

In-Person Classes by Glenn Mathewson

Based on the International Residential Code

All courses are available for scheduling as Live Webinars
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TWO-DAY CLASSES

IRC, Chapter 3 (Two-day course. See 90 min webinars for more descriptions)

The 30 sections of Chapter 3, Building Planning, provide the necessary criteria for the design and construction of homes. This section is critical for design parameters such as geographic criteria, minimum room sizes, and construction geometry in features like stairways and guards. Chapter three sets the general requirements for how a home must be built for the safe use and navigation of the occupants and must be understood prior to applying the more specific code provisions in the following chapters. Learn or refresh the basics of home design in this unique course that covers all the sections of Chapter 3, some in depth and some with a general overview.

- Learn the required geometry of guards, handrails, emergency openings and room design.
- Understand the minimum fire-protection provisions for home construction.
- Be introduced to many different fundamentals of home design and construction.

Building Codes for Building Decks (four half-day classes)

This two-day course is designed as four four-hour courses, described below, and can be provided individually as stand-alone classes. The two-day class provides a comprehensive explanation of how the 2018 International Residential Code regulates deck construction, from initial design to project completion.

1) Decks, The Existing Structure

This course is related to how a new deck will interact with an existing site and building. Building, plumbing, mechanical, electrical, and fuel-gas codes must all be considered when designing a deck to effectively work with a home.

- Know how to identify building systems and components located on the exterior of a typical home.
- Learn how to safely design a deck that will work with emergency escape and rescue windows.
- Understand the various ways an improperly designed deck can negatively and hazardously affect building systems of the existing structure.

2) Decks, Ledgers & Lateral Loads

This course reviews the basics of a deck structural system, including tributary loading and the load path. Lumber grading, treatment, and decay issues are discussed as well as hardware and hanger corrosion resistance requirements. Ledger connections and lateral load resistance is explained in detail, including practices necessary for a variety of exterior claddings. This class is complimented well with Decks, Down The Load Path where details of the other structural members are explained.

- Understand the limitations of the IRC's prescriptive design criteria and when alternatives are necessary.
- Comprehend the concept of a load path and how to determine the tributary load on a bearing point.
- Realize the significance provisions related to the attachment of a deck ledger to a home.

3) Decks, Down the Load Path

From the decking to the foundation, this course covers, in detail, all segments of a deck load path, except for ledgers and lateral loads. New IRC tables specific to deck joist and beam spans and deck foundations are

explained with a deep understanding allowing for interpolation and use on more creative deck designs. This class is complimented well with Decks, Ledgers and Lateral Loads.

- Understand the basics of deck foundation design and construction.
- Understand the variety of manufactured decking products and how to ensure their proper installation.
- Realize the potential flexibility of the joist and beam span tables not obvious in the code provisions.

4) Decks, Features & Finishes

Decks often contain many features typical inside a home, such as stairs, ramps, landings, guards, and handrails. These features, as well as common deck amenities, are explained in detail. Photos and graphics provide a clear understanding of the specific geometry required for the safe use and navigation of these features. Code provisions discussed in this class are useful in applications other than just decks.

- Understand the differences and similarities of guards and handrails.
- Learn the strict geometric requirements of various stairways, including straight, winder and spiral, and the uniformity required of their components.
- Understand how to work with the code more successfully through an understanding of some basic administrative principles related to adoption and enforcement.

FULL-DAY CLASSES (7 to 8 hours)

Deck Inspection and Plan Review

Previously not specifically addressed in the code, residential decks have seen tremendous attention in the last few IRC editions. Generally thought of as simple structures and often constructed by ill-prepared homeowners or new contractors, the truth of their nuances is now clearly revealed in the recent standards. This course starts with a common under-detailed plan submission and walks through all aspects of the load path from the decking to the foundation. Useful for plan reviewers, inspectors, and contractors and taught by a former deck builder turned inspector who contributed to the creation of nearly all the new provisions. Abandon the guesswork of deck code compliance relied on in past years and get up to speed on how the IRC now provides for these common structures.

- Understand the limits of prescriptive design for decks.
- Learn the information that should be asked for during plan review.
- Be more confident to review and inspect residential decks according to the latest code provisions.

