

11TH ANNUAL

FIREFIGHTING-BUILDING-ELECTRICAL
COMBINED CONFERENCE
PLUMBING-FIRE PREVENTION-ARSON

EST. 1882

JULIAN CARROLL CONVENTION CENTER
415 PARK AVENUE, PADUCAH, KY
THURSDAY, OCTOBER 12, FRIDAY, OCTOBER 13 &
SATURDAY, OCTOBER 14, 2023, 8:00 A.M.

THURSDAY EVENING

HOSPITALITY NIGHT PROVIDED BY

IAFF LOCAL 168

PADUCAH PROFESSIONAL FIREFIGHTERS

10/12/23@ 6:00 PM

Parking Lot behind Holiday Inn Riverfront

Food-Beverages-Fun



Thursday Classes:

NFPA: Energy Storage Systems & Electric Vehicles-Hazards, Risks & Existing Regulations; Leadership Within the Fire & Life Safety Ecosystem-The Who, The Why, & The How; NFPA & Firefighter Health & Wellness-NFPA Standards, History & Application

Energy Storage Systems and Electric Vehicles – Hazards, Risks, and Existing Regulations

This session will provide attendees with an overview of the hazards and risks associated with lithium-ion battery systems to include portable and mobility devices, in building Energy Storage Systems, and electric vehicles. This session will highlight recent catastrophic incidents that caused serious injuries and property damage as case studies and examples, then follow the path of how AHJ's and Code Officials can utilize existing codes and standard to mitigate risks in the built environment as well as challenges to implementing these requirements in new and existing buildings.

Leadership within the Fire and Life Safety Ecosystem – The Who, The Why, The How

The NFPA Fire and Life Safety Ecosystem is a framework which can reduce and prevent catastrophic fires like those we've seen in the past. Fire prevention and code professionals can be the leaders and champions of this system utilizing basic leadership strategies and tactics that are proven in the business world to increase the chances of achieving the mission of fire safety in our communities

NFPA and Firefighter Health and Wellness – NFPA Standards, History, and Application

This session will provide attendees with an overview of the NFPA standards associated with firefighter health and wellness to include NFPA 1583 – Standard on Health-Related Fitness Programs, NFPA 1582 – Standard on Occupational Medical Programs, NFPA 1581 – Standard on Infection Control Programs, and NFPA 1500 – the new consolidated standard for all health and wellness programs. Robby Dawson of NFPA will be the instructor.

**NFSA (Sprinkler Systems): Modern Fires in Buildings Protected by Fire Sprinklers
(Classroom & Hands-On Opportunities, MAXIMUM 40 Participants)**

This seminar will provide an overview of the complexities involved with proper fire sprinkler protection in the modern built environment, given the challenges of high heat release rates found in modern commodities and storage configurations. These occupancies range from homes, mid-rises, high-rises, big box stores, storage warehouses, and massive distribution warehouses with automated storage and retrieval systems. All these complexities present challenges for all stakeholders involved, including responding fire department personnel who oftentimes have not received adequate training.

This seminar will provide attendees with an overview of recent fires involving these facilities, an overview of the codes and standards impacting them, as well as best practice recommendations to consider when approving permits and/or responding to incidents within these buildings. It is important to involve all stakeholders in the overall fire protection of

these facilities from concept, design, installation, inspection, approval, pre-planning, and emergency response operations.

Participants will be provided with an overview of the different storage arrangements and commodity classifications. Three major types of sprinklers allowed in NFPA 13 and IFC Chapter 32 Requirements for High-Piled Combustible Storage will be discussed. The importance of pre-incident planning coordinated between the building owner and responding fire department personnel will be emphasized. We will discuss the different scopes and limitations of NFPA 13, NFPA 13R & NFPA 13D sprinkler systems and how these differences relate to strategic fireground operations. We will provide an overview of the different types and classes of Standpipe Systems.

Participants will have a unique opportunity to observe “hands on” training demonstration of NFSA’s LIVE FIRE SPRINKLER DEMONSTRATION/TRAINING TRAILER that is equipped with a complete standpipe system and hose connections with an assortment of PRV’s (pressure reducing valves), a fully operational wet, dry, and double pre-action sprinkler system, fire department connection, and full fire alarm system. We will conclude with a live residential fire sprinkler burn demonstration.

This course will be instructed by Ron Ritchey and Brian Biggs of NFSA.

Friday Classes:

FIRE SERVICE: Today’s Fire Service Leadership: in the Firehouse, On the Fireground

Today’s fire service is an ever-changing profession. Whether volunteer or career, one must ask themselves “are we re-inventing the wheel or do we really need to better understand our trade.” How have our personnel changed? How do we deal with generational differences, education levels, training initiatives and fire duty (or lack thereof)? Topics to be addressed in this course will be:

- Personal Readiness
- Leadership Qualities
- Evaluating ourselves as leaders
- Dealing with “Dinosaur Eggs”
- Diversity / EEO
- Physical Fitness
- Proper Wearing of PPE
- Millennials
- Politics
- Traditions
- Training

ELECTRICAL: NEC Articles:

690 PV Overview, 705 Interconnected Electric Power Production Sources, 706 Energy Storage NEC & ICC
Instructor of this class will be Jeff Fecteau, CBO, Senior Regulatory Engineer, UL.

