Lobby

Exhibitor Set-up

Sunday - 8:00pm - 9:00pm

Champaign Meeting Room {second floor} and Private Dining Room [second floor]

Early Arrival Conference Registration and Hospitality

Monday March 2, 2020

Monday - 8:30am - 11:00am

Franklin Rooms B, C, & D

Conference Open and Keynote Session

Monday - 11:00am - 12:00pm

Franklin Lobby / Exhibit area

Golden Hour of Technology

Monday - 12:00pm - 1:00pm

McKinley & Hayes Meeting Rooms [first floor]

Lunch

Monday - 1:00pm - 2:00pm

Taft Room - A - [first floor]

004. School Safety: How to Develop Collaborative Solutions

Taft Room - C - [first floor]

021. Code Enforcement in the Age of Information, Automation, and Integration

Franklin Room - B - [second floor]

022. IoT (Internet of Things) and the AHJ

Franklin Room - C - [second floor]

042. Introduction to NFPA 72 - Fire Alarm Systems

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

131. Post Traumatic Growth and Resilience Following a Critical Incident

Garfield Room [first floor]

Campus Fire Department Symposium

Monday - 2:15pm - 3:15pm

Taft Room - A - [first floor]

024. Through the Lock: Technological Advances in Rapid Entry

Taft Room - C - [first floor]

003. Fires, Guns, and Wicked Problems that Cause Fire Codes

Franklin Room - B - [second floor]

045. Let's Talk Mobile Food Units – AKA Mobile Food Trucks (an Ohio fire code-based lecture)

Franklin Room - C - [second floor]

007. We don't know what we don't know" - Standpipes and Fire Sprinkler Systems

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

129. Development and Application of a Standard Operating Guideline for Below-Grade/Basement Fires in Residential Occupancies

Monday - 2:15pm - 3:15pm

Garfield Room [first floor]

Campus Fire Department Symposium

Monday - 3:15pm - 3:45pm

Franklin Lobby / Exhibit area

Afternoon Break with Exhibitors

Monday - 3:45pm - 4:45pm

Taft Room - A - [first floor]

012. The Compliance Engine - Brycer

Taft Room - C - [first floor]

Program Pending Approval

Franklin Room - B - [second floor]

018. Fire Inspection Practices and Principles

Franklin Room - C - [second floor]

011. Emergency Responder Radio Communication Enhancement Systems

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

130. Saving Those Who Save Others

Garfield Room [first floor]

Campus Fire Department Symposium

Tuesday March 3, 2020

Tuesday - 8:00am - 9:00am

Taft Room - A - [first floor]

014. Life Safety Relations? Flipping the Switch on How Code Officials Approach Their Job

Taft Room - C - [first floor]

032. Understanding Interior Finish and Furnishings Code Requirements and Fire Tests

Franklin Room - B - [second floor]

019. MIT Campus Fire Safety – Maintaining Safety and Operational Sustainability

Franklin Room - C - [second floor]

036. Understanding CO Detection Requirements and the Fire Code

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

105. Pre-Planning and Fire Suppression Considerations for Large Buildings under Construction

Garfield Room [first floor]

Campus Fire Department Symposium

Tuesday - 9:00am - 9:30am

Franklin Lobby / Exhibit area

Mid-Morning Break with Exhibitors

Tuesday - 9:30am - 10:30am

Taft Room - A - [first floor]

023. After The Fire (Hour 1)

Taft Room - C - [first floor]

020. Collaboration as a (Code) Enforcement Tool

Franklin Room - B - [second floor]

002. NFPA 241 - Fire Safeguarding Buildings Under Construction, Alteration and Demolition

Tuesday - 9:30am - 10:30am

Franklin Room - C - [second floor]

035. Significant Changes to the 2019 Edition of NFPA 72

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

101. Fire Department Operations in High-Rise and Large-Area Structures

Garfield Room [first floor]

Campus Fire Department Symposium

Tuesday - 10:45am - 11:45am

Taft Room - A - [first floor]

023. After The Fire (Hour 2)

Taft Room - C - [first floor]

026. The Benefits of Combining Fire Code and Zoning Code Enforcement

Franklin Room - B - [second floor]

043. NFPA 25 – Misunderstood, Misapplied, and Misinterpreted

Franklin Room - C - [second floor]

010. Myth Busters: Fire Protection Edition

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

128. Adrenaline Based Fireground Tactics – A Recipe for Disaster

Garfield Room [first floor]

Campus Fire Department Symposium

Tuesday - 12:00pm - 1:00pm

Hayes Meeting Room [first floor]

Lunch

McKinley Meeting Room [first floor]

