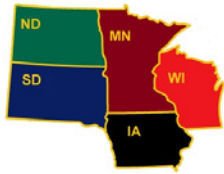




INTERNATIONAL
CODE
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Join Us in Minneapolis!
Quality Education for Construction Industry Professionals

ICC Region III Upper Great Plains Annual Educational Institute

February 13–17, 2023



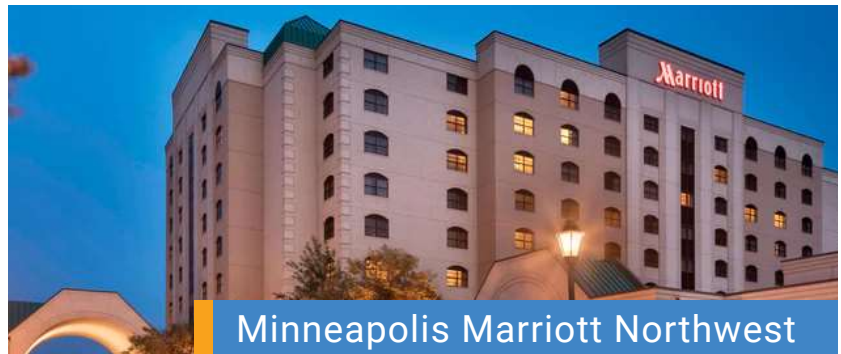
Networking



Meet Colleagues



Great Instructors



Minneapolis Marriott Northwest





Welcome to the 19th Annual ICC Upper Great Plains Region III Educational Institute

Welcome!

The Association of Minnesota Building Officials (AMBO), the International Code Council (ICC), and the Region III Chapter of ICC are proud to collaborate on the 19th year of this annual educational event. This week-long event is focused on the construction-inspection industry. We invite you to join us the week of February 13th through 17th, 2023, at the Minneapolis Marriott Northwest in Brooklyn Park, Minnesota, for abundant networking opportunities and outstanding educational offerings at a superb venue.

A Week of Diversified, Engaging Programs

The Institute features 40 sessions of construction-industry related topics offered in eight tracks over five days. Check the brochure for a few select sessions to be offered virtually. Look for **V** to mark the virtual sessions. Presenters are well-qualified and often well-known individuals from ICC and related areas of expertise. Everyone is invited and welcome to attend. The week should be of particular interest to individuals involved in building code administration, inspections, and related regulatory or design positions, as well as contractors, builders, and students: Building Officials, Building Inspectors, Permit Technicians, Fire Inspectors, Mechanical and Plumbing Inspectors, Housing Inspectors, Design Professionals, Contractors, Students in Construction-Related Programs, and other interested parties.

Continuing Education

All sessions qualify for ICC continuing education for ICC certifications. Sessions also are submitted to the Minnesota Department of Labor and Industry for continuing education approval for DLI licensees.

All ICC-labeled sessions will be submitted to the American Institute of Architects for continuing education approval. *To receive AIA continuing education, you must sign the separate AIA attendance sheet provided for each ICC session.*

The Venue

The Minneapolis Marriott Northwest is conveniently located 30 minutes from the Minneapolis-Saint Paul International Airport. It is near multiple shopping and dining options and you will find free on-site self-parking. Enjoy the convenience of modern well-appointed hotel suites and classrooms under one roof. Classrooms, meeting rooms, and public areas comfortably host the event well within any CDC guidelines. Attendees are provided with continental breakfast prior to session starts, morning and afternoon breaks, and lunch.

Location

Minneapolis Marriott Northwest
7025 Northland Drive North
Minneapolis, Minnesota 55428
763.536.8300 – for general information and questions
Or, [visit the website](https://www.iccsafe.org/RegionIII).

continued on next page

Guestroom Reservations

All guest rooms are two-room suites. AMBO group-rate reservations are available through January 23, 2023.

The AMBO Group Rate is \$132 plus applicable taxes and is available for the dates of the Institute: starting Sunday, February 12, 2023, and ending Saturday, February 18, 2023.

To make a reservation at the AMBO Group-Rate, you can [reserve on-line](#) or call in to this location at 1.877.303.1681 and ask for the AMBO Conference Group Rate.

Registration Information

Register Online: www.iccsafe.org/RegionIII. There is no fax, no email, and no mail-in option for registration. Register today as popular sessions may fill and close early. *All in-person classes include continental breakfast, breaks, and lunch.*

Daily Rate: \$190 each day.

Early-Bird Rate: \$165.00 per day *if registered by Friday, 6 January 2023.*

Multi-Day Discount: \$165.00 per day for three, four, or five days.

Online Registration Closes: Registration closes Monday, February 6, 2023, the week prior to the event.

Walk-In Registration: Opens Monday, February 13, 2023 at 7:00 a.m. on site. Limited space available as some classes may be full.

Walk-In Rate: \$200.00 per day.

Cancellation/Refund Policy: Submit cancellation and refund requests by email to learn@iccsafe.org.

Chapter President's Special: ICC Chapter Presidents may take advantage of a complimentary day of attendance at the Institute. Contact Jerry Backlund, AMBO Chair, at jbacklund@hastingsmn.gov.

Chapter Meetings and Special Events

ICC Resource Center

The ICC Resource Center will be on-site throughout the day on Wednesday and Thursday with an assortment of Code books, ICC merchandise and staff to provide product/service demonstrations.

Trade Show

Wednesday is "Trade Show Day." Vendors from throughout the area will showcase their products and provide timely and relevant information. Be sure to visit participating vendors and welcome them to the Institute.

Dinner Outing

All Institute attendees are invited to join an annual off-site dinner outing on Tuesday following the AMBO General Membership Meeting. This is a pay-your-own-way social event. Details will be provided on-site.

