

#### **Membership Meeting – September 2025**

Delta Hotels Milwaukee Northwest Menomonee Falls, Wisconsin September 23, 2025

## Wisconsin code update

presented by

#### Mark S. Graham

Vice President, Technical Services
National Roofing Contractors Association (NRCA)





#### Membership Meeting – Feb. 2021

February 18, 2021 Zoom meeting

### <u>Code changes – What's happening,</u> <u>when and how do they affect you</u>

presented by

#### Mark S. Graham

Vice President, Technical Services
National Roofing Contractors Association (NRCA)



www.marksgraham.com/presentations.html

Wisconsin has updated its building and energy code...
impacting roofing contractors



State of Wisconsin

#### Department of Safety and Professional Services







Self-Service Professions Programs ▼ Boards/Councils ▼ Rules/Statutes ▼ News/Media About DSPS ▼

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### Commercial Buildings

The Division of Industry Services (DIS) reviews plans for public buildings and places of employment prior to construction for compliance with the state statutes and building codes and sets standards for energy efficiency and heating, ventilating, and air conditioning systems. This includes multifamily buildings.

DIS coordinates with local certified municipalities which provide plan review and inspection services for certain types of buildings. Inspection certifications are administered by Industry Services. Building materials are evaluated for conformance with standards. To become a local certified municipality, please visit the Delegated Agents page.

Questions regarding the commercial building code can be sent to DSPSSBbuildingtech@wisconsin.gov.

#### Updates to the WI Commercial Building Code

The Wisconsin Commercial Building Code will adopt the 2021 ICC as of September 1, 2025. DSPS is preparing Wisconsin Amendments to accompany the updated WI Commercial Building Code. See the **DSPS presentation** to learn more about the amendments.

#### STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES

IN THE MATTER OF RULEMAKING PROCEEDINGS BEFORE THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES ORDER OF THE
DEPARTMENT OF SAFETY AND
PROFESSIONAL SERVICES
ADOPTING RULES
(CLEARINGHOUSE RULE 23-007)