Ohio Fire Officials Meeting and Lunch

Tuesday - 1:00pm - 2:00pm

Taft Room - A - [first floor]

008. Fire Retardant-Treated Wood for Durable Construction

Taft Room - C - [first floor]

No Programing

Franklin Room - B - [second floor]

017. Inspection of commercial cooking appliances per NFPA 96

Franklin Room - C - [second floor]

016. Fire Alarm System Design by the Numbers

Franklin Room - D - [second floor] - UL Firefighter Safety Symposium

127. Anatomy of a Firefighter Health & Safety Program

Garfield Room [first floor]

Campus Fire Department Symposium

Tuesday - 2:15pm - 3:15pm

Taft Room - A - [first floor]

No Programing

Taft Room - C - [first floor]

No Programing

Franklin Room - B - [second floor]

034. Understanding NFPA 96: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations

Franklin Room - C - [second floor]

042. NFPA 72 – Testing and Inspection, can you self-perform them

Franklin Room - D - [second floor]

015. Short Term Property Rentals of 4 Bedrooms or Less Being Advertised On Airbnb etc..

Garfield Room [first floor]

Campus Fire Department Symposium

2020 Workshop and Program Descriptions



This logo in the program description indicates this program has been approved by the Ohio Board of Building Standards (OBBS) for continuing education credit.

002. NFPA 241 - Fire Safeguarding Buildings Under Construction, Alteration and Demolition **International Association of Fire Fighters and the City of Cambridge (MA) Fire Department**

This program will focus on the importance for the construction industry to find and follow the requirements and enforcement of NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations. As we have learned these operations present an increased potential for fire due to so many buildings being vulnerable when the presence of large quantities of combustible materials, debris, usual and unusual ignition sources, and impeded fire department access and water supplies, These conditions are typically unique and generally may not be present following construction operations. Discussion will cover historic fires, the regulatory code path, gaps in the construction industry and real-life examples of some of the issues commonly found. The goal will be to entrain all members involved in a construction project, from owners to enforcers to designers to contractors, on how to work together toward achieving the fire service's expectations.

Major Learning Outcomes of the Presentation:

- Discover and navigate through the code path
- Challenges faced with a fast-paced construction industry
- Problem solving with innovation and techniques

003. Fires, Guns, and Wicked Problems that Cause Fire Codes **City of Nevada, IA**

This presentation will take a look back at major fires which have influenced code development. Look at the emerging threats public buildings face with terrorism and hostile situations. Our fire protection devices are being used against us. With the wicked problems and products we face in the code development world, public apathy is still our biggest threat. Learn what is being done and what is likely to come in the way of products vs. code. Let me help you walk the tightrope between safety and conflagration.

As a member of the Fire and Life Safety Section, I am very concerned our changing dynamics in the fire service are contributing to the rise in fire events and higher fatalities. I seek to raise awareness if we do not listen to tragic historical lessons learned in the past, we may be entering a new phase of conflagration.

Major Learning Outcomes of the Presentation:

- Provide a historical perspective of how fires caused major basic code development
- Codes for all season threats and how our fire code devices are being used against us
- What is being marketed to our public
- A look at the products likely to impact conflagration
- The future of fire safety

004. School Safety: How to Develop Collaborative Solutions

Meridian Fire Department, ID

Early this year, first responders (Police and Fire), school district officials (public, charter and private schools) across Ada and Canyon County, the Idaho Office of School Safety and Security, and Ada County Emergency Management formed the Treasure Valley School Safety Committee. The Committee assessed and compared their all-hazards and all-threats based school emergency plans and procedures that were in use throughout the Treasure Valley. This effort coincided and supported the Idaho Office of School Safety and Security's ongoing mission to perform statewide comprehensive threat and vulnerability assessments on school campuses and provide training and support to improve school preparedness.

We quickly found there were variations in the basic terminology and procedures found in these plans, as well as different priorities and perspectives among responders and emergency services personnel when it came to preparing for and responding to school emergencies. The determination was made that an enduring partnership needed to be in place to facilitate a consistent and multi-disciplinary approach to making our schools safer. Because of the transient nature of residents, school staff and students we felt a standardized way of preparing for disasters was needed. This program introduces the first 4 annexes we are using as a standard across the state.

Major Learning Outcomes of the Presentation:

- Learning to work together as a group instead of being an island.
- Consistency pays off.
- Standardization is important for all stakeholders.

007. We don't know what we don't know" Standpipes and Fire Sprinkler Systems
National Fire Sprinkler Association - Linthicum Heights, MD



This presentation was developed to enhance the fire service understanding of fire protection systems design and how to start to identify systems installed during different install standards and code editions. The presentation will cover standpipe systems, the how and why the designs have changed over the years, along with examples of expectations for different fire sprinkler designs. This program will increase situational knowledge of systems, how to recognize deferent system designs and the pre-planning of buildings. The presentation aims to simplify provide fire service personnel with a better understanding of how systems are designed and to allow them to apply these concepts in making more appropriate tactical and command responses.