AMBO Board Meeting

The AMBO Board of Directors will meet at 5:00 p.m. on Monday. **Reservations are required** of Board Members and Invited Guests.

AMBO ICC Chapter Membership Meeting

The AMBO General Membership Meeting will be after class on Tuesday.

Region III Chapter Meeting

The Region III Chapter of ICC will hold a meeting on Wednesday during lunch.

**We look forward to seeing new faces and renewing past acquaintances
at this unique, networking and training opportunity!**

What's New for 2023

In-Person Classes (all classes)

Check out the **Blue Matrix** for the In-Person classes offered at the Minneapolis Marriott Northwest Hotel.

Virtual Classes (select few)

Can't travel? Join us virtually! Check out the virtual offerings in the **Yellow Matrix** and noted with a **V**.

How do I register **Myself**?

If you are registering yourself and you will be the one attending classes at Region III Education Event, go to iccsafe.org/RegionIII and click on **Individual Registration** and login to your myICC* account (upper right).

Once you have logged in, toggle to select if you will be attending In-Person classes or Virtual classes. Make your course selections by either clicking on individual classes or by selecting the full track. When done, click **Add To Cart** button and follow the on-screen prompts to proceed to Checkout.

How do I register a **Group or Another Individual**?

There are two options for group registrations and registering another individual this year.

1. You may register groups by clicking **Group Registration** and completing the online form on the ICC Region III Education Event site as in previous years (iccsafe.org/RegionIII). ICC will manually register all individuals on your online form within 7 days and send confirmation emails directly to the individuals. Please provide the specific attendee emails.

OR

2. **New this year** –To make the process simpler, faster, and more accurate for our attendees, ICC Region III Education Event will also be using **Vouchers** for group registrations this year.

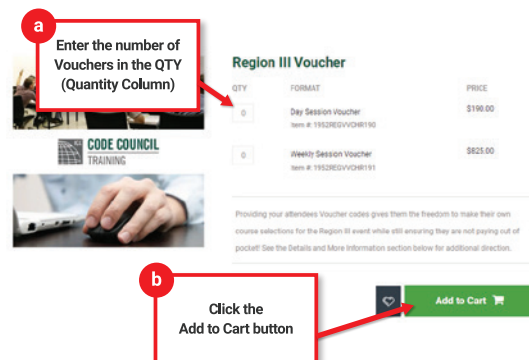
You may purchase Vouchers from the ICC Store. Once purchased, unique **Voucher Codes** can be distributed to individuals to register themselves. Each Voucher Code can only be used once.

Vouchers are available in the following formats:

- In-Person Day Session
- Virtual Day Session
- In-Person Weekly Session
- Virtual Weekly Session

To purchase Vouchers go to iccsafe.org/RegionIII, click on **Group Vouchers** and login to your myICC* account (upper right).

- a. Enter quantity of each type of Voucher you would like to purchase.
- b. Click the **Add to Cart** button and follow the on-screen prompts to checkout.
- c. You will receive a confirmation email with the Voucher Codes to distribute to each attendee. Once you get the Voucher Codes, distribute to the person who will be attending ICC Region III Education Event and have them make their course selections.



Do not login as yourself and make course selections on their behalf as YOU will be registered for the course. Should you have any questions at all, please contact ICC Training at (888) ICC-SAFE, x33821 or learn@iccsafe.org.

**If you do not have a myICC Account, click the Register link to create a username and password. There is no fee to create an account with ICC.*

TRACK 1 – CODE ENFORCEMENT AND PROFESSIONAL DEVELOPMENT

MONDAY 2/13/2023

Formulating an Effective Code Enforcement Program

Session 311 

This course will focus on the different facets of code enforcement programs that play essential and vital roles. We will review key points of what a robust and successful program looks like as we hone in on areas to consider in the formulation and development of such programs as well as how that leads to a successful code enforcement team.

Instructor: Cecilia Muela (ICC)

TUESDAY 2/14/2023

Effective Communications

Session 312

Mastering the art of Effective Communication is key while maneuvering through our day to day. Being able to get out of situations without the need for physical contact and before situations escalate is vital. This class will cover verbal communication techniques as we use the Art of Word Play to assist in de-escalating tense situations both in the office and in the field. We will discuss the direct correlation and importance between verbal communication and kinesics to gain confidence in our everyday public interactions.

Instructor: Cecilia Muela (Monarch Consulting)

WEDNESDAY 2/15/2023

AM: Building Inspections and Code Enforcement – A Powerful Duo

Session 313

This class will provide an overview of the ins-and-outs of field inspection preparedness and performance thereof for both the Code Enforcement Officer and the Building Inspector. Students will learn how to effectively work with building inspection staff to gain compliance. Students will have a basic overview of building inspection protocols. Students will gain confidence in conducting code enforcement inspections that link-up to building.

PM: Safety: In the Field and Self-Care

Code Enforcement has evolved throughout the years adding various responsibilities to code officers with little or no training. Understanding how to tap in to resources to stay safe in the field is vital. Equally, it is important to understand how to protect the code enforcement officer from PTSD as a result of traumatic events as related to code enforcement. This class will discuss field response tactics, as well as self-care tools for the Code Enforcement Officer.

Instructor: Cecilia Muela (Monarch Consulting)

THURSDAY 2/16/2023

Legal Aspects of Code Administration **Session 314**

Participants will be provided guidelines for effective code administration and enforcement of the legal aspects of the code for the code official. The following topics will be covered during the seminar: legal concepts, property law concepts, identifying responsible parties, administration of the building code, preparing a case for court, right of entry, liability and testifying effectively.