#### ORDER

An order of the Department of Safety and Professional services to repeal SPS 361.02 (4). 361.03 (15) (b), 361.31 (2) (b) 2. b., (2) (c), 362.0202 (2) (h), and (Note), 362.0504, 362.0506, 362.0603, 362.0705, 362.0713, 362.0902, 362.0903 (4) (a) 2., (b), (5) (cm), (7) (b), (12), (16) and (17), 362.0904 (3), 362.0915, 362.1004, 362.1010, 362.1013, 362.1029, 362.1206, 362.1210 (2m), 362.1506, 362.1507, 362.1607, 362.1613, 362.1700, 362.1807, 362.1808, 362.1908, 362.2503, 363.0401 (5), 363.0403 (5), (6), (8), (9), (10), and (11),363.0406, 363.0407 (1) and (2), 363.0408, 363.0502, 363.0503 (1), (2), (3), and (4), 363.5402, 363.5502, 363.5503, 364.0300 (1) (Note), 364.0506 (2) (c), 364.0507 (2), 364.0802, 364.1500 (1m), (2m), and (Note), 366.0605, 366.0902 (2), 366.0903, 366.0904, 366.1204, and 366.1301 (2); to renumber SPS 362.0202 (1) (a), 362.0202 (2) (f), 362.0202 (2) (i), 362.1405, 362.3307, 366.0603, and 366.0909; to renumber and amend SPS 362.1101. 362.1107. 362.1111. 362.1203. 362.1204. 362.1503. 366.0400. 366.0600, 366.0606, 366.0609, 366.0804, 366.0809, 366.0810, 366.1010, 366.1011, 366.1012, 366.1205, and 366.1401; to amend SPS 305.627 (1), SPS 361.03 (12) (intro) and (12) (a), (13) (b), (14) (intro), (a), (b), (c), (d), and (Note), 361.03 (15) (g), 361.04 (12), (13), (13g), and (14), 361.05 (1), (2), (3), (4), and (5), 361.30 (1) (b) 1., 361.31 (2) (b) 1., (3) (a), (3) (a) (Note 1), 361.32 (1) and (2), 361.36 (1) (a), (b), (c), (d), (e), (f), and (g), 361 Subchapter V (title), 361.45, 361.46 (title), (1), (2) (intro) and (b) and (f) and (g) and (3), 361.47 (1) (a) and (b), (2) (title) and (a) and (b), (3) (a) 1, and 3., (b) 3., (5), (6) (a) and (c), (d) 1., (e) and (f), 361.48 (intro.), 361.485 (1) and (2), 361.51 (8) (b), 361.60 (5) (c) 3., 362.0308, 362.0310, 362.0412 (1) and (2), 362.0415 (1), 362.0423, 362.0903 (1), (2), (3), (4) (a) (intro.), and 1., (5) (a), (b) 1., (Note 1), (9), (10) (a), and (14), 362.0907 (3), (5) (a), and (b), 362.1006 (1) (intro.) and (b), 362.1015, 362.1020 (intro) and (2), 362.1603 (1) and (3), 362.1802, 362.1806, 362.1810 (8), 362.2211, 362.2510, 362.2902 (1) (a) 2., (d) and (e) and (2) (a), 362.3001 (1) and (2), 362.3002 (1) (a) 2. b., 362.3500 (3), 362.3600 (1), 363.0101, 363.0302, 363.0303 (1) (Note), (2) (a) 1., 2., 3., and 4., 363,0401 (1) (b), (2), and (3), 363,0403 (1), (2), (3) (intro.) and (b), (4), and (7) (intro.), 363.0600 (1), (2), (3), and (4), 363.5101, 363.5302, 363.5303 (1) (Note), (2) (a) 1., 2., 3., and 4., 363.5403 (2), 363.5405, 363.5600 (1), (2), (3), and (4), 364.0300 (1), 364.0309 (1) (table) footnote a., 364.0401 (2) (b), 364.0402 (table), 364.0403 (5) d. 1., 364.0501 (3) (intro.) and (6), 364.0505, 364.0606 (1) and (2), 364.0701, 364.1500 (3), 365.0800, 365.0900, 366.0101 (4) (b) and (c), 366.0701, 366.0702 (1) and (2), 366.0902 (1), 366.1201 (1) and (2), and 366.1301 (3) and (4); to repeal and recreate 361.31 (1)

# **Noteworthy revisions**

• IBC 2015 to IBC 2021 with "Wisconsin-isms":

Notable Wisconsin-isms:

- Automated sprinkler systems
- Smoke and fire dampers
- Ch. 17 exception removed
- IECC 2015 (IECC 2009 tables) to IECC 2021

