

**Minutes of the North Carolina Building Code Council
September 12, 2017
Raleigh, NC**

All members of the North Carolina Building Code Council were present for the Council Meeting except for Tony Sears, Mack Paul, Tim Fowler, and Ralph Euchner.

The following are summary minutes. The official minutes of this meeting are recorded on CD. Anyone desiring verbatim CDs or excerpts from these CDs should contact the Engineering Division of the NC Department of Insurance for information and reproduction costs. The next scheduled NC Building Code Council meeting will be held **Tuesday, December 12, 2017**. The location will be announced 30 days before the meeting.

Part A Administrative Items

Item A – 1 Ethics Statement: Inquire upon conflicts of interest or appearance of conflicts of interest that exist within the Council.

There were no actual or potential conflicts of interest noted.

Item A – 2 Approval of Minutes of the June 13, 2017 NC Building Code Council Meeting.

A motion to accept the June 13, 2017 meeting minutes was made, seconded and approved as amended below.

The opinion on Item D-8 was removed.

The Council received written comments from the American Wood Council were submitted and will be reviewed. Committee will give report at December 12, 2017 meeting.

Barry Gupton discussed the rule making changes made to Section 1(a) G.S. 150B-20(a) of the Senate Bill 16 Ratified Bill and how it will affect B items. This legislation will be effective January 2018.

Require Agencies and The Office of Administrative Hearings to Provide Additional Notice of Petitions for Rule Making

SECTION 1.(A) G.S. 150B-20(a) reads as rewritten:

- “(a) Petition. – A person may petition an agency to adopt a rule by submitting to the agency a written rule-making petition requesting the adoption. A person may submit written comments with a rule-making petition. If a rule-making petition requests the agency to create or amend a rule, the person must submit the proposed text of the requested rule change and a statement of the effect of the

requested rule change. Each agency must establish by rule the procedure for submitting a rule-making petition to it and the procedure the agency follows in considering a rule-making petition. An agency receiving a rule-making petition shall, within three business days of receipt of the petition, send the proposed text of the requested rule change and the statement of the effect of the requested rule change to the Office of Administrative Hearings. The Office of Administrative Hearings shall, within three business days of receipt of the proposed text of the requested rule change and the statement of the effect of the requested rule change, distribute the information via its mailing list and publish the information on its Web site.”

Item A – 3 (a) Section 10 of Senate Bill 16 Ratified Bill

STUDY ELECTRICAL SAFETY FOR SWIMMING POOLS

SECTION 10. The Building Code Council shall review electrical safety requirements for swimming pools to determine if the requirements should be amended in order to better protect public safety. No later than December 1, 2017, the Council shall report its findings and recommendations, including any actions the Council has taken related to electrical safety requirements for swimming pools, to the Joint Legislative Oversight Committee on Justice and Public Safety.

The Council reviewed the electrical safety for swimming pools.

(b) Section 11 of Senate Bill 16 Ratified Bill

STUDY USE OF UNGRADED LUMBER IN CERTAIN CIRCUMSTANCES

SECTION 11. The Building Code Council shall study under what circumstances it would be appropriate to use lumber that has not been grade stamped under the authority of a lumber grading bureau in construction in North Carolina. The Council shall consider cost, durability, public safety, and any other factors the Council deems necessary. No later than December 1, 2017, the Council shall report its findings and recommendations to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources.

Item A – 4 Rules Review Commission Meeting Report

Barry Gupton reported that all D-Items adopted at the June 13, 2017 BCC meeting were approved by the Rules Review Commission. The Energy Conservation, Existing Building, Mechanical and Residential Codes are on the September RRC agenda.

Barry also addressed that the 2018 Codes are scheduled to become effective January 2019 and should be in-hand the middle of 2018.

Item A – 4 Public Comments

Pam Elliott addressed the Board regarding the current electrical codes. She received third degree burns as a child and wants the electrical codes expanded from what has currently been accepted.

Robert Privott introduced Gary Embler to the Board. Gary took a moment to thank the committees for their service.

Part B – New Petition for Rulemaking

The following Petitions for Rulemaking have been received since the last Council meeting. The Council will vote either to deny or grant these Petitions. The Council will give no further consideration to Petitions that are denied. Petitions that are granted may proceed through the Rulemaking process. The council may send any Petition to the appropriate committee. The hearing will take place during or after the December 12, 2017 meeting.

Item B – 1 Request by Cliff Isaac representing the NC Department of Insurance to amend the NC State Building Code, Volume 2018 NC Residential Code as follows:

R301.1.4 Notice of Usage. When an area of a dwelling other than a crawlspace is unfinished and not habitable it shall be plainly identified by a label attached to a wall, ceiling, or other conspicuous location that identifies the allowed use of the area. The label shall also state that altering the area to an area of living, sleeping, or eating and cooking would require a permit and compliance with the North Carolina Residential Code for One and Two Family Dwellings.

