

2021 IEBC Committee

Report to the NH Building Code Review Board

October 10, 2022

Committee Members:

Jeffrey Trexler, PE, Chair
Arthur Guadano
Michael Hagen, CFM

Beverly Kowalik, PE
Arthur Rose

Tasks:

1. Assist the NH Building Code Review Board (BCRB) in complying with the statutory requirements of RSA 155-A:10, IV by providing a summary of all significant changes to the 2021 *International Existing Building Code* (IEBC), estimating the cost impact of those changes relative to the 2018 IEBC, and documenting the need for the code change.
2. Review current amendments to the 2018 IEBC, determine if they remain applicable under the 2021 IEBC and, if so, to which section(s) of the 2021 IEBC they would apply. Transfer the amendments to the updated NH BCRB Amendment Form and bring forward for consideration by the BCRB.
3. Develop any additional amendments to the 2021 IEBC the Committee feels are warranted at this time and bring them forward for consideration by the BCRB.
4. Prepare a written report to the BCRB summarizing the Committee's findings.

Synopsis:

The primary effort of the Committee was directed toward Task 1. The Committee utilized the International Code Council (ICC) publication *Significant Changes to the International Building Code – 2021 Edition, Part 9 – 2021 International Existing Building Code* as the basis for this work. This publication was provided by ICC with their permission for the Committee to use its contents for the purpose of fulfilling our tasks.

A total of 22 significant changes to the body of the code identified in the ICC publication were reviewed. Included in this report is a summary of these changes, tabulated by chapter, indicating the applicable 2021 code section, applicable 2018 code section, section or subject title, cost impact indicator, and a brief description of the code change. Except for the cost impact indicator, the tabulated information is almost entirely

copied from the ICC publication. The Committee is grateful to ICC for their permission to use and copy the contents as it greatly simplified both the review and reporting process.

The Committee has determined that estimating an average cost in dollars of any particular IBC code change is not practical as an “average” building designed and constructed under the IBC cannot be adequately defined. Each building is unique, with cost affected by numerous variables including location, size, shape, occupancy and use, type of construction, and the nature of building components and materials. Some changes are broad and affect many building types and sizes, others are limited to only a very specific segment of a certain category or size of building or type of construction. Rather than attempt to estimate a cost in dollars, the Committee has chosen to estimate the relative change in cost for a building constructed under the 2021 IEBC compared to the same building constructed under the 2018 IEBC. If a 2021 change included new or additional restrictions or limitations, the impact of that change was deemed to be a cost increase over the less restrictive 2018 code. If a change removed restrictions or provided additional options to meet a previous requirement, the impact was deemed to be a decrease in cost. In the cost column of the tables, the following indicators are used:

- + Cost Increase
- Cost Decrease
- N Neutral, neither Increase or Decrease
- N/A Not Applicable in NH, for climatic or environmental reasons

Under Task 2 the Committee reviewed 9 current amendments to the 2018 IEBC, labeled Exhibits EX-18-01-21 through EX-18-09-21, and consented to bring forward all amendments but EX-18-08-21 and EX-18-09-21 for consideration by the BCRB. A few of the amendments require updating of certain section numbers to corollate with 2021 IEBC section numbers.

Under Task 3, the Committee has not proposed bringing forward any additional amendments to the 2021 IEBC.

Summary of Significant Changes to the 2021 IEBC

Chapter #3: Provisions for All Compliance Methods				
Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
303 Modification	1106	Storm Shelters	N/A	Storm shelter requirements have been relocated to Chapter 3. The required occupant capacity is now limited to the total occupant load of the classrooms, vocational rooms and offices in the school while the maximum distance of travel has been deleted.
306.7.11, 306.7.12 Clarification	305.8.10 305.8.11	Accessible Toilet and Bathing Rooms	N	The requirements for accessible bathing rooms and toilet rooms have been clarified.
307, 308 Modification	502, 503, 803, 804, 1104, 1105	Smoke Alarms and CO Detection	N	The requirements for smoke alarms and CO alarms have been relocated to Chapter 3 to apply to all three methods. In addition, the CO requirements have been revised to recognize the use of both CO alarms and CO detection systems.
309 Addition		Exterior Wall coverings and Envelopes	+	When significant portions of a building's exterior wall coverings or exterior wall envelopes are added or replaced, they must comply with the requirements of Chapters 14 and 26 of the IBC.

Chapter #4: Repairs				
Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
405.2.4 Modification	405.2.4	Snow Loads and Substantial Damage	+	Snow loads must be addressed for the repair of substantial structural damage regardless of whether the damage was a result of snow.

Chapter #5: Prescriptive Compliance Method

Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
502.6, 503.16, 506.6 Addition		Classroom Acoustics	+	Additions, Level 3 alterations and changes of occupancy in educational occupancies are now required to meet the enhanced classroom acoustic requirements of Section 808 of ICC A117.1.
503.4 Modification	503.4	Rooftop Equipment Dead Load	-	The addition of equipment to the roof without a full structural analysis is now permitted when the equipment weighs less than 400 pounds and is less than 10 percent of the total roof dead load.
503.12, 706.3.2 Modification	503.12, 706.3.2	Roof Diaphragm Wind Loads	N/A	The requirements of Sections 503.12 and 707.3.2 have been relaxed so that the evaluation of wind loads is now only required when the ultimate design wind speed is greater than 130 mph.
503.17, 704.3 Addition		Locking in Educational Occupancies	N	Requirements in the IBC have been referenced to provide special allowances for educational occupancies with regard to door lock mechanisms.
506.4, 1011.5.1, 1011.5.6 Addition	506, 1011.4.1, 1011.4	Emergency Escape and Rescue Openings	-	The new Sections 506.4 and 1011.4.6 add allowances during a change of occupancy to use replacement window requirements for the installation of emergency escape and rescue openings.
506.5.3, 1006.3 Modification	506.4.3, 1006.3	Change of Occupancy from Group U or S	+	An upgrade threshold has been added when changing from a Group S or U occupancy to another occupancy.