# Roofing-related "Wisconsin-isms"

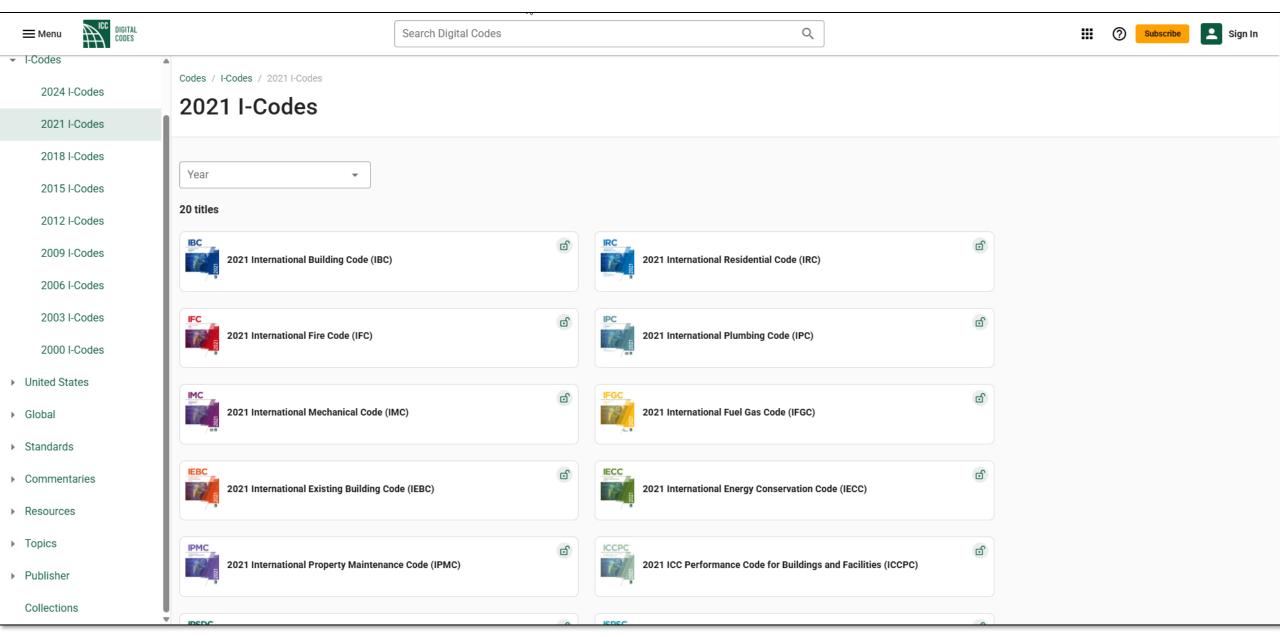
SPS 362.1502 Secondary Roof roof drainage. These are department rules in addition to IBC section 1503.4 s. 1502: Design and installation of roof drainage systems shall comply with IBC section 1503 s. 1502 and all applicable provisions in ch. SPS 382.

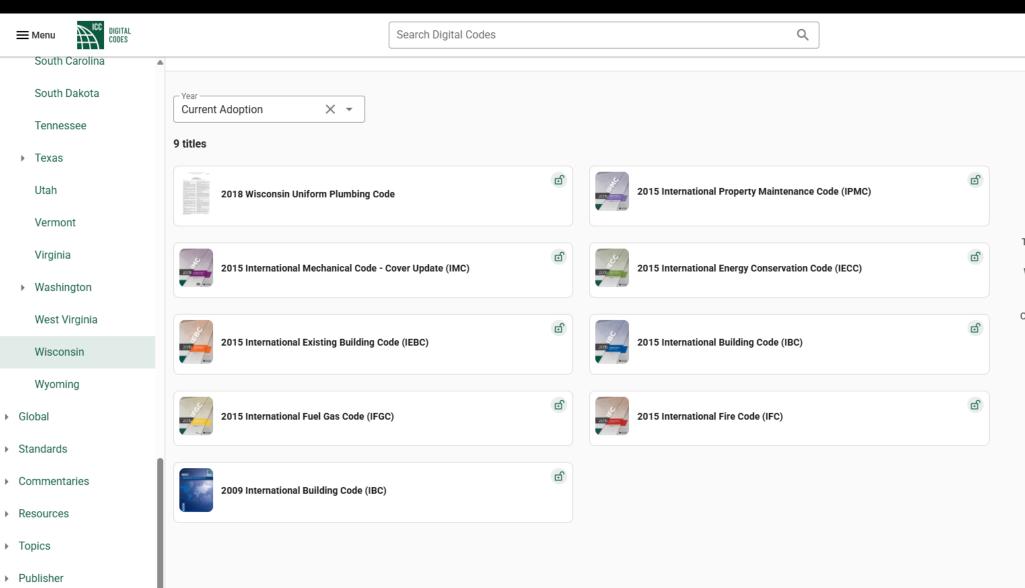
SECTION 96. SPS 362.1506 is repealed.

SECTION 97. SPS 362.1507 is repealed.