Major Learning Outcomes of the Presentation:

- Overview of standpipe systems.
- Provide an understanding of how standpipe systems have changed
Equip the fire service personnel with tools for applying a tactical and command response to difference systems designs.
- Recognition of different fire protection system components and different design applications.
- A Better understanding of designs identification when pre-planning buildings.

008. Fire Retardant-Treated Wood for Durable Construction
Wester Wood Preservers Institute - Vancouver, WA

It's no secret that wood burns. However, wood can be treated to resist fire and provide adequate time for occupants to exit a structure. Understanding the requirements for fire-retardant (FR)-treated wood products as defined in the building code will allow for the proper use of these products in construction as an alternative to non-combustible materials.

In this presentation, participants will learn about the manufacturing process for FR-treated wood, available products and their differences and how FR-treated wood is used in construction. This session will explore how treatments are impregnated into the wood, how fire retardants offer protection and the testing required to confirm fire-retardant capabilities.

Topics include a history of fire retardants for wood, an overview of treatments, desired service life and exposure conditions, the differences between coatings and pressure treatment and current issues concerning the safe use of FR-treated wood.

A variety of FR-treated wood products are specified for a variety of structures where there is increased risk from fire where protection is needed to allow time to escape the structure in a fire event. To assure

a safe and long service life, it is critical to understand how these products are made, the fire retardants used and the various code provisions allowing the use of these products.

Major Learning Outcomes of the Presentation:

- Discover how FR-treated lumber is manufactured, the steps taken to assure proper quality control and the fire retardants used today.
- Learn how to specify FR-treated wood products and make necessary adjustments in design values when used.
- Explore how the International codes allow use of FR-treated wood products for specific applications.
- Consider appropriate interior and exterior applications of FR-treated wood.

010. Myth Busters: Fire Protection Edition

Fire Code Academy



“A 3-hr rated door will last three hours in a fire.” Or how about, “It meets the Code, so we are protected.” Then there is, “Don’t worry, it’s UL listed.” Or the ever popular, “We don’t need any special protection because the fire department is only three minutes away.” These and a myriad of other fire protection myths and misconceptions continue to plague us even as the science of fire protection engineering has matured into solid science over the past forty years.

This presentation focuses on “busting” a number of common myths and misconceptions. If you are a facility owner, it will explain the need for a site-specific fire protection analysis to assure your fire safety objectives are achieved. If you are enforcing the Codes, it will provide some of the “whys” behind code requirements, so you better understand the intent of the Codes.

Did you ever wonder why that “code compliant” building burned down? Through the use of case studies, a review of the purpose of the codes, a look at fire test standards and fire test results and applying some common sense we will bust some of these common fire protection myths. Even if you already know these myths and misconceptions have been debunked, it’s often difficult to convince others. This presentation will provide some of the information you need to battle the common misperceptions, misunderstandings, misrepresentations that interfere with making effective fire protection decisions.

Major Learning Outcomes of the Presentation:

- Identify the purpose, application, and limitation of codes and standards.
- Understand the application and limitation of fire testing and fire test results.
- Identify common fire protection misconceptions when presented as part of a fire protection analysis.

011. Emergency Responder Radio Communication Enhancement Systems

Honeywell Fire Safety



Very informational presentation of the evolution of code requirements for ERRCES. Presentation defines the reasons for Emergency Responder Radio Signal impairment inside buildings, code required methods and definitions of measuring those signals and code definition of the required solution for those impairments. Presentation will discuss difference in State and Local requirements across the US. UL 2524 will also be discussed as part of the presentation and the System requirements that includes to make these systems robust, safe, reliable and not cause issues with a Public Safety Radio Network it is connected to

012. The Compliance Engine

Brycer, Warrenville, IL

Across the nation, 40% of Fire Protection Systems go un-tested, un-inspected, and un-maintained year over year. Less than 3% of Fire Code Officials nationwide can tell you when a Commercial Properties Sprinkler was last inspected or even if it is Compliant or Deficient. 95% of Fire Departments do not have the time, manpower, or resources to inspect each of their properties on an Annual basis. How is this changing...? Departments are implementing Software as a Service models to combat these drastic numbers and tackle the 3rd party inspection reporting industry.

