

COMMUNITY AFFAIRS

DIVISION OF CODES AND STANDARDS

Uniform Construction Code

Adopted Amendments: N.J.A.C. 5:23-3.14, 3.16, 3.17, 3.18, 3.20, 3.21, and 3.22

Proposed: April 18, 2022, at 54 N.J.R. 677(a).

Adopted: August 1, 2022, by Lt. Governor Sheila Y. Oliver, Commissioner, Department of Community Affairs.

Filed: August 12, 2022, as R.2022 d.111, **with non-substantial changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-6.3).

Authority: N.J.S.A. 52:27D-119 et seq.

Effective Date: September 6, 2022.

Expiration Date: February 9, 2029.

Summary of Public Comments and Agency Responses

Comments were received from the American Chemistry Council; Rico Fisher, Barnegat Township; International Code Council (ICC); Mitchell Malec, a retired former employee of the Department of Community Affairs (Department); New Jersey Realtors; David T. Phelan, Manahawkin; Richard A. Soltis, Jr., Hamilton Township; and Scott Williamson, Hillsborough Township.

General Comments

1. COMMENT: The International Code Council (ICC) expressed support for the adoption of the 2021 International Building Code (IBC), International Residential Code (IRC), International

Energy Conservation Code (IECC), International Mechanical Code (IMC), and International Fuel Gas Code (IFGC). The ICC also thanked Lieutenant Governor Sheila Y. Oliver, Commissioner; Director Edward Smith; Assistant Director Kevin Luckie; and Robert Austin for their time and effort in reviewing and updating these codes and ensuring the State continues to be a nationally recognized leader in guaranteeing the highest building safety standards for all residents.

RESPONSE: The Department thanks the ICC for their continued support in adopting the latest editions of the national model codes.

2. COMMENT: One commenter felt that there should be no amendments to the body of any of the national model codes. The commenter stated that the codes are developed through consensus meetings made up of parties that enforce the codes on a daily basis and noted that the updates often ensure that special interest groups cannot insert their particular agendas into the body of the codes. The commenter also stated that there have been several instances where New Jersey-specific issues have been incorporated into the national model codes.

RESPONSE: The Department respectfully disagrees that amendments to the national model codes are unnecessary. The Department also disagrees that these amendments are the result of special interest group agendas. The Uniform Construction Code Act (Act), at N.J.S.A. 52:27D-123b(4), allows the Department to either adopt the newest edition of the model code or defer to a previous requirement of the model code. As such, all amendments to the subcodes included in this rulemaking can be traced back to a previous version of the national model code and, thus, have been through the process described by the commenter. These amendments are determined

to be more consistent with the intent and purpose of the Act than the unamended text of the model code.

N.J.A.C. 5:23-3.14 Building Subcode

3. COMMENT: One commenter requested that certain sections of the International Wildland – Urban Interface Code (IWUIC), related to construction practices, designs, and materials, be incorporated into the building subcode or one- and two-family dwelling subcode. The commenter likened this inclusion to flood resistant construction practices, which were included in the 2015 editions of the subcodes. The commenter understood that the Municipal Land Use Law, N.J.S.A. 40:55D-1, dictates Wildland-Urban Interface Zones, but noted that once the zone is established by municipalities, the Uniform Construction Code (UCC) should set requirements for ignition resistant construction in accordance with the IWUIC.

RESPONSE: The Department appreciates the commenter’s suggestion; however, the Department cannot make this change. Pursuant to the Act, the Department does not have the authority to incorporate the IWUIC into the building subcode or one- and two-family dwelling subcode. Pursuant to N.J.S.A. 52:27D-123b(4), the Act requires the Department to either adopt the newest edition of the model code or defer to a previous requirement of the model code. The Department cannot include language from a different code into the requirements of the building subcode or one- and two-family dwelling subcode.