Single Family Homes, from Application to Occupancy

Construction of single-family, detached homes is quite a process. From planning to application to execution to inspection, there are many steps along the way. Like a dance, a beautiful performance comes from smooth steps timed by everyone in the group. Mutual understanding and respect for each professional involved and a good grasp of the choreography helps ensure no one trips up. Learn the steps of building a new home in this brand-new class. No formal wear required!

- Have been immersed in a photographic journey through all parts of new home construction.
- Better understand the inspections required for new home construction.
- Understand the complexity of coordinating over 100 individual tradesmen involved in house construction.

Energy Conservation Construction

Energy conservation isn't all about insulation and the energy code. There are many ways that framing, plumbing, electrical, and other installations can enhance the energy performance of a home. Dimes add up to dollars and dollars add up to dinner, just the same, small gains in energy conservation can add up to lots of saved energy. Learn how to keep energy in mind throughout the whole construction process, long before the insulation crew arrives.

- Understand code provisions that reduce thermal bridges and increase insulation in the exterior envelope, such as single-ply and box headers, as well as single top plate construction and 24-inch-on-center wall spacing.
- Think outside the box about how various trades can enhance energy performance.
- Learn the complexities of providing certain air barriers and why they are essential to thermal performance.

PMGE Fundamentals

This class is helpful for everyone in the construction industry, as it explores the reasoning and science behind many plumbing, mechanical, fuel-gas, and electrical code provisions. Whether a contractor or inspector, cross training in these specialized trades offers a better understanding of the work performed and how they "work".

- Realize the old saying "\$hit runs downhill" is completely false.
- Understand how natural draft venting works.
- Trust that there are sensible reasons for many seemingly arbitrary code provisions.

Furnaces & Water Heaters

Furnace and water heater installations and replacements are ubiquitous in every house. Many new contractors and inspectors are often tasked with their installation and inspection, and many homeowners tackle these projects on their own. Not as simple as often believed, these appliances are connected to many systems of a house, including electrical, venting, gas, water, and air distribution. This class explores, in depth, all the various code provisions regarding their installation.

- Understand the large list of requirements for a water heater temperature and pressure relief valve.
- Learn the various venting methods: natural, induced, and forced.
- Gain a greater respect for the various complications regarding their installation and inspection.

HALF-DAY CLASSES (3 to 4 hours)

Building Codes, Purpose, Process and People

This course uncovers how the code works and the people involved. It begins with some fun history leading up to the current International Codes and follows with an enlightening explanation of how the code is developed and adopted into law. Before applying the provisions, this course lays the foundation of how to navigate the code and how the code is administered as a minimum standard. The course concludes with sessions about key players in the use of the code and offers perspective from each of them in hope for a team effort in applying the codes across our communities.

- Be introduced to some of the history of codes and how they got to be what they are today.
- Learn how the code is developed, adopted, administered, and navigated. Learn the rules of the rules.
- Gain perspective by seeing what it's like working with code behind the plans examiner's desk, through the inspector's eyes, and in the contractor's boots.

Building Codes for Basement Finish

Finishing a basement requires nearly all the trades and construction required for a new house, short of foundations and roofs. However, many applications are unique when transforming the former guts below a home into finished living space. Building, plumbing, mechanical, fuel-gas and electrical provisions involved with these projects will be reviewed in detail.

- Understand and identify the building components in the basement that need evaluation and consideration prior to concealment.
- Be introduced to code provisions that regulate the overall design of the finished space.
- Learn how emergency escape and rescue openings must be handled.

Asphalts Shingles & The Code

This class is designed for inspectors, roofers, foremen, general contractors, remodelers and other professionals involved with roofs or roofing. Asphalt shingle installation requirements are discussed in detail. A general overview of standards and manufacturer requirements rolled asphalt products, tile and clay shingles, and wood shingles is also provided. Common issues related to roof modifications and additions will also be discussed.

- Have a better understanding of residential roofing systems.
- Be introduced to various problems that can occur in connecting a new roof to an existing roof.
- Learn how to inspect asphalt shingles for proper installation.

Don't Mess with Egress

Getting people out of buildings safely is a core objective of any building code, and that includes the path through a house to the exterior doors and emergency escape and rescue openings (egress windows). This course reviews all the code provisions related to movement through and out a house, including doors, halls, stairs, and escape windows, to include decks over windows and door landings on the exterior.

- Learn all the details of emergency escape and rescue openings, including various methods for designing a deck over a below grade egress window.
- Understand the regulations related to stairways, doors and landings.
- Be introduced to the various requirements related to the addition of an exit door to home.

