Minutes of the North Carolina Building Code Council
June 9, 2015
Raleigh, NC

All members of the North Carolina Building Code Council were present for the Council Meeting.

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, September 15, 2015**. 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 March 10, 2015 NC Building Code Council Meeting.

A **motion** to accept the March 10th meeting minutes was made by David Smith, **seconded** by Ralph Euchner, and **approved**.

Item A – 3 City of Concord Fire Code Ordinance.

[NOTE: This item was delayed from the March BCC Meeting**]**

Motion – Alan Perdue/**Second** – Lon McSwain/**Denied.** The request was denied.

Item A – 4 Rules Review Commission Meeting Report

The D-Items from the March 2015 BCC meeting were approved by the Rules Review Committee.

Item A – 5 Public Comments

There were none.

Part B – New Petitions 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 September 2015 meeting.

Item B – 1 Request by Michael A. Segala, Jr., representing Aquatherm, to amend the 2012 NC Plumbing Code, Section 605.4. The proposed amendment is as follows:

605.4.1. Aquatherm green pipe with blue strip (SDR 11) shall be allowed in the North Carolina Plumbing Code for cold water potable water system applications including inside the building.

Motion – Al Bass/**Second** – Wade White/**Approved**. The request was granted and will be sent back to change wording.

Item B – 2 Request by Jeff Tiller, Appalachian State University and North Carolina Energy Efficiency Alliance, to amend the 2012 NC Energy and Conservation Code, Table 502.1.2. The proposed amendment is as follows:

Revised U-factor table less American Wood Council items (indicated as "Other proposal" below)

TABLE 502.1.2
BUILDING ENVELOPE REQUIREMENTS OPAQUE ELEMENT, MAXIMUM U-FACTORS

Climate Zone	3		4		5	
	All Other	Group R	All Other	Group R	All Other	Group R
Roofs						
X Insulation entirely above deck	U-0.039	U-0.039	U-0.032	U-0.032	U-0.032	U-0.032
Metal buildings	U-0.041	U-0.041	U-0.037	U-0.037	U-0.037	U-0.037
Attic and other-wood framing	U-0.027	~~U-0.041~~ U-0.027	~~U-0.021~~ U-0.024	~~U-0.021~~ U-0.024	~~U-0.021~~ U-0.024	~~U-0.021~~ U-0.024
Attic and other – steel framing	U-0.035	U-0.035	U-0.029	U-0.029	U-0.029	U-0.029
Walls, Above Grade						
Mass	U-0.123	U-0.104	U-0.104	U-0.090	U-0.090	~~U-0.060~~ U-0.071
Metal building	U-0.094	U-0.072	U-0.060	U-0.050	U-0.050	U-0.050
Metal framed	Other proposal	Other proposal	Other proposal	Other proposal	Other proposal	Other proposal
Wood framed and other	Other proposal	Other proposal	Other proposal	Other proposal	Other proposal	Other proposal
Walls, Below Grade						
Below-grade wall[a]	C-0.119	C-0.119	C-0.119	C-0.092	C-0.119	C-0.092)
Floors						
Mass	U-0.064	U-0.064	U-0.057	U-0.051	U-0.057	U-0.051
Joist / Framing-wood	U-0.033	U-0.033	~~U-0.027~~ U-0.026	~~U-0.027~~ U-0.026	~~U-0.027~~ U-0.026	~~U-0.027~~ U-0.026
Joist / Framing-steel	U-0.032	U-0.032	U-0.032	U-0.032	U-0.032	U-0.032
Slab-on-Grade Floors						
Unheated slabs	F-0.730	F-0.540	F-0.520	F-0.520	F-0.520	F-0.510
Heated slabs	F-0.860	F-0.860	~~F-0.688~~ F-0.843	F-0.688	F-0.688	F-0.688

a. When heated slabs are placed below-grade, below grade walls must meet the *F*-factor requirements for perimeter insulation according to the heated slab-on-grade construction.

Motion – Ralph Euchner/**Second** – Wade White/**Approved**. The request was granted.

Item B – 3 Request by Wayne Hamilton, representing the NC Fire Service Code Revision Committee, to amend the 2012 NC Fire Code, Section 505.1.1. The proposed amendment is as follows:

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

Motion – Alan Perdue/**Second** – Lon McSwain/**Approved**. The request was granted.

Item B – 4 Request by Wayne Hamilton, representing the NC Fire Service Code Revision Committee, to amend the 2012 NC Fire Code, Section 902.1. The proposed amendment is as follows:

Section 902 Definitions

Night Club. ~~An establishment meeting all of the following~~ An A-2 occupancy meeting all of the following conditions:

1. ~~Has a posted capacity or occupant load that exceeds one occupant per 15 square foot (1.39m^2) net~~ The aggregate floor area of concentrated use and standing space that is used for dancing and/or viewing of performers exceeds 10 percent of the Group A-2 fire area, excluding adjacent lobby areas ; and

2. Provides live or recorded entertainment by performing artist; and

3. ~~Serves~~ Allows alcoholic beverages~~.~~ consumption.