Instructor: Linda Pieczynski (ICC)

FRIDAY 2/17/2023

Complaint Management **Session 315**

This course will focus on how to effectively prepare yourself for taking on your code-compliance case load. We will discuss what case management should look like from start-to-finish to allow for an “airtight” case with proper noticing and evidence documentation. We will also discuss case priority types for effective management of case workload.

Instructor: Cecilia Sevilla (ICC)

All classes are on-site with a select few that are also Virtual – .

TRACK 2 – BUILDING: UNDERSTANDING THE BASICS

MONDAY 2/13/2023

Administrative/PT Scope of Practice – Day 1 Session 321

Day 1 of this two-day course is intended to provide essential information in the areas of code history and administration, legal aspects, customer service, basic construction, inspection process, zoning terms, permit fee calculations, basic occupancy, construction types, basic means of egress and dealing with difficult customers.

Instructor: Gil Rossmiller (Shums Coda)

TUESDAY 2/14/2023

Administrative/PT Scope of Practice – Day 2 Session 322

Day 2 of this two-day course continues to provide the essential information from day one in the areas of code history and administration, legal aspects, customer service, basic construction, inspection process, zoning terms, permit fee calculations, basic occupancy, construction types, basic means of egress and dealing with difficult customers.

Instructor: Gil Rossmiller (Shums Coda)

WEDNESDAY 2/15/2023

AM: Understanding Residential Building Code Session 323

Understanding Residential Building Code: Who are the stakeholders of the development of the IRC? This course will be an overview of the fundamentals of the IRC, including code development origins, basic principles, and issues that are missing or assumed to be included. Examples and illustrations will be an integral part of this presentation.

PM: Exterior Wall Systems

Water intrusion through exterior walls may be the largest problem in residential construction today. This course will discuss the IRC requirements for exterior walls of chapters 3, 6 and 7. General installation requirements of products will be discussed, including weather resistance barriers, flashing, vinyl/wood/hardboard siding, masonry and culture veneers, stucco and EIFS systems.

Instructor: Russell Thornburg (Thornburg Code Services)

THURSDAY 2/16/2023

2018 Residential Plan Review

Session 324

This course provides a procedure for reviewing residential building plans and specifications based on Chapters 1 through 10 of the 2018 International Residential Code® (IRC®). Participants will have the opportunity to practice a building plan review using actual construction documents and an IRC Plan Review Record.

Instructor: John Gibson (ICC)

FRIDAY 2/17/2023

A Day in the Life of an Inspector

Session 325

Walk a day in the shoes of Justin Holmes, a field inspector in Anywhere, Minnesota. We will work through his day of plan review, field inspections, phone calls and interactions with department staff as he encounters an array of situations that test our code knowledge, people skills and other resources. We will also discuss these situations and outcomes for best practices and desired results.

Instructor: Andy Schreder (Rum River Consultants)

TRACK 3 – BUILDING: GENERAL TOPICS

MONDAY 2/13/2023

2018 IRC Essentials: Emphasis on Mechanical, Fuel Gas, Plumbing (Combination Inspector Focus)

Session 331 

This seminar examines basic concepts of the 2018 International Residential Code (IRC) beyond the building provisions. This seminar is designed to assist the combination inspectors that must understand mechanical, fuel gas, plumbing and electrical (MEP) installations in buildings regulated by the IRC. A clear understanding of the identified requirements allows the code user to apply the IRC in specific situations and helps to build an understanding of the intent of the code when asked to make a judgment on code compliance. Code requirements provide a basis for use and application of the code. This seminar will help the code user correctly locate code requirements and begin to develop a procedure for applying them.

Instructor: Roger Axel (ICC)

TUESDAY 2/14/2023

2021 IRC Essentials

Session 332 

This course focuses on the basic concepts of the 2021 International Residential Code® (IRC®). These concepts provide a basis for the correct utilization of the code. A clear understanding of the identified requirements allows the code user to apply the IRC in specific situations and helps to build an understanding of the intent of the code when asked to make a judgment on code compliance. This course will help the code user to correctly locate code requirements. It will also provide a basis for the correct use and application of the code as well as a procedure for applying the code. It will address the organization of the code and how it relates to the ICC family of International Codes® (I-Codes®).

Instructor: Sandra Hyde (ICC)

WEDNESDAY 2/15/2023

2021 IBC Essentials

Session 333 

This course focuses on the basic concepts of the 2021 International Building Code® (IBC®). These concepts provide a basis for the correct utilization of the code. A clear understanding of the identified requirements allows the code user to apply the IBC in specific situations and helps to build an understanding of the intent of the code when asked to make a judgment on code compliance. This course will help the code user to correctly locate code requirements. It will also provide a basis for the correct use and application of the code as well as a procedure for applying the code. It will address the organization of the code and how it relates to the ICC family of International Codes® (I-Codes®).

Instructor: Steve Thomas (ICC)

THURSDAY 2/16/2023

Part 1: Overview of Engineered Wood Products Session 334

With the expanding choice and use of engineered wood products in today's construction market, it's more important than ever to understand how to properly select, install and detail engineered wood materials. This course introduces plywood, oriented strand board (OSB), glued laminated timbers (glulam), I-joists and structural composite lumber (SCL); the benefits of engineered wood construction; and the proper applications of EWP.

Part 2: Lateral Load Paths for Wood-Framed Structures

The overall strength of a building is a function of all building components – roof, walls, floors and foundation – working together as a unit. Knowing where to look for clues when tracking the load path through the building is vital to ensuring load path continuity. This segment will provide a top-to-bottom overview of gravity and lateral design for wood framed structures, including examples of complete and incomplete load paths.

Part 3: Wall Bracing

Wall bracing is a critical component of a home's structural stability, yet it's a common source of confusion and misapplication. APA, a nonprofit trade association, has created a free online calculator that helps designers apply the bracing requirements of the IRC with ease. Learn with a hands-on demonstration of the tool including how to quickly set up a new project, the design flexibility of the calculator, and comparisons with traditional approaches to wall bracing.