Porch Roof Framing

Like decks, porch roofs are often considered easy construction and are typically attempted by new contractors or weekend warrior homeowners. However, the truth is quite the contrary. Porch roofs require significant evaluation depending on the extreme variety of their design. This class reviews the code application of these projects from the foundation to the roofing.

- Understand the significant differences between constructing with a ridge board or a ridge beam.
- Learn the various ways to connect a porch roof to an existing house.
- Realize the limitations of prescriptive, structural design and when engineered design is necessary.

90-MINUTE IN-PERSON CLASSES AVAILABLE AS WEBINARS

Residential Fire Sprinklers, Lessons from Implementation (90-min)

Hear the story of one jurisdiction's long journey of implementing mandatory, residential fire sprinklers soon after the provisions were added to the IRC. This is not a comprehensive class about sprinkler codes. Rather, it casually shares the surprises, the bumps in the road, and the domino effect that you don't learn reading the code. Learn many lessons of implementation from an instructor who lived through the process and learned by mistake and oversight.

- Be more prepared to implement residential fire sprinkler system requirements in their jurisdiction.
- Understand issues that don't reveal themselves on the sprinkler plans.
- Realize the team effort required by the building plan reviewer, inspector, fire department, water department, contractor, and tradesmen.

Common IRC Mistakes (90 min)

There are some long-standing code provisions that just never seem to be fully understood and they're other new ones that don't seem to be catching on. This class picks out the top ten and explains in detail why they are important not to miss.

- Understand the differences between fire blocking, firestopping, and draft stopping.
- Be or reminded of the nuances of stairs, guards, and handrails.
- Learn the differences between a ridge board and a ridge beam.

The Plague of Roof Replacements (90 min)

When calamity strikes and insurance is footing the bill, the permit approval and inspection process gets turned upside down. Hail and windstorms can make a mess for building departments. Learn how to handle the difficult questions and situations that arise when roofing gets out of control and the building department gets stuck between the homeowner, insurance agent, and contractor.

- Understand the limits of the code and when "policies and procedures" must be implemented.
- Learn how to carefully answer the specific and contradictory questions asked by insurance agents and homeowners.
- Understand how to stay non-bias and pure to the code during tremendous pressure from the other involved parties (owner, insurance, and contractor).

Chapter 3 of the IRC (9 90-min. sessions)

The 30 sections in Chapter 3, Building Planning, of the International Residential Code provide the necessary criteria for the design homes. This section is critical for design parameters such as geographic criteria, minimum room sizes, and construction geometry in features like stairways and guards. Chapter three sets the general requirements for how a dwelling must be designed and built for the safe use and navigation of the occupants. This webinar series offers nine stand-alone webinars, that together, cover every section and first subsection of IRC Chapter 3, some in depth and some with a general overview. These 90-Minute webinars can be presented individually or as a 9-part series.

Alarms and Nature (90-min)

AIA: IRC3-90-18-8

For the IRC to be useful across the US, chapter three provides a number of provisions that differentiate the various climatic and geographic conditions that buildings must endure. The "Nature" segment of this webinar lays out all the variables of the environment that affect code provisions. Coupled with this are the two required alarms that protect us from poisons that can be present in any climate, smoke and carbon monoxide. Sections 314 and 315 provide the necessary details for the proper installation and thus successful use of these critical alarms. Provisions of the referenced standard, NFPA 72 will also be discussed.

- Discover the only two retroactive code requirements found in the IRC.
- Learn the details of proper smoke alarm installation.
- Understand how the IRC can apply to a variety of climates.

Egress and Guards (90-min)

AIA: IRC3-90-18-1

The first half of section 311 spells out the basic requirements for the path of egress from a dwelling and is discussed in this session. Complimenting those codes, is section 312 for guards and window fall protection. These subjects are intended to provide a safe walking path for occupants throughout a dwelling, including when near the edge of a floor or at an upper floor window opening.

- Learn the distinction between a guard and handrail and the various guard designs that can be code compliant.
- Discover the details that regulate the path of egress through a house.
- Understand the specifics of guard design limitations and the freedoms within the limits.
- Realize the flexibility allowed in exterior door landing height.