Motion – Alan Perdue/**Second** – Lon McSwain/**Approved**. The request was granted.

Item B – 5 Request by Robert Privott, representing the NC Home Builders Association, to amend the 2012 NC Mechanical Code, Section 312.1. The proposed amendment is as follows:

312.1 Load calculations. Heating and cooling system design loads for the purpose of sizing systems, appliances and *equipment* shall be determined in accordance with the procedures described in the ASHRAE/ACCA Standard 183. Alternatively, design loads shall be determined by an *approved* equivalent computation procedure, using the design parameters specified in Chapter 3 of the *International Energy Conservation Code.*

For one- and two-family dwellings and townhouses, heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J, or other approved heating and cooling calculation methodologies.

For permitting, inspections, certificate of compliance or certificate of occupancy, verification of Calculations for HVAC Systems - ACCA Manual D, ACCA Manual J nor ACCA Manual S calculation submittals and review shall not be required

Motion – David Smith/**Second** – Robbie Davis/**Approved**. The request was granted.

Item B – 6 **Request by Cindy Register, representing the NC Building Code Council, Electrical Committee, to adopt the 2014 NEC with the following amendments.**

https://archive.org/details/nfpa.nec.2014

Proposed North Carolina Amendments to 2014 NEC
Prepared by Electrical Adhoc Committee – August 31, 2014

Item 6.1: Retain language from 2011 NEC for 110.26 (E) (2) – No Cost Impact

(2) Outdoor. ~~Outdoor installations shall comply with 110.26(E)(2)(a) and (b).~~
~~(a) *Installation Requirements.*~~ Outdoor electrical equipment shall be installed in suitable enclosures and shall be protected from accidental contact by unauthorized personnel, or by vehicular traffic, or by accidental spillage or leakage from piping systems. The working clearance space shall include the zone described in 110.26(A). No architectural appurtenance or other equipment shall be located in this zone.
~~(b) *Dedicated Equipment Space.* The space equal to the width and depth of the equipment, and extending from grade to a height of 1.8 m (6 ft) above the equipment, shall be dedicated to the electrical installation. No piping or other equipment foreign to the electrical installation shall be located in this zone.~~

Item 6.2: Retain Existing NC Electrical Code Amendment to 210.8(A) (3) – No Cost Impact

210.8 (A) (3) Outdoors
Exception No. 1 *to (3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.*

Exception No. 2 to (3): A single outlet receptacle supplied by a dedicated branch circuit which is located and identified for specific use by a sewage lift pump.

Item 6.3: Retain language from 2011 NEC for 210.8(A) (7) – No Cost Impact

210.8(A) (7) Sinks — located in areas other than kitchens where receptacles are installed within 1.8 m (6 ft) of the outside edge of the sink.

Item 6.4: Remove GFCI requirement for kitchen dishwasher branch circuit. This was not a requirement in the 2011 NEC. – No Cost Impact

~~**210.8 (D) Kitchen Dishwasher Branch Circuit.** GFCI protection shall be provided for outlets that supply dishwashers installed in dwelling unit locations.~~

Item 6.5: Retain location requirements from 2011 NEC for AFCI Protection and remove term "readily". – No Cost Impact

210.12 Arc-Fault Circuit-Interrupter Protection. Arc-fault circuit-interrupter protection shall be provided as required in 210.12(A) (B), and (C). The arc-fault circuit interrupter shall be installed in an ~~readily~~ accessible location.

(A) Dwelling Units. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit ~~kitchens,~~ family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, ~~laundry areas,~~ or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through (6):

(1) A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit

(2) A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.

(3) A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:
a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 15.2 m (50 ft) for a 14 AWG conductor or 21.3 m (70 ft) for a 12 AWG conductor.
c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.

(4) A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 15.2 m (50 ft) for a 14 AWG conductor or 21.3 m (70 ft) for a 12 AWG conductor.
c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
d. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination–type AFCI and shall be listed as such.

(5) If RMC, IMC, EMT, Type MC, or steel-armored Type AC cables meeting the requirements of 250.118, metal wireways, metal auxiliary gutters, and metal outlet and junction boxes are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

(6) Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 50 mm (2 in.) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

Exception: Where an individual branch circuit to a fire alarm system installed in accordance with 760.41(B) or 760.121(B) is installed in RMC, IMC, EMT, or steel sheathed

cable, Type AC or Type MC, meeting the requirements of 250.118, with metal outlet and junction boxes, AFCI protection shall be permitted to be omitted.

Informational Note No. 1: For information on combination-type and branch/feeder-type arc-fault circuit interrupters, see UL 1699-2011, *Standard for Arc-Fault Circuit Interrupters*. For information on outlet branch circuit type arc-fault circuit interrupters, see UL Subject 1699A, *Outline of Investigation for Outlet Branch Circuit Arc-Fault Circuit-Interrupters*. For information on system combination AFCIs, see UL Subject 1699C, *Outline of Investigation for System Combination Arc-Fault Circuit Interrupters*.

Informational Note No. 2: See 29.6.3(5) of *NFPA 72*-2013, *National Fire Alarm and Signaling Code*, for information related to secondary power-supply requirements for smoke alarms installed in dwelling units.