Motion/Second/Approved by the Residential Super Committee.

Motion/Second/Approved by Council. Request granted.

Item B – 2 Request by Leon Skinner representing the City of Raleigh to amend the 2018 NC Plumbing Code – Section 403.1.1 (exception 2) and 2018 NC Building Code – Section 2902.1.1 (exception 2) as follows:

In buildings that contain dwellings or sleeping units that have a pool dedicated to the residents, a percentage reduction of the total required fixtures provided for a pool and pool deck without bleachers and grandstands may be taken equal to the percentage of total residential units whose entries fall within a 500 feet foot horizontal travel distance of the pool deck. In multi-story structures, the residential units located not more than one story above or below the pool and pool deck may be included in the percentage. Travel from the pool to the required toilet facilities shall be on an accessible route.

Motion/Second/Approved by the Commercial Super Committee.

Motion/Second/Approved by Council. Request granted.

Part C – Notice of Rulemaking Proceedings and Public Hearing

The following Petitions for Rulemaking have been granted by the Council. Notice of Rulemaking proceedings has been made. The Public Hearing was held September 12, 2017 and the Final Adoption meeting may take place on or after December 12, 2017. The written public comment period expires on October 16, 2017.

Item C – 1 Request by the NC Building Code Council, Electrical Ad Hoc Committee, to adopt the 2017 National Electric Code with North Carolina Amendments to be known as the 2017 North Carolina Electrical Code. The base documents for the 2017 NC Ad-Hoc Committee amendments are the 2014 NC Electrical Codes. The 2017 NC Ad-Hoc Committee amendments are posted at the link below and are replacements to the Sections printed in the base documents.

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2017%20Amendments%20to%20be%20adopted%20with%20the%20NEC%20Version%201.pdf

The 2017 National Electrical Code is available at the link below for purchase or for public access.

<http://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70>

Barry Gupton explained the hyperlinks for items C-1 through C-1.42. The Board decided that all C – 1 items would be considered a global issue.

Barry Gupton and Joe Starling addressed the duplicate items. They explained how some amendments are dependent on others approved and alternate items, if not passed.

Item C – 1.1 Retaining Existing NC Electrical Code Amendment, Article 10.

Item C – 1.2 Retaining the language from 2014 NEC for section 110.16

Item C – 1.3 Retaining language from 2014 NEC for section 110.24(A)

Item C – 1.4 Deleting subsection (c) of section 110.26(E)(2); (moving the intent of a current amendment over to the new Code)

Item C – 1.5 Deleting section 110.41

- Item C – 1.6 Adding an Exception for sewer lift pumps to section 210.8(A)(3); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.7 Adding an Exception for sewer lift pumps to section 210.8(B)(4); (amendment that was accidentally omitted from previous Code adoption)**
- Item C – 1.8 Deleting subsection (D) of section 210.8; (moving the intent of a current amendment over to the new Code)**
- Item C – 1.9 Replacing the words “a readily” with the word “an” and deleting kitchens and laundry areas from subsection (A) in section 210.12; (moving the intent of a current amendment over to the new Code)**
- Item C – 1.10 Removing bathrooms from section 210.12(B)**
- Item C – 1.11 Deleting subsection (C) of section 210.12**
- David Hewitt, representing NEMA spoke in opposition to elimination of AFCI requirements.**
- Robert Privott, NCHBA spoke in favor of changes that do not affect BCEGS and insurance ratings.**
- Item C – 1.12 Replacing the length of 1.8 m (6 ft) with 15.24 m (50 ft) in the Exception for section 210.12(D); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.13 Adding an Exception to 210.52(B)(2) for allowing receptacles to be on the small-appliance circuit if with 1.8 m (6ft) of the kitchen sink; (moving the intent of a current amendment for 210.8(A)(7) over to the new Code)**
- Item C – 1.14 Amending so that only one receptacle is required in foyers per section 210.52(I); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.15 Retaining the language from 2014 NEC for section 230.95(C)**
- Item C – 1.16 Replacing the word “present” with “available” in section 250.50; (moving the intent of a current amendment over to the new Code)**