Instructor: Ron Nuttall (APA)

Track 3 continued on next page

All classes are on-site with a select few that are also Virtual – .

FRIDAY 2/17/2023

AM: 2018 IBC Types of Construction and Application

Together with occupancy classification, one of the most critical steps in analyzing a building for code compliance is classifying it for type of construction. This seminar will address the two distinct aspects regarding the use of construction type in the IBC: 1) determination of the appropriate types of construction for a building based on the building's occupancy, height and area, and 2) identification of the construction and fire-resistance-rated features associated with the nine individual construction types established in the IBC. In addition, the permissible use of combustible materials in Type I and II noncombustible buildings will be addressed.

Session 335

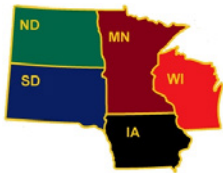
PM: 2018 IBC Allowable Heights & Areas

Based on the provisions of IBC Chapter 5, this seminar focuses on how a building's occupancy classification and type of construction relate to the maximum building size permitted by the IBC. The approach to determining a building's maximum allowable height and area is explained, including use of Table 503 and all related permitted increases due to sprinkler protection and frontage open space. Detailed provisions related to mezzanines and unlimited area buildings are also addressed.

Instructor: Doug Thornburg (ICC)



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Mark Your Calendar for 2024

Quality Education for Construction Industry Professionals

ICC Region III Upper Great Plains Annual Educational Institute February 12–16, 2024

Minneapolis Marriott Northwest | 7025 Northland Drive North | Minneapolis, Minnesota 55428

TRACK 4 – BUILDING: ESSENTIALS TO KNOW

MONDAY 2/13/2023

2018 IBC Performing Non-Structural Plan Review – Day 1 **Session 341**

Day 1 – With knowledge of performing a nonstructural plan review, participants will be better able to understand and apply the requirements of the 2018 International Building Code (IBC®). When you complete this seminar, you will be able to determine whether a given set of building plans complies with the outlined requirements of the 2018 IBC.

Instructor: John Gibson (ICC)

TUESDAY 2/14/2023

2018 IBC Performing Non-Structural Plan Review – Day 2 **Session 342**

Day 2– This session is a continuation of Session 341 covering nonstructural plan reviews. Completing this two-day seminar will allow participants to be better able to determine whether a given set of building plans complies with the outlined requirements of the 2018 IBC.

Instructor: John Gibson (ICC)

WEDNESDAY 2/15/2023

AM: 2018 Special Building Types, Features, and Hazards **Session 343**

Based on selected provisions from Chapter 4, this seminar focuses on several building types, features and hazards that have special characteristics. High-rise buildings, underground buildings, mall buildings, parking garages and special amusement buildings are specialized structures that have their own unique considerations. Atriums, stages and platforms are building features that are evaluated in a special manner due to the uniqueness of their use. High-hazard conditions are regulated in a specific manner through provisions addressing combustible storage, use and storage of hazardous materials, spray application of flammable finishes, medical gas storage rooms, control areas and laboratory suites.

PM: 2018 Mixed Occupancies

Based on the provisions of IBC Section 508, this seminar addresses those special requirements applicable to buildings containing two or more occupancy classifications. The three mixed-occupancy options are presented along with examples and exercises that illustrate the proper application of the provisions.

Instructor: Doug Thornburg (ICC)

THURSDAY 2/16/2023

2018 IBC Assembly Spaces **Session 344**

This seminar will address the 2018 International Building Code® requirements applicable to design and construction of assembly spaces. It will address the differences between the various Group A occupancies and how assembly uses may also fit within the business or educational occupancy classifications. The seminar will cover the unique aspects of the code related to assembly uses including the stage and platform requirements of Section 410, the ICC 300 Standard for Bleachers, Folding and Telescopic Seating, and Grandstands, the special egress provisions of Section 1028, along with the special amusement building and motion picture projection room requirements from Chapter 4. International Fire Code® provisions related to places of assembly such as requirements for a fire watch, limitations on open flames, combustibles and finishes will also be addressed. The discussion will include the unique IBC criteria applicable to accessibility, fire protection and building size issues in assembly buildings. During this seminar, participants will listen to lecture, discuss examples and participate in activities that pertain to the course content.

Instructor: Steve Thomas (ICC)

FRIDAY 2/17/2023

2018 IBC Care Facilities **Session 345**

This seminar will address provisions in the 2018 International Building Code® and referenced standards relating to the design and construction of care facilities, such as medical care, custodial care, ambulatory care and day care facilities. It will focus on the specific decision-making needed to apply the provisions appropriately by highlighting the differences between the various types of care activities. The seminar will include a discussion on how the length of stay, number of care recipients, degree of care and capability/incapability of self-preservation all relate to the occupancy classification and resultant code requirements. Smoke compartments, dwelling and sleeping unit separations, incidental use separations and other special conditions provisions are also addressed. Unique provisions will be highlighted in the areas of accessibility, type of construction, fire protection, means of egress and interior finishes. During this seminar, participants will listen to lecture, discuss examples and participate in activities that pertain to applying sections of the IBC to care facilities.

Instructor: Roger Axel (ICC)

TRACK 5 – BUILDING: SPECIFIC CONCERNS

MONDAY 2/13/2023

Codes for Decks – Day 1

Session 351

Part 1: Existing Structure

Part 2: Ledgers & Lateral Loads

Day 1 – Decks have been popular in backyards for a long time, but have only recently been addressed in the IRC. Learn all the details of the new prescriptive structural deck codes that started in 2015 and are in their best form yet in 2021. From the features of the existing house to the final finish of the guards, learn from a professional instructor with over 20 years in the deck and code industry.