014. Life Safety Relations? Flipping the Switch on How Code Officials Approach Their Job

Bedford Hills Fire Department, OH

The purpose of the program is to expand the perspective of the life safety inspectors on their role during safety inspections. This will assist each student by helping them create an avenue to steer safety initiatives in the local business community. Fire prevention efforts are much broader than code enforcement. Finding the uniqueness in the businesses in a community is the bottom up approach to setting a safety culture. Real world examples will be presented that show quantitative results that happened by creating an expanded role towards life safety. This will include other class participants sharing what they have learned in their role as a life safety inspector. Maintaining a single perspective during life safety inspections may suffice to meet the minimum standards in code enforcement. However, creating relationships around specific principles in a business is what keeps the safety in the building when the inspector leaves. This improves the overall outcome in protecting life and property.

Major Learning Outcomes of the Presentation:

- Improve the understanding of the 5 most common fire emergencies in business today and develop realistic steps to reduce the likelihood of having an unfriendly event.

- Modernize a fire inspector's approach during the inspection process and helping reduce workplace injuries in local business.
- Equip life safety inspectors with the basic knowledge of lean manufacturing and how it correlates to improving protection.
- Leveraging public relations and education opportunities to minimize future emergencies in the business sector.

015. Short Term Property Rentals of 4 Bedrooms or Less Being Advertised On Airbnb etc..
City of Massillon Fire Department, OH

By now many of us are familiar with short term property rental websites like Airbnb.com and VRBO.com. The concept of renting out some usable space as a homeowner to make a few extra bucks is not a new one. "Bed and Breakfasts" have been operating in Ohio and throughout the country for many years legally. Many of us may have even stayed at a "B&B", or may even be using these websites ourselves when we travel. But how much risk are you putting up for you or your loved ones when you use these websites? Are they safe?

How many "Airbnb's" are operating within your jurisdiction right now? Are they required to comply with the same codes hotels and motels are required to follow? Are you "responsible" for them? What is the difference between a "Bed and Breakfast" and an "AirBnB"?

This 60 minute presentation will educate attendees on everything they need to know in order to be able to identify, inspect, and ultimately regulate these businesses. With a 96% increase in usage in Ohio over the last 10 years, I assure you, these business already exist within your local jurisdiction whether you know it or not.

Major learning objectives will cover the history of these companies and their skyrocketing success, what they do and how they do it, how many of these businesses are not compliant with state and local code and ordinance, and what to do should you find these within your jurisdiction.

Whether you work in your jurisdiction's building department, fire prevention bureau, tax department, health department and/or code enforcement, this issue affects you! Come join us to update and educate yourself on this controversial topic.

016. Fire Alarm System Design by the Numbers **Fire Code Academy**



Whether you are a designer, a building owner, or a code enforcement official, you have probably always wondered about how to quantify the expected performance of a fire alarm system. Common questions include: “How fast will the fire detection system detect a fire?”; “What size will a fire be when the fire detection system activates?”; “How soon do we need to detect a fire to limit the potential damage to loss of no more than XX-lbs of stock?”; and “How can a fire alarm system be code compliant if it doesn’t provide a sound pressure level (SPL) at least 15-dBA above the average ambient SPL?” These are just a few of the questions that can be answered by the “numbers” behind a fire alarm system design.

This presentation will introduce some of the common calculations used in the development of a design for a fire detection and alarm system or evaluation of the expected performance of an existing fire detection and alarm system. An understanding of these fundamental calculation methods and mathematical modeling provides a better understanding of the appropriate application and use of fire detection and alarm systems.

Major Learning Outcomes of the Presentation:

- Identify two means of using calculations to estimate the performance of a fire detection and alarm system.
- Explain how fire alarm system audibility can be evaluated mathematically.
- Explain the application and limitations of computer fire modeling.

017. Inspection of commercial cooking appliances per NFPA 96 **Precision Kleen, Inc. Euclid, OH**

This top 10 list will outline the important areas all code officials should use during routine inspections, the topics will cover, Fire protection, Specialty Equipment, Exhaust Fans, Duct work, Exhaust Hoods, Cooking Equipment, New/existing construction, Proper Documentation and the Service Provider Learning Outcomes: We will improve defining code requirements, define common problems found in eating & drinking establishments, reduce the risk of fire and property loss, provide a greater awareness of current industry issues.

Major Learning Outcomes of the Presentation:

- A better understanding of why to inspect cooking appliances per NFPA 96 11.7.
How to properly inspect.
- Fire Prevention of cooking appliances and identifying hazards.

018. Fire Inspection Practices and Principles - The Use of Computer Software Programs for Fire Code Inspections

U-Conn Fire Department, CT

The main focus of my presentation will be, The Use of Computer Software Programs for Fire Code Inspections, specifically within the residential areas of campus.

