

1   **NOTICE OF RULE MAKING PROCEEDINGS AND PUBLIC HEARING**

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3   **NORTH CAROLINA BUILDING CODE COUNCIL**

4  
5     **Notice of Rule-making Proceedings** *is hereby given by NC Building Code Council in accordance with*  
6     *G.S. 150B-21.5(d).*

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8     **Citation to Existing Rule Affected by this Rule-Making:** *North Carolina Administrative, Building,*  
9     *Electrical, Energy Conservation, Fire, Plumbing and Residential Code amendments.*

10  
11    **Authority for Rule-making:** *G.S. 143-136; 143-138.*

12  
13    **Reason for Proposed Action:** *To incorporate changes in the NC State Building Codes as a result of*  
14    *rulemaking petitions filed with the NC Building Code Council and to incorporate changes proposed by the*  
15    *Council.*

16  
17    **Public Hearing:** *Tuesday, June 11, 2019, 9:00AM, Albemarle Building, 325 North Salisbury Street,*  
18    *Raleigh, NC 27603, 2<sup>nd</sup> Floor Training Room 240. Comments on both the proposed rule and any fiscal*  
19    *impact will be accepted.*

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21    **Comment Procedures:** *Written comments may be sent to Barry Gupton, Secretary, NC Building Code*  
22    *Council, NC Department of Insurance, 1202 Mail Service Center, Raleigh, NC 27699-1202. Comments on*  
23    *both the proposed rule and any fiscal impact will be accepted. Comment period expires on July 15, 2019.*

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25    **Statement of Subject Matter:**

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28    **1. Request by Carl Martin representing the North Carolina Department of Insurance to amend the**  
29    **2018 NC Building Code, Sections 429.1.1 and 430.3.**

30  
31    **429.1.1 Location.**

32    Rooms where occupants receive care in I-4 and R-3 adult and child day care facilities shall be on the level  
33    of exit discharge.

34  
35    **Exception:** Second story rooms used for first grade children but not younger than 2-1/2 years of age in  
36    licensed Group I-4 daycare facilities that meet all the following:

37    1. Fully sprinklered in compliance with 903.3.1.1.

- 1 2. Maximum of 49 children on the second story.
- 2 3. Maximum exit access travel distance is 75 feet.
- 3 4. Two remote means of egress are provided from each room containing children.
- 4 5. Interior egress stairs shall be a minimum of 1-hour fire-resistant-rated and shall discharge directly to the
- 5 exterior, and
- 6 6. Atriums shall not connect the first and second floor unless the atrium is 1-hour separated from the second
- 7 floor.

8

9 **430.3 Group E in churches, private schools and public schools.**

10 Rooms used for first grade children and younger shall be located on the level of exit discharge. Rooms used

11 for second grade children shall not be located more than one story above the level of exit discharge.

12

13 **Exception:** Second story rooms used for first grade children but not younger than 2-1/2 years of age in

14 licensed Group E daycare facilities that meet all the following:

- 15 1. Fully sprinklered in compliance with 903.3.1.1.
- 16 2. Maximum of 49 children on the second story.
- 17 3. Maximum exit access travel distance is 75 feet.
- 18 4. Two remote means of egress are provided from each room containing children.
- 19 5. Interior egress stairs shall be a minimum of 1-hour fire-resistant-rated and shall discharge directly to the
- 20 exterior, and
- 21 6. Atriums shall not connect the first and second floor unless the atrium is 1-hour separated from the second
- 22 floor.

23

24 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is

25 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,

26 2021).

27 **Reason Given** – The purpose of this amendment is to allow the use of second floor for daycare under

28 certain conditions and limitations.

29 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.

30 This rule is not expected to either have a substantial economic impact or increase local and state funds. A

31 fiscal note has not been prepared.

32

33

34 **2. Request by Carl Martin representing the North Carolina Department of Insurance to amend the**

35 **2018 NC Building Code, Section 714.4.2 as follows:**

36

1 **714.4.2 Membrane penetrations.**

2 Penetrations of membranes that are part of a *horizontal assembly* shall comply with Section 714.4.1.1 or  
3 714.4.1.2. Where floor/ceiling assemblies are required to have a *fire-resistance rating*, recessed fixtures  
4 shall be installed such that the required *fire resistance* will not be reduced.

5 **Exceptions:**

6  
7 7. The ceiling membrane of 1- and 2-hour fire-resistance-rated horizontal assemblies is permitted to be  
8 interrupted with the double wood top plate of a wall assembly ~~that is sheathed with Type X gypsum~~  
9 ~~wallboard~~, provided that all penetrating items through the double top plate are protected in accordance with  
10 Section 714.4.1.1 or 714.4.1.2 and the ceiling membrane is tight to the top plate. For 2-hour fire-  
11 resistance-rated horizontal assemblies the wall assembly must be sheathed with Type X gypsum wallboard.  
12

13 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
14 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
15 2021).

16 **Reason Given** – The purpose of this amendment is to recognize the 1-hour fire-resistance of wood based on  
17 char rate.

18 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.  
19 This rule is not expected to either have a substantial economic impact or increase local and state funds. A  
20 fiscal note has not been prepared.

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23 **3. Request by Terry Cromer representing the North Carolina Association of Electrical Contractors**  
24 **to amend the 2018 Administrative Code, Section 106.3.1 as follows:**

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26 **106.3 Permit Application.**

27 **106.3.1 Information required.** A permit application shall be filed with the Inspection Department on a  
28 form furnished for that purpose. The Inspection Department shall make available a list of information  
29 which must be submitted with the building permit application, including a complete building code  
30 summary (see Appendix A of the Administrative Code and Policies). Trade permit applications for  
31 miscellaneous electrical, mechanical and plumbing work  
32 to be performed for other than the construction of, alterations, repairs or additions to one- and two- family  
33 dwelling, townhouses or other building or structure shall be submitted in the exact format as, and contain  
34 only the information in Appendix A-1 of the Administrative Code and Policies. The Inspection  
35 Department’s building code summary shall be in the exact format as, and contain only the information in,  
36 Appendix B of the Administrative Code and Policies. The Inspection Department shall only modify its  
37 building code summary or trade permit application as set forth in section 103.5 Modifications, or as

1 necessary to reflect any changes by the Office of State Fire Marshal to Appendix B or trade permit  
2 application which have been approved of by the Building Code Council.