4. COMMENT: One commenter was opposed to the amendment at N.J.A.C. 5:23-3.14(b)8vii; this amendment would retain requirements for the entirety of a Group M occupancy to be sprinklered, rather than just the fire area. The commenter opined that sprinklers in the fire area

would allow for compartmentalization of the building. The commenter stated that although the Department's justification that this better protects patrons is true, the cost/benefit justification is lacking. The commenter asked why Group M is singled out and requested clarification of the meaning of the proposed amendment.

RESPONSE: The language that is utilized in this amendment is the language that appeared in the 2018 International Building Code (IBC). It is applicable to Group M because those uses are the most likely to contain 2,500 square feet of upholstered furniture. The Code Advisory Board recommended, and the Commissioner of the Department agreed, to retain this language because it better protects the persons within the applicable buildings. In addition, this would allow for more flexibility of display or storage of the furniture, rather than requiring the owner to compartmentalize the furniture to one area. Lastly, because this amendment maintains a current requirement within the building subcode, this does not increase cost of compliance with the UCC.

5. COMMENT: One commenter was opposed to the amendment at N.J.A.C. 5:23-3.14(b)8xlvii and (b)20 to retain the requirement to provide emergency power rather than allowing standby power. The commenter felt that this amendment is not justifiable, and the cost/benefit is lacking. The commenter stated that model code changes that have been proposed and accepted should be recognized. The commenter further opined that emergency voice/alarm communication systems are not essential to life safety and has always felt that standby power should have always been allowed, "and probably was intended," for these systems and noted several systems that use standby power rather than emergency power. The commenter stated that, though it is true that

emergency power provides faster power to devices, if it were more appropriate, more systems would utilize emergency power.

RESPONSE: The Department respectfully disagrees with the commenter. The Code Advisory Board recommended, and the Commissioner agreed, to retain emergency power because a number of these systems exist in high-rise residential structures and play a critical role in the protection of occupants. In these instances, the faster the systems are able to be powered, the better residents in the State are protected. Lastly, because this amendment maintains a current requirement within the building subcode, this does not increase cost of compliance with the UCC and maintains current protective measures.

6. COMMENT: One commenter felt that the requirement for an emergency elevator communication system for the deaf, hard of hearing, and speech impaired (Section 3001.2) should be retained. The commenter noted that these requirements are in ASME (American Society of Mechanical Engineers) A17.1-2019, Safety Code for Elevators and Escalators, and questioned the Department's statement that these requirements are proposed for deletion "until such time as a standard is developed." The commenter then asked if emergency power to this communication system is required similar to the Department's proposal to retain emergency power to voice/alarm communication systems.

RESPONSE: The Department respectfully disagrees with the commenter. In reviewing the 2021 IBC, as well as A17.1-2019, the Department determined that, although progress has been made for these devices in elevators, there are still no standards for how the system is to be designed. With that information, the Code Advisory Board, as advised by the Elevator Subcode Committee, recommended that this section remain deleted until further system requirements have

been incorporated into A17.1-2019. The Commissioner agreed with that recommendation. In addition, because this section is not proposed for adoption, the standby power required for these devices is irrelevant.

N.J.A.C. 5:23-3.18 Energy Subcode

7. COMMENT: The American Chemistry Council (ACC) supported the adoption of the 2021 International Energy Conservation Code (IECC) as proposed by the Department. The ACC provided the following statistics within the comments provided: based on housing starts in New Jersey, the adoption of the 2021 IECC, Residential provisions, on aggregate, consumers will save \$3,064,000 in the first year; based on new commercial construction numbers, the adoption of the 2021 IECC, Commercial provisions, with ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) standard 90.1-2019, on aggregate, consumers will save \$846,600 in the first year. The ACC also noted that this rulemaking addresses the issue of Environmental Justice through meeting affordable housing needs because reduced energy cost and more efficient homes better serves residents throughout the State.

RESPONSE: The Department thanks the commenter for the support.