At UConn we recently placed into service a new computer software program that is used for: Fire inspection documentation, Scheduling of fire inspections, Management of fire code violations, Triage and management of fire code complaints, Inspection reporting, Statistical data/trend reporting I would like to discuss the use of inspection checklist, inspection methodology and prioritization of fire code violations, inspection follow-up, Residential Life inclusion in the inspection process and how to meet the ultimate goal of student fire safety. The presentation will also touch on integrating the inspection process with the abatement process and ultimate code compliance by partnering with Facilities Operations (campus specific) to define a prioritization methodology for abatement and re-inspection.

019. MIT Campus Fire Safety – Maintaining Safety and Operational Sustainability

Massachusetts Institute of Technology

The MIT Capital Renewal Committee established a Safety Systems Subcommittee to evaluate fire safety systems on the MIT campus. The initial objective was to prioritize how capital funds would be distributed for fire protection and alarm systems modernization based on the physical state of the systems.

As the Subcommittee moved forward, a re-evaluation of the baseline parameters was performed and the Subcommittee elected to base the review on criteria above and beyond just the physical conditions of the systems. The group realized that a number of crucial parameters needed to be factored into the review process, physical condition should not be the only driver. Factors such as building occupancy (residential vs. laboratory), building construction (high rise vs. low rise), life safety, business/mission operational continuity, and long term systems support.

The objective then became more focused on sustainability, safety, and needs of MIT as a whole versus straight repairs to aging systems. With the new metrics factored in, results were significantly changed from the preliminary evaluation. The presentation will compare and contrast the initial and modified evaluation processes and results to demonstrate how a well-rounded approach can potentially increase overall campus safety and operational sustainability.

The Major Learning Outcomes of the Presentation:

- Demonstrate the effects of how incorporating operational and life safety factors changes the impacts of fire safety systems prioritization.
- Demonstrate the importance of maintaining core fire safety infrastructure.
- Demonstrate how utilizing a wider range of risk factors can potentially increase campus safety and support long term operational continuity.

020. Collaboration as a (code) Enforcement Tool **City of Marion, OH**

The presentation will demonstrate how fire code officials can collaborate with community partners to affect compliance through non-traditional enforcement mechanisms. The focus of the presentation is the collaboration between the City of Marion Fire Department and Legal Aid of Columbus, Marion Office in landlord / tenant disputes concerning safe housing conditions.

The presentation will start with a short introduction and background of the presenters. Next will be a brief history of the specific housing conditions and challenges Marion is facing, including no local residential building department. Presented as timelines, the case studies will examine 2 landlord / tenant disputes involving unsafe housing conditions. The case studies will demonstrate how code enforcement was accomplished through civil litigation, even while pursuing traditional code enforcement mechanisms in a simultaneous enforcement track.

Major Learning Outcomes of the Presentation:

- Learn how collaboration with community partners can affect compliance through non-traditional enforcement mechanisms.
- Identify community partners that also have a stake in compliance and the benefits of collaborating with them.
- Take the lessons learned in the case study and apply them to their community.

021. Code Enforcement in the Age of Information, Automation, and Integration **Potter Electric and The National Fire Sprinkler Association**

Verifying code compliance typically involves a person conducting an onsite inspection and confirming that applicable rules are being followed. But in today's era of smart, integrated devices and systems, more and more code-related inspections and tests are being performed either by a 3rd party who generates a record, or on a constant basis and monitored electronically.

Additionally, integrated systems rely on each other to function properly and require different ways of verifying readiness than those used in the past. In either case, an inspection has often become a review of data in lieu of physically witnessing a process or condition. The presenters, each being former AHJ's now involved in emerging technology, will examine the changing approaches to code compliance, comparing and contrasting those with traditional methods. The current state of codes and standards regulating these activities and where they may be headed in the future will also be discussed.

Major Learning Outcomes of the Presentation:

- Identify which common code-related inspections and tests might be suitable for automation or 3rd party evaluation.
- Understand how to better utilize technology to ensure code compliance while freeing up resources needed for tasks requiring a "hands-on" approach.

- Explain the current status of codes and standards that permit non-traditional methods of verification and predict where these methods may go in the future.
- Plan for methods of code compliance that don't fit the mold of how codes and standards are traditionally applied.

022. IoT (Internet of Things) and the AHJ

Keltron Corporation

This presentation focuses on working with the AHJ community to introduce emerging technologies and providing an understanding of how the fire and life safety industry fits into the IoT ecosystem. The AHJ community is intrinsically resistant to new technologies and by exploring their relevance and benefits, we hope AHJs and their colleagues will become more comfortable and see a path to adoption.