3

4 **APPENDIX A-1**

5

*This space reserve for department information*

**RESIDENTIAL & COMMERCIAL TRADE PERMIT**  
**PLUMBING/MECHANICAL/ELECTRICAL/FUEL PIPING/FIRE PLACE/OTHER**

Permit Holders Name: \_\_\_\_\_ Application Date: \_\_\_\_\_  
Project Address: \_\_\_\_\_ Subdivision: \_\_\_\_\_  
Property Owner: \_\_\_\_\_ Mobile phone #: \_\_\_\_\_  
Email Address: \_\_\_\_\_

Is this property located within a flood plain?  N/A  No  Yes *If yes, additional paperwork may be required*

Description of work: \_\_\_\_\_

**PLUMBING CONTRACTOR**

Plumbing Contractor: \_\_\_\_\_ License #: \_\_\_\_\_  
Project Supervisor: \_\_\_\_\_ Mobile #: \_\_\_\_\_  
Email Address: \_\_\_\_\_

**MECHANICAL CONTRACTOR**

Mechanical Contractor: \_\_\_\_\_ License #: \_\_\_\_\_  
Project Supervisor: \_\_\_\_\_ Mobile #: \_\_\_\_\_  
Email Address: \_\_\_\_\_

**ELECTRICAL CONTRACTOR**

Electrical Contractor: \_\_\_\_\_ License #: \_\_\_\_\_  
Project Supervisor: \_\_\_\_\_ Mobile #: \_\_\_\_\_  
Email Address: \_\_\_\_\_

**FUEL PIPING CONTRACTOR**

Fuel Piping Contractor: \_\_\_\_\_ License #: \_\_\_\_\_  
Project Supervisor: \_\_\_\_\_ Mobile #: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Are you installing a gas appliance(s)?  Yes  No *If yes, list appliance(s) below in description*  
Description: \_\_\_\_\_

6

7

**CONTRACTOR – OTHER**

Refrigeration    Exhaust Hoods    Ventilation    Other: \_\_\_\_\_

Contractor Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Project Supervisor: \_\_\_\_\_ Mobile #: \_\_\_\_\_  
Email Address: \_\_\_\_\_

**CONTRACTOR – OTHER**

Refrigeration    Exhaust Hoods    Ventilation    Other: \_\_\_\_\_

Contractor Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Project Supervisor: \_\_\_\_\_ Mobile #: \_\_\_\_\_  
Email Address: \_\_\_\_\_

Total Cost of Project: \$ \_\_\_\_\_

Permit Fee: \$ \_\_\_\_\_

I hereby certify that I have the authority to make the necessary application, that all information in this application is correct and all work will comply with the State Building Code and all other applicable State and local laws and ordinances. The Inspection & Permits Department shall be notified of any changes in the approved plans and specifications for the project herein prior to implementation. I understand that I must assure the trade for which I am requesting an inspection is indeed ready for the inspection at the time of the request.

Signature of Permit Holder: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: \_\_\_\_\_ Date: \_\_\_\_\_  
Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Amount Paid: \_\_\_\_\_ Paid via:    Cash    Check    Credit Card

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**Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

**Reason Given** – The purpose of this amendment is to add a uniform trade permit application requirement.

**Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase in cost. This rule is not expected to either have a substantial economic impact or increase local and state funds. A fiscal note has not been prepared.

**4. Request by Stuart Laney representing Laney Electrical Construction, Inc. to amend the 2017 Electrical Code, Section 406.4(D)(4) as follows:**

~~406.4(D)(4) Are Fault Circuit Interrupters.~~

1 ~~Where a receptacle outlet is located in any areas specified in 210.12(A) or (B), a replacement receptacle at~~  
2 ~~this outlet shall be one of the following:~~

- 3  
4 (1) ~~A listed outlet branch circuit type are fault circuit interrupter receptacle~~  
5 (2) ~~A receptacle protected by a listed outlet branch circuit type are fault circuit interrupter type receptacle~~  
6 (3) ~~A receptacle protected by a listed combination type are fault circuit interrupter type circuit breaker~~

7  
8 ~~Exception No. 1: Arc fault circuit interrupter protection shall not be required where all of the following~~  
9 ~~apply:~~

- 10 (1) ~~The replacement complies with 406.4(D)(2)(b).~~  
11 (2) ~~It is impracticable to provide an equipment a ground conductor as provided by 250.130(C).~~  
12 (3) ~~A listed combination type are fault circuit interrupter circuit breaker is not commercially available.~~  
13 (4) ~~GFCI/AFCI dual function receptacles are not commercially available.~~

14  
15 ~~Exception No. 2: Section 210.12(B), Exception shall not apply to replacement of receptacles.~~

16  
17 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
18 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
19 2021).

20 **Reason Given** – The purpose of this amendment is to eliminate AFCI protection where a receptacle is  
21 replaced.

22 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
23 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
24 funds. A fiscal note has not been prepared.

25  
26  
27 **5. Request by Colin Triming representing the North Carolina Fire Code Revision Committee to**  
28 **amend the 2018 NC State Building Code, NC Fire Code 505.1.1 as follows:**

29  
30 **505.1.1 Suite/Room identification.** Where numerical addresses are posted to identify suites or rooms  
31 within buildings, the first digit of the suite or room number shall match the floor number signage.

32  
33 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
34 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
35 2021).

36 **Reason Given** – The purpose of this amendment is to require standard suite/room identification based on  
37 the actual floor level to assist in emergency response.