8. COMMENT: New Jersey Builders Association (NJBA) thanked the Department for its diligent review of the latest national model codes and expressed support for the majority of the rulemaking. However, the NJBA recommends the deletion of Section 401.2.5 regarding maintenance of the building Energy Rating Index (“ERI,” established through the Energy Star program) value of five percent less than the established ERI target. NJBA noted that the 2018 ERI threshold values were developed based on energy modeling including above-Federal

minimum equipment efficiencies to ensure that a home compliant with an ERI path is at least as efficient as a typical house built to the prescriptive provisions listed within Table R402.1.3 of the IECC-R. NJBA also felt that the language was unclear regarding whether the intent is five percent of the ERI threshold or five percent of energy performance (that is, five ERI points). Finally, NJBA noted that the five percent penalty, in combination with the 2021 IECC revised ERI thresholds, results in ERI values close to the zero energy ready levels listed at Appendix RC, Zero Energy Residential Building Provisions, in the IECC. NJBA stated that this level of performance is unprecedented and unjustified for minimum code provisions and provided information that, according to Residential Energy Services Network (RESNET), less than seven percent of all rated dwelling units reached an ERI/HERS below 50 and only one percent of rated dwelling received an ERI/HERS below 45 in year 2020. Less than 25 percent of dwelling units constructed in the U.S. obtain an ERI/HERS rating and these units are typically more energy efficient than the ones that do not seek the rating.

RESPONSE: Section R401.2.5, entitled Additional energy efficiency, is not intended to be used as the minimum code provision for all new residential construction. Rather, that section provides a choice between a number of different methods to achieve additional energy efficiencies; these additional options are meant to provide developers with flexibility in applying new energy efficiency features. This provision was considered during the 2021 IECC code adoption hearings, which constitute a consensus standard, and were found to be appropriate as a new energy efficiency feature. As such, the Department will be adopting this provision as one of the options for achieving additional energy efficiency.

9. COMMENT: New Jersey Realtors stated that while it supports the concept of energy efficiency, the Department should consider the upfront costs associated with this proposed rule to home and business owners in the State. The commenter stated that any change to the energy subcode should lead to a cost savings that covers the initial up-front costs over a period of seven years. Finally, the commenter asked for clarification regarding the applicability of the amendments, specifically if the changes apply to existing structures or new construction.

RESPONSE: This rulemaking applies only to new construction; work undertaken in existing structures must be performed in accordance with the Rehabilitation Subcode (Subchapter 6) of the UCC, which is not included as a part of the changes to the energy subcode. The Department does carefully consider the cost associated with each update of the model code, as well as the cost savings over time.

For this rulemaking, the American Chemistry Council provided research that showed that adoption of the 2021 IECC, Residential provisions, will save consumers \$3,064,000 on aggregate in the first year. Additionally, when compared to the previous edition (2018), the Pacific Northwest National Laboratories (PNNL), a contractor of the United States Department of Energy (US DOE), estimates national total energy savings in residential buildings of eight to 14 percent (source, <https://www.iccsafe.org/wp-content/uploads/Energy-Savings-2009-2021-IECC.pdf>). The Energy-Efficient Codes Coalition (EECC) provide for similar percentages, with additional life-cycle cost savings ranging from \$1,831 to \$4,251 (source, <https://energyefficientcodes.org/wp-content/uploads/2021-IECC-Cost-Effectiveness-Summary.pdf>). This analysis also suggests simple payback, value benefits, and positive cashflow to the homeowner over an average 10.09 year payback period.

Based on new commercial construction numbers, the adoption of the 2021 IECC, Commercial provisions, with ASHRAE 90.1-2019, will save New Jersey consumers \$846,600 on aggregate in the first year according to research provided by ACC. When compared to the previous edition (2016), US DOE estimates national savings in commercial buildings of approximately:

- 4.7 percent site energy savings
- 4.3 percent source energy savings
- 4.3 percent energy cost savings
- 4.2 percent carbon emissions.

