Agenda

**Anatomy of a Fire**
- History and science behind development of fire protection design
- Overview of fire growth and characteristics
- The role that building construction plays in fire behavior
- How codes are written to address fire resistance ratings, ventilation, egress, fire fighter access
- Case study showing integration with overall building life safety performance

**NFPA 13 Design Approach**
- Definition of responsible charge in the design of a sprinkler system
- Engineer vs. contractor responsibilities for the design of automatic sprinkler systems
- Design approaches for construction documents applied to NFPA 13
- Establishing levels of contractor competency for degree of project complexity
- Case study for application of design approaches to NFPA 13
- What is the right level of fire protection design to optimize installation cost?

**What’s Eating Your Pipes? – How Corrosion Can Cause Your Sprinkler System to Fail and How to Fight it**
- Corrosion in fire protection systems is a growing problem
- Steps in combating the corrosion problem
- Various types of corrosion that can take place in fire protection systems
- Specific information on ways to size up the corrosion problem, overview of NFPA 25 specified maintenance requirements and techniques to mitigate corrosion
- Case studies of existing buildings to emphasize corrosion issues associated with the upkeep of sprinkler systems

**Hazard Evaluation vs. Risk Analysis – A Way of Thinking**
- Steps that code enforcement officials, engineers, and architects can take in dealing with hazards and risks within structures that are not addressed by the building and fire codes
- The difference between hazard evaluations and risk analysis
- Examples of quantifying hazards and risk along with implementing risk management plans
- A case study of a fire to emphasize the value of a hazard and risk analysis
- Hazard evaluations and risk analysis for the evaluation of an existing building

**Manufacturing and Industrial Occupancies – The Specialized Knowledge You Should Have**
- Identifying the level of protection that codes may not prescribe
- Developing hazardous level classification
- How to apply performance-based requirements of the codes
- Developing customized detection and suppression design criteria
- Case studies

**Fire Protection for Data Centers**
- Outline the design professional’s responsibilities in the development of data center fire protection systems
- Technical details specified and defined in the Building Code and NFPA standards
- Developing customized detection and suppression design criteria

Learning Objectives

**You’ll be able to:**

- **Examine** how codes are written to address fire resistance ratings, ventilation, egress and fire fighter access.
- **Discuss** design approaches to NFPA 13.
- **Learn** how corrosion can cause sprinkler systems to fail and discuss techniques to fight it.
- **Explore** steps for dealing with hazards and risks that are not addressed by the building and fire codes.
- **Review** the level of protection needed for manufacturing and industrial occupancies, and explore fire protection for data centers.

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**Designing for Fire Protection**

*Portland, ME - Thursday, July 12, 2018*

- **Portland, ME - Thursday, July 12, 2018**

- **Examine** how codes are written to address fire resistance ratings, ventilation, egress and fire fighter access
- **Identify** design approaches to NFPA 13
- **Review** how corrosion can cause sprinkler systems to fail and learn techniques to fight it

**Continuing Education Credits**

**Professional Engineers**
- 6.5 PDHs

**Architects**
- 6.5 HSW Continuing Ed. Hours
- 6.5 AIA HSW Learning Units

**International Code Council**
- 6.5 CEUs (Fire)

**Contractors**
- Non-Credit Continuing Ed.
Douglas R. Nadeau, MSSEE, P.E., CFPS, LEED AP
President at RAN Fire Protection Engineering, P.C.
Mr. Nadeau, P.E., is the president of RAN Fire Protection Engineering, P.C., and vice president of truVUE Inspection Technologies. He is a licensed fire protection engineer, certified fire protection specialist and LEED accredited professional. His education includes a bachelor of science degree in both Mechanical Engineering and Physics, along with a master of science degree in Fire Protection Engineering from Worcester Polytechnic Institute. Mr. Nadeau has worked as a lead design engineer for fire protection and plumbing systems in all types of buildings and uses for more than 20 years. Mr. Nadeau has been recognized as a leader in the field of fire protection engineering. He has been responsible for the complete design of fire protection and mechanical systems, including contract drawings and specifications as well as project coordination, administration, construction management and cost estimating. He has conducted risk evaluations of various building features involving building code application, fire modeling, and identification and resolution of hazardous conditions. Mr. Nadeau has a long history of experience with commercial, public, and institutional buildings. His work evaluating the life safety provisions inherent in the Uniform Building Code (UBC), South Carolina Building Code (SBC), and Building Officials and Code Administrators (BOCA) has been internationally published. In addition, his expertise in the determination and application of the intent of building codes has allowed him to function as a reference for state agencies and local municipalities.

Christopher Crivello, P.E.
Fire Protection Project Engineer at RAN Fire Protection Engineering, P.C.
Mr. Crivello is a fire protection project engineer for RAN Fire Protection Engineering, P.C., and a technical staff member at truVUE Inspection Technologies. His education includes a bachelor of science degree in Mechanical Engineering from Rensselaer Polytechnic Institute, along with a master of science degree in Fire Protection Engineering from Worcester Polytechnic Institute. He has passed the principles and practices of engineering exam in fire protection engineering to become a licensed professional engineer. Mr. Crivello has a long history of experience with commercial, public, and institutional buildings. His work evaluating the life safety provisions inherent in the Uniform Building Code (UBC), South Carolina Building Code (SBC), and Building Officials and Code Administrators (BOCA) has been internationally published. In addition, his expertise in the determination and application of the intent of building codes has allowed him to function as a reference for state agencies and local municipalities.

Seminar Information

Doubletree by Hilton
361 Maine Mall Road
Portland, ME 04106
(207) 775-6161

Registration
4:00 - 8:30 am
Morning Session
8:30 am - 12:00 pm
Lunch (On your own)
12:00 - 1:00 pm
Afternoon Session
1:00 - 4:30 pm

Continuing Education Credit Information
This seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSWS continuing education hours to architects in all states, excluding Florida architects. Educators and courses are not subject to preapproval in Maine.

The American Institute of Architects has approved this event for 6.5 HSWS Learning Units (Sponsor No. J085). Only full attendance can be reported to the AIA/CEES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 15), North Carolina, and North Dakota. HalfMoon Education is deemed an approved architect continuing education sponsor in New York.

The International Code Council has approved this event for 65 CEUs in the specialty area of Fire.

This seminar offers a non-credit continuing education opportunity to contractors, it is not approved by any state contractor licensing entity.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Tuition
$259 for individual registration
$259 for three or more registrations.
Each registration includes a complimentary continental breakfast and printed seminar manual.

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Additional Learning

Webinar Series
HVAC Series
• Heating, Ventilation and Air Conditioning Principles
  Thurs., June 7, 2018, 11:00 AM - 1:00 PM CDT
• HVAC System Design Considerations
  Thurs., June 7, 2018, 1:30 - 2:30 PM CDT
• Evaluating HVAC Systems and Equipment
  Fri., June 8, 2018, 11:00 AM - 12:00 PM CDT
• HVAC System Controls and Techniques
  Fri., June 8, 2018, 12:30 - 2:30 PM CDT

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