1 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
2 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
3 funds. A fiscal note has not been prepared.

4  
5  
6 **6. Request by Terry Cromer representing the North Carolina Association of Electrical Contractors**  
7 **to amend the 2017 NC Electrical Code, Section 210.8(B) as follows:**

8  
9 **(B) Other Than Dwelling Units.** All single-phase receptacles rated 150 volts to ground or less, 50 amperes  
10 or less ~~and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less~~ installed in the  
11 following locations shall have ground-fault circuit-interrupter protection for personnel.

12  
13 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
14 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
15 2021).

16 **Reason Given** – The purpose of this amendment is to eliminate a 3-phase breaker requirement that is not  
17 currently manufactured.

18 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
19 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
20 funds. A fiscal note has not been prepared.

21  
22  
23 **7. Request by Jeff Tiller, PE representing Appalachian State University and Robert Privott**  
24 **representing the North Carolina Home Builders Association to amend the 2018 NC Energy Code,**  
25 **Section R406 Energy Rating Compliance Alternative as follows:**

26  
27 **R406.1 Scope.**

28 This section establishes criteria for compliance using an Energy Rating Index (ERI) analysis.

29  
30 **R406.2 Mandatory requirements.**

31 Compliance with this section requires that the provisions identified in Sections R401 through R404 labeled  
32 as “mandatory” be met. The building thermal envelope shall be greater than or equal to levels of efficiency  
33 and Solar Heat Gain Coefficient in Table R406.2.1 or Table R406.2.2, Table 402.1.1 or 402.1.3 of the 2012  
34 ~~North Carolina Energy Conservation Code~~. Minimum standards associated with compliance shall be the  
35 ANSI RESNET ICC Standard 301-2014: “Standard for the Calculation and Labeling of the Energy  
36 Performance of Low-Rise Residential Buildings using an Energy Rating Index.” A North Carolina

1 registered design professional or certified HERS rater is required to perform the analysis if required by  
 2 North Carolina Licensure laws.

3

4 **Exception:** Supply and return ducts in unconditioned space and outdoors shall be insulated to a minimum  
 5 R-8. Supply ducts inside semi-conditioned space shall be insulated to a minimum R-4; return ducts inside  
 6 conditioned and semi-conditioned space are not required to be insulated. Ducts located inside conditioned  
 7 space are not required to be insulated other than as may be necessary for preventing the formation of  
 8 condensation on the exterior of cooling ducts.

9

**TABLE R406.2.1**  
**MINIMUM INSULATION AND FENESTRATION REQUIREMENTS FOR ENERGY RATING INDEX COMPLIANCE<sup>a</sup>**

CLIMATE ZONE	FENESTRATION VALUES			R-VALUES FOR								
	FENESTRATION U-FACTOR <sup>b,i</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b,k</sup>	CEILING <sup>m</sup>	UNVENTED <sup>p</sup> ENCLOSED RAFTER ASSEMBLIES AIR-IMPERMEABLE	UNVENTED <sup>p</sup> ENCLOSED RAFTER ASSEMBLIES AIR-PERMEABLE/IMPERMEABLE	WOOD FRAME WALL	MASS WALL <sup>l</sup>	FLOOR	BASEMENT <sup>o,o</sup> WALL	SLAB <sup>q</sup>	CRAWL SPACE <sup>r</sup> WALL
3	0.35	0.65	0.3	30	20	20+5 <sup>q</sup>	13	5/10	19	10/13 <sup>l</sup>	0	5/13
4	0.35	0.6	0.3	38 or 30ci <sup>l</sup>	20	20+15 <sup>q</sup>	15, 13+2.5 <sup>b</sup>	5/10	19	10/13	10	10/13
5	0.35	0.6	NR	38 or 30ci <sup>l</sup>	25	15+20 <sup>q</sup>	19 <sup>n</sup> , 13+5 <sup>h</sup> , or 15+3 <sup>h</sup>	13/17	30 <sup>u</sup>	10/13	10	10/13

For SI: 1 foot = 304.8 mm.

a. R-values are minimums. U-factors and SHGC are maximums.

b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. "10/13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall or crawl space wall.

d. For monolithic slabs, insulation shall be applied from the inspection gap downward to the bottom of the footing or a maximum of 18 inches below grade whichever is less. For floating slabs, insulation shall extend to the bottom of the foundation wall or 24 inches, whichever is less. (See Appendix R2) R-5 shall be added to the required slab edge R-values for heated slabs.

e. Deleted.



f. Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.

g. Or insulation sufficient to fill the framing cavity, R-19 minimum.

h. The first value is cavity insulation, the second value is continuous insulation so "13+5" means R-13 cavity insulation plus R-5 continuous insulation. If structural sheathing covers 25 percent or less of the exterior, insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

i. The second R-value applies when more than half the insulation is on the interior of the mass wall.

j. In addition to the exemption in R402.3.3, a maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty.

k. In addition to the exemption in R402.3.3, a maximum of two glazed fenestration product assemblies having a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty.

l. R-30 shall be deemed to satisfy the ceiling insulation requirement wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Otherwise, R-38 insulation is required where adequate clearance exists or insulation must extend either to the insulation baffle or within 1" of the attic roof deck.

m. Table value required except for roof edge where the space is limited by the pitch of the roof; there the insulation must fill the space up to the air baffle.

n. R-19 fiberglass batts compressed and installed in a nominal 2 x 6 framing cavity is deemed to comply. Fiberglass batts rated R-19 or higher compressed and installed in a 2x4 wall is not deemed to comply.

o. Basement wall meeting the minimum mass wall specific heat content requirement may use the mass wall R-value as the minimum requirement.

p. The air-impermeable insulation shall meet the requirements of the definition in section. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. For one- and two-family dwellings and townhouses, the insulation installation shall meet the requirements of R806.5 of the North Carolina Residential Code. For Residential Buildings other than one- and two-family dwellings and townhouses, the insulation installation shall meet the installation requirements of 1203.3 of the North Carolina Building Code.