### The I-codes are available online... and they're free

codes.iccsafe.org





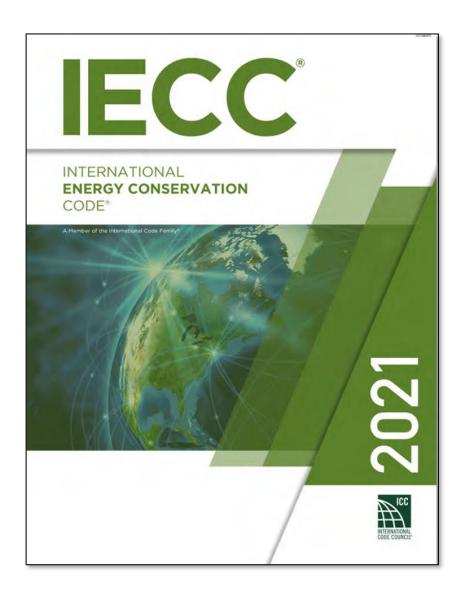
Collections



#### Wisconsin

The Wisconsin Department of Safety and Professional Services (DSPS), is responsible for the adoption of Wisconsin's building, fire safety and energy efficiency codes. Amendments to adopted ICC codes include: Buildings And Strructures Heating, Vengting And Air Conditioning Fuel Gas Appliances Energy Conservation Energy Conservation (IECC Amendments) Existing Buildings

## **2021 IECC**



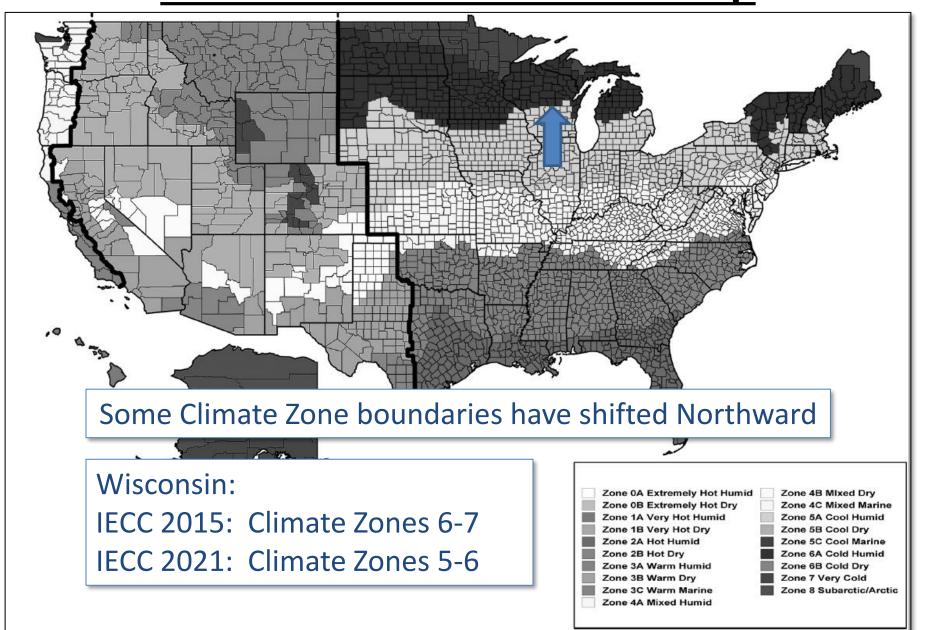
### Broad-scope change:

Revised Climate Zone map

### Roofing-related changes:

- Reformatted roofing provisions
- Rewrote the U-factor approach to also apply to roof assemblies
- Revised tapered insulation criteria:
  - Average R-value method
- Clarified language on roof re-covers

# **2021 IECC – Climate zone map**



# **R-value increase**

#### **IECC 2009:**

Insulation entirely above deck: Climate Zone 6: R-20

Climate Zone 7: R-25

• Metal buildings: R-13 + R-19

• Attics and other: R-38

#### **IECC 2021:**

• Insulation entirely above deck: R-30

• Metal buildings: Climate Zone 5: R-19 + R-11

Climate Zone 6: R-25 + R-11

• Attics and other: R-49

# **2021 IECC – Tapered insulation**

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**C402.2.1.1 Tapered**, **above-deck insulation based on thickness**. Where used as a component of a roof/ceiling assembly *R*-value calculation, the sloped roof insulation *R*-value contribution to that calculation shall use the average thickness in inches (mm) along with the material *R*-value-per-inch (per-mm) solely for *R*-value compliance as prescribed in Section 402.1.3.