Instructor: Glenn Mathewson (BuildingCodeCollege.com)

TUESDAY 2/14/2023

Codes for Decks – Day 2

Session 352

Part 3: Down the Load Path

Part 4: Features and Finishes

Day 2 – This session builds on information in Session 351 with more details of the new prescriptive structural deck codes. Learn from a professional instructor with over 20 years in the deck and code industry.

Instructor: Glenn Mathewson (BuildingCodeCollege.com)

WEDNESDAY 2/15/2023

2018 IRC Advanced Wood Wall Bracing

Session 353

This seminar provides a comprehensive explanation of the 2018 International Residential Code® (IRC®) bracing requirements. It guides the participant through an in-depth review and analysis of the bracing requirements for wood-framed residential structures.

The seminar will focus on advanced bracing concepts, provisions within other chapters of the IRC that affect wall bracing and gray areas of the code. The seminar covers the requirements of Simplified Wall Bracing in Section R602.12 as well as Wall Bracing in Section R602.10.

Instructor: Sandra Hyde (ICC)

THURSDAY 2/16/2023

Roof to Soil: The Essentials – Structural

Session 354

Building Load Transfer, Design, and Inspection (Advanced)

This course will offer an overview in identifying and calculating live and dead loads from roof to displacement. A number of resource materials will be identified and used to help the participant with hands-on applications. Participants will have opportunity to evaluate each segment of load transfer of truss/rafter, beams/headers, point loads, walls, floors and foundations systems from plan review to actual built environment for field inspector. A review of fasteners and connectors will also be included. The Supplement NDS (Design Values for Wood Construction), and/or WCFM (One- and Two-Family Dwelling) would be helpful resources. Participants should bring a calculator and a current Residential Code book.

Instructor: Russell Thornburg (Thornburg Code Services)

FRIDAY 2/17/2023

2018 IRC Performing Residential

Session 355

Building Inspections

This seminar provides building inspectors with fundamental knowledge necessary to administer and enforce applicable code requirements from the 2018 IRC, which apply from foundation-to-final residential building inspection. Specifically, the seminar provides participants with checklists that enable those performing residential building inspections to determine whether the materials, design, construction, installation and location of building components comply with the code.

Instructor: John Gibson (ICC)

TRACK 6 – CROSS FUNCTIONAL: BUILDING AND FIRE

MONDAY 2/13/2023

Fire-Resistive Construction

Session 361

This presentation provides a detailed look at the requirements of the International Building Code for fire-resistance-rated assemblies, along with the standards and testing process involved with the certifications of these assemblies. It also includes information on protecting the various breaches within rated construction, along with a detailed discussion on the use of the UL Product iQ online directory to locate code compliant assemblies.

Instructor: Rich Walke (Creative Technology)

TUESDAY 2/14/2023

AM: Protecting Penetrations in

Fire-Resistance-Rated Construction

Session 362

This presentation will provide a detailed review of how through- and membrane-penetrations in fire-resistance-rated assemblies are protected. It includes an in-depth review of code requirements, testing procedures, what materials and components make up a firestop systems, how to use the UL Product iQ online directory to locate code compliant systems, and how to ensure that the firestop system is installed as a "complete assembly."

PM: Protecting Joints and Voids in Fire-Resistance-Rated Construction

This presentation will provide a detailed review of how to protect the various joints and voids described in Section 715 of the International Building Code. It includes an in-depth review of fire-resistant joint systems, perimeter fire containment systems, continuity head-of-wall systems, along with the "stuffing" of other voids with approved materials. The discussion will include how to use the UL Product iQ online directory to locate code compliant systems, and how to ensure that the systems are installed as a "complete assembly."

Instructor: Rich Walke (Creative Technology)

WEDNESDAY 2/15/2023

2018 IFC & IBC Fire Protection Systems

Session 363

This seminar is designed to guide participants through the 2018 IFC requirements related to fire protection systems (Chapter 9). These requirements include suppression systems, standpipe systems, automatic fire alarm systems, automatic detection systems and additional fire protection assemblies.

Instructor: Roger Axel (ICC)

THURSDAY 2/16/2023

Part 1: Atrium vs. Vertical Openings

Session 364

This course will outline the differences between atrium and vertical openings in the building code for various occupancies. We will review the general requirements for enclosure, allowable openings, fire protection features, means of egress and standards applicable to each.

**Instructor: Natalie Buckman
(Summit National Fire Consulting)**

Part 2: Atrium Smoke Control

This presentation will review the code requirements and development of the rational analysis, smoke control design parameters, application of computational fluid dynamic (CFD) analysis and present project examples for smoke control in atriums.

Instructor: Matt Smith (Summit National Fire Consulting)

Part 3: Smoke Control Systems

This presentation will cover three types of Smoke Control Systems required for new construction and found in existing buildings. Smoke control systems are the least understood and often the least maintained life-safety systems in buildings due to their complex design and physical factors affecting their operation. This course will help attendees identify system requirements and code provisions that drive their implementation.

Instructor: Chris Leaver (Summit National Fire Consulting)

Part 4: Smoke Control Systems Inspection and Testing Requirements

This presentation will cover the requirements for Inspection and Testing of Smoke Control Systems and will be present project examples to reinforce the learning.

Instructor: Chris Leaver (Summit National Fire Consulting)

Track 6 continued on next page

FRIDAY 2/17/2023

UL Solutions – Research Update

We have witnessed an increase in overnight delivery and consumer demand with rapid shipping. This has led to the expanded use of automated storage and retrieval systems that rely on computer-based robots to manage stock and order fulfillment. The densities of these automated systems present a challenge to responding fire fighters. This presentation will provide an overview of a project conducted at UL Solutions involving a research partnership between an industry leader, AutoStore, and the fire service to develop tactical considerations for the fire service when responding to a fire in an AutoStore System.