- Item C – 1.17 At the March 14, 2017 BCC meeting, item was introduced as a B-8 item. If item is not rejected, adding Exception for temporary services for section 250.53(A)**
- Item C – 1.17 (Alternative): If item B-8 from the March 14, 2017 BCC meeting is rejected, keep current approved amendment for section 250.53(A)**
- Item C – 1.18 At the March 14, 2017 BCC meeting, item was introduced as a B-4 item. If item is not rejected, adding a second Exception to section 250.140 and expanding the original Exception in subsection (3)**
- Item C – 1.19 At the March 14, 2017 BCC meeting, item was introduced as a B-5 item. If item is not rejected, adding an Exception No. 5 for section 250.142(B)**
- Item C – 1.20 At the March 14, 2017 BCC meeting, item was introduced as a B-3 item. If item is not rejected, adding subsection (5) for existing panelboards in dwellings to section 300.3(B)**
- Item C – 1.21 At the March 14, 2017 BCC meeting, item was introduced as a B-9 item. If item is not rejected, adding an Exception to section 300.9**
- Item C – 1.21 (Alternative): If item B-9 from the March 14, 2017 BCC meeting is rejected, keep current approved amendment for section 300.9**
- Item C – 1.22 Retaining intent of the language from 2011 NEC with some modifications for section 310.15(B)(7); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.23 Removing the listing and labeling requirement for cable ties for section 320.30(A)**
- Item C – 1.24 Removing the listing and labeling requirement for cable ties for section 328.30**
- Item C – 1.25 Removing the listing and labeling requirement for cable ties for section 330.30(A)**
- Item C – 1.26 Removing crawl spaces from the requirements of section 334.15(C); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.27 Including one and two family dwellings to the list of exclusions for section 404.2(C)(8); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.28 Replacing the words “a readily” with the word “an” for section 406.4(D); (moving the intent of a current amendment over to the new Code)**
- Item C – 1.29 Removing subsections 5, 6, and 7 from section 406.12**
- Item C – 1.30 Removing the “not handwritten” provision from section 408.4(B)**

- Item C – 1.31 Deleting subsection (B) from section 409.22**
- Item C – 1.32 Deleting subsection (B) from section 422.5; and (moving the intent of a current amendment over to the new Code)**
- Item C – 1.33 Deleting section 430.99**
- Item C – 1.34 Deleting subsection (4) from section 430.130(A)**
- Item C – 1.35 Deleting section 440.10**
- Item C – 1.36 Retaining the language from 2014 NEC for Article 445 in its entirety**
- Item C – 1.37 Retaining the language from the 2014 NEC for section 555.1**
- Item C – 1.38 Retaining the language from the 2014 NEC for section 555.3 and modifying the ground fault threshold**
- Item C – 1.39 Adding additional language to the signage requirement with a footnote for section 555.24**
- Item C – 1.41 At the March 14, 2017 BCC meeting, item was introduced as a C-4 item. If item is not rejected, adding a subsection (1) to 680.21(C) for existing pool pump motor replacements**
- Item C – 1.42 At the June 13, 2017 BCC meeting, item was introduced as a B item. If item is not rejected or withdrawn, adding a subsection (2) to 680.21(C) for existing pool pump motor circuitry**

Item C – 2 Request by the NC Building Code Council and Appendix B Ad-Hoc committee, to amend the 2012 & 2018 Administrative Code and Policies, section 204.3.4 as follows:

204.3.4 Information Required. A permit application shall be filed with the Inspection Department on a form furnished for that purpose. The Inspection Department shall make available a list of information which must be submitted with the building application permit application, including a complete building code summary (see Appendix B) and a permit application information (see Appendix A). The Inspection Department’s building code summary shall be in the exact format as, and contain only the information in, Appendix B of the Administrative Code and Policies. The Inspection Department shall only modify its building code summary as set forth in section 103.5 Modifications, or as necessary to reflect any changes by the Building Code Council to Appendix B of the Administrative Code and Policies.

The 2018 Appendix B – Building Code Summary is available at the link below for public access.

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Enforcement_-_Design_Tools&user=Code_Enforcement_Resources

Item C – 3 Request by the NC Building Code Council, representing the NC General Assembly, to amend the 2012 NC Building Code, Section 1301.1.1 as follows:

1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code*.

Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

Billy Hinton, representing NCDOI noted that items C-3 through C-8 address the statutory direction by the General Assembly.

Item C – 4 Request by the NC Building Code Council, representing the NC General Assembly, to amend the 2012 NC Energy Code, Section 101.2 as follows:

101.2 Scope. This code applies to *residential* and *commercial* buildings.

Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2012 North Carolina Building Code. This exclusion shall apply to the entire building area.

Item C – 5 Request by the NC Building Code Council, representing the NC General Assembly, to amend the 2015 NC Existing Building Code, Section 101.12 as follows:

101.12 Energy conservation. Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

Item C – 6 Request by the NC Building Code Council, representing the NC General Assembly, to amend the 2018 NC Building Code, Section 1301.1.1 as follows:

1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code*.

Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

Item C – 7 Request by the NC Building Code Council, representing the NC General Assembly, to revise the 2018 NC Existing Building Code, Section 101.12 as follows:

101.12 Energy conservation

Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

Item C – 8 Request by the NC Building Code Council, representing the NC General Assembly, to amend the 2018 NC Energy Code, Section C101.2 as follows:

C101.2 Scope.

This code applies to *commercial buildings* and the buildings' sites and associated systems and equipment.