"...average thickness..."

C402.2.1.2 Minimum thickness, lowest point. The minimum thickness of above-deck roof insulation at its lowest point, gutter edge, roof drain or scupper, shall be not less than 1 inch (25 mm).

"...not less than 1 inch..."

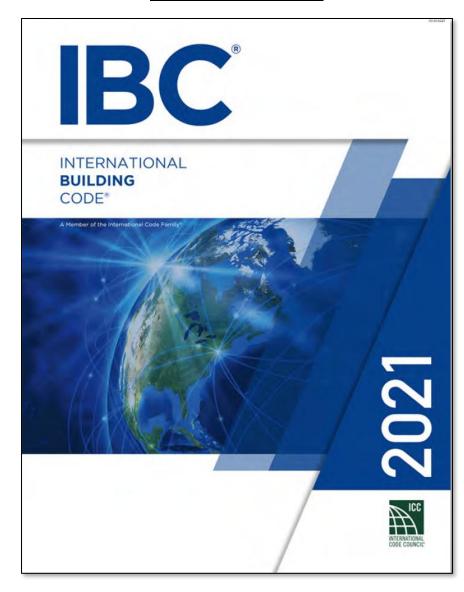
C402.2.1.3 Suspended ceilings. Insulation installed on suspended ceilings having removable ceiling tiles shall not be considered part of the minimum thermal resistance (*R*-value) of roof insulation in roof/ceiling construction.

C402.2.1.4 Joints staggered. Continuous insulation board shall be installed in not less than two layers and the edge joints between each layer of insulation shall be staggered, except where insulation tapers to the roof deck at a gutter edge, roof drain or scupper.

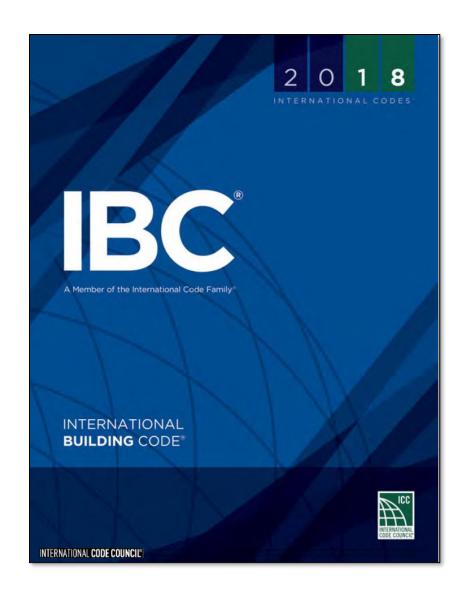
## **IECC 2021**

Air barrier requirements and roof reflectivity requirements (none) are largely the same.