q. The value for air-permeable insulation is shown first and that for air-impermeable insulation second. Thus, R-20 + R-5 indicates that the minimum value for air-permeable insulation is R-20, and the minimum value for air-impermeable insulation is R-5. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

**TABLE R406.2.2  
EQUIVALENT U-FACTORS FOR TABLE R406.2.1**

CLIMATE ZONE	FENESTRATION <sup>a</sup>	SKYLIGHT	CEILING	UNVENTED <sup>a</sup> ENCLOSED RAFTER ASSEMBLIES AIR-IMPERMEABLE	UNVENTED <sup>a</sup> ENCLOSED RAFTER ASSEMBLIES AIR-PERMEABLE/IMPERMEABLE	FRAME WALL	MASS WALL <sup>b</sup>	FLOOR	BASEMENT <sup>d</sup> WALL	CRAWL SPACE <sup>c</sup> WALL
3	0.35	0.65	0.0350	0.05	0.04 <sup>f</sup>	0.082	0.141	0.047	0.059	0.136
4	0.35	0.60	0.0300	0.05	0.029 <sup>f</sup>	0.077	0.141	0.047	0.059	0.065
5	0.35	0.60	0.0300	0.04	0.029 <sup>f</sup>	0.061	0.082	0.033	0.059	0.065

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

b. When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.07 in Climate Zone 3, 0.07 in Climate Zone 4 and 0.054 in Climate Zone 5.

c. Basement wall U-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.

d. A maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 and a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty. When

applying this note and using the RESCheck "UA Trade-off" compliance method to allow continued use of the software, the applicable fenestration products shall be modeled as meeting the U-factor of 0.35 and the SHGC of 0.30, as applicable, but the fenestration products' actual U-factor and actual SHGC shall be noted in the comments section of the software for documentation of application of this note to the applicable products. Compliance for these substitute products shall be verified compared to the allowed substituted maximum U-value requirement and maximum SHGC requirement, as applicable.

e. The air-impermeable insulation shall meet the requirements of the definition in section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. For one- and two-family dwellings and townhouses, the insulation installation shall meet the requirements of R806.5 of the North Carolina Residential Code.

f. For air-permeable/ impermeable applications, Table R406.2.1 shall be followed for minimum insulation values.

1

2 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
3 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
4 2021).

5 **Reason Given** – The purpose of this amendment is to change the base requirement (called the “back stop”)  
6 for homes seeking compliance using the Energy Rating Index.

7 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
8 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
9 funds. A fiscal note has not been prepared.

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11

12 **8. Request by Jeff Tiller, PE representing Appalachian State University and Robert Privott**  
13 **representing the North Carolina Home Builders Association to amend the 2018 NC Residential Code,**  
14 **Section N1106 Energy Rating Compliance Alternative as follows:**

15

16 **N1106.1 Scope.**

17 This section establishes criteria for compliance using an Energy Rating Index (ERI) analysis.

18

19 **N1106.2 Mandatory requirements.**

20 Compliance with this section requires that the provisions identified in Sections N1101 through N1104  
21 labeled as “mandatory” be met. The building thermal envelope shall be greater than or equal to levels of  
22 efficiency and Solar Heat Gain Coefficient in Table N1106.2.1 or Table N1106.2.2, ~~Table 402.2.2 or~~  
23 ~~402.1.3 of the 2012 North Carolina Energy Conservation Code.~~ Minimum standards associated with  
24 compliance shall be the ANSI RESNET ICC standard 301-2014: “Standard for the Calculation and  
25 Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index.” A  
26 North Carolina *registered design professional* or certified *HERS rater* is required to perform the analysis if  
27 required by North Carolina Licensure laws.

28

1 **Exception:** Supply and return ducts in unconditioned space and outdoors shall be insulated to a minimum  
2 R-8. Supply ducts inside semi-conditioned space shall be insulated to a minimum R-4; return ducts inside  
3 conditioned and semi-conditioned space are not required to be insulated. Ducts located inside conditioned  
4 space are not required to be insulated other than as may be necessary for preventing the formation of  
5 condensation on the exterior of cooling ducts.  
6

**SECTION N1106  
ENERGY RATING INDEX COMPLIANCE ALTERNATIVE**

**N1106.1 Scope.**

This section establishes criteria for compliance using an Energy Rating Index (ERI) analysis.

**N1106.2 Mandatory requirements.**

Compliance with this section requires that the provisions identified in Sections N1101 through N1104 labeled as "mandatory" be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in **Table N1106.2.1 or Table N1106.2.2**, ~~Table 402.1.1 or 402.1.3 of the 2012 North Carolina Energy Conservation Code.~~ Minimum standards associated with compliance shall be the ANSI RESNET ICC Standard 301-2014: "Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index." A North Carolina *registered design professional* or certified *HERS rater* is required to perform the analysis if required by North Carolina Licensure laws.

**Exception:** Supply and return ducts in unconditioned space and outdoors shall be insulated to a minimum R-8. Supply ducts inside semi-conditioned space shall be insulated to a minimum R-4; return ducts inside conditioned and semi-conditioned space are not required to be insulated. Ducts located inside conditioned space are not required to be insulated other than as may be necessary for preventing the formation of condensation on the exterior of cooling ducts.