BUILDING: Protect Your Openings – Fire Door and Fire Window Assemblies

This program provides a detailed look at the requirements of Chapter 7 of the 2021 International Building Code (IBC) for fire door and fire window assemblies. For each topic, the program includes a discussion of code requirements for new construction, the referenced standards, the testing process, and the available methods of demonstrating code compliance. From there, the program will cover the commissioning and maintenance provisions of NFPA 80, as required by both the International Building Code and the International Fire Code. Rich Walke will be the instructor of this course.

Friday Classes Continued:

FIRE ALARM:

Part 1: Inspection, Testing and Maintenance of Fire Alarm Systems based on the 2016 Edition NFPA 72

Part 2: Significant Changes to the NFPA 72, National Fire Alarm and Signaling Code – 2016 Edition

Part 1 looks at the requirements for the periodic inspection, testing and maintenance (ITM) of alarm and signaling systems found in the 2016 Edition of NFPA 72 which is referenced by NFPA 1 – 2018 Edition which was adopted by the State of Kentucky. In addition to looking at the requirements found in Chapter 14 (Inspection, Testing, and Maintenance) of NFPA 72, differences between the ITM requirements of 2013 and 2016 editions of the code will be discussed. Chapter 14 covers the responsibilities placed on owners or their designated representatives when it comes to creating an inspection, testing and maintenance program. The chapter also covers the documentation requirements for new and existing fire alarm and signaling systems.

Part 2 will look at several of the significant changes that occurred when the 2016 Edition of NFPA 72 replaced the 2013 Edition of the Code.

The program will benefit code officials in building and fire departments, fire alarm technicians and designers, building owners, managers, and property maintenance personnel. The instructor for this course will be Warren Olsen, CFPS CBO.

SPRINKLER: NFPA 13 – Sprinkler System Installation Requirements

There are hundreds of types of sprinklers in use today. Determining where to locate them can be a complex task. They need to be spaced properly and installed in specific locations to ensure coverage of the protected area and located far enough away from obstructions to ensure that the spray pattern can adequately develop and control or suppress a fire. The rules that govern this complex matrix of decisions are found in Chapter 8 of NFPA 13 on Installation Requirements. This fast paced and interactive seminar will guide the participant through series of decisions and requirements that lead to compliance with NFPA 13 and ensure the system will operate properly when needed.

Attendees should bring a copy of the NFPA 13 with them. Ron Ritchey and Brian Biggs will instruct this class.

ARSON: Origin Matrix/Damage Dynamics

Originally developed by Retired ATF Special Agent and Certified Fire Investigator Andy Cox, the Origin Matrix is a methodology used to assist in determining the origin of a fire. Origin Matrix Analysis can be found in Chapter 18 of NFPA 921.

Fire Pattern Persistence

Research conducted by ATF Special Agent and Certified Fire Investigator Chad Campanell has shown predictable results in fire pattern formation and survivability through the post flashover environment depending on the location of the fire origin and the location of ventilation points and flow paths with a compartment.

Presented by ATF Special Agent Brian Alwes

Smart Device Data:

ATF SACFI Ken Pitney will be presenting on the emerging trend of smart devices located in the fire scene. He will show what the devices are, what they do, and where they are used. Finally, SACFI Pitney will discuss what information can be obtained from these smart devices, how to obtain that information, and how it can assist us with the Origin & Cause determination.

Case Study – Remote Control Improvised Incendiary Device

ATF SACFI Ken Pitney will be presenting a case study of a remote controlled improvised incendiary device (RC-IID) recovered from an attempted arson. This case study focuses on the integration of the Origin & Cause investigation with the follow-up criminal investigation involving surveillance, search warrants, arrest warrants, and post arrest interviews. SACFI Pitney will share what to do, what not to do, and lessons learned.

PLUMBING: Tankless Water Heater Designs & Technology; Ky Plumbing Code Updates

At the completion of this training, the individual will be able to explain the designs and applications of tankless water heaters and how they may affect consumer lifestyles as well as maintenance and service of the units. Instructed by Russell "Rusty" Scaggs.

Changes and updates to the Kentucky Plumbing Code will be presented by Bruce Chester and Bill Gipson.