Stairways (90-min)

AIA: IRC3-9-18-3

Section 311 includes a wealth of provisions related to the path of people out of a dwelling. This session focuses on the subsections of 311 that regulate the design and construction of stairways and ramps. These features are critical for safe egress from basements and upper floors, and thus, from treads to landings and handrails to headroom, there are a lot of specifics to cover.

- Learn the specific provisions related to graspable handrails.
- Discover the strict geometric requirements of stairway design.
- Understand the flexibilities permitted in landing designs.

Escape and Rescue (90-min)

AIA: IRC3-90-18-2

Emergency escape and rescue is a critical passive safety concept for dwellings. Section R310 and its many subsections lay out the design requirements necessary for this core life safety function. Though the general requirements for “egress windows” are relatively understood, this session reveals the specific details that often are not.

- Learn the minimum required sizes for escape and rescue openings.
- Discover the recent code modifications regarding existing and new basements.
- Understand how to handle below grade openings around decks.

Fire and Water (90-min)

AIA: IRC3-90-18-4

The IRC provides a number of passive fire protection requirements in section 302, such as limiting space between structures through fire separation distance, and limiting the rapid spread of fire through fireblocking, draft stops, and fire stopping. Also provided is Section R313 and the requirement for active fire suppression through the use of automatic fire sprinkler systems.

- Learn the difference between fireblocking, draft stopping and fire stopping.
- Discover the various materials permitted for fireblocking.
- Understand the limitations of construction close to a property line.

Sizes and Services (90-min)

AIA: IRC3-90-18-5

This session combines a number of different chapter 3 sections under two different titles. “Sizes” reveals the various design requirements related to ceiling height, bathrooms, and the use of mezzanines and habitable attics

to add an additional habitable floor. “Services” combines together the various short sections related to features such as garages and elevators to pools and storm shelters. Sections 309, 319, 321, 323, 324, 326 and 327 are discussed.

- Learn when a fourth floor isn’t a fourth story above grade plane.
- Review the unique clearances around bathroom fixtures.
- Discover the nuances of minimum ceiling height in various places.

Safety Glazing (90-min)

AIA: IRC3-90-18-6

Windows are a necessity of every dwelling but depending on where they are located can provide more than just natural light. Glass located in “hazardous locations” are those areas where the probability of human contact is higher. In these areas, safety glazing is required to minimize injury. Where are these hazardous locations and what is safety glazing? It’s not just tempered glass. Find out in this session that is packed with glazing provisions.

- Learn what safety glazing is and how to verify it is present.
- Discover the hazardous locations in the code where safety glazing is required.
- Understand the reasoning behind provisions related to glazing (glass).

Health and Human (90-min)

IRC3-90-18-7

Sections 303 and 306 provide the minimum requirements for the comfortable and sanitary environment within a dwelling. Provisions related to illumination, heating, and sanitation are discussed in depth. Also necessary for a safe environment is appropriate accessibility for those with mobility challenges, and this is discussed as provided in section 320.

- Learn the minimum requirements for sanitation in a dwelling.
- Explore the various requirements for conditioned air through heating and ventilation
- Discover the extent for which the IRC regulates accessibility of dwellings.

Materials (90-min)

AIA: IRC3-90-18-9

A handful of sections in Chapter 3 regulate the use of wood and foam plastic materials. 317 and 318 spell out the requirements necessary to protect wood materials for a long service life against the degradation from decay and termites. Section 316 is dedicated to foam plastics and the special consideration necessary with its use.

- Discover the major recent changes related to ground contact rated materials.
- Learn the limits of minimum code requirements related to wood decay resistance.
- Be introduced to the various methods of termite resistance.

Everything But the Deck (90-min)

Today’s homeowners are demanding more from their decks, as the interest in “outdoor living” continues to grow. Contractors involved with elaborate outdoor living spaces need more knowledge than just how to build a deck. Lighting, fire-pits, new doors, sinks, hot tubs, and other deck amenities require additional design and building code considerations. Understanding what to expect from such installations not only makes for a smooth project, but also can provide confidence and knowledge in the design and sale of amenities.

- Learn how to properly design common deck amenities to work with the deck, home, and building codes.
- Understand considerations that must be made in preparation for immediate or future amenity installations.
- Realize the hazards and liabilities associated with the installation of common deck amenities.

Decay and Corrosion of Decks (90-min)

Being located in the exterior environment, decks experience many conditions that interior construction does not. From decay of lumber to corrosion of hangers, new codes and standards address these issues in ways often overlooked or not understood. Which products must be used, is dependent on the varying exterior conditions as well as how the deck is constructed. Learn the facts from codes, standards, manufacturers' requirements, and science.

