MODULAR ADVANTAGE

Modular Building Institute

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SPECIAL EXPANDED EDITION

BLUEPRINTS FOR THE FUTURE

Peek behind the curtain with the architects and engineers defining – and *redefining* – commercial modular construction.

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MODULAR BUILDING INSTITUTE

Modular Manufacturing & Construction

Design & Engineering — Risk Management Strategies & Insurance Considerations

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Thanks to the leadership of forward-thinking industry pioneers, modular construction has shifted from the margins to the mainstream. However, this shift in where and how construction occurs has introduced new — and often heightened — engineering and design risks. In today's environment, these risks are compounded by interconnected digital platforms, proprietary designs, and delays caused by technology outages. If these risks are not proactively managed throughout the project lifecycle, the result can be significant financial harm to a company's balance sheet.

There are no shortcuts: risk reduction and mitigation require Rigorous front-end planning and "future-proof" module design.

Key Engineering & Design Risk Mitigation Strategies

The following risks are, unfortunately, common in modular projects — and smart players deploy mitigation strategies early and often:

- ✓ Dimensional Tolerance — addressed with 3D BIM coordination and strict quality control at all interfaces
- ✓ Code Misapplication — prevented by conducting deep code reviews at project inception with the Authority Having Jurisdiction (AHJ)
- ✓ Material Mis-Specification — avoided through comprehensive materials reviews
- ✓ Permitting Delays — mitigated through early, proactive engagement with permitting bodies
- ✓ MEP Integration Conflicts — resolved through a central clash detection study
- ✓ Foundation/Module Mismatch — controlled via built-in tolerance buffers and predetermined "hold points"
- ✓ Life/Fire Safety — managed with third-party reviews and early code consultant involvement
- ✓ Internal Coordination — strengthened through operational alignment and effective inter-team communication
- ✓ Rigging & Transit Failures — prevented by vetting logistics teams and requiring eye-sign-offs from multiple experienced professionals

Known Consequences — real consequences of Engineering and Design failures. Below are examples of actual legal disputes where alleged poor design and engineering in modular construction led to costly outcomes:

- Graphic Builders LLC v. RCM Modular Inc. (MA) — $1.8 million verdict. Defective units included non-compliant electrical and plumbing systems, misaligned exteriors, and leaking windows
- Global Modular Inc. v. Kadena Pacific Inc. (CA) — $1.07 million awarded. Water damage resulted from inadequate weatherproofing and improper protection during delivery and installation
- 330 Grand LLC v. Modular Steel Systems Inc. (NY) —

Over $250,000. Incomplete design and engineering services led to failure to meet contractual obligations

- Burcher v. Custom Builders Express LLC (VA) — $1.71 million wrongful death judgment. A home was improperly fastened to its foundation, violating code and resulting in a fatality
- Centrella et al. v. Ritz-Craft Corporation (VT) — $94,262. Code violations and poor design led to elevated carbon monoxide levels and water intrusion

Professional Liability (Errors & Omissions) Insurance — What You Should Know

Professional Liability (also known as E&O) is one policy to be crafted by an experienced broker. Unlike Workers' Compensation (statutory insuring agreement), no two E&O policies are the same. Six critical considerations:

✓ Customization — E&O policies vary widely. Coverage must match your operations precisely

✓ Application as Warranty — your signed application becomes part of the policy. Material misstatements or omissions can void coverage

✓ Exclusions Matter — review limitations carefully to avoid coverage gaps

✓ Limits & Triggers — know how your limits apply and when

> If risks [associated with design and engineering] are not proactively managed throughout the project lifecycle, the result can be significant financial harm to a company's balance sheet.

✓ Defined Terms — policy words in bold are defined; know what they mean

✓ Ask Questions — your broker should walk you through all relevant implications

The structure of every E&O policy:

✓ Declarations Page — declares the Named Insured, policy term, premium, retroactive date, policy limits, and — most importantly — the definition of "Professional Services." If all services are not reflected here, coverage may be void. You end up with a contract to an argument

✓ Insuring Agreement — "Subject to all terms and conditions of this policy, the Company will pay on the Insured's behalf damages and claim expenses in excess of the deductible arising out of a claim first made against the Insured during a policy year, and reported to the Company in writing during that policy year, by reason of an actual or alleged act or omission including personal injury, in the performance of professional services, where such acts or omissions occurred or are alleged to have occurred on or after the retroactive date"

✓ Conditions — outlines Claims Reporting, Allocation, Cancellation, Subrogation, and more

✓ Exclusions — typically 20+, such as "Insured vs. Insured" claims, contractual liability, or trade secret disputes. Between the review of your application and the issuance of the policy, insurance carriers frequently place exclusionary endorsements onto your policy to protect their shareholders, not your company

The "Ifs" of E&O — Are You Covered?

✓ If you hire design-build professionals: consider Owner's Protective Professional Indemnity (OPPI). If you're unfamiliar, ask your broker why

✓ If subcontractors are involved: will your E&O respond to allegations tied to their work — or are you exposed?

✓ If General and Professional Liability are bundled: is there a

shared aggregate limit and is this truly sufficient?

- ✓ If your policy is Claims-Made: know your retroactive date. Are current limits ($1M?) sufficient for work dating back to that time, since and going forward?
- ✓ If Defense Costs are within the limit of liability: understand how this reduces available indemnity protection
- ✓ If your policy has a "Hammer Clause": Be sure you fully understand the implications on your settlement authority

Final Thoughts

In 30+ years of guiding firms through engineering and design liability, I've seen the modular industry grow more complex — and more exposed. It's impossible to distill everything into one article, but I hope you've found this snapshot valuable.

I welcome your questions and conversations. Reach out to discuss how we may help you protect your projects and your business.

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