Chapter #6: Classification of Work

Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
603.1, 704.2, 801.3 Modification	603.1, 704, 801	Furniture and Equipment	-	Furniture, such as office cubicles, reception desks and small bookcases, is exempt from a permit and not intended to be a Level 2 alteration.

Chapter #7: Alterations – Level 1

Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
704.1.1 Addition	704	Seating in Nursing Home Corridors	-	IBC Section 407.4.3 has been referenced allowing, under certain conditions, projections into the corridor within nursing homes.

Chapter #8: Alterations – Level 2

Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
803.2.2, 803.2.3, 803.2.5 Modification	803.2	Sprinklers and Level 2 Alterations	-	Level 2 alteration sprinkler requirements have been revised for buildings and areas with higher hazard or risk.

Chapter #9: Alterations – Level 3

Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
904.1.4 Addition		Sprinklers and Level 3 Alterations	-	Sprinkler requirements for Level 3 alterations have been added to clarify required systems based on the specific occupancy and location of the work area.
904.1.5 Addition		Sprinklers and Level 3 Alterations	N	Sprinkler requirements for Level 3 alterations have been added to clarify required systems based on the specific occupancy and location of the work area.
904.1.6 Addition		Sprinklers and Level 3 Alterations	-	Sprinkler requirements for Level 3 alterations have been added to clarify required systems based on the specific occupancy and location of the work area.
904.1.7 Modification	904.1.4	Sprinklers and Level 3 Alterations	+	Sprinkler requirements for Level 3 alterations have been added to clarify required systems based on the specific occupancy and location of the work area.

Chapter #10: Change of Occupancy

Code Section		Section Title or Subject	Cost	Description of Change
2021	2018			
1002.1 Modification	1002.1	Special Uses	+	Section 1002 has been revised to provide a general reference to IBC Chapter 4 for special uses.
1002.2 Modification	1002.2	Incidental Uses	N	Section 1002 has been revised to provide a general reference to IBC Chapter 4 to require compliance with incidental uses in accordance with the IBC.
1002.3 Addition		Change of Occupancy in Health Care	N	Section 1002 has been revised to provide a general reference to IBC Chapter 4 to provide specific requirements for Group I-2 and I-1 occupancies undergoing a change of occupancy.
1011.1, 1011.2 Modification	1011.1, 1011.2	Change of Occupancy Applicability	-	A change of occupancy without alterations need not comply with all IEBC Level 1, 2 and 3 Alteration requirements for the work area method, and the extent of the automatic sprinkler installation has been clarified.

NEW HAMPSHIRE BUILDING CODE AMENDMENT FORM

EXHIBIT #: _____
REVISION #: 0

Submitted by:

Name: Michael Hagan **Address:** 25 Triangle Park Dr. Concord, NH 03301
Date: 9/20/2022 **Telephone:** 603-224-7447
Company/Org/Self: New Hampshire Building Officials **Email:** mhagan@keenenh.gov

Code: (select one only) IBC IEBC IECC IMC **Check one:** Delete Amend Add
 IPC IRC ISPSC NEC

**** Please Use MS Word Track Changes below if Available****

Applicable NH Code Language: (In effect or awaiting ratification as of date of request)		Proposed Code Language:	
Code Year: 2018	Code Section: N/A	Code Year: 2018	Code Section: Appendix G
Not adopted		APPENDIX G FLOOD-RESISTANT CONSTRUCTION Adopt Appendix G in its entirety per Section 101.2.1 of the International Building Code 2018, Flood-resistant construction	

Reason/Justification: Appendix G is intended to provide floodplain management and administrative requirements of the National Flood Insurance Program (NFIP). These standards used to be adopted through local ordinances, this will help communities be consistent with one set of standards.

Cost impact: No additional cost the National Flood Insurance Program is already standard practice

For Building Code Review Board Use: Date received: _____
 Revision History Date: R1: _____; R2: _____; R3: _____ R4: _____; R5: _____
 Hearing: Vote Date: _____ Move forward; Scheduled hearing date: _____ Do Not Move Forward
 BCRB approved: Revision #: _____; Approved; Not approved; Date: _____

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X
Philip Sherman
Chairman

Ratified by General Court: Ratified; Not ratified;

Date: _____ Bill year and number: _____

Signed by Governor: Date: _____

Effective date: _____

Expiration date, if any: _____

Form rev date: 12/31/2021

Local Authority Summary

	RSA	IBC	IRC				
Issue permits	RSA 155-A:2, III	105	R105				
	RSA 676:8						
	RSA 676:11						
Fees	RSA 155-A:2, III	109	R108				
Certificates of Occupancy	RSA 155-A:2, IV, RSA 674:51,IV	111	R110				
Board of Appeals	RSA 674:51,II(b), RSA 674:34, RSA 673:3	113	R112				
Violations	Per authority to issue permits	114	R113				
Stop Work	Per authority to issue permits	115	R114				
Adopt other codes	RSA 674:51-a						
Amend state code	RSA 155-A:2,V						