**TABLE N1106.2.1  
MINIMUM INSULATION AND FENESTRATION REQUIREMENTS FOR ENERGY RATING INDEX COMPLIANCE<sup>a</sup>**

CLIMATE ZONE	FENESTRATION VALUES			R-VALUES FOR								
	FENESTRATION U-FACTOR <sup>b,i</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b,k</sup>	CEILING <sup>m</sup>	UNVENTED <sup>p</sup> ENCLOSED RAFTER ASSEMBLIES AIR-IMPERMEABLE	UNVENTED <sup>p</sup> ENCLOSED RAFTER ASSEMBLIES AIR-PERMEABLE/IMPERMEABLE	WOOD FRAME WALL	MASS WALL <sup>l</sup>	FLOOR	BASEMENT <sup>c,o</sup> WALL	SLAB <sup>d</sup>	CRAWL SPACE <sup>e</sup> WALL
3	0.35	0.65	0.3	30	20	20+5 <sup>q</sup>	13	5/10	19	10/13 <sup>f</sup>	0	5/13
4	0.35	0.6	0.3	38 or 30ci <sup>l</sup>	20	20+15 <sup>q</sup>	15, 13+2.5 <sup>h</sup>	5/10	19	10/13	10	10/13
5	0.35	0.6	NR	38 or 30ci <sup>l</sup>	25	15+20 <sup>q</sup>	19 <sup>h</sup> , 13+5 <sup>h</sup> , or 15+3 <sup>h</sup>	13/17	30 <sup>h</sup>	10/13	10	10/13

For SI: 1 foot = 304.8 mm.

a. R-values are minimums. U-factors and SHGC are maximums.

b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. "10/13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall or crawl space wall.

d. For monolithic slabs, insulation shall be applied from the inspection gap downward to the bottom of the footing or a maximum of 18 inches below grade whichever is less. For floating slabs, insulation shall extend to the bottom of the foundation wall or 24 inches, whichever is less. (See Appendix O) R-5 shall be added to the required slab edge R-values for heated slabs.

e.- Deleted.

f. Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.7 and Table N1101.7.

g. Or insulation sufficient to fill the framing cavity, R-19 minimum.

h. The first value is cavity insulation, the second value is continuous insulation so "13+5" means R-13 cavity insulation plus R-5 continuous insulation. If structural sheathing covers 25 percent or less of the exterior, insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

i. The second R-value applies when more than half the insulation is on the interior of the mass wall.

j. In addition to the exemption in N1102.3.3, a maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty.

k. In addition to the exemption in N1102.3.3, a maximum of two glazed fenestration product assemblies having a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty.

l. R-30 shall be deemed to satisfy the ceiling insulation requirement wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Otherwise, R-38 insulation is required where adequate clearance exists or insulation must extend either to the insulation baffle or within 1" of the attic roof deck.

m. Table value required except for roof edge where the space is limited by the pitch of the roof; there the insulation must fill the space up to the air baffle.

n. R-19 fiberglass batts compressed and installed in a nominal 2 x 6 framing cavity is deemed to comply. Fiberglass batts rated R-19 or higher compressed and installed in a 2x4 wall is not deemed to comply.

o. Basement wall meeting the minimum mass wall specific heat content requirement may use the mass wall R-value as the minimum requirement.

p. The air-impermeable insulation shall meet the requirements of the definition in section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. The insulation installation shall meet the requirements of R806.5.

q. The value for air-permeable insulation is shown first and that for air-impermeable insulation second. Thus, R-20 + R-5 indicates that the minimum value for air-permeable insulation is R-20, and the minimum value for air-impermeable insulation is R-5. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. The air permeable insulation shall be installed directly under the air permeable insulation.

**TABLE N1106.2.2  
EQUIVALENT U-FACTORS FOR TABLE N1106.2.1\***

CLIMATE ZONE	FENESTRATION <sup>a</sup>	SKYLIGHT	CEILING	UNVENTED <sup>e</sup> ENCLOSED RAFTER ASSEMBLIES AIR-IMPERMEABLE	UNVENTED <sup>e</sup> ENCLOSED RAFTER ASSEMBLIES AIR-PERMEABLE/IMPERMEABLE	FRAME WALL	MASS WALL <sup>b</sup>	FLOOR	BASEMENT <sup>d</sup> WALL	CRAWL SPACE <sup>c</sup> WALL
3	0.35	0.65	0.0350	0.05	0.04 <sup>f</sup>	0.082	0.141	0.047	0.059	0.136
4	0.35	0.60	0.0300	0.05	0.029 <sup>f</sup>	0.077	0.141	0.047	0.059	0.065
5	0.35	0.60	0.0300	0.04	0.029 <sup>f</sup>	0.061	0.082	0.033	0.059	0.065

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

b. When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.07 in Climate Zone 3, 0.07 in Climate Zone 4 and 0.054 in Climate Zone 5.

c. Basement wall U-factor of 0.360 in warm-humid locations as defined by Figure N1101.7 and Table N1101.7.

d. A maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 and a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty. When applying this note and using the RESCheck "UA Trade-off" compliance method to allow continued use of the software, the applicable fenestration products shall be modeled as meeting the U-factor of 0.35 and the SHGC of 0.30, as applicable, but the fenestration products' actual U-factor and actual SHGC shall be noted in the comments section of the software for documentation of

application of this note to the applicable products. Compliance for these substitute products shall be verified compared to the allowed substituted maximum U-value requirement and maximum SHGC requirement, as applicable.

e. The air-impermeable insulation shall meet the requirements of the definition in section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. The insulation shall meet the requirements of R806.5.

f. For air-permeable/ impermeable applications, Table N1106.2.1 shall be followed for minimum insulation values.

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**Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

**Reason Given** – The purpose of this amendment is to change the base requirement (called the “back stop”) for homes seeking compliance using the Energy Rating Index.

**Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase in cost. This rule is not expected to either have a substantial economic impact or increase local and state funds. A fiscal note has not been prepared.

**9. Request by Jeff Tiller, PE representing Appalachian State University and Robert Privott representing the North Carolina Home Builders Association to amend the 2018 Residential Code, Section 2 Definitions and the 2018 Energy Code, Section 2 Definitions as follows:**

**AIR-IMPERMEABLE INSULATION.** An insulation having an air permanence equal to or less than 0.02 L/s-m<sup>2</sup> at 75 Pa pressure differential tested according to ASTM E 217 or E 283.

**Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

**Reason Given** – The purpose of this amendment is to provide a definition for “air-impermeable insulation.”

**Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase in cost. This rule is not expected to either have a substantial economic impact or increase local and state funds. A fiscal note has not been prepared.

**10. Request by Robert Privott representing the North Carolina Home Builders Association to amend the 2018 Residential Code, Section R506.2.1 as follows:**

1 **R506.2.1 Fill.** Fill material shall be free of vegetation and foreign material. The fill shall be compacted to  
2 ensure uniform support of the slab, and except where *approved*, the fill depths shall not exceed 24 inches  
3 (610 mm) for clean sand or gravel and 8 inches (203 mm) for earth.

4  
5 **Exception:** #57 stone, ABC stone or crusher run may be used as fill without compaction for a maximum  
6 depth of four (4) feet.

7  
8 **(Note: alternate wording for the exception)**

9  
10 **Exception:** #57 or #67 stone may be used as fill without a compaction test for a maximum depth of 4 feet.

11  
12 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
13 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
14 2021).

15 **Reason Given** – The purpose of this amendment is to eliminate the requirement for compaction tests at a  
16 greater depth where specific stone is used.

17 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.  
18 This rule is not expected to either have a substantial economic impact or increase local and state funds. A  
19 fiscal note has not been prepared.

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21  
22 **11. Request by Keith Rogers representing the North Carolina Building Code Council Mechanical**  
23 **Standing Committee to amend the 2018 NC Plumbing Code, Section 305.4 as follows:**

24  
25 **305.4 Freezing.** Water pipes install in a wall exposed to the exterior shall be located on the heated side of  
26 the wall insulation. Water, soil, and condensate waste pipes shall not be installed outside of a building, in  
27 unconditioned attics, unconditioned utility rooms, or in any other place subjected to freezing temperatures  
28 unless adequate provision is made to  
29 protect such pipes from freezing by a minimum of R6.5 insulation determined at 75°F (24°C) in accordance  
30 with ASTM C177 or heat or both.

31 Exterior water supply system piping shall be installed ~~not less than 6 inches (152 mm)~~ below the frost line  
32 and not less than 12 inches (305 mm) below grade.

33  
34 **Note:** These provisions are minimum requirements, which have been found suitable for normal weather  
35 conditions. Abnormally low temperatures for extended periods may require additional provisions to prevent  
36 freezing.

37

1 **305.4.1 Frost Protection.** No traps of soil or waste pipe shall be installed or permitted outside of a building  
2 or concealed in outside walls or in any place where they may be subjected to freezing temperatures, unless  
3 *approved* provisions are made to protect them from freezing.

4  
5 **305.4.2 Sewer depth.** *Building Sewers* that connect to private sewage disposal systems shall be installed  
6 not less than 3 inches (76.2 mm) below finished grade at the point of septic tank connection. *Building*  
7 *sewers* shall be installed not less than 3 inches (76.2 mm) below grade.

8  
9 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
10 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
11 2021).

12 **Reason Given** – The purpose of this amendment is to eliminate freeze protection for larger drainage pipes  
13 that do not hold water for extended periods and to reduce the burial depth.

14 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.  
15 This rule is not expected to either have a substantial economic impact or increase local and state funds. A  
16 fiscal note has not been prepared.

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18  
19 **12. Request by Ralph Euchner representing the North Carolina Building Code Council to amend the**  
20 **2018 NC Plumbing Code, Section 306.2.4 Tracer Wire as follows:**

21  
22 **306.2.4 Tracer wire.** For plastic sewer *pipng*, an insulated copper tracer wire or other *approved* conductor  
23 shall be installed adjacent to and over the full length of the *pipng*. Access shall be provided to the tracer  
24 wire or the tracer wire shall terminate at the cleanout between the building drain and building sewer. The  
25 tracer wire size shall be not less than 14 AWG and the insulation type shall be listed for direct burial.

26  
27 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
28 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
29 2021).

30 **Reason Given** – This purpose of this amendment is to require a tracer wire for easier detection of plastic  
31 sewer lines.

32 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
33 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
34 funds. A fiscal note has not been prepared.

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1 **13. Request by Jesse Wade White, Jr., PE representing the North Carolina Building Code Council**  
2 **Electrical Ad Hoc Committee to amend the 2017 NC Electrical Code, Section 695.3 as follows:**

3  
4 **695.3 Power Source(s) for Electric Motor-Driven Fire Pumps.**

5 Electric motor-driven fire pumps shall have a reliable source of power.

6 ~~Informational Note: See Sections 9.3.2 and A.9.3.2 from NFPA 20 – 2019, *Standard for the Installation of*~~  
7 ~~*Stationary Pumps for Fire Protection*, for guidance on the determination of power source reliability.~~

8  
9 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
10 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
11 2021).

12 **Reason Given** – This purpose of this amendment is to eliminate the Informational Note about “reliable  
13 source of power” and replace with a definition.

14 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.  
15 This rule is not expected to either have a substantial economic impact or increase local and state funds. A  
16 fiscal note has not been prepared.

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18  
19 **14. Request by Jesse Wade White, Jr., PE representing the NC Building Code Council Electrical Ad**  
20 **Hoc Committee to amend the 2017 NC Electrical Code, Section 695.2 as follows:**

21  
22 **695.2 Definitions.**

23  
24 **Fault-Tolerant External Control Circuits.** Those control circuits either entering or leaving the fire pump  
25 controller enclosure, which if broken, disconnected, or shorted will not prevent the controller from starting  
26 the fire pump from all other internal or external means and may cause the controller from starting the fire  
27 pump from all other internal or external means and may cause the controller to start the pump under these  
28 conditions.

29  
30 **On-Site Power Production Facility.** The normal supply electric power for the site that is expected to be  
31 constantly producing power.

32  
33 **On-Site Standby Generator.** A facility producing electric power on site as the alternate supply of electric  
34 power. It differs from an on-site power production facility, in that it is not constantly producing power.