Session 365

The second portion of the program will provide an overview of the research conducted at UL Solutions as it relates to Battery Energy Storage Systems and the development of UL 9540A, a test methodology developed to assess the behavior of BESS when exposed to fire.

Instructor: Sean DeCrane
(International Association of Fire Fighters)

TRACK 7 – MECHANICAL AND PLUMBING

MONDAY 2/13/2023

2018 IMC Design and Plan Review **Session 371**

This course reviews and analyzes selected requirements for commercial design and plan review of mechanical systems. The course will provide participants with a thorough understanding of key areas of the 2018 International Mechanical Code (IMC) and related standards.

Instructor: Jerry Flanik (ICC)

TUESDAY 2/14/2023

2018 IMC Boilers and Hydronic Piping **Session 372**

This course reviews and analyzes selected requirements for boilers & hydronic piping systems. Summarize the purpose and content of Boilers and Hydronic Piping contained in the 2018 IMC. Describe the intent and application of Boilers and Hydronic Piping sections within the 2018 IMC. Explain the application of Boilers and Hydronic Piping regarding the 2018 IMC through inspection, plan review and enforcement.

Instructor: Jerry Flanik (ICC)

WEDNESDAY 2/15/2023

2018 UPC Overview **Session 373**

This seminar will provide an overview of the key sections and basic principles of design, plan review and inspection in accordance with the 2018 Uniform Plumbing Code. Instructor-led examples and applications will enable participants to better understand the various functions of plumbing systems correlated to the requirements of the 2018 UPC.

Instructor: Jerry Flanik
(Associated Consulting Solutions, Inc.)

THURSDAY 2/16/2023

HVAC Duct Construction/ Fire Dampers and Kitchen Grease Duct Fabrication **Session 374**

This dynamic hands-on session will cover SMACNA's HVAC Duct Construction Standards 4th edition; Fire Damper Manual & Kitchen Grease Duct Fabrication Tables. Specific topics will include basic duct construction (round, rectangular, flat oval), duct material types, duct joints, tapes/sealants, flexible ducts as well as the basics for proper fire/smoke damper installation & service. Field fabricated kitchen grease duct systems will also be covered.

Instructor: Eli Howard (SMACNA)

FRIDAY 2/17/2023

Part 1: Carbon Monoxide Incidents and Investigations **Session 375**

This presentation will review basic information about the characteristics and production of carbon monoxide (CO) and incident statistics. Brief discussion about the current rules, codes and standards requirements. Examples of CO incidents and investigations.

Instructor: Matthew Wilber (Engineering Systems, Inc.)

Part 2: Reviewing Heating and Cooling Load Calculations

This presentation will cover the basics of reviewing heating and cooling load calculations. We will look at the components of a load calculation, review common load calculation summaries that may be submitted, and discuss how to verify the accuracy of the calculations.

Instructor: Andrew Rynda (Engineering Systems, Inc.)

Part 3: When Building Codes Aren't Followed

This presentation will cover some examples of unique equipment/building failure scenarios, and how proper adherence to building codes could have prevented or mitigated the impacts incurred.

Instructor: Kyle Faircloth (Engineering Systems, Inc.)

All classes are on-site with a select few that are also Virtual – .

TRACK 8 – MOSTLY MINNESOTA FOCUS

MONDAY 2/13/2023

AM – Part 1: State of the State

Session 381

The year 2022 marks 50 years that the Minnesota State Building Code has existed to regulate the safe use of buildings and structures. To commemorate this milestone, this presentation will discuss the development of the code and the code enforcement profession since its beginning in 1972; highlight the progress that has been made to date; discuss the future of the industry including technologies, codes, building materials and more.

Instructor: Scott McLellan (MN DLI)

AM – Part 2: State of the State

This session provides an overview of Minnesota's residential building contractor licensing requirements and DLI's enforcement authority. It is designed to encourage attendee participation with time for questions and answers.

Instructor: Sean O'Neil (MN DLI)

PM – Part 3: MN Accessibility

This course will cover some of the basics of the 2020 Minnesota Accessibility Code that are most often asked about for commercial buildings and public accommodation facilities, as well as a basic overview of the scoping and technical criteria for Group R occupancies, such as how to calculate the quantity of units required to comply with accessibility provisions and basic design criteria.

Instructor: Karen Gridley (MN DLI)

TUESDAY 2/14/2023

AM: Code Administration and Enforcement for "Modular" Buildings

Session 382

This program is intended for MN code officials and designers of Interstate Industrialized Building Commission (IIBC) Modular Buildings. Attendees will learn to identify the different types of manufactured structures and the roles and responsibilities of the Local Code Official and IIBC Evaluation and Inspection Agency for permitting, plan review, field inspection and corrective actions for IIBC structures. Attendees will hear how a modular building manufacturer works to comply with the requirements of the IIBC program and the building code.

Instructors: Scott Wheeler (MN DLI) and Aaron Dennis (Rise Modular)

PM: Apartment HVAC

This course will entail HVAC plan review for R-2 occupancies. We will look at the different ventilation requirements for 3 story and less, over 3 stories and other Mechanical/Fuel Gas Code plan-review questions that arise during the plan-review process.

Instructor: Chris Rosival (MN DLI)

WEDNESDAY 2/15/2023

AM: An Overview of the Framing Provisions of the Minnesota Residential Code

Session 383

This presentation will address the framing of new single-family homes, additions, remodel projects and fire-damaged structures. It will focus on both conventional framing and engineered components, submittal documents, framing limitations, treated lumber and fasteners. The intended audience is building inspectors, plan reviewers, designers, general contractors and framing contractors.

