



May 21, 2021

Exploratory Committee for Code Updates
Fire Prevention & Building Safety Commission
Indiana Department of Homeland Security
Indiana Government Center-South
302 W. Washington Street, Room E208
Indianapolis, IN 46204

Via Email: buildingcommission@dhs.in.gov

RE: Recommendation to Update Codes to the 2021 IBC, IRC, IECC
Importance of IBC 13 – Building Code Chapter 14 Exterior Walls

Thank you for your continued work reviewing the need for Indiana to update its suite of building codes. Following the discussion at the April 27th meeting of the Exploratory Committee for Code Updates, the American Chemistry Council's [North American Modern Building Alliance](#) (NAMBA) is writing to encourage an update to the Indiana Building Codes inclusive of the latest model code provisions in the 2021 International Building Code (IBC), 2021 International Residential Code (IRC) and 2021 International Energy Conservation Code (IECC). As we have written before, an update to the State's building code would also provide many benefits including strengthening the fire safety requirements applicable to exterior wall assemblies of commercial buildings. It would also result in better coordination of residential and commercial building code moisture control requirements and improved thermal envelope requirements for improved durability and efficiency of building envelopes with expanded flexibility that will allow builders and design professionals to achieve acceptable solutions.

The American Chemistry Council and many stakeholders participated in the Indiana Fire Prevention & Building Safety Commission review and update process in 2018 and 2019. At that time the Commission did not make substantive updates to the energy efficiency requirements of the Residential Code and deferred updates to the Commercial energy code. Three years later the model codes have continued to evolve and Indiana is falling further behind. For reference, we attached the most recent of many stakeholder coalition letters sent to the Commission on this topic.

Indiana Should Adopt The 2021 IBC, 2021 IRC, and 2021 IECC
The 2021 I-Codes including the IBC, IRC, and IECC provide a set of minimum requirements developed through a consensus-based public process representing the collective wisdom of thousands of experts from various local jurisdictions,

professions, and industries. Relative to the current State Building Code, there are many essential updates that will result in increases in safety and more durable, efficient, sustainable, resilient, and affordable buildings. Areas of particular note include:

- Wall, Ceiling, and Below Grade Insulation Requirements and Expanded Options
- Air Tightness Thresholds and Testing Requirements
- Ventilation for Healthy Indoor Air Quality
- Coordination of Insulation Strategies and Water Vapor Control
- Better Water Management Practices for Exterior Walls and Wall Coverings
- New and Updated Material Specifications
- New and Updated Performance Standards

The building envelope is the most important aspect of a building with regard to its purpose of protecting occupants and protecting the building structure and contents from the outdoor environment. The 2021 IECC, IBC, and IRC family of codes include new provisions that are better coordinated to minimize risk of unintended consequences in meeting the various building and energy code requirements for the building envelope. Some examples include the following:

2021 IBC Section 1404.3 and 2021 IRC Section R702.7: These sections now include completely coordinated water vapor control provisions that support various insulation strategies available in the 2021 IECC for building walls. Prior editions of the IRC and IBC are incomplete and in some cases limit options that may be more cost-effective or better performing.

2021 IBC Section 2510.6 and 2021 IRC Section R703.7.3: These sections now include completely coordinated water management practice for stucco and adhered masonry veneer exterior wall coverings that provide for enhanced drainage and management of inward vapor drives in moist climates to help avoid damage to moisture-sensitive sheathing materials such as wood structural panels and exterior gypsum sheathing products.

2021 IECC Sections C402 and R402: Building thermal envelope requirements, including insulation and fenestration requirements, have been enhanced in certain climate zones to improve performance of the building envelope. These requirements represent the state-of-the-art for commercial and residential buildings. Combined with the above coordinated provisions of the IBC and IRC, these changes will improve comfort, energy efficiency, and long-term performance of the initial building investment.

2021 IECC Sections C402.5 and R402.4: The 2021 IECC provides additional flexibility for builders and design professionals to meet improved envelope air tightness requirements. Depending on building occupancy and size,

improvements to air tightness requirements will ensure better performing building envelopes and improved energy efficiency and comfort. In addition, where practicable, envelope air leakage testing requirements have been added for certain commercial buildings to ensure the intended performance is achieved using “blower door” testing as commonly used for residential buildings. For residential buildings, new criteria for testing have been added to avoid unintended stringency for smaller homes using testing criteria existing in prior editions of the IECC and IRC Chapter 11.

2021 IECC Section R402.4.1.2 and IRC Section M1505: The IRC and IECC have been clarified and updated to better coordinate requirements for whole house mechanical ventilation. As building envelopes become tighter, it is critical that mechanical ventilation be fine-tuned in order to maintain healthy indoor air quality.

Other significant changes between the 2021 IBC and the 2014 Indiana Building Code include the following:

- 2021 IBC Section 602.4 has been greatly expanded to recognize the new construction Type IV-A, IV-B, and IV-C (mass timber elements) as well as multiple related revisions throughout Chapters 5, 7, and 17.
- 2021 IBC Chapter 8 includes new language clarifying requirements for interior finish materials as well as requirements for newer technologies (e.g. site-fabricated stretch systems and high-density polypropylene).
- 2021 IBC Section 1406.10 regarding use of MCM on exterior walls of Type I–IV construction has been simplified.
- 2021 IBC Section 2603.1.1 is a new section adding reference and requirement for spray-applied polyurethane foam insulation compliance with the ICC-1100 standard.
- 2021 IBC Sections 2603.10 through 2603.13 contain important new information and requirements regarding the use of foam plastic insulating sheathing.