N.J.A.C. 5:23-3.21 One- and Two-Family Dwelling Subcode

10. COMMENT: Two commenters requested that the Department incorporate language to reference specific sections of National Fire Protection Association (NFPA) code 72 into the Section R314, Smoke alarms, of the one- and two-family dwelling subcode. The inclusion of those sections would create additional required locations for smoke alarms. The commenter also requested that these sections be incorporated into the building subcode. The commenters noted that a recent tragedy lead to the loss of life and may have been avoidable if smoke alarms were provided in the locations specified within NFPA 72. Finally, the commenter stated that the Department's article "Smoke Alarm Locations" in the Fall 2018 edition of the Construction Code Communicator (CCC) states that only those locations required within Section R314 are enforceable; however, the commenter noted that the ICC issued an interpretation stating that the locations required by the NFPA are applicable. The commenters requested that, in addition to

the subcode changes requested above, the Department publish an updated CCC article to announce the change.

RESPONSE: The Department lacks the authority to make the changes requested by the commenter. Pursuant to the Act, the Department does not have the authority to incorporate sections from a referenced standard into the one- and two-family dwelling or building subcode. Pursuant to N.J.S.A. 52:27D-123b(4), the Act requires the Department to either adopt the newest edition of the model code or defer to a previous requirement of the model code. The Department appreciates the commenter's concern and recognizes the value of ensuring safety of all residents; however, the CCC is a Department publication, and comments on the contents of this publication are outside the scope of this rulemaking. Articles may be reviewed or republished where changes are warranted.

Summary of Agency Initiated Changes:

1. At N.J.A.C. 5:23-3.14(b)10i, the Department is making a change to delete a reference to the International Existing Building Code (IEBC) in the User Notes of Chapter 11; the change would instead refer readers to the rehabilitation subcode of the UCC. This aligns with amendments made throughout the IBC in user notes; this language is not enforceable and provides notes for code users; ensuring proper cross-references and is not a substantive change.

2. At N.J.A.C. 5:23-3.14(b)10iv, the Department is making a change to correct an internal inconsistency within the IBC and the Standard ICC A117.1-2017 related to stair nosings. The IBC allows a maximum of 9/16 of an inch, whereas ICC A117.1 provides a maximum of 1/2 of an inch. In the interest of consistency, the Department is revising A117.1 to reflect the greater allowance provided within the IBC. Because this language already exists in the IBC as proposed, this is not a substantive change to the enforceable language of the UCC.

3. At N.J.A.C. 5:23-3.16(b)7vi, the Department proposed to delete the amendment to Section 680.25, Feeders (Wiring Methods). This was proposed for deletion in error; this section applies to pools, not to fire pump rooms as the notice of proposal summary erroneously stated, and the exception maintains the 2011 NEC exception for feeder installations and usage. As such, the Department will be retaining the current text of the electrical subcode at N.J.A.C. 5:23-3.16(b)7vi by not adopting the proposed change to that section.

4. At N.J.A.C. 5:23-3.21(c)3iv, xvii, xxvii, and xli, amendments reflect updated titles within the International Residential Code (IRC); these changes are administrative in nature and do not constitute a substantive change.

5. At N.J.A.C. 5:23-3.21(c)24, the designation of all appendices is amended to add an “A” before each letter designation to reflect the codification within the IRC. This change is administrative in nature and does not constitute a substantive change.

Federal Standards Statement

No Federal standards analysis is required for the adopted amendments because the amendments are not being adopted in order to implement, comply with, or participate in any program established under Federal law or under a State law that incorporates or refers to Federal law, standards, or requirements. This adoption incorporates the latest editions of the national model codes into State rules, which aligns with the requirements of the Uniform Construction Code Act.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*):

5:23-3.14 Building Subcode

(a) (No change from proposal)

(b) The following chapters of the building subcode are modified as follows:

1. – 9. (No change from proposal.)

10. Chapter 11, Accessibility, shall be amended as follows:

i. In the user notes, under About this Chapter, “in the International Existing Building Code” shall be deleted, and “within the Rehabilitation Subcode, N.J.A.C. 5:23-6” shall be inserted.

Recodify existing i.-ii. as ***ii.-iii.*** (No change in text from proposal.)

[iii.] ***iv.*** In Section 1102.1, Design, “amended as follows:” shall be added to the end of the sentence and the following list shall be inserted:

1. – 9. (No change from proposal.)