Informational Note No. 3: See 760.41(B) and 760.121(B) for power-supply requirements for fire alarm systems.

Item 6.6: Remove exception for 6' extension at 210.12 (B). – No Cost Impact

(B) Branch Circuit Extensions or Modifications — Dwelling Units. In any of the areas specified in 210.12(A), where branch-circuit wiring is modified, replaced, or extended, the branch circuit shall be protected by one of the following:

(1) A listed combination-type AFCI located at the origin of the branch circuit

(2) A listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit
~~*Exception: AFCI protection shall not be required where the extension of the existing conductors is not more than 1.8 m (6 ft) and does not include any additional outlets or devices.*~~

Item 6.7: Revise to reflect NC Electrical Code Amendment with January 1, 2015 effective date. - No Cost Impact

210.52 (I) Foyers. Foyers that are not part of a hallway in accordance with 210.52(H) and that have an area that is greater than 5.6 m^2 (60 ft^2) shall have at least one receptacle~~(s) located in each wall space 900 mm (3 ft) or more in width. Doorways, door-side windows that extend to the floor, and similar openings shall not be considered wall space~~.

Item 6.8: Retain Existing NC Electrical Code Amendment to 250.50 – No Cost Impact

250.50 Grounding Electrode System. All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are available ~~present~~ at each building or structure served shall be bonded together to form the grounding electrode system. Where none of these grounding electrodes exist, one or more of the grounding electrodes specified in 250.52(A)(4) through (A)(8) shall be installed and used.

Item 6.9: Modify 250.53 (A) (2) to match D-1 Agenda Item – No Cost Impact

250.53 (A) (2)
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 construction site for one and two-family residences, provided the temporary electrical service does not exceed 150 volts to ground or 100A.

Item 6.10: Retain Table and Language of 2011 NEC related to sizing of Dwelling Services and Feeders – No Cost Impact

310.15 (B) (7) 120/240-Volt, Single-Phase Dwelling Services and Feeders.
~~For one-family dwellings and the individual dwelling units of two-family and multifamily dwellings, service and feeder conductors supplied by a single-phase, 120/240-volt system shall be permitted be sized in accordance with 310.15(B)(7)(1) through (4).~~
~~(1) For a service rated 100 through 400 A, the service conductors supplying the entire load associated with a one-family dwelling, or the service conductors supplying the entire load associated with an individual dwelling unit in a two-family or multifamily dwelling, shall be permitted to have an ampacity not less than 83 percent of the service rating.~~
~~(2) For a feeder rated 100 through 400 A, the feeder conductors supplying the entire load associated with a one-family dwelling, or the feeder conductors supplying the entire load associated with an individual dwelling, unit in a two-family or multifamily dwelling, shall be permitted to have an ampacity not less than 83 percent of the feeder rating.~~
~~(3) In no case shall a feeder for an individual dwelling unit be required to have an ampacity greater than that specified in 310.15(B)(7)(1) or (2).~~
~~(4) Grounded conductors shall be permitted to be sized smaller than the ungrounded conductors, provided that the requirements of 220.61 and 230.42 for service conductors or the requirements of 215.2 and 220.61 for feeder conductors are met.~~
~~Informational Note No. 1: The conductor ampacity may require other correction or adjustment factors applicable to the conductor installation.~~
~~Informational Note No. 2: See Example D7 in Annex D.~~

Delete Example D7 in 2014 NEC

Replace with 2011 NEC text & table:

310.15 (B) (7) 120/240-Volt, 3-Wire, Single-Phase Dwelling Services and Feeders.
For individual dwelling units of one-family, two-family, and multifamily dwellings, conductors, as listed in Table 310.15(B)(7), shall be permitted as 120/240-volt, 3-wire, single-phase service-entrance conductors, service-lateral conductors, and feeder conductors that serve as the main power feeder to each dwelling unit and are installed in raceway or cable with or without an equipment grounding conductor. For application of this section, the main power feeder shall be the feeder between the main disconnect and the panelboard that supplies, either by branch circuits or by feeders, or both, all loads that are part or associated with the dwelling unit. The feeder conductors to a dwelling unit shall not be required to have an allowable ampacity rating greater than their service-entrance conductors. The grounded conductor shall be permitted to be smaller than the ungrounded conductors, provided the requirements of 215.2, 220.61, and 230.42 are met.