Major Learning Outcomes of the Presentation:

- Gain an understanding of the importance of emerging technologies in the fire and life safety ecosystem.
- Learning how the fire and life safety system fits into the IoT ecosystem.
How to approach the AHJ when using new technologies.

023. After the Fire

After The Fire

On January 19, 2000, a fire raged through Seton Hall University's freshman dormitory, killing three students and injuring 58 others.

Alvaro and Shawn talk more about their ordeal of being college burn victims nationally at many colleges across the country. They also speak at high schools as well as fire safety training or firefighting seminars and conferences. Their motive is to be advocates for fire safety and prevention so that no other students will have to endure the pain that they suffered. Also, they strive to be the voice of many burn victims across the country who may feel "trapped in their new skin."

024. Through the Lock: Technological Advances in Rapid Entry

Knox Corporation

The program provides an overview of the technological changes that allow for rapid access to residential and commercial structures in our community. Today or firefighters and paramedics respond to many types of buildings with a number of access points and locking mechanisms that challenge the first responder to gain access in a timely manner. In the past our EMS have had to knock on doors, in apartment buildings wait for another tenant to come or leave to get in or have the dispatcher call the person back and have them come open the door.

The presentation will discuss the importance and need to be able to enter buildings 24/7 to access alarms, injured or ill patients and other situations you were dispatched.

The presentation will look at the different products on the market and what may be in your community. If you don't have a program how you can implement one, getting buy in from government officials and marketing to the community to support the program.

Major Learning Outcomes of the Presentation:

- Identify technological advances in rapid entry and community needs.
- Getting the necessary support from government leadership and organizational support.
- Marketing to the community the importance of the program.

026. The Benefits of Combining Fire Code and Zoning Code Enforcement
Springfield Township Fire Department (Cincinnati), OH

This a new presentation we are preparing to share with other municipalities to discuss the effects of combining different inspection divisions into one. We have had many success stories with this along with the occasional set back other municipalities may encounter as well. We will discuss how we worked through those and answer questions others may have pertaining to their municipality.

Combining enforcement divisions was a new innovative way we found to provide better services to our residents and business owners while reducing cost. We understand this is an "outside of the box" concept that may or may not benefit other communities. Buy in or collaboration of internal departments from their own municipality is crucial and another topic we will discuss.

In 2017, the Springfield Township Fire Department launched a Code Enforcement Division to provide inspection services for zoning and property maintenance as well as fire inspection for business, schools and daycare facilities. With the addition of the Code Enforcement Division, the Department improved its Insurance Service Office (ISO) Class rating from a Class 3 to a Class 2. ISO class ratings can have a significant influence on property insurance rates, especially for businesses. This exceptional rating has been achieved by less than 3% of fire departments nationwide.

Major Learning Outcomes of the Presentation:

- How combining the two enforcement divisions into one benefited Springfield Township.
- Will this work for your municipality and what to expect from combining divisions?
- What we learned from our experience with trying different innovative ideas.

032. Understanding Interior Finish and Furnishings Code Requirements and Fire Rating Tests **GBH International, MI**

The fire test requirements for interior finish and furnishings are the source of much confusion and misinformation. Many people don't understand which test is appropriate for their application, and they provide inappropriate test data. Worse still, sometimes misleading test reports are used in an attempt to gain acceptance for materials which would not meet the required level of fire safety if tested properly.

This presents a challenge for code officials when trying to evaluate materials being presented for compliance. This session will explain the code requirements for these materials, focusing on the what the tests measure and how to interpret the results. Examples will be given of materials being misused in applications for which they are not approved or appropriate.

Major Learning Outcomes of the Presentation:

- Have a general understanding of interior finish and furnishings fire test requirements in the IBC and IFC.
- Be familiar with the different fire tests for interior finish and furnishings, specifically:
 - a. What properties are measured
 - b. What the test results mean
 - c. How to interpret variations from the standard test
- Understand the implications of approving interior finish materials or furnishings which are not appropriate for the intended use.

034. Understanding NFPA 96: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations **Precision Kleen, Inc.**

NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. NFPA 96 provides preventive and operative fire safety requirements intended to reduce the potential fire hazard of both public and private commercial cooking operations.

035. Significant Changes to the 2019 edition of NFPA 72 **Honeywell Fire Safety**



An informative and unbiased presentation covering key changes to the 2019 edition of the NFPA 72® National Fire Alarm and Signaling Code as well as providing the reasons for the changes and how they will impact public life safety. The discussion will provide an overview of new requirements for smoke detection, carbon monoxide detection, sending signals to supervising stations, Building System

Information Unit (BSIU) controlling fire alarm system functions, requirements for class A wireless pathways and several changes relating to elevators.