- Understand when ground-contact lumber must and should be used for construction.
- Learn the variety of corrosion resistant hangers and hardware and how to select the appropriate products.
- Reveal the provisions in the AWWA M4 standard for field treatment of preservative treated lumber.

Attaching Ledgers to Cantilevers (90-min)

In decades past, many decks were attached to the face of cantilevered floors from the home, but this practice is clearly taboo today and prohibited by building codes unless engineered connections within the floor are used. None-the-less, many doors exit from these cantilevers and many decks need to wrap around them. Learn multiple ways to solve this major change in deck construction practice, satisfy the code, and avoid the cost of site-specific engineering.

- Understand why thoughtless attachment to cantilevered floors is an uncertain and unsafe practice.
- Learn how to build through the cantilever and the flexibility the code offers.
- Learn the code implications of framing a series of beams around a cantilevered floor.
- Understand the importance of starting deck design at the foundation.

Deck Foundation Flexibility (90-min)

On the other end of the ledger, the foundation system transmits about half the loads on the deck to the earth. Though commonly just a hole filled with a couple bags of cement, the IRC and the market of alternative systems provide a lot of flexibility in design. Instead of hearing another story of what the code tells you to do, learn the variety the code allows you to do. Frost protection, expansive soils, bearing capacity, and soil type will be discussed. The IRC provides a handful of different footing designs, allows for the approval of alternative deck foundation systems on the market.

- Learn the intent of the prescriptive designs and be better prepared to evaluate alternative ones.
- Understand the minimum depths of foundations and methods of protecting from frost heave.
- Discover the new IRC methods for sizing deck footings.
- Realize the complications in prescriptive deck footing design and why it doesn't work well across the nation.

Deck Design for Hot Tubs (90-min)

Whether installed before, with, or after a deck is built, hot tubs have a lot of building and electrical codes that have nothing to do with connecting it to power. Does the electrician or electrical inspector understand safety glazing provisions in the building code. Does the builder or building inspector know that metal guards near hot tubs are an electrical issue? All four of these professionals, plus designers and even hot tub owners should understand the clearances required to lighting, receptacle outlets, switches, glass, service conductors, and more. Learn the codes related to the hot tub placement and the deck around it, then let an electrician take it from there.

- Learn the minimum and maximum distances and the exceptions regarding electrical equipment near hot tubs.
- Discover how metal guards and other metal features of the deck can become an electrical hazard near hot tubs.
- Realize the code implications related to where a hot tub is located.
- Understand the need for cross-training when designing hot tubs into decks.

The Most Prescriptive Post (90-min)

AIA: BCBD-21-90-1

Until recently, 4x4 posts were used to support decks with little thought to how much they carried or how tall they were. The 2015 IRC shocked many with a maximum 8 ft. height and the 2018 continued the chaos with a limit that appeared to go down further down. Finally, in the 2021 edition, the post sizing table is all grown up and ready to accurately size deck support posts based on the deck design. Other new provisions were added for post connections, but they aren't as precise as the code so specifically presents them to be. Learn the details and the design behind the new 2021 post provisions.

- Understand the evolution of the post sizing table from the 2015 IRC to the 2021 IRC.
- Be comfortable utilizing and approving the 2021 IRC for post sizing as an alternative to previous editions.
- Realize how the 2021 IRC can be used to size posts for two-level decks and porch roofs.
- Discover the reality behind the specific post-to-beam provisions in the IRC.

Minimum Code for Budget Decks (90-min)

Description: The International Residential Code is the “minimum” standard of construction. A better understanding of this minimum allows for “above code” practices to be more well recognized, but it also allows for consumers on the lower end of budget to still safely enjoy their homes. Learn some tips and tricks straight from the code that can keep basic deck construction affordable. Do you really need all that metal hardware and double-ply beams? Do you have to fill the entire hole with concrete? Building to the minimum allows more people the chance for a backyard deck and summer barbecues.