Table 310.15(B)(7) Conductor Types and Sizes for 120/240-Volt, 3-Wire, Single-Phase Dwelling Services and Feeders. Conductor Types RHH, RHW, RHW-2, THHN, THHW, THW, THW-2, THWN, THWN-2, XHHW, XHHW-2, SE, USE, USE-2

	Conductor (AWG or kcmil)	
Service or Feeder Rating (Amperes)	Copper	Aluminum or Copper-Clad Aluminum
100	4	2
110	3	1
125	2	1/0
150	1	2/0
175	1/0	3/0
200	2/0	4/0
225	3/0	250
250	4/0	300
300	250	350
350	350	500
400	400	600

Item 6.11: Retain Existing NC Electrical Code Amendment to 334.15 (C) – No Cost Impact

334.15 (C) In Unfinished Basements ~~and Crawl Spaces~~. Where cable is run at angles with joists in unfinished basements, ~~and crawl spaces,~~ it shall be permissible to secure cables not smaller than two 6 AWG or three 8 AWG conductors directly to the lower edges of the joists. Smaller cables shall be run either through bored holes in joists or on running boards. Nonmetallic-sheathed cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or shall be protected in accordance with 300.4. Conduit or tubing shall be provided with a suitable insulating bushing or adapter at the point the cable enters the raceway. The sheath of the nonmetallic-sheathed cable shall extend through the conduit or tubing and into the outlet or device box not less than 6 mm (1⁄4 in.). The cable shall be secured within 300 mm (12 in.) of the point where the cable enters the conduit or tubing. Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment grounding conductor complying with the provisions of 250.86 and 250.148.

Item 6.12: Revise to reflect NC Electrical Code Amendment with January 1, 2015 effective date. – No Cost Impact

Article 404.2(C)
(8) Where installed in residential one- and two- family dwellings

Item 6.13: Remove term "readily" from 406.4 (D) and add new exception – No Cost Impact

406.4 (D) Replacements. Replacement of receptacles shall comply with 406.4(D)(1) through (D)(6), as applicable. Arc-fault circuit-interrupter type and ground-fault circuit-interrupter type receptacles shall be installed in an ~~readily~~ accessible location.
(1) Grounding-Type Receptacles. Where a grounding means exists in the receptacle enclosure or an equipment grounding conductor is installed in accordance with 250.130(C), grounding-type receptacles shall be used and shall be connected to the equipment grounding conductor in accordance with 406.4(C) or 250.130(C).

(2) Non–Grounding-Type Receptacles. Where attachment to an equipment grounding conductor does not exist in the receptacle enclosure, the installation shall comply with (D)(2)(a), (D)(2)(b), or (D)(2)(c).
(a) A non–grounding-type receptacle(s) shall be permitted to be replaced with another non–grounding-type receptacle(s).
(b) A non–grounding-type receptacle(s) shall be permitted to be replaced with a ground-fault circuit interrupter type of receptacle(s). These receptacles shall be marked "No Equipment Ground." An equipment grounding conductor shall not be connected from the ground-fault circuit-interrupter-type receptacle to any outlet supplied from the ground-fault circuit-interrupter receptacle.
(c) A non–grounding-type receptacle(s) shall be permitted to be replaced with a grounding-type receptacle(s) where supplied through a ground-fault circuit interrupter. Grounding-type receptacles supplied through the ground-fault circuit interrupter shall be marked "GFCI Protected" and "No Equipment Ground." An equipment grounding conductor shall not be connected between the grounding type receptacles.

(3) Ground-Fault Circuit Interrupters. Ground-fault circuit-interrupter protected receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this *Code*.
Exception: Where replacement of the receptacle type is impracticable, such as where the outlet box size will not permit the installation of the GFCI receptacle, the receptacle shall be permitted to be replaced with a new receptacle of the existing type, where GFCI protection is provided and the receptacle is marked "GFCI protected" and "no equipment ground," in accordance with 406.4(D)(2) (a), (b), or (c).

(4) Arc-Fault Circuit-Interrupter Protection. Where a receptacle outlet is supplied by a branch circuit that requires arc-fault circuit-interrupter protection as specified elsewhere in this *Code*, a replacement receptacle at this outlet shall be one of the following:
(1) A listed outlet branch-circuit type arc-fault circuit-interrupter receptacle
(2) A receptacle protected by a listed outlet branch-circuit type arc-fault circuit-interrupter type receptacle
(3) A receptacle protected by a listed combination type arc-fault circuit-interrupter type circuit breaker
This requirement becomes effective January 1, 2014.
Exception: Non-grounding type receptacles.

(5) Tamper-Resistant Receptacles. Listed tamper-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be tamper-resistant elsewhere in this *Code*.

(6) Weather-Resistant Receptacles. Weather-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this *Code*.

Item 6.14: For one- and two-family residences, remove term "readily" from 422.5 – No Cost Impact

422.5 Ground-Fault Circuit-Interrupter (GFCI) Protection. The device providing GFCI protection required in this article shall be readily accessible.
Exception: For one- and two-family residences, the device providing the GFCI protection required in this article shall be accessible.

Item 6.15: Retain Existing NC Electrical Code Amendment, Article 10. - No Cost Impact
(PLEASE NOTE I HAVE HIGHLIGHTED LANGUAGE THAT WILL NEED TO BE EDITED)

Article 10 - ADMINISTRATIVE SECTION

10.1 TITLE
These Administrative Regulations along with the requirements included in the 2014 Edition of the National Electrical Code (NFPA-70 - 2014) as adopted by the North Carolina Building Code Council on (DATE TO BE DETERMINED), to be effective (DATE TO BE DETERMINED), with the following amendments:
PROVIDE LIST OF ALL NC AMENDMENTS shall be known as the North Carolina Electrical Code, and may be cited as such or as the State Electrical Code; and will be referred to herein as "the code" or "this code".