036. CO Detection and Fire/Building Code Requirements

Honeywell Fire Safety



An informative presentation covering important facts about carbon monoxide (CO) gas and CO detection, review of recent state legislative changes and current research. This presentation will discuss the new CO detection requirements to the model Fire and Building Codes.

042. Introduction to NFPA 72 - Fire Alarm Systems

Telgian Corporation



Fire alarm systems has several devices working together to detect and warn people through visual and audio appliances when smoke, fire, carbon monoxide or other emergencies are present. These alarms may be activated automatically from smoke detectors, and heat detectors or may also be activated via manual fire alarm activation devices such as manual call points or pull stations.

Fire alarm systems are essential for the adequate detection and warning of a fire situation within commercial and residential premises. The detection, visual and audible requirements of a fire alarm system are dependent on the layout and use of the building. It is due to the diversity of these applications that fire alarm panels and related accessories have been developed to meet these varying needs.

043. NFPA 25 – Misunderstood, Misapplied, and Misinterpreted **Telgian Corporation**



NFPA 25 *Standard for the Inspection, Testing, and Maintenance of Water-based Fire Protection Systems* is referenced by all water-based system installation standards including fire and building codes and is widely adopted throughout the United States. However, the scope and purpose of the standard are widely misunderstood and its application widely misapplied.

NFPA 25 is intended to eliminate system failures that are the result of lack of maintenance. Therefore, the focus of the inspections and tests required by the standard do not address the design status of the system or compliance to installation standards. Attendees of this session will learn the reasons behind this limited scope and how the inspections and tests are geared to meet these limits.

In addition, the roles of the AHJ, the property owner, and the service provider will be reviewed to examine how the stakeholders are intended to work together to meet the purpose of NFPA 25.

044. NFPA 72 – Testing and Inspection, can you self-perform them **Telgian Corporation**



This presentation will include an overview of the test and inspection requirements as defined by NFPA 72, The National Fire Alarm and Signaling Code. This program will also stress the newly added definitions of qualified personnel and a few of the avenues to obtain these qualifications. The program will define the roles of the person conducting, inspection, testing, programming and servicing of the fire alarm system as well as review the documentation requirements for both the personnel and the test and inspection activities.

045. Let's Talk Mobile Food Units – AKA Mobile Food Trucks (an Ohio fire code-based lecture) **City of Springdale, OH**

How do we enforce the Ohio Fire Code when it comes to Mobile Food Units? New language added to the 2017 Ohio Fire Code (OFC) put basic safety measures into place for Mobile Food Units. This new section of the code has been a challenge for some jurisdictions.

A definition of “mobile food unit” as identified in the OFC: “Mobile food unit.” Any apparatus or equipment that is used to cook, prepare or serve food, and that routinely changes or can change

location and is operated from a moveable vehicle or apparatus, including but not limited to motorized vehicles, trailers, and hand propelled carts.

In this session we discuss what we know, what we don't know and what we don't want to know about this rejuvenated craze we call Mobile Food Units and the Mobile Food Truck Rallies.

101. Fire Department Operations in High-Rise and Large-Area Structures **City of Dayton Fire Department, OH**

Do your fire companies really know the buildings in their first-due district? Various concepts of fire protection systems, some of which can be quite complicated or intimidating, and brought down "to the street" for firefighters and company officers. Significant knowledge of standpipe and sprinkler systems, fire pumps, elevators, fire alarm control panels, smoke control systems, and other building safety features is often reserved for fire prevention or code enforcement personnel.

Students will gain an understanding of complex fire protection system components that will enable them to apply the easy-to-remember principles on working incidents. Attendees are also guided in developing a realistic and engaging company-level pre-incident planning program. Case studies involving line-of-duty deaths and high-dollar-loss fires that occurred in buildings despite fire protection systems being in place are also examined.

105. Pre-Planning and Fire Suppression Considerations of Large Buildings under Construction **American Wood Council, Leesburg, VA**

This program is designed to provide background and information to fire departments that may experience the construction of large area buildings in their community. Many fire departments have limited experience in the planning and response to these complex buildings. This requires a thorough understanding of the fire and building code provisions as well as the proper use of NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations and NFPA 1620, Standard for Pre-Incident Planning.

Major Learning Outcomes of the Presentation:

- Identify risks & hazards on construction sites. Learn the leading causes of fires in structures under construction
- Apply model codes and standards that pertain to safety precautions during construction and pre-incident planning
- Identify the procedures and methods of pre-incident planning from the moment a building is contemplated
- Develop strategies and tactics to suppress a fire on a construction site of a large area building

127. Anatomy of a Firefighter Health & Safety Program **City of Dryden Fire Services, ON Canada**

Today's risks to firefighter health & safety are significantly different from the risks of previous years. While a current firefighter still faces the risks of explosions, burns and building collapses...a modern firefighter health & safety program must also work to protect firefighters from infectious diseases, cancer, post-traumatic stress disorder, heart injury secondary to overexertion and many more dangers.