Exceptions:

1. Energy expended in support of *process energy* applications does not invoke energy conservation code requirements or building thermal envelope requirements unless otherwise required in specific sections of this code.
2. Per G.S. 1430138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2018 North Carolina Building Code. This exclusion shall apply to the entire building area.

Item C – 9 Request by Robert Privott and Buddy Hughes of the NC Home Builders Association, LOGIX, Inc., to amend the 2012 Residential Code, Section R404.1.2.3.6.1 as follows:

R404.1.2.3.6.1 Stay-in-place forms. Stay-in-place concrete forms shall comply with this section.

1. Surface burning characteristics. The flame-spread index and smoke developed index of forming material, other than foam plastic, left exposed on the interior shall comply with Section R302. The surface burning characteristics of foam plastic used in insulating concrete forms shall comply with Section R316.3.
2. Interior covering. Stay-in-place forms constructed of rigid foam plastic shall be protected on the interior of the building as required by Section R316. Where gypsum board is used to protect the foam plastic, it shall be installed with a mechanical fastening system. Use of adhesives in addition to mechanical fasteners is permitted.
3. Exterior wall covering. Stay-in-place forms constructed of rigid foam plastics shall be protected from sunlight and physical damage by the application of an approved exterior wall covering complying with this code. Exterior surfaces of other stay-in-place forming systems shall be protected in accordance with this code.
4. Termite hazards. In areas where hazard of termite damage is ~~very moderate~~ – heavy in accordance with Figure R301.2 (6), foam plastic insulation shall be permitted below grade on foundation walls in accordance with one of the following conditions:
 - 4.1. Where in addition to the requirements in Section R318.1, ~~an approved~~ a method of protecting the foam plastic and structure from subterranean termite damage is provided.
 - 4.2. The structural members of walls, floors, ceilings and roofs are entirely of noncombustible materials or pressure-preservative-treated wood.
 - 4.3. On the interior side of basement walls.

Robert Privott, representing the NC Home Builders Association, addresses the difference in language in the code and wants to modify language so it is consistent.

Items C-9 and C-11 have been pulled into one unit for comments.

Buddy Hughes addressed the Committee regarding insulation and consistency.

Leon Skinner would like to have the opportunity for committees to have more input into new products to give options for jurisdiction approval

Item C – 10 Request by Robert Privott, representing the NC Home Builders Association, to amend the 2018 Residential Code, Chapter 2 Definitions as follows:

Add definition for Farm Building.

Farm Building. Any building not used for sleeping purposes that is not accessed by the general public and is used primarily for a farm purpose. Farm purposes includes but are not limited to structures or buildings for equipment and/or storage and processing of agricultural products or commodities such as: crops, fruits, vegetables, ornamental or flowering plants, dairy, timber, livestock, poultry and all other such forms of agricultural products by the specific farm on which the structure or building is located. Farm purposes do not include structures or buildings for uses such as education facilities, research facilities, or aircraft hangers.

Robert Privott, representing the NC Home Builders Association offered a revised definition as a substitute for what was originally offered in Rules Review.

The decision was made to leave language as is and include new definition underneath as a substitute and follow up with vote during December's BCC meeting.

Michael Rettrie, Orange County has concerns with removing "bona fide" stating it will cause confusion.

Julian Burns, representing himself as a resident who has a farm, stands by leaving the language as is.

Proposed revised language to match Building/Fire Codes.

FARM BUILDING. Any *building* not used for sleeping purposes that is not accessed by the general public and is used primarily for a farm purpose. Farm purposes includes structures or *buildings* for equipment, storage and processing of agricultural products or commodities such as: crops, fruits, vegetables, ornamental or flowering plants, dairy, timber, livestock, poultry and all other such forms of agricultural products by the specific farm on which the structure or *building* is located. Farm purposes do not include structures or *buildings* for uses such as education facilities, research facilities, or aircraft hangers.

Item C – 11 Request by Robert Privott and Buddy Hughes, representing the NC Home Builders Association, LOGIX, Inc., to amend the 2018 Residential Code, Section R318.4.5.1 as follows:

R318.4.5.1 Inspection and treatment gaps.

Foam plastic in contact with the ground shall not be continuous to the bottom of the weather-resistant siding. A clear and unobstructed 2-inch (51mm) minimum inspection gap shall be maintained from the bottom of the weather-resistant siding to the top of any foam plastic. A minimum 4-inch (102 mm) treatment gap shall be provided beginning not more than 6 inches (152 mm) below grade. The top and bottom edges of the foam plastic installed between the inspection gap and the treatment gap shall be cut at a 45-degree (0.79 rad) angle. See

Appendix O. ~~For additional requirements for ICF foundations see Section R404.1.3.3.6.1.~~

Exception: For ICF foundations see Section R404.1.3.3.6.1

Item C – 12 Request by Robert Privott and Buddy Hughes, representing the NC Home Builders Association, LOGIX, Inc., to amend the 2018 Residential Code, Section R404.1.3.3.6.1 as follows:

R404.1.3.3.6.1 Stay-in-place forms. Stay-in-place concrete forms shall comply with this section.