10.2 SCOPE
Article 80 Administration and Enforcement of the code is hereby not adopted and does not apply for this code. For Scope and Exceptions to Applicability of Technical Codes, refer to the North Carolina Administrative Code and Policies.

10.3 PURPOSE
The purpose of the code is to provide minimum standards, provisions and requirements of safe and stable design, methods of construction and uses of materials in buildings or structures hereafter erected, constructed, enlarged, altered, repaired, moved, converted to other uses of demolished and to regulate the electrical systems, equipment, maintenance, use and occupancy of all buildings or structures. All regulations contained in this code have a reasonable and substantial connection with the public health, safety, morals, or general welfare, and their provisions shall be construed liberally to those ends.

10.4 ADMINISTRATION
For administrative regulations pertaining to inspection (rough-ins and finals), permits and Certificates of Electrical Compliance, see local ordinances and the North Carolina Administrative Code and Policies. When the provisions of other codes are determined to be contrary to the requirements of this code, this code shall prevail.

10.5 DEFINITION
Unless the context indicates otherwise, whenever the word "building" is used in this chapter, it shall be deemed to include the word "structure" and all installations such as plumbing systems, heating systems, cooling systems, electrical systems, elevators and other installations which are parts of, or permanently affixed to, the building or structure.

10.6 APPLICATION OF CODE TO EXISTING BUILDINGS
For requirements of existing structures, refer to the North Carolina Administrative Code and Policies.

10.7 SERVICE UTILITIES
10.7.1 Connection of Service Utilities – No person shall make connections from a utility, source of energy, fuel or power to any building or system which is regulated by the technical codes until approved by the Inspection Department and a Certificate of Compliance is issued (General Statute 143-143.2)
10.7.2 Authority to disconnect Service Utilities – The Inspection Department shall have the authority to require disconnecting a utility service to the building, structure or system regulated by the technical codes, in case of emergency or where necessary to eliminate an imminent hazard to life or property. The Inspection Department shall have the authority to disconnect a utility service when a building has been occupied prior to

Certificate of Compliance or entry into the building for purposes of making inspections cannot be readily granted. The Inspection Department shall notify the serving utility, and whenever possible the owner or occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant shall be notified in writing within eight (8) working hours (General Statutes 143-143.2, 153A-365, 153A-366, 160A-425 and 160A-426).
NORTH CAROLINA ELECTRICAL CODE, 2014 EDITION

10.8 TEMPORARY POWER

10.8.1 Scope. The provisions of this section apply to the utilization of portions of the wiring system within a building to facilitate construction.
10.8.2 Provisions for Temporary Power. The Code enforcement official shall give permission and issue a permit to energize the electrical service when the provisions of 10.8 and the following requirements have been met:
1) The service wiring and equipment, including the meter socket enclosure, shall be installed, the service wiring terminated, and the service equipment covers installed.
2) The portions of the electrical system that are to be energized shall be complete and physically protected.
3) The grounding electrode system shall be complete.
4) The grounding and the grounded conductors shall be terminated in the service equipment.
5) At least one receptacle outlet with ground fault circuit interrupter protection for personnel shall be installed with the circuit wiring terminated.
6) The applicable requirements of the North Carolina Electrical Code apply.
10.8.3 Uses Prohibited. In no case shall any portion of the permanent wiring be energized until the portions have been inspected and approved by an electrical Code Enforcement Official. Failure to comply with this section may result in disconnection of power or revocation of permit.
10.8.4 Application for Temporary Power. Application for temporary power shall be made by and in the name of the applicant. The application shall explicitly state the port portions of the energized electrical system, mechanical system, or plumbing system for which application is made, its intended use and duration.
10.8.5 Security and Notification. The applicant shall maintain the energized electrical system or that portion of the building containing the energized electrical system in a secured and locked manner or under constant supervision to exclude unauthorized personnel. The applicant shall alert personnel working in the vicinity of the energized electrical system to its presence.

10.9 Requirements of Other State Agencies, Occupational Licensing Boards, or Commissions
The North Carolina State Building Codes do not include all additional requirements for buildings and structures that may be imposed by other State agencies, occupational licensing boards, and commissions. It shall be the responsibility of a permit holder, design professional, contractor, or occupational license holder to determine whether any additional requirements exist.

Motion – Cindy Register/**Second** – Tim Fowler/**Approved**. The request was 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 June 9, 2015 and the Final Adoption meeting may take place on or after September 15, 2015. The written public comment period expires on July 14, 2015.