35  
36 **Reliable Source of Power.** A source of power that possess all of the following characteristics:

1 (1) The electric utility supplying the power has not conducted any intentional shut downs longer than 10  
2 continuous hours in the year prior to the plan submittal and is verified in writing by that electric utility.

3 (2) The source of power is not supplied by overhead conductors within 60 feet of the building(s) equipped  
4 with fire pump(s).

5 (3) Only the disconnect switches and overcurrent protection devices permitted in Article 695 and NFPA 20-  
6 2013 section 9.3.2 are installed in the normal source of power to the fire pump controller.

7  
8 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
9 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
10 2021).

11 **Reason Given** – This purpose of this amendment is to eliminate the Informational Note about “reliable  
12 source of power” and replace with a definition.

13 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.  
14 This rule is not expected to either have a substantial economic impact or increase local and state funds. A  
15 fiscal note has not been prepared.

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18 **15. Request by David Smith representing the North Carolina Building Code Council Residential**  
19 **Committee to amend the 2018 NC Residential Code, Section R703.7.2.1 Support by steel angle as**  
20 **follows:**

21  
22 **R703.2.1 Support by steel angle.** A minimum 6 inches by 4 inches by 5/16 inch (152 mm by 102 mm by 8  
23 mm) steel angle, with the long leg placed vertically, shall be anchored to double 2 inches by 4 inches (51  
24 mm by 102 mm) wood studs at a maximum on-center spacing of 16 inches (406 mm) or shall be anchored  
25 to solid double 2x blocking firmly attached between single 2-inch by 4-inch (51 mm by 102 mm) wood  
26 studs at a maximum on center spacing of 16 inches (406 mm). Anchorage of the steel angle at every double  
27 stud spacing shall be a minimum of two 7/16 inch (11 mm) diameter by 4 inch (102 mm) lag screws at  
28 every double stud or shall be a minimum of two 7/16-inch diameter (11.1 mm) by 4 inches (102 mm) lag  
29 screws into solid double blocking with each pair of lag screws spaced at horizontal intervals not to exceed  
30 16 inches (406 mm). The steel angle shall have a minimum clearance to underlying construction of 1/16  
31 inch (2 mm). A minimum of two-thirds the width of the masonry veneer thickness shall bear on the steel  
32 angle. Flashing and weep holes shall be located in the masonry veneer wythe in accordance with Figure  
33 R703.7.2.1. The maximum height of masonry veneer above the steel angle support shall be 12 feet, 8  
34 inches (3861 mm). The air space separating the masonry veneer from the wood backing shall be in  
35 accordance with Sections R703.7.4 and R703.7.4.2. The method of support for the masonry veneer on steel  
36 angle shall be constructed in accordance with Figure R703.7.2.1.

1 The maximum slope of the roof construction without stops shall be 7:12. Roof construction with slopes  
2 greater than 7:12 but not more than 12:12 shall have stops of a minimum 3 inch \_3 inch\_1/4 inch (76 mm \_  
3 76 mm\_6 mm) steel plate welded to the angle at 24 inches (610 mm) on center along the angle or as  
4 *approved by the building official.*

5  
6 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
7 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
8 2021).

9 **Reason Given** – This purpose of this amendment is to provide an option to attach the steel angle to  
10 blocking to support masonry veneer.

11 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
12 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
13 funds. A fiscal note has not been prepared.

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15  
16 **16. Request by David Smith representing the North Carolina Building Code Council Residential**  
17 **Committee to amend the 2018 NC Residential Code, Section R403.1.6 as follows:**

18  
19 **Exceptions:**

20  
21 1. Walls 24 inches (610 mm) total length or shorter connecting offset braced wall panels shall be anchored  
22 to the foundation with a minimum of one anchor bolt located in the center third of the plate section and  
23 shall be attached to adjacent braced wall panels at corners as shown in Table R602.3(1) and Figure  
24 R602.10.3(5).

25  
26 2. Connection of walls 12 inches (305 mm) total length or shorter connecting offset braced wall panels to  
27 the foundation without anchor bolts shall be permitted. The wall shall be attached to adjacent braced wall  
28 panels at corners as shown in Table R602.3(1) and Figure R602.10.3(5).

29  
30 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
31 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
32 2021).

33 **Reason Given** – This purpose of this amendment is to provide a reference to figures.

34 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
35 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
36 funds. A fiscal note has not been prepared.

37

1  
2 **17. Request by Ralph Euchner representing the North Carolina Building Code Council to amend the**  
3 **2018 NC Residential Code, Section P2604.1.4 Tracer Wire as follows:**

4  
5 **P2604.1.4 Tracer wire.** For plastic sewer *pip*ing, an insulated copper tracer wire or other *approved*  
6 conductor shall be installed adjacent to and over the full length of the *pip*ing. Access shall be provided to  
7 the tracer wire or the tracer wire shall terminate at the cleanout between the building drain and building  
8 sewer. The tracer wire shall be not less than 14 AWG and the insulation type shall be listed for direct  
9 burial.

10  
11 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
12 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
13 2021).

14 **Reason Given** – This purpose of this amendment is to require a tracer wire for easier detection of plastic  
15 sewer lines.

16 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase  
17 in cost. This rule is not expected to either have a substantial economic impact or increase local and state  
18 funds. A fiscal note has not been prepared.

19  
20  
21 **18. Request by Keith Rogers representing the North Carolina Building Code Council Mechanical**  
22 **Standing Committee to amend the 2018 Residential Code, Section P2603.5 as follows:**

23  
24 **P2603.5 Freezing.** Water pipes installed in a wall exposed to the exterior shall be located on the heated  
25 side of the wall insulation. In other cases, water, ~~soil~~ and condensate waste pipes shall not be installed  
26 outside of a building, in unconditioned attics, unconditioned utility rooms or in any other place subjected to  
27 freezing temperatures unless adequate provision is made to protect such pipes from freezing by a minimum  
28 of R-6.5 insulation determined at 75°F (24°C) in accordance with ASTM C177 or heat or both. Exterior  
29 water supply system piping shall be installed ~~not less than 6 inches (152 mm)~~ below the frost line and not  
30 less than 12 inches (305 mm) below grade.