1. Surface burning characteristics. The flame-spread index and smoke developed index of forming material, other than foam plastic, left exposed on the interior shall comply with Section R302. The surface burning characteristics of foam plastic used in insulating concrete forms shall comply with Section R316.3.
2. Interior covering. Stay-in-place forms constructed of rigid foam plastic shall be protected on the interior of the building as required by Section R316. Where gypsum board is used to protect the foam plastic, it shall be installed with a mechanical fastening system. Use of adhesives in addition to mechanical fasteners is permitted.
3. Exterior wall covering. Stay-in-place forms constructed of rigid foam plastics shall be protected from sunlight and physical damage by the application of an approved exterior wall covering complying with this code. Exterior surfaces of other stay-in-place forming systems shall be protected in accordance with this code.
4. ~~Deleted. Termite protection. In areas where the probability of termite infestation is “very heavy” as indicated by Table R301.2(1) or Figure R301.2(6), foam plastic insulation shall be permitted below grade on foundation walls in accordance with Section R318.4.~~

Termite hazards. In areas where hazard of termite damage is very moderate – heavy in accordance with Figure R301.2(6), foam plastic insulation shall be permitted below grade on foundation walls in accordance with one of the following conditions:

- 4.1. Where in addition to the requirements in Section R318.1, an approved a method of protecting the foam plastic and structure from subterranean termite damage is provided.
- 4.2. The structural members of walls, floors, ceilings and roofs are entirely of noncombustible materials or pressure-preservative-treated wood.

4.3. On the interior side of basement walls.

5. Flat ICF wall system forms shall conform to ASTM E 2634.

Item C – 13 Request by Robert Privott, representing the NC Home Builders Association, to amend the 2018 Residential Code, Table N1102.1.2 and the 2018 Energy Conservation Code, Table R402.1.2 as follows:

TABLES N1102.1.2 and R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

CLIMATE ZONE	FENESTRATION b, j U-FACTOR	SKYLIGHT b U-FACTOR	GLAZED FENESTRATION SHGC ^{b, e, k}	CEILING R- VALUE ^m	WOOD FRAME WALL R- VALUE	MASS WALL R- VALUE ⁱ	FLOOR R- VALU E	BASEMENT c, o WALL R-VALUE	SLAB ^d R- VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
3	0.35	0.55 <u>0.60</u>	0.30	38 or 30 ^{eil} <u>30</u>	15 or 13+2.5^{eh} <u>13</u>	5/13 or 5/10 ^{ei} <u>5/10</u>	19	5/13^f <u>10/13^f</u>	0	5/13
4	0.35	0.55 <u>0.60</u>	0.30	38 or 30 ^{cont} _j	15 or 13+2.5 ^h	5/13 or 5/10 ^{ei} <u>5/10</u>	19	10 / 15 <u>13</u>	10 ^d	10/ 15 <u>13</u>
5	0.35	0.55 <u>0.60</u>	NR	38 or 30 ^{cont} _j	19ⁿ or 15, 13+5 ^h or 15+3 ^{e, h}	13/17 or 13/2.5^{ei}	30 ^g	10/ 15 <u>13</u>	10 ^d	10 / 15 <u>13</u>

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. R-19 fiberglass batts compressed and installed in a nominal 2 × 6 framing cavity is deemed to comply. Fiberglass batts rated R-19 or higher compressed and installed in a 2 × 4 wall is not deemed to comply.
- f. Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.2(4) and (2) N1101.7 and Table ~~N1101.2~~ N1101.7
- g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- h. "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. 15+3 means R-15 cavity insulation plus R-3 insulated sheathing. 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. 13+2.5 means R-13 cavity insulation plus R-2.5 sheathing.
- i. For Mass Walls, the second R-value applies when more than half the insulation is on the interior of the mass wall.
- j. 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 to either the insulation baffle or within 1" of the attic roof deck.
- k. 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.

Billy Hinton with NC Department of Insurance spoke of correlation of UV and R factors, including both Residential and Energy Codes.

Jeff Tiller with Appalachian State University was representing Jarrett Davis and submitted Mr. Davis' comments to the Committee in opposition of the Residential Insulation Table.

Bridgett Herring, representing self, spoke against the table that was submitted.

Curt Hurd spoke in support of the 2018 Codes with the R value & energy efficiency.

Eric Lacey with Product Manufacturing advocates, spoke in support of the 2018 Codes and disapproves of the C-13 table.

Sam Zimmerman, a builder in Zone 5, supports the IECC table and said upgrades are better for homeowners.

Notes from Chuck Perry were submitted.

Mr. Ben Edwards, Spindale, NC Town Commissioner, spoke in favor of the 2018 table in the 2018 Energy Conservation code. He requested C-13 not be approved.