Item C – 1 Request by Lon McSwain, representing the NC BCC, to amend the 2012 NC Building Code, Volume I, Table 508.4. The proposed amendment is as follows:

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES

OCCUPANCY		A[d]	B	E	F-1	F-2	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M	R	S-1	S-2[b]	U
B	S	1	2[e]	1	2	1	NP	2	1	1	1	1	2	1	1	1	1	~~2~~1	1	1
	NS	2	2[e]	2	3	2	NP	3	2	2	2[a]	2	NP	2	2	2	2	~~3~~2	2	2
M	S	1	1	1	2	1	NP	2	1	1	1	1	2	1	1	2[e]	1	~~2~~1	1	1
	NS	2	2	2	3	2	NP	3	2	2	2[a]	2	NP	2	2	2[e]	2	~~3~~2	2	2
S-1	S	1	~~2~~1	1	2	1	NP	2	1	1	1	1	2	1	1	~~2~~1	1	3[e]	1	1
	NS	2	~~3~~2	2	3	2	NP	3	2	2	2	2	NP	2	2	~~3~~2	2	3[e]	2	2

There were no comments on this item.

Item C – 2 Request by Lon McSwain, representing the NC BCC, to amend the 2012 NC Building Code, Volume I, Section 1007.7. The proposed amendment is as follows:

1007.7 Exterior area for assisted rescue. The exterior area for assisted rescue must be open to the outside air and meet the requirements of Section 1007.6.1. Separation walls shall comply with the requirements of Section 705 for *exterior walls*. Where walls or openings are between the area for assisted rescue and the interior of the building, the building *exterior walls* within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a *fire resistance rating* of not less than 1 hour. Openings within such *exterior walls* shall be protected by opening protectives having a *fire protection rating* of not less than 3/4 hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower.

Exception: Areas for assisted rescue that are located 10 feet (3048 mm) or more from the exterior face of a building are not required to be separated from the building by fire-resistance rated walls or protected openings.

Wayne Hamilton, with the NC Fire Service Code Revision Committee, asked that this also be reflected in the NC Fire Code.

Item C – 3 Request by Lon McSwain, representing the NC BCC, to amend the 2012 NC Building Code, Sections 712.4 and 1018.1 and Table 1018.1, and the 2012 NC Fire Code Section 1018.1 and Table 1018.1. The proposed amendment is as follows:

1018.1 Construction. *Corridors* shall be fire-resistance rated in accordance with Table 1018.1. The *corridor* walls required to be fire-resistance rated shall comply with Section 709 for *fire partitions*.

~~**Exceptions:**~~

~~1. A *fire resistance rating* is not required for *corridors* in a Group E occupancy where each room that is used for instruction has at least one door opening directly to the exterior and rooms for assembly purposes have at least one half of the required *means of egress* doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.~~

~~2. A *fire resistance rating* is not required for *corridors* contained within a Group R dwelling or sleeping unit.~~

~~3. A *fire resistance rating* is not required for *corridors* in *open parking garages*.~~

~~4. A *fire resistance rating* is not required for *corridors* in an occupancy in Group B which is a space requiring only a single *means of egress* complying with Section 1015.1.~~

TABLE 1018.1
CORRIDOR FIRE-RESISTANCE RATING
(footnotes a through e remain unchanged)

f. Exit access corridors are not required to be rated on any single tenant floor or in any single tenant space, when ~~1 hour fire resistance rated tenant demising walls are provided between all tenants spaces and~~ 1-hour fire-resistance-rated floor/ceiling assemblies are provided in multistory buildings and fire partitions are provided between other tenant spaces on the same floor. The structure supporting such floor/ceiling assemblies and fire partitions is not required to be rated in Types IIB, IIIB and VB construction.

g. A fire-resistance rating is not required for corridors in a Group E occupancy where each room that is used for instruction has at least one door opening directly to the exterior and rooms for assembly purposes have at least one-half of the required means of egress doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.

h. A fire-resistance rating is not required for corridors contained within a Group R dwelling or sleeping unit.

i. A fire-resistance rating is not required for corridors in open parking garages.

j. A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with Section 1015.1.

(Insert footnote references as required in the table. Footnote f for Group B, g for Group E, h for Group R, i for Group S, j for Group B)

712.4 Continuity. Assemblies shall be continuous without openings, penetrations or joints except as permitted by this section and Section 708.2, 713.4, 714 and 1022.1. Skylights and other penetrations through a fire-resistant-rated roof deck or slab are permitted to be unprotected, provided that the structural integrity of the fire-resistant-rated roof assembly is maintained. Unprotected skylights shall not be permitted in roof assemblies required to be fire-resistance rated in accordance with Section 705.8.6. The supporting construction shall be protected to afford the required *fire-resistance rating* of the *horizontal assembly* supported.

Exceptions:

1. In buildings of Type IIB, IIIB, or VB construction, the construction supporting the *horizontal assembly* is not required to be fire-resistance-rated at the following:

~~1.~~ 1.1. Horizontal assemblies at the separations of incidental uses as specified by Table 508.2.5, provided the required *fire-resistance rating* does not exceed 1 hour.

~~2.~~ 1.2. Horizontal assemblies at the separation of *dwelling units* and *sleeping units* as required by Section 420.3.

~~3.~~ 1.3. Horizontal assemblies as *smoke barriers* constructed in accordance with Section 710.

2. Horizontal assemblies constructed solely for the purpose of satisfying the requirements of footnote f of Table 1018.1.

There were no comments on this item.