The above examples are only a few of the benefits of adopting these latest codes to better protect building investments through improved durability, energy efficiency, construction flexibility, and resiliency. It is beyond the scope of this letter to lay-out a complete comparison with prior code editions, but such a comparison is recommended due to the many advancements embodied in the 2021 I-Codes.

Indiana Should Revise Current Chapter 14 To Increase Fire Safety

We strongly urge the Committee to update the fire safety provisions of the building code and propose that the State revise Chapter 14 of the State Building Code by removing exceptions to the general requirement that exterior walls containing combustible components be tested in accordance with NFPA 285 (Standard Fire Test

Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components).

The Indiana building code exceptions provide that wall assemblies otherwise required to be tested in accordance with NFPA 285 are exempt from the requirement where the building is fully fire sprinklered. As manufacturers of building products and wall assemblies that are **subject to the building code's regulations** for full-scale fire testing, we believe that deleting these exceptions will further ensure the fire safety of **Indiana's buildings without** negatively impacting the constructability or affordability of buildings.

While Indiana's building code is based on the International Building Code (IBC), the NFPA 285 exceptions represent significant departures from the current model code language as well as the code requirements in other jurisdictions. In recent years, the few other jurisdictions such as Minnesota, Virginia and the District of Columbia that previously had similar exceptions removed them from their building codes. Currently, NAMBA is unaware of any state-wide building code that provides for an exception to the NFPA 285 requirements solely because the building is equipped with sprinklers.

Building fire safety requires a multi-layered approach. This layered approach establishes protections for building occupants and first responders, as well as safeguards against property loss. While the life-saving value of fire sprinklers is unquestionable, passive fire protection measures such as building material standards also contribute toward overall levels of building fire safety. We believe that the full-scale fire testing of wall assemblies for commercial buildings is one of the most important passive fire protection measures included in the building code. Furthermore, as manufacturers of building products, we have made significant investments in fire testing in order to provide the marketplace with a wide variety of fire-tested wall assemblies **that meet today's design needs and owner preferences.**

Sincerely,

David H. Mann, Senior Director
North American Modern Building Alliance
David.Mann@americanchemistry.com
700 2nd Street, NE | Washington, DC 20002
O: (202) 680-0459
www.modernbuildingalliance.us

About the North American Modern Building Alliance

The North American Modern Building Alliance (NAMBA) is a leading voice on the topic of the safe and effective use of plastic building materials in building envelopes. We believe having an informed public and robust codes and standards are essential to supporting a multi-layered approach to building fire safety. Ensuring the appropriate level of fire safe buildings is a joint responsibility of the entire value chain involved in building design, manufacture and construction. We are here to help policy makers, fire safety stakeholders, and the public understand the opportunities and challenges of this important topic. The North American Modern Building Alliance members are:

Atlas Roofing Corp.

American Chemistry Council Center for the Polyurethanes Industry

American Chemistry Council North American Flame Retardant Alliance

BASF Corporation

Carlisle Construction Materials

Covestro

DuPont

EIFS Industry Members Association

GAF

Huntsman

Kingspan

Metal Construction Association

Owens Corning

Polyisocyanurate Insulation Manufacturers Association

Rmax - A Business Unit of the Sika Corporation

October 11, 2019

Mr. Robin Nicoson
Chairman, Fire Prevention and Building Safety Commission
Indiana Government Center South
302 West Washington Street
Indianapolis, IN 46204

Re: Proposed Rule on Indiana Residential Code, LSA Document #19-330

Dear Chairman Nicoson,

We, the undersigned, all expressed strong stakeholder interest in the development of the energy efficiency requirements of the Indiana Residential Code in the attached letters dated August 22, 2018 and in numerous appearances before the Residential Code Committee last year.

As citizens groups and community members, we are concerned and disappointed that the Committee failed to acknowledge the potential life-safety and environmentally-friendly benefits of updating the residential energy code. As experts in the building trades, we know that the people of Indiana want better and that the builders of Indiana can do better. As manufacturers, we know a strong energy code will drive improvements in energy efficiency, conservation, public health and wellness that will create jobs and improve the statewide and local economies.

We urge you to reconsider the proposals submitted by the Responsible Energy Codes Alliance and the Midwest Energy Efficiency Alliance.

Further, we would also urge the Fire Prevention and Building Safety Commission to initiate a rulemaking to update Indiana's commercial building code, which is still based on a 2010 model. An update of the commercial code is long overdue, and will reap benefits from business, environmental and safety standpoint.

Sincerely,

350.org - Indiana- Indianapolis

American Institute of Architects- Indiana

American Chemistry Council

Ball State University Center for Energy Research & Education & Service

Building Performance Institute

Building Performance Association (formerly Efficiency First, the Home Energy

Magazine, and the Home Performance Coalition)

Citizens Action Coalition

Earth Charter Indiana

Energy Efficient Codes Coalition

Hoosier Environmental Council

The Indiana Chapters of ASHRAE: Central Indiana, Evansville, Ft Wayne and

Northern Indiana

Kheprw Institute

Knauf Insulation

Midwest Energy Efficiency Alliance

North American Insulation Manufacturers Association

Owens Corning

Polyisocyanurate Insulation Manufacturers Association

Responsible Energy Codes Alliance

Sierra Club Hoosier Chapter