Instructor: Peter Kulczyk (City of Champlin)

PM: 2020 Minnesota Residential Code Q & A

The course content is based on questions and conversations posed to the presenter over the course of the year. Subject items are intended to generate discussions and share thoughts among attendees. Course content utilizes examples, scenarios, exercises, and references to the 2020 Minnesota Residential Code. The course content is intended for building officials of varying experience levels.

Instructor: Richard Lockrem (MN DLI)

THURSDAY 2/16/2023

Mixed Types of Construction Based on IBC 510.2, Podium Provisions

Session 384

Note: This session is appropriate to all of ICC Region III; it is not limited to Minnesota.

This class is beneficial to individuals that deal with "Podium Construction." Plan reviewers, building inspectors, fire inspectors, architects and other code enforcement individuals will be presented with "everyday" issues and concerns that we face with dealing with these multi-use, mixed type of construction projects.

Instructor: Larry Farris (BKV Group)

Track 8 continued on next page

TRACK 8 – MOSTLY MINNESOTA FOCUS (CONTINUED)

FRIDAY 2/17/2023

AM – Part 1: Measuring Building and Duct Leakage, Blower Door, and Duct Blaster – The How and Why Session 385

This presentation will address both house and duct leakage testing as it relates to the 2015 Minnesota Energy Code. When blower door and duct blaster test is required; and why testing is important, as it can identify potential problems that effect comfort, safety, energy saving and building durability will be discussed.

AM – Part 2: Residential Make-Up Air – Options for Sizing and Install

This segment will discuss negative air pressure in regard to exhaust systems in residential structures. Chapter 5 in the Minnesota Mechanical Code Exhaust Systems will be referenced, particularly the 501 sizing tables. We'll show common make-up air equipment and install details. This session comes from many years of field experience regarding building pressure concerns.

AM – Part 3: A Field Perspective on Balanced Ventilation, HRV and ERV

The third segment will make reference to our current balanced ventilation State of Minnesota Energy Code. This is from a 35-year perspective on experience gained from the field. We'll discuss how new technology has changed and improved balanced ventilation systems. We'll talk about what happens when ventilation code is not followed and what we have learned about ventilation/ IAQ as it relates to COVID.

Instructor: Mike Wilson (Dakota Supply Group)

PM: Sunrooms & Garages: Understanding Minnesota's Energy Code Provisions

Sunrooms are a bit unique when relating to other aspects of residential construction. In some instances, they seem to serve as outdoor space, in other cases indoor space, and still at other times they seem to serve both purposes. In addition to sunrooms, garages raise questions when heat is added. How they are constructed is one factor to consider, but probably the most confusing aspect is if, when, and how the Energy Code applies to these types of projects. If you are a designer, contractor, or code official and are not quite clear how the Energy Code relates to residential sunrooms and garages, please join us for this half day discussion. We will dive into the Residential Energy Code to see what it has to say about these structures. Examples and designs will be reviewed and discussed. This program will not address structural aspects or engineered designs.

Instructor: Steve Shold (MN DLI)

VIRTUAL SESSIONS

TRACK	Monday Feb. 13	Tuesday Feb. 14	Wednesday Feb. 15	Thursday Feb. 16
Track 1 Code Enforcement and Professional Development	SESSION 311 Formulating an Effective Code Enforcement Program <i>Cecilia Sevilla (ICC)</i>			SESSION 314 Legal Aspects of Code Administration <i>Linda Pieczynski (ICC)</i>
Track 3 Building: General Topics	SESSION 331 2018 IRC Essentials – PMG <i>Roger Axel (ICC)</i>	SESSION 332 2021 IRC Essentials <i>Sandra Hyde (ICC)</i>	SESSION 333 2021 IBC Essentials <i>Steve Thomas (ICC)</i>	
Track 7 Mechanical and Plumbing			SESSION 373 2018 UPC Overview <i>Jerry Flanik (ACS)</i>	