Item C – 4 Request by Lon McSwain, representing the NC BCC, to amend the 2012 NC Building Code, Section 1109.14. The proposed amendment is as follows:

1109.14.1 Facilities serving a single building. In Group R-2 and R-3 occupancies where recreational facilities are provided serving a single building containing *Type A units* or *Type B units*, 25 percent, but not less than one, of each type of recreational facility shall be *accessible*. Every recreational facility of each type on a site shall be considered to determine the total number of each type that is required to be *accessible*.

Exception: Pools for single or multiple Group R-2 and Group R-3 occupancy buildings intended for the residents only.

1109.14.2 Facilities serving multiple buildings. In Group R-2 and R-3 occupancies on a single *site* where multiple buildings containing *Type A units* or *Type B units* are served by recreational facilities, 25 percent, but not less than one, of each type of recreational facility serving each building shall be *accessible*. The total number of each type of recreational facility that is required to be *accessible* shall be determined by considering every recreational facility of each type serving each building on the site.

Exception: Pools for single or multiple Group R-2 and Group R-3 occupancy buildings intended for the residents only.

1109.14.3 Other occupancies. All recreational and sports facilities not falling within the purview of Section 1109.14.1 or 1109.14.2 shall be *accessible*.

Exception: Pools for single or multiple Group R-2 and Group R-3 occupancy buildings intended for the residents only.

There were no comments on this item.

Item C – 5 Request by Wayne Hamilton, NC Fire Service Code Revision Committee, to amend the 2012 NC Fire Code, Sections 308.1.6.3 & 202. The proposed amendment is as follows:

Add the following section to Chapter 3 of the NC Fire Code:

308.1.6.3 Sky lanterns. A person shall not release or cause to be released an untethered *sky lantern.*

Add the following to section 202 General Definitions of the NC Fire Code:

SKY LANTERN. An unmanned device with a fuel source that incorporates an open flame in order to make the device airborne.

Wayne Hamilton, representing the NC Fire Service Code Revision Committee, recommends that the Council adopt this code change.

Item C – 6 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Section R102.7. The proposed amendment is as follows:

R102.7 Existing structures. For requirements of existing structures, refer to the North Carolina Administration and Enforcement Requirements Code and the North Carolina Existing Building Code.

There were no comments on this item.

Item C – 7 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Table R302.6. The proposed amendment is as follows:

TABLE R302.6
DWELLING/GARAGE SEPARATION

SEPARATION	MATERIAL
From the residence and attics	Not less than 1/2-inch gypsum board or equivalent applied to the garage side
From all habitable rooms above the garage[a]	Not less than 5/8-inch X-gypsum board or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation	Not less than 1/2-inch gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 1/2-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area

For SI: 1 inch – 25.4 mm, 1 foot – 304.8mm

Footnote: a. For dwelling units constructed prior to the 2012 code edition, 1/2" or greater existing gypsum on the bottom side of the garage ceiling shall be acceptable. Joints shall be taped.

There were no comments on this item.

Item C – 8 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Section R308.4. The proposed amendment is as follows:

R308.4 Hazardous Locations. The following shall be considered specific hazardous locations for the purposes of glazing:

7. Glazing adjacent to stairways, landings and ramps within 36 inches (914 mm) horizontally of a walking surface when the exposed surface of the glazing is less than 60 inches (1524 mm) above the plane of the adjacent walking surface.

Exception:

1. When a rail is installed on the accessible side(s) of the glazing 34 to 38 inches (864 to 965 mm) above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1½ inches (38 mm) in cross sectional height.

2. Where a change in elevation is 8¼ inches or less at an exterior door.

There were no comments on this item.

Item C – 9 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Section R311.4. The proposed amendment is as follows:

~~**R311.4 Vertical egress.** Egress from habitable levels including habitable attics and basements not provided with an egress door in accordance with Section R311.2 shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.~~

There were no comments on this item.

Item C-10 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Section R408.2. The proposed amendment is as follows:

R408.2 Ground vapor retarder. When required by Section 408.1.1, ~~A~~ a minimum 6-mil (0.15 mm) polyethylene vapor retarder or equivalent shall be installed to nominally cover all exposed earth in the crawl space, with joints lapped not less than 12 inches. Where there is no evidence that the groundwater table can rise to within 6 inches (152 mm) of the floor of the crawl space, it is acceptable to puncture the ground vapor retarder at low spots to prevent water puddles from forming on top of the vapor retarder due to condensation. ~~Install a drain to daylight or sump pump at each low spot. Crawl space drains shall be kept separate from roof gutter drain systems and foundation perimeter drains.~~

There were no comments on this item.