Brent Welch, who works with an insulation company expressed products are readily available for builders from his company and competitors.

Charlie Heck spoke on behalf of Trade Associates for Fiberglass in opposition to this amendment.

Robert Privott addressed the table in support of his requested proposal. He submitted results from Appalachian State University inspections.

Michael Rettie, Orange County spoke in opposition to the amendment.

Item C – 14 Request by Leon Skinner, representing the City of Raleigh, to amend the 2018 NC Plumbing Code, Chapter 2 as follows:

Water service pipe. The pipe from the water main or other source of potable water supply, or from the meter when the meter is at the public right of way, to the water distribution system of the building served. ~~Water service pipe shall terminate 5 feet (1524 mm) outside the foundation wall.~~

Item C – 15 Request by Leon Skinner, representing the City of Raleigh, to amend the 2018 NC Plumbing Code, Section 605.3 as follows:

605.3 Water service pipe. Water service pipe shall conform to NSF 61 and shall conform to one of the standards listed in Table 605.3. ~~All~~ Water service pipe or tubing, installed underground and outside of the structure, shall have a minimum working pressure rating of 160 psi (1100 kPa) at 73.4°F (23°C). Where the water pressure exceeds 160 psi (1100 kPa), piping material shall have a minimum rated working pressure equal to the highest available pressure. Water service piping materials not third-party certified for water distribution shall terminate ~~5 feet (1524 mm) outside the building~~ at or before the full-open valve located at the entrance to the structure. ~~All~~ Ductile iron water service piping shall be cement mortar lined in accordance with AWWA C104.

Item C – 16 Request by Jesse Wade White, Jr., PE, representing the BCC Electrical Standing Committee, to amend the 2014 NC Electrical Code, Section 680.21(C) as follows:

Amendment 680.21(C)(2)

(C) GFCI Protection. Outlets supplying pool pump motors connected to single-phase, 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel.

(2) Existing Pool Pump Motor Branch Circuit and Overcurrent Protection. All existing single-phase, 120-volt through 240-volt branch circuits and overcurrent devices that supply power to a pool pump motor by direct connection or outlet

shall comply with the provisions of 680.21(C) when the branch circuits or overcurrent devices are altered, installed, modified, relocated, repaired, or replaced.

Terry Cromer, NC Association of Electrical contractors spoke in favor of this amendment.

The family of Rachel Russel sent comments through Adam Neijna, Attorney to speak in favor of this extra layer of safety in hopes of preventing future electrocution in pools like the one that killed their daughter.

Public comments Concluded.

The Building Code Council members went into Committee meeting.

Part D – Final Adoption

The following Petitions for Rulemaking have been granted by the Council. Notice of Rulemaking proceedings and Public Hearing has been made. The Public Hearings were held March 14, 2017 and June 13, 2017. The Final Adoption meeting took place on September 12, 2017. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rulemaking process.

Item D – 1 Request by Pat Griffith Rose, representing NC Ellis Cannady Chapter of the IAEI, to amend the 2014 NC Electrical Code, Section 300.3 (B) (5) as follows:

300.3 Conductors

(B) Conductors of the Same Circuit. All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, auxiliary gutter, cable tray, cable bus assembly, trench, cable, or cord, unless otherwise permitted in accordance with

300.3(B) (1) through (B) (4).

(1) Paralleled Installations. Conductors shall be permitted to be run in parallel in accordance with the provisions of 310.10(H). The requirement to run all circuit conductors within the same raceway, auxiliary gutter, cable tray, trench, cable, or cord shall apply separately to each portion of the paralleled installation, and the equipment grounding conductors shall comply with the provisions of 250.122. Parallel runs in cable tray shall comply with the provisions of 392.20(C).

Exception: Conductors installed in nonmetallic raceways run underground shall be permitted to be arranged as isolated phase installations. The raceways shall be installed in close proximity, and the conductors shall comply with the provisions of 300.20(B).

(2) Grounding and Bonding Conductors. Equipment grounding conductors shall be permitted to be installed outside a raceway or cable assembly where in accordance with the provisions of 250.130(C) for certain existing installations or in accordance with 250.134(B), Exception No. 2, for dc circuits. Equipment

bonding conductors shall be permitted to be installed on the outside of raceways in accordance with 250.102(E).

(3) Nonferrous Wiring Methods. Conductors in wiring methods with a nonmetallic or other nonmagnetic sheath, where run in different raceways, auxiliary gutters, cable trays, trenches, cables, or cords, shall comply with the provisions of

300.20(B). Conductors in single-conductor Type MI cable with a nonmagnetic sheath shall comply with the provisions of

332.31. Conductors of single-conductor Type MC cable with a nonmagnetic sheath shall comply with the provisions of

330.31, 330.116, and 300.20(B).