# **2021 IBC**



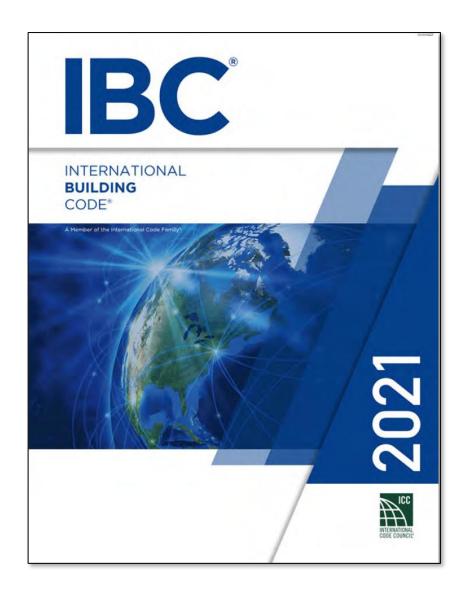
## **2018 IBC**



### Roofing-related changes:

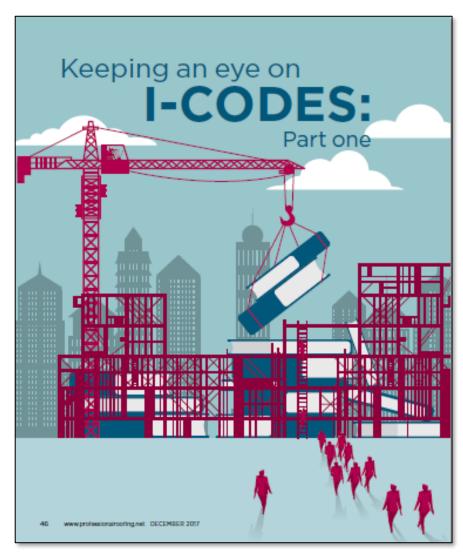
- Use of ASCE 7-16 and V<sub>ULT</sub>
- Metal shingle wind testing
- Reformatted underlayment requirements
- Rooftop PV requirements
- Protective roof coating clarification in reroofing

## **2021 IBC**



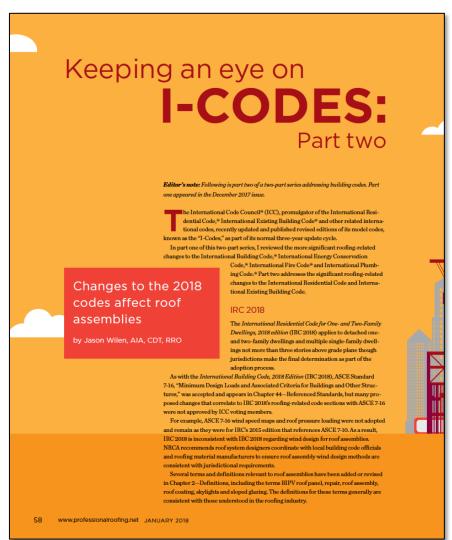
### Roofing-related changes:

- Reformatted single ply section
- Reformatted and new liquidapplied membrane requirements
- Reformatted and new roof coating requirements
- New aggregate-surfacing requirements
- New gutter testing requirement (ANSI/SPRI GT-1)
- Roof zones required in Construction Documents