Saturday Classes:

FIRE SERVICE: Tactical Fireground Decision Making, Incident Command-SOP Driven or Order Driven"

Recently, many studies have been done on firefighting tactics that are producing hard to swallow changes and catchy phrases like "hitting it hard from the yard." and "beware of the flow path". This program will discuss today's fireground and how we need to understand our enemy to achieve success. Modern building hazards and fire dynamics will be discussed as well Back to Basics Tactical Considerations such as line placement / selection, search, VEIS, and ventilation. The importance of proper wearing of PPE and a discussion on the increase of maydays in the fire service. This is a must attend program that will be valuable to all ranks from probie to chief of department. Topics to be discussed will include:

- Modern Fire Behavior & Construction's effect on fire attack
- Modern Day Tactics
- Vent-Enter- Isolate & Search
- Size-up
- Training
- Command Presence
- Communications
- On-Scene Reports/Situation Update/CAN
- Tactical Considerations
- Officer Accountability
- Managing Maydays

Phil Higgins of Fairfield, CT and Chris Black of Burlington FD will be the instructors for this course.

ELECTRICAL: NEC Articles

300 Wire & Cable Applications, 406 Tamper-Resistant Receptacles, 410, 411 & 600 Retrofit Kits, 445 Generators. Instructor of this class will be Jeff Fecteau, CBO, Senior Regulatory Engineer, UL.

Instructors Bios Available on the Conference website:

<http://paducahky.gov/annual-conference-information>



Lodging available at a discounted rate,

Holiday Inn Riverfront

600 N 4th St, Paducah, KY 42001

Call (800) 465-4329 Block Code: PFD



PFD 11TH ANNUAL COMBINED CONFERENCE

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THURSDAY, OCTOBER 12, FRIDAY, OCTOBER 13 & SATURDAY, OCTOBER 14, 2023
REGISTRATION BEGINS AT 7:30 A.M., CLASSES AT 8:00

NAME: _____
(LAST) (FIRST) (INITIAL)

~ THURSDAY, OCTOBER 12TH, 6:00 PM EARLY REGISTRATION & HOSPITALITY EVENT (OPTIONAL) ~
BEHIND THE HOLIDAY INN, 600 N 4TH STREET, SPONSORED BY IAFF LOCAL 168

→ PLEASE SELECT ONE CLASS EACH DAY THAT YOU ARE ATTENDING ALL CLASSES ARE 8:00 A.M. TO 4:30 P.M. ←
THURSDAY:

_____ **NFPA:** Energy Storage Systems & Electric Vehicles-Hazards, Risks & Existing Regulations;
Leadership Within the Fire & Life Safety Ecosystem-The Who, The Why, & The How;
NFPA & Firefighter Health & Wellness-NFPA Standards, History & Application

_____ **NFSA (Sprinkler Systems):** Modern Fires in Buildings Protected by Fire Sprinklers
(Classroom & Hands-On Opportunities, MAXIMUM 40 Participants)

FRIDAY:

_____ **Fire Service:** Fire Service Leadership: in the Firehouse, On the Fireground

_____ **Electrical:** NEC Articles:690 PV Overview, 705 Interconnected Electric Power Production Sources, 706 Energy Storage NEC & ICC

_____ **Building:** Protect Your Openings-Fire Door and Fire Window Assemblies

_____ **Sprinkler Systems:** NFPA 13-Sprinkler System Installation Requirements

_____ **Fire Alarm:** ITM of Fire Alarm & Signaling Systems; NFPA 72, 2016 ed.

_____ **Arson: ATF:** Origin Matrix/Damage Dynamics & Fire Pattern Persistence;
Smart Device Data & Remote Control Improvised Incendiary Device Case Study

_____ **Plumbing:** Tankless Water Heater Designs & Technology; Ky Plumbing Code Updates

SATURDAY:

_____ **Fire Service:** Tactical Fireground Decision Making, Incident Command-SOP Driven or Order Driven

_____ **Electrical:** NEC Articles:300 Wire & Cable Applications, 406 Tamper-Resistant Receptacles,
410, 411 & 600 Retrofit Kits, 445 Generators

PHONE: _____ EMAIL ADDRESS: _____

REPRESENTING: _____

ADDRESS: _____

CITY, STATE, ZIP: _____


◀ NO REGISTRATION FEES, LUNCH TO BE PROVIDED ▶

E-Mail Registration Form to: atinsman@paducahky.gov, or Mail to:
PFD, Fire Prevention Division Attn: April Tinsman, P.O. Box 2267, Paducah, KY 42002

Discounted Lodging rates: Holiday Inn Paducah Riverfront, 600 N 4th St, Paducah, KY
Call (270) 366-7614 Block Code: PFD, or mention Paducah Fire Dept for reservations
Online booking available at: www.holidayinn.com/paducahky. Group Code: PFD

Please call (270) 444-8527 for any additional conference information

Visit
PaducahFireConference.com
Or Scan QR
Code to Register Online



Paducah Fire Department
Fire Prevention Division
P.O. Box 2267
Paducah, KY 42002

**Paducah Fire Department
11th Annual Combined Conference**



**Firefighting~Building~Electrical
COMBINED CONFERENCE
Plumbing~Fire Prevention~Arson**



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