31  
32 **Note:** These provisions are minimum requirements, which have been found suitable for normal weather  
33 conditions. Abnormally low temperatures for extended periods may require additional provisions to prevent  
34 freezing.

35

1 **P2603.5.1 Sewer depth.** *Building sewers* that connect to private sewage disposal systems shall be installed  
2 not less than 3 inches (76.2 mm) below finished grade at the point of septic tank connection. *Building*  
3 *sewers* shall be not less than 3 inches (76.2 mm) below grade.

4  
5 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is  
6 December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,  
7 2021).

8 **Reason Given** – The purpose of this amendment is to eliminate freeze protection for larger drainage pipes  
9 that do not hold water for extended periods and to reduce the burial depth.

10 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost.  
11 This rule is not expected to either have a substantial economic impact or increase local and state funds. A  
12 fiscal note has not been prepared.

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14  
15 **19. Request by Barry Siegal representing BSC Holdings, Inc. to amend the 2018 NC Building Code,**  
16 **Section 903.2.8 and Table 602 and 2018 NC Fire Prevention Code, Section 903.2.8 as follows:**

17  
18 **903.2.8 Group R.** An *automatic sprinkler system* installed in accordance with Section 903.3 shall be  
19 provided throughout all buildings with a Group R *fire area*.

20  
21 **Exceptions:**

22  
23 1. An *automatic sprinkler system* is not required in new adult and child day care facilities located in  
24 existing Group R-3 and R-4 occupancies.

25  
26 2. *temporary overflow shelters*.

27  
28 3. An *automatic sprinkler system* is not required in camping units located within a campground where all of  
29 the following conditions exist.

30 3.1. The camping unit is limited to one story in height,

31 3.2. The camping unit is less than 400 square feet (37 m<sup>2</sup>) in area.

32 3.3. The camping unit does not have a kitchen.

33  
34 4. An automatic sprinkler system is not required in an *Open Air Camp Cabin* that complies with the  
35 following:

36

1 4.1. The open air camp cabin shall have at least two remote unimpeded exits. Lighted exit signs shall not be  
2 required.

3 4.2. The open air camp cabin shall have at least two remote unimpeded exits. Lighted exit signs shall not be  
4 required.

5 4.3. Smoke detectors and portable fire extinguishers shall be installed as required by other sections of this  
6 Code.

7

8 5. An automatic sprinkler system is not required in the following Group R-3 buildings not more than three  
9 stories above grade plane in height with a separate means of egress:

10 5.1. Detached one- and two-family dwellings.

11 5.2. Attached one- and two-family dwellings separated with fire walls complying with Section 706 and  
12 containing no other occupancy classification.

13

14 **TABLE 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED**  
15 **ON FIRE SEPARATION DISTANCE<sup>a, d, g</sup>**

16

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H <sup>e</sup>	OCCUPANCY GROUP F-1, M, S- 1 <sup>f</sup>	OCCUPANCY GROUP A, B, E, F-2, I, R <sup>hi</sup> , S-2, U
$X < 5^b$	All	3	2	1
$5 \leq X < 10$	IA	3	2	1
	Others	2	1	1
$10 \leq X < 30$	IA, IB	2	1	1 <sup>c</sup>
	IIB, VB	1	0	0
	Others	1	1	1 <sup>c</sup>
$X \geq 30$	All	0	0	0

1

2 For SI: 1 foot = 304.8 mm.

3 a. Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table  
4 601.

5 b. See Section 706.1.1 for party walls.

6 c. Open parking garages complying with Section 406 shall not be required to have a fire-resistance rating.

7 d. The fire-resistance rating of an exterior wall is determined based upon the fire separation distance of  
8 the exterior wall and the story in which the wall is located.

9 e. For special requirements for Group H occupancies, see Section 415.6.

10 f. For special requirements for Group S aircraft hangars, see Section 412.4.1.

11 g. Where Table 705.8 permits nonbearing exterior walls with unlimited area of unprotected openings, the  
12 required fire-resistance rating for the exterior walls is 0 hours.

13 h. For Group R-3 detached one- and two-family dwellings of any construction type and not more than  
14 three stories above grade plane in height with a separate means of egress a fire separation distance of 5  
15 feet or less shall be 1-hour fire-resistant rated and shall be 0-hour fire-resistant rated for distances  
16 greater than 5 feet.

17 i. For Group R-3 attached one- and two-family dwellings of any construction type separated with fire  
18 walls complying with Section 706, containing no other occupancy classification, and not more than  
19 three stories above grade plane in height with a separate means of egress a fire separation distance of 5  
20 feet or less shall be 1-hour fire-resistant rated and shall be 0-hour fire-resistant rated for distances  
21 greater than 5 feet.

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**Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is December 1, 2019 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

**Reason Given** – This purpose of this amendment is to eliminate the R-3 sprinkler requirement and reduce the physical separation to match the Residential Code.

**Fiscal Statement** – This rule is anticipated to provide equivalent compliance with minor decrease in cost. This rule is not expected to either have a substantial economic impact or increase local and state funds. A fiscal note has not been prepared.

**NOTICE:**

**Appeals and Interpretations** of the North Carolina State Building Codes are published online at the following link.

[http://www.ncdoi.com/OSFM/Engineering\\_and\\_Codes/Default.aspx?field1=Code Interpretations&user=Code Enforcement Resources](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Interpretations&user=Code_Enforcement_Resources)

**NOTICE:**

**Objections and Legislative Review** requests may be made to the NC Office of Administrative Hearings in accordance with G.S. 150B-21.3(b2) after Rules are adopted by the Building Code Council.

<http://www.ncoah.com/rules/>