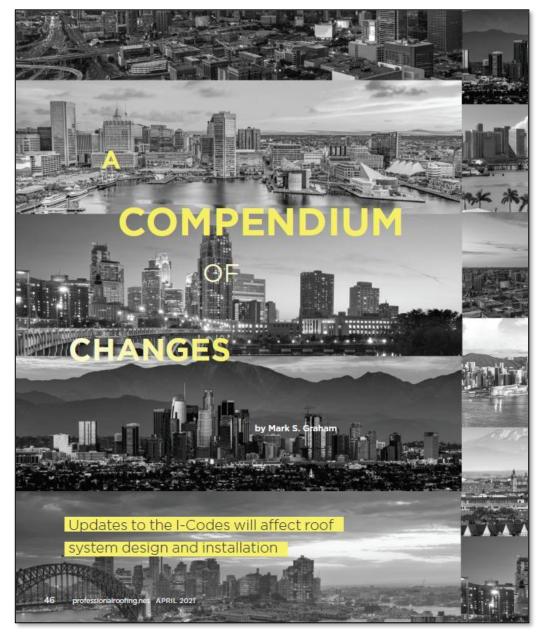
Professional Roofing, December 2017

Link to access this article



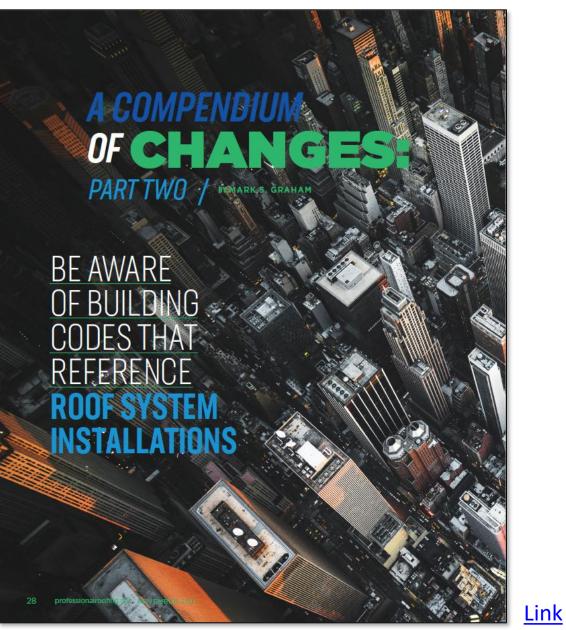
#### Professional Roofing, January 2018

Link to access this article



**Professional Roofing** 

April 2021



**Professional Roofing** 

November 2021

When leaving the existing insulation or replacing it in kind, what does the code say about that?

The Department of Safety & Professional Services has revised the initial applicability to be all projects submitted after NOVEMBER 1. It was October 1.

How does it impact current projects-or projects soon to start?

If building is insulated below, what's the requirement for above deck?

What do we do if the heights around the existing roof doesn't allow for the required R-value?

What is the R-value requirement for our area now (Milwaukee)?

# **Questions...** and other topics

REGISTER NOW FOR NRCA'S PREMIER LEGAL CONFERENCE, LEGALCON LIVE 2025



#### **EVENT/LEGAL**

### **LEGALCON LIVE 2025**

OCT. 8-10, 2025 **OMNI HOTEL CHICAGO** 

Members: \$1,255; each additional registrant from the same company: \$1,055

**Nonmembers:** \$1,575; each additional registrant from the same company: \$1,375

**Guests:** \$205 (another individual who will not attend the conference)

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#### **Low-Slope Roofing Systems**

Low-slope roofing systems require careful planning, material selection, and detailing to ensure long-term performance and weather resistance. This course covers everything from wind design and insulation to membrane systems, coatings, and moisture control. Participants will gain hands-on insights into roofing codes, warranties, and maintenance strategies to avoid common failures and extend roof life.

#### Learning Outcomes:

- · Identify and apply best practices for designing and installing bituminous, single-ply, and liquid-applied membrane systems.
- Understand insulation types, moisture control strategies, and code requirements for low-slope roofing.
- Evaluate roofing details, warranty provisions, and maintenance programs to ensure long-term system performance.

#### Who Should Attend:

- Contractors, architects, and materials specifiers involved in roofing design and construction.
- Commissioning authorities, product manufacturers, and owner's representatives overseeing roofing projects.
- Anyone responsible for the maintenance, repair, or re-roofing of low-slope roofing systems.

#### Select from 2 upcoming dates:

Date	Format	ID	Fee	<u></u>
☑ Dec 2-3, 2025	Ք Face-to-Face Madison, WI	D572	\$1,095 🍑	ENROLL NOW
☑ Dec 1-2, 2026	용 Face-to-Face Madison, WI	D755	\$1,095	ENROLL NOW





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#### Mark S. Graham

Vice President, Technical Services
National Roofing Contractors Association
Two Pierce Place, Suite 1200
Itasca, Illinois 60143

(847) 299-9070 mgraham@nrca.net www.nrca.net

Personal website: www.MarkGrahamNRCA.com

LinkedIn: linkedin.com/in/MarkGrahamNRCA

#### Mark S. Graham

www.marksgraham.com

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Additional information about my work is available on NRCA's website, www.nrca.net.

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