

Premier technical guidance

NRCA's new manual provides up-to-date best industry practices for membrane roof systems

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The NRCA Roofing Manual:
Membrane Roof Systems

2023



NRCA recently released *The NRCA Roofing Manual: Membrane Roof Systems—2023*, the latest volume in the four-volume roofing manual series.

This volume replaces the 2019 volume and provides current NRCA best practice guidelines for the design and installation of membrane roof systems, including built-up, polymer-modified bitumen, liquid-applied, and thermoset and thermoplastic single-ply membrane roof systems.

What's new

The first set of changes made to any new manual are to establish consistency throughout all volumes. For example, changes to text, figures and details in previous editions not already added as interim updates are considered. This can be as simple as updated dates to standards or as extensive as global changes to terms or images used throughout the manual.

Next, changes are made to update each chapter. NRCA's Manual Update Committee, which, for this manual revision, comprises NRCA members with expertise in membrane roof systems, takes on the

responsibility of updating the manual. Following are changes to the 2023 manual.

Chapter 1

Roof system configurations have been expanded to include more options for liquid-applied systems. Self-adhering EPDM also was added.

Chapter 2

New and updated information has been added regarding steel roof deck design and single-ply roof membrane attachment and comes from the American Iron and Steel Institute, Steel Deck Institute and Factory Mutual.

This chapter also includes new information regarding gypsum and updates to relevant standards referenced for wood roof decks.

Chapter 3

Language has been updated to reflect the latest versions of ASHRAE 90.1, "Energy Standard for Buildings Except Low-Rise Residential Buildings," and the *International Energy Conservation Code,® 2021 Edition*.

Chapter 4

Changes to the insulation chapter include a revised recommendation for joint stagger distance for multilayer insulation installations and commentary about polyisocyanurate board thickness.

The relative dimensional instability of thicker boards and recommendations for in-service R-values and designer specification of polyisocyanurate also are discussed.

More in-depth language has been included about thermal bridging, and a new section was added to discuss vacuum-insulated panels.

Clarifications also were made to address the final surface slope of crickets and saddles of a tapered insulation system.

Chapter 5

The roof membranes chapter now includes expanded language for liquid-applied systems and flashing and provides a new figure for the application of low-rise foam adhesives.

Chapter 6

The fasteners section was renamed the attachment section to reflect the growing options other than fasteners.

Chapter 7

The surfacings chapter includes new language about reflectivity and reflectivity standards, as well as a discussion about the sun-setting of ENERGY STAR.[®]

Chapters 8 and 9

The main changes to these chapters are updated references to standards.

Chapter 10

Noteworthy changes to this chapter include saddle figure updates to improve drainage and added language about energy code requirements for rigid board insulation. Construction details including roof drains were revised, and liquid-applied details were expanded.

Other changes

An appendix addressing electronic leak detection was added, and revisions were made to the wind uplift and chemical compatibility appendices.

Additional qualifying language was added to the appendices for temporary roof systems and flood testing of roof systems.

And finally, code compliance for membrane roof assemblies now provides information regarding the 2021 I-Codes.

Download it for free

When designing and installing membrane roof systems, be sure you're incorporating the most current best practices gathered from roofing professionals across the industry. NRCA members receive free access to electronic versions of The NRCA Roofing Manual, including *The NRCA Roofing Manual: Membrane Roof Systems—2023*. Members can download the entire manual series as PDF documents at nrca.net. Hard-copy versions of all NRCA manuals also are available for purchase. 📄📱🌐

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The four-volume set

The NRCA Roofing Manual



Since 2007, The NRCA Roofing Manual four-volume set has been published as an individual volume each year on a four-year repeating cycle. The manual represents NRCA's in-depth, best industry practices and technical information concerning the design, materials and installation of quality roof systems.

The current version now consists of the following four volumes:

- *The NRCA Roofing Manual: Membrane Roof Systems—2023*
- *The NRCA Roofing Manual: Architectural Metal Flashing and Condensation and Air Leakage Control—2022*
- *The NRCA Roofing Manual: Steep-slope Roof Systems—2021*
- *The NRCA Roofing Manual: Metal Panel and SPF Roof Systems—2020*