(4) Enclosures. Where an auxiliary gutter runs between a column-width panelboard and a pull box, and the pull box includes neutral terminations, the neutral conductors of circuits supplied from the panelboard shall be permitted to originate in the pull box.

(5) Existing Dwelling Panelboards. An equipment grounding conductor for an existing one-and two-family dwelling shall be permitted to be installed separately and outside of the raceway or cable assembly where all the following conditions apply:

(a) When relocating or installing an additional service disconnecting means:

(b) Enacting 300.3(B)(5)(a) redefines the existing service entrance conductors as a feeder in Article 100; and

(c) Replacement of the existing service entrance conductors requires the removal of the building finish or deemed impractical by the AHJ.

Residential Super Committee: Motion to accept. Second. Accepted.

Commercial Super Committee: Motion to accept. Second. Accepted.

Building Code Council: Motion to Adopt. Second. Adopted.

Item D – 2 Request from Pat Griffith Rose, representing NC Ellis Cannady Chapter of the IAEI, to amend the 2014 NC Electrical Code, Section 250.140. Exceptions 1 & 2 as follows:

250.140 Frames of Ranges and Clothes Dryers. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be connected to the equipment grounding conductor in the manner specified by 250.134 or 250.138.

Exception No. 1: For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, the frames of electric ranges, wall-mounted ovens, counter mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be permitted to be connected to the grounded circuit conductor if all the following conditions are met.

(1) The supply circuit is 120/240-volt, single phase, 3 wire; or 208Y / 120-volt derived from a 3-phase, 4 wire, wye-connected system.

- (2) *The grounded conductor is not smaller than 10 AWG copper or 8 AWG aluminum.*
- (3) *Any of the following:*
- a) *The grounded conductor is insulated;*
 - b) *The grounded conductor is uninsulated and part of a Type SE service-entrance cable and the branch circuit originates at the service.*
 - c) *The grounded conductor is uninsulated and part of a cable assembly and all current-carrying conductors are protected by a ground fault circuit interrupter at the origination of the branch circuit; or*
 - d) *A new 3-wire cable assembly not smaller than the existing conductors shall be permitted to be extended from the service to an enclosure where the existing conductors shall be spliced together and provisions are made so that the grounded conductors are insulated by tape, heat-shrink or other approved means inside the enclosure.*
- (4) *Grounding contacts of receptacles furnished as part of the equipment are bonded to the equipment.*

Exception No. 2: For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, an equipment grounding conductor sized in accordance with 250.122 shall be permitted to be run separately from the circuit conductors.

Commercial Super Committee: Motion to accept. Second. Accepted.

Residential Super Committee: Motion to accept. Second. Accepted.

Building Code Council: Motion to Adopt. Second. Adopted.

Item D - 3 Request from Pat Griffith Rose, representing NC Ellis Cannady Chapter of the IAEEI, to amend the 2014 NC Electrical Code, Section 250.142 (B) as follows:

250.142 Use of Grounded Circuit Conductor for Grounding Equipment.

(B) Load-Site Equipment. Except as permitted in 250.30(A)(1) and 250.32(B) Exception, a grounded circuit conductor shall not be used for grounding non-current carrying metal parts of equipment on the load side of the service disconnecting means or on the load side of a separately derived system disconnecting means or the overcurrent devices for a separately derived system not having a main disconnecting means.

Exception No. 1: The frames of ranges, wall-mounted ovens, counter-mounted cooking units, and clothes dryers under the conditions permitted for existing installations by 250.140 shall be permitted to be connected to the grounded circuit conductor.

Exception No. 2: It shall be permissible to ground meter enclosures by connection to the grounded circuit conductor on the load side of the service disconnect where all of the following conditions apply:

(1) No service ground-fault protection is installed.

(2) All meter enclosures are located immediately adjacent to the service disconnecting means.

(3) The size of the grounded circuit conductor is not smaller than the size specified in Table 250.122 for equipment grounding conductors.

Exception No. 3: Direct-current systems shall be permitted to be grounded on the load side of the disconnecting means or overcurrent device in accordance with 250.164.

Exception No. 4: Electrode-type boilers operating at over 1000 volts shall be grounded as required in 490.72(E)(1) and 490.74.

Exception No. 5: It shall be permissible to ground an existing panelboard enclosure by connection to the grounded circuit conductor for a one- and two-family dwelling where all the following conditions apply:

1. When relocating or installing an additional main disconnecting means;
2. Enacting 250.142(B) Exception No. 5: (1) redefines the existing service entrance conductors as a feeder in Article 100;
3. An equipment grounding conductor in the existing panelboard is not present;
4. Replacement of the existing service entrance conductors requires either the removal of the building finish or deemed impractical by the AHJ.
5. All grounding electrode conductors are removed completely from the existing panelboard; and
6. The grounded conductors are insulated by tape, heat-shrink, or other approved means except where covered by the sheathing of a cable assembly or as needed for joints, splices, and termination purposes.