10. In Section 504.5, entitled “Nosings,” at items 2 and 3, “1/2 inch (13 mm) shall be deleted and “9/16 inch (14.3 mm)” shall be inserted in its place. In addition, at item 6, “1 1/2 inches (38 mm)” shall be deleted and “1 1/4 inches (32 mm)” shall be inserted in its place.

Recodify proposed 6.-30. as ***11.-31.*** (No change in text from proposal.)

Recodify proposed iv.-lvii. as ***v.-lviii.*** (No change in text from proposal.)

11. – 27. (No change from proposal.)

5:23-3.16 Electrical subcode

(a) (No change from proposal.)

(b) The following chapters or articles of the electrical subcode are amended as follows:

1.-6. (No change from proposal.)

7. The following chapters or articles of the electrical subcode are amended as follows:

i.-v. (No change from proposal.)

***vi. In Section 680.25(A)(1), Feeders (Wiring Methods), the following exception, from Section 680.25(A)(1) of the NEC/2011, shall be inserted:**

“Exception: An existing feeder between an existing remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A)(5).”*

8.-9. (No change from proposal.)

5:23-3.21 One- and Two-Family Dwelling Subcode

(a)-(b) (No change from proposal.)

(c) The following chapters or sections of the IRC/2021 shall be modified as follows:

1.-2. (No change.)

3. Chapter 3, Building Planning, shall be amended as follows:

i.-v. (No change from proposal)

vi. In Table R301.5, Minimum Uniformly Distributed Live Loads, delete “Balconies (exterior) and” from the fourth row. Insert a new row below “Decks” with Exterior Balconies” in the “Use” column and “60” in the “*[Live]* *Uniform* Load” column.

vii. – xxiv. (No change from proposal.)

xxv. Section R313.2, One- and two-family dwellings automatic *[fire]* *sprinkler* systems, shall be deleted. Section R313.2.1 shall be retained.

xxvi.-xlv. (No change from proposal.)

4. – 23. (No change from proposal.)

24. The Appendices shall be amended as follows:

i. Appendix *[A]* ***AA***, Sizing and Capacities of Gas Piping; Appendix *[B]* ***AB***, Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances Listed for Use with Type B Vents; and Appendix *[C]* ***AC***, Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems are informative and are not part of the one- and two-family dwelling subcode.

ii. Appendix *[D]* ***AD***, Recommended Procedure for Safety Inspection of an Existing Appliance Installation; Appendix *[E]* ***AE***, Manufactured Housing Used as Dwellings; Appendix *[F]* ***AF***, Radon Control Methods; and Appendix *[G]* ***AG***, Piping Standards for Various Applications, are deleted in their entirety.

iii. Appendix *[H]* ***AH***, Patio Covers, and Appendix *[K]* ***AK***, Sound Transmission, shall be adopted as part of this subcode.

iv. Appendix *[I]* ***AI***, Private Sewage Disposal; Appendix *[J]* ***AJ***, Existing Buildings and Structures; Appendix *[L]* ***AL***, Permit Fees; Appendix *[M]* ***AM***, Home Day Care - R-3 Occupancy; Appendix *[N]* ***AN***, Venting Methods; Appendix *[O]* ***AO***, Automatic Vehicular Gates; and Appendix *[P]* ***AP***, Sizing of Water Piping Systems, shall be deleted.

v. Appendix *[Q]* ***AQ***, Tiny Houses; Appendix *[R]* ***AR***, Light Straw-Clay Construction; and Appendix *[S]* ***AS***, Strawbale Construction, shall be adopted as part of this subcode.

vi. Appendix *[T]* ***AT***, Solar-Ready Provisions-- Detached One- And Two-Family Dwellings, Multiple Single-Family Dwellings (Townhouses), shall be optional at the discretion of the permit applicant.

vii. Appendix *[V]* ***AV***, Board of Appeals, shall be deleted in its entirety.

viii. Appendix *[W]* *AW*, 3D-Printed Construction, shall be adopted as part of this subcode. The Appendix shall be amended as follows:

(1) (No change from proposal.)