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TRACK	Monday Feb. 13	Tuesday Feb. 14	Wednesday Feb. 15	Thursday Feb. 16	Friday Feb. 17
Track 1 Code Enforcement and Professional Development	SESSION 311 Formulating an Effective Code Enforcement Program <i>Cecilia Muela (ICC)</i>	SESSION 312 Effective Communications <i>Cecilia Muela (Monarch Consulting)</i>	SESSION 313 AM – Building Inspections and Code Enforcement – A Powerful Duo PM – Safety: In the Field and Self-Care <i>Cecilia Muela (Monarch Consulting)</i>	SESSION 314 Legal Aspects of Code Administration <i>Linda Pieczynski (ICC)</i>	SESSION 315 Complaint Management <i>Cecilia Sevilla (ICC)</i>
Track 2 Building: Understanding the Basics	SESSION 321 Administrative/PT Scope of Practice (DAY ONE) <i>Gil Rossmiller (Shums Coda)</i>	SESSION 322 Administrative/PT Scope of Practice (DAY TWO) <i>Gil Rossmiller (Shums Coda)</i>	SESSION 323 AM – Understanding Residential Building Code PM – Exterior Wall Systems <i>Russell Thornburg (Thornburg Code Services)</i>	SESSION 324 2018 Residential Plan Review <i>John Gibson (ICC)</i>	SESSION 325 A Day in the Life of an Inspector <i>Andy Schreder (Rum River Consultants)</i>
Track 3 Building: General Topics	SESSION 331 2018 IRC Essentials: Emphasis on Mechanical, Fuel Gas, Plumbing (Combination Inspector Focus) <i>Roger Axel (ICC)</i>	SESSION 332 2021 IRC Essentials <i>Sandra Hyde (ICC)</i>	SESSION 333 2021 IBC Essentials <i>Steve Thomas (ICC)</i>	SESSION 334 Part 1: Overview of Engineered Wood Part 2: Lateral Load Paths Part 3: Wall Bracing <i>Ron Nuttall (APA)</i>	SESSION 335 AM – Types of Construction and Application PM – 2018 Allowable Heights & Areas <i>Doug Thornburg (ICC)</i>
Track 4 Building: Essentials to Know	SESSION 341 2018 IBC Performing Non-Structural Plan Review (Day One) <i>John Gibson (ICC)</i>	SESSION 342 2018 IBC Performing Non-Structural Plan Review (Day Two) <i>John Gibson (ICC)</i>	SESSION 343 AM – 2018 Special Building Types, Features, and Hazards PM – 2018 Mixed Occupancies <i>Doug Thornburg (ICC)</i>	SESSION 344 2018 IBC Assembly Spaces <i>Steve Thomas (ICC)</i>	SESSION 345 2018 IBC Care Facilities <i>Roger Axel (ICC)</i>
Track 5 Building: Specific Concerns	SESSION 351 Codes for Decks – DAY 1 Part 1: Existing Structure Part 2: Ledgers & Lateral Loads <i>Glenn Mathewson (BuildingCodeCollege.com)</i>	SESSION 352 Codes for Decks – DAY 2 Part 3: Down the Load Path Part 4: Features and Finishes <i>Glenn Mathewson (BuildingCodeCollege.com)</i>	SESSION 353 2018 IRC Advanced Wood Wall Bracing <i>Sandra Hyde (ICC)</i>	SESSION 354 Roof to Soil: The Essentials – Structural Building Load Transfer, Design, and Inspection (Advanced) <i>Russell Thornburg (Thornburg Code Services)</i>	SESSION 355 2018 IRC Performing Residential Building Inspections <i>John Gibson (ICC)</i>

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TRACK	Monday Feb. 13	Tuesday Feb. 14	Wednesday Feb. 15	Thursday Feb. 16	Friday Feb. 17
Track 6 Cross Functional: Building and Fire	SESSION 361 Fire-Resistive Construction <i>Rich Walke (Creative Technology)</i>	SESSION 362 Part 1: Protecting Penetration in Fire-Resistance-Rated Construction Part 2: Protecting Joints and Voids in Fire-Resistance-Rated Construction <i>Rich Walke (Creative Technology)</i>	SESSION 363 2018 IFC & IBC Fire Protection Systems <i>Roger Axel (ICC)</i>	SESSION 364 Part 1: Atriums & Vertical Openings Part 2: Atrium Smoke Control Part 3: Smoke Control Systems Part 4: Smoke Control Systems Inspections & Testing <i>Various Instructors (Summit Fire)</i>	SESSION 365 UL Solutions – Research Update <i>Sean DeCrane (AIAFF)</i>
Track 7 Mechanical and Plumbing	SESSION 371 2018 IMC Design and Plan Review <i>Jerry Flanik (ICC)</i>	SESSION 372 2018 IMC Boilers and Hydronic Piping <i>Jerry Flanik (ICC)</i>	SESSION 373 2018 UPC Overview <i>Jerry Flanik (ACS)</i>	SESSION 374 HVAC Duct Construction, Fire/Smoke Dampers, and Kitchen Grease Ducts <i>Eli Howard (SMACNA)</i>	SESSION 375 Part 1: Carbon Monoxide Incidents Part 2: Heating and Cooling Load Calcs Part 3: When Codes Aren't Followed <i>Wilber/Rynda/Faircloth (Engineering Systems, Inc.)</i>
Track 8 Mostly Minnesota Focus	SESSION 381 AM – Part 1: State of the State <i>Scott McLellan (MN DLI)</i> AM – Part 2: Lic and Enforcement <i>Sean O'Neil (MN DLI)</i> PM – Part 3: MN Accessibility <i>Karen Gridley (MN DLI)</i>	SESSION 382 AM – Modular Construction <i>Aaron Dennis (Rise Modular), Scott Wheeler (DLI)</i> PM – Apartment HVAC <i>Chris Rosival (MN DLI)</i>	SESSION 383 AM – Residential Framing <i>Peter Kulczyk (City of Champlin)</i> PM – 2020 Minnesota Residential Code Q & A <i>Richard Lockrem (MN DLI)</i>	SESSION 384 Mixed Construction (IBC 510) Podium Provisions <i>Larry Farris (BKV Group)</i>	SESSION 385 AM Part 1: Building and Duct Leakage, Blower Door Part 2: Make-Up Air Part 3: Balanced Ventilation <i>Mike Wilson (Dakota Supply Group)</i> PM – Sunrooms & Additions and the Residential Energy Code <i>Steve Shold (MN DLI)</i>
Special Events	AMBO Board Dinner Meeting (Reservations Required)	AMBO Membership Meeting Dinner Outing	Trade Show ICC Bookstore Region III Chapter Meeting	ICC Bookstore	

REGISTER ONLINE at www.iccsafe.org/RegionIII

Early bird pricing ends Friday, 6 January 2023

2023 ICC Region III Upper Great Plains Educational Institute

February 13-17, 2023



Download Your Session Handouts



NOTE: Printed handouts will not be available on-site.

Materials will be provided on-site only for those sessions with a notice that the instructor will bring handouts.

Easy and Convenient to access your session materials!

Handouts will be available for download on February 3, 2023.

Visit: [Region III Handouts Page](#)

Password: 23region3

Session Handouts are Organized by Track, then Day, then Session Number & Title.

Download and Print to bring to class or to retain for reference.

Follow along on your device during the session.

Thank you for your support of AMBO, ICC, and Region III!