Residential Super Committee: Motion to accept. Second. Accepted.

Building Code Council: Motion to adopt. Second. Adopted.

Item D – 4 Request from Robert D. Richardson, representing Professional Trade Manufacturing, LLC, to amend the 2012 (2018?) NC Plumbing Code, Section 305.6 as follows:

305.6 FREEZING. The top of water pipes, installed below grade outside the building, shall be below the frost line or a minimum of 12 inches (305mm) below finished grade, whichever is greater. Water pipes installed in a wall exposed to the exterior shall be located on the heated side of the wall insulation. Water piping components and appurtenances installed in an unconditioned attic or unconditioned utility room or unconditioned garage or crawl space shall have insulation with a minimum R-factor of 6.5 determined at 75 degrees F (24 C) in accordance with ASTM C-177.

Residential Committee: Motion to deny. Second. Denied.
Commercial Committee: Motion to deny. Second. Denied.
Building Code Council: No action necessary.

Item D – 5 Request from Terry Cromer, representing NC Association of Electrical Contractors, to amend the 2014 NC Electrical Code, Article 250.53(A)(2) Supplemental Electrode Required as follows:

(2) Supplemental Electrode Required.

Exception No. 1: If a single rod, pipe, or plate grounding electrode has a resistance to earth of 25 ohms or less, the supplemental electrode shall not be required.

Exception No. 2: The supplemental ground electrode shall not be required at temporary electrical service installation (saw service pole) at a construction site ~~for one and two family residences, provided the temporary electrical service does not exceed 150 volts to ground or 100A.~~ provided all ungrounded circuits do not exceed 150 volts to ground, and the rating of the single disconnecting means or the summation of the ratings of multiple overcurrent devices that serve together as the disconnecting means, does not exceed 100 amperes.

Residential Super Committee: Motion to accept. Second. Accepted.
Commercial Super Committee: Motion to accept. Second. Accepted.
Building Code Council: Motion to adopt. Second. Adopted.

Item D – 6 Request from Terry Cromer, representing NC Association of Electrical Contractors, to amend the 2014 NC Electrical Code, Article 300.9 Raceways in Wet Locations Above Grade as follows:

300.9 Raceways in Wet Locations Above Grade.

Where raceways are in wet locations above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceway in wet locations above grade shall comply with 310.10(C).

Exception: The raceway shall not be considered a wet location if:

- (1) The section of raceway routed in a wet location above grade does not exceed ~~1500 mm (5 ft)~~ 1.8 m (6 ft) in length;
- (2) Any fittings or conduit bodies are watertight and listed for use in wet locations; and
- ~~(3) Raceway is open at its termination point in a dry location.~~
(3) All termination points of the raceway are only open in any of the following:
 - a. a dry location;
 - b. equipment suitable for outdoor use
 - c. equipment listed for use in a wet location.

Residential Super Committee: Motion to accept. Second. Accepted.
Commercial Super Committee: Motion to accept. Second. Accepted.
Building Code Council: Motion to adopt. Second. Adopted.

Item D – 7 Request from Daniel Priest, representing Priest Architecture, PLLC, to amend Section 901.1 from the 2012 and 2018 NC Fire Prevention Code. The amendment was referred to Committee on June 13, 2017 and held until September 12, 2017, as follows:

901.1 Scope. ~~The provisions of this chapter shall specify where fire protection systems are required and shall apply to the design, installation, inspection, operation, testing and maintenance of all *fire protection systems*.~~

901.1 Scope. The provisions of the International Building Code shall specify where *fire protection systems* are required and shall apply to the design, installation, inspection, operation, testing of all fire protection systems. Fire protection systems shall be repaired, operated and maintained in accordance to the *International Fire Code*.

Substitute language:

901.1 Scope. The provisions of the *International Building Code* shall specify where *fire protection systems* are required. The provisions of the *International Fire Code* shall determine the design, installation, inspection, operations, testing and maintenance of all *fire protection systems*.

Request was made for an immediate effective date for the 2012 Code.

Commercial Super Committee: Motion to accept with substitute language. Second. Accepted.
Building Code Council: Motion to adopt with substitute language. Second. Adopted. Effective immediately for the 2012 Code.

Part E – Reports

❖ Chairman’s Report

The Chairman thanked the NC DOI staff and the Building Code Council staff and leadership for all their assistance.

❖ Ad-Hoc Committee Reports

None

❖ Standing Committee Reports

None

❖ **Staff Reports**

Cliff Isaac with NC DOI discussed the upcoming events such as:
Code College (for Inspectors).
7 Cs Course (COCO).
Meeting with Inspections Departments.
Meeting with Builders.

Cliff also said he would do some research about the possibility of shortening the path for inspectors to become active due to the shortage of inspectors.

❖ **Public Comments**

None.

Adjourned.