This program will look at the structure and function of a modern firefighter health & safety program. It will outline the many different areas that a fire department needs to consider when building a health & safety program in order to be successful, examine current best practices and engage the audience in a discussion regarding new and emerging firefighter health & safety trends.

Firefighters and fire service leaders who attend the presentation will gain knowledge of how to successfully build modern firefighter health & safety programs. They will learn about current risks to firefighter safety and what steps are being taken to protect them.

Major Learning Outcomes of the Presentation:

- Review of firefighter health & safety program requirements
- Identification of current best practices
- Discussion regarding new and emerging trends

128. Adrenaline Based Fireground Tactics – A Recipe for Disaster **City of Springfield Fire Dept, OH**

This program will discuss the issues associated with adrenaline-based fire ground tactics. Tactics on the rush! We will discuss the steps a small Midwestern City has taken to alter fire ground tactics using fire behavior research and best practices. We will talk about the process we use to train our members to analyze structure fires and develop sound tactics capitalizing on experience, and education. We will look at the concept of Benefits vs Consequences and show how we are teaching our members to apply this concept to their actions on the fire ground. An ordinary kitchen fire that became a close call will be reviewed using the Benefits vs Consequences concept. Students will leave with an understanding of how to apply the Benefits vs Consequences concept to the fire ground and the importance of the on going size up. Students will be exposed to training concepts they can take back to their departments and methods they can use to analyze past fires and how to use their experiences as learning tools.

129. Development and Application of a Standard Operating Guideline for Below-Grade/Basement Fires in Residential Occupancies.

Colerain Township Division of Fire, OH

Below-Grade/Basement residential fires present inherent dangers during firefighting operations. Numerous line-of-duty-deaths and near misses have occurred in the last two decades. Colerain Fire and EMS experienced both a near miss in 2003 and a double line-of-duty-death in 2008 at below-grade/basement residential fires.

Following the tragic double line-of-duty-death in 2008, a comprehensive internal investigation made several recommendations including development of a Standard Operating Guideline for Below-grade/Basement Fires was developed. Henceforth, the Below-Grade/Basement Fire Standard Operating Guideline has been successfully applied on numerous occasions with none more so than at a residential structure fire in November, 2016. This structure fire presented itself with challenges and hidden dangers that had we not learned from the past it is possible another history repeating event with equally tragic consequences may have occurred.

However, the successful application of the Below-Grade/Basement Fire Standard Operating Guideline and the use of a transitional attack resulted in a successful fireground operation. Unequivocally speaking then, the development and use of a Standard Operating Guideline for Below-grade/Basement Fires is paramount to safe and effective fireground operations.

Major Learning Outcomes of the Presentation:

- Below-Grade/Basement fires present inherent dangers during firefighting operations with numerous line-of-duty-deaths and near misses over the last two decades.
- Size up at below-grade/basement fires is critical to the success of the operation.
- The development and application of a Below-Grade/Basement Fire Standard Operating Guideline has resulted in safer fireground operations.

130. Saving Those Who Save Others

The Firefighter Behavioral Health Alliance, MO

A look at FF/EMS suicide prevention/awareness course designed to educate attendees on warning signs/symptoms, communications, emotional and physical behaviors.

Major Learning Outcomes of the Presentation:

- To introduce attendees to emotional and behavioral awareness.
- To introduce attendees to the various signs & symptoms of possible suicidal FF/EMS.
- Improve communication skills.
- Discussion of suicide rates within the EMS and Fire Service.

131. Post Traumatic Growth and Resilience Following a Critical Incident **Colerain Township Division of Fire, OH**

This presentation is designed to review important mental health issues surround firefighters, police, dispatchers and others in high stress occupations. Chief Conn will share his story of a critical incident, the subsequent years of questions that were left behind, and his resulting breakthrough that allowed him to grow past his traumatic event. Then Chief Conn will discuss how we can begin changing the culture in these emergency services to address mental health considerations within our own organizations and to reduce the continually escalating suicide rate among our brothers and sisters.

Major Learning Outcomes of the Presentation:

- Understand the importance of mental health screenings and vigilance in combating the increasing first responder suicide rate.
- Explore how servant leadership concepts can be employed to help guide organizations through the turbulent waters of firefighter suicide and LODD's.
- Understand that Post Traumatic Stress effects everyone differently and by understanding these differences, we can prevent PTS from becoming PTSD.