- Learn what metal hardware is optional
- Recognize the value of affordable construction and how it equates with safety
- Distinguish how to lower the cost of deck construction and offer a new deck to more potential buyers

Deck Lateral Loads and Codes (90-min)

The IRC provides two optional methods for resisting deck lateral loads pulling on a house, but no guidance on when you need them. Though a good start to addressing something long overlooked, a connection alone, is not a structural design, and the code provides nothing else for decks. Imagine a braced wall panel on a house with hold-down anchors but no bracing. This course gets well outside the code to discuss fundamentals and design clues that must be considered in all deck designs. Learn what the code provides for deck lateral design and what it doesn't.

- Understand the true nature of why deck lateral load connections were included in the IRC
- Discover what's missing in deck lateral load design and ideas to provide it.
- Be introduced to the fundamental concepts of deck lateral design and research that was conducted on the subject.

The Maddening of Cladding and Flashing (90-min)

The IRC provides substantial provisions for attaching a deck ledger to a wood framed house, but only after you're looking at the wall sheathing. Before this, the exterior cladding must be removed, and that creates a whole mess of variables and variety. From cement board to engineering wood to vinyl siding and anchored veneer, hardly any ledger connection will be the same. Don't forget the flashing that must work with the ledger, cladding and even the joists. Learn how the code handles the terminations and clearances of various claddings and where other resources are necessary.

- Learn the minimum clearances above decking to various claddings.
- Understand why brick veneer cannot support ledgers.
- Discover the minimal guidance in the code for ledger flashing.

The Details of the Decking (90-min)

Decking is the first structural element in a deck design, though it often doesn't get the respect the joists and beams receive. We just step all over it. Bad puns aside, the decking does a lot more than may be realized. Exterior wood decking was recognized in the code in 2015, to include 5/4 and 2x decking, including fastening provisions. Sometimes simple things, like decking, can have details we may not know.

- Identify the various forces that decking must resist and how it resists them.
- Hear the new 2021 IRC provision that already applied but weren't known.
- Learn how decking you're not standing on is still supporting you.

Everything But the Deck (90-min)

Today's homeowners are demanding more from their decks, as the interest in "outdoor living" continues to grow. Contractors involved with elaborate outdoor living spaces need more knowledge than just how to build a deck. Lighting, fire-pits, new doors, sinks, hot tubs, and other deck amenities require additional design and building code considerations. Understanding what to expect from such installations not only makes for a smooth project, but also can provide confidence and knowledge in the design and sale of amenities.

- Learn how to properly design common deck amenities to work with the deck, home, and building codes.
- Understand considerations that must be made in preparation for immediate or future amenity installations.
- Realize the hazards and liabilities associated with the installation of common deck amenities.

Decks, Preparing for the Permit Process (90-min)

This course highlights the information that should be collected from a site and included in the plans when submitted for a deck building permit. Suggestions for preparing the construction documents (plans) and general expectations of building departments will be discussed.

- Know what information to collect from the site and include on their plans.
- Know how to increase their chance for plan approval.
- Understand what is expected on construction documents by a building department.

Decay and Corrosion of Decks (90-min)

Being in the exterior environment, decks experience many conditions that interior construction does not. From decay of lumber to corrosion of hangers, new codes and standards address these issues in ways often overlooked or not understood. Which products must be used is dependent on the varying exterior conditions as well as how the deck is constructed. Learn the facts from codes, standards, manufacturer's requirements, and science and build not just a code-compliant deck, but also a long-lasting one.

- Understand when ground-contact lumber must and should be used for construction.
- Learn the variety of corrosion resistant hangers and hardware and how to select the appropriate products.
- Be introduced to the science of metal corrosion and why galvanization protects metal.

Behind the Scenes of Sizing Beams (90-min)

AIA: BCBD-21-90-2

In under a minute of looking at the IRC deck beam design table, you'll probably think you have it all figured out, but you'd be wrong. The footnotes in the 2021 edition give you clues that there is much more to it, but don't let the fine print fool you. There are some huge implications to them, and ones designers and builders should want to hear. They apply the same to the 2018 edition...but that edition failed to mention them. As with all prescriptive design, there are load and design assumptions that limit the design choices provided. However, with an understanding of what's happening behind the scenes, building authorities can gain comfort in using a few tricks to maximize the use of the code for prescriptive design for their communities.

- Understand the load assumptions used to derive the maximum beam spans and adjustments the 2021 IRC allows.
- Learn how to use the IRC in an alternative manner to design beams loaded from both sides.
- Understand the difficulty of providing pre-engineered beam design in the IRC due to variables in the load path.
- Realize the IRC provides methods to fine tune prescriptive design.