Item C-11 **Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Table R602.10.1. The proposed amendment is as follows:**

Table R602.10.1
BRACING METHODS[1, 2]

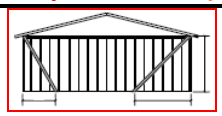
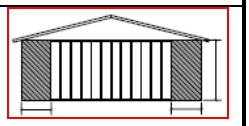
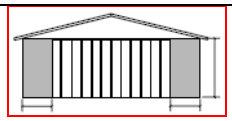
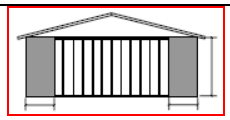
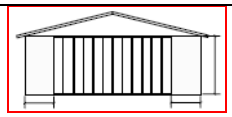
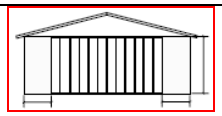
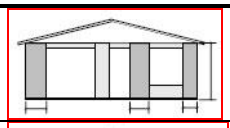
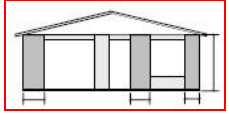
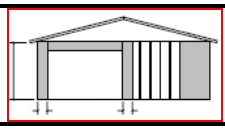
Method	Minimum Brace Material Thickness or Size	Minimum Brace Panel Length or Brace Angle	Connection Criteria		*Illustration of Bracing Method (illustrates method only, not location)*
			Fasteners	Spacing	
LIB Let-in Bracing	1x4 wood brace (or approved metal brace installed per manufacturer instructions)	45° angle for maximum 16"oc stud spacing[3]	2-8d common nails or 3-8d (2-1/2" long x 0.113" dia.) nails	Per stud and top and bottom plates	
DWB Diagonal wood boards	¾" (1" nominal)	48"	2-8d (2-1/2" long x 0.113" diameter) or 2 – 1-3/4" long staples	Per stud and top and bottom plates	
WSP Wood structural panel	3/8"	48"[4]	6d common nail or 8d (2-1/2" long x 0.113" diameter) nail *See Table R602.3(3)*	6" edges 12" field	
SFB Structural Fiberboard Sheathing	½"	48"[4]	1-1/2" long x 0.120" dia. Galvanized roofing nails	3" edges 6" field	
GB Gypsum Board Installed on both sides of wall	½"	96" for use with R602.10.2 48" for use with R602.10.3	Min. 5d cooler nails or #6 screws	7" edges 7" field	
PCP Portland cement plaster	¾" (maximum 16"oc stud spacing)	48"	1-1/2" long, 11 gage, 7/16" diameter head nails or 7/8" long, 16 gage staples	6" o.c. on all framing members	
CS-WSP[5] Continuously sheathed WSP	3/8"	24" adjacent to window not more than 67% of wall height; 30" adjacent to door or window greater than 67% and less than 85% of wall height. 48" for taller openings.	Same as WSP	Same as WSP	
CS-SFB[5] Continuously sheathed SFB	½"		Same as SFB	Same as SFB	
PF Portal Frame[6,7,8]	7/16"	See Figure R602.10.1	See Figure R602.10.1	See Figure R602.10.1	

Table Notes:

1. Alternative bracing materials and methods shall comply with Section 105 of the North Carolina Administrative Code and Policies, and shall be permitted to be used as a substitute for any of the bracing materials listed in Table R602.10.1 provided at least equivalent performance is demonstrated.

Where the tested bracing strength or stiffness differs from tabulated materials, the bracing amount required for the alternative material shall be permitted to be factored to achieve equivalence.

2. All edges of panel-type wall bracing shall be attached to framing or blocking, except GB bracing horizontal joints shall not be required to be blocked when joints are finished.
3. Two LIB braces installed at a 60° angle shall be permitted to be substituted for each 45° angle LIB brace.
4. For 8-foot or 9-foot wall height, brace panel minimum length shall be permitted to be reduced to 36-inch or 42-inch length, respectively, where not located adjacent to a door opening. A braced wall panel shall be permitted to be reduced to a 32-inch length when studs at each end of the braced wall panel are anchored to foundation or framing below using hold-down device with minimum 2,800 lbs. design tension capacity. For detached single story garages and attached garages supporting roof only, a minimum 24-inch brace panel length shall be permitted on one wall containing one or more garage door openings.

The 24" braced wall panel length is intended to be located adjacent to the garage door opening.

5. Bracing methods designated CS-WSP and CS-SFB shall have sheathing installed on all sheathable surfaces above, below, and between wall openings.
6. For purposes of bracing in accordance with Section R602.10.2, two portal frame brace panels with wood structural panel sheathing applied to the exterior face of each brace panel as shown in Figure R602.10.1 shall be considered equivalent to one braced wall panel.
7. Structural fiberboard (SFB) shall not be used in portal frame construction.
8. No more than three portal frames shall be used in a single building elevation.
9. CS-WSP and CS-SFB cannot be mixed on the same story.

There were no comments on this item.

Item C-12 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2012 NC Residential Code, Section R703.12. The proposed amendment is as follows:

R703.12. Adhered stone or masonry veneer installation. Adhered stone or masonry veneer shall be installed in accordance with the manufacturer's instructions. Protection against the accumulation of water in the exterior wall assembly shall be provided in accordance with Section R703.6 of this code.

There were no comments on this item.

Item C-13 Request by Tim Norris, representing Norris Enterprises, Inc./NCAEC, to amend the 2011 NEC, Section 406.4(D)(4). The proposed amendment is as follows:

~~**406.4(D)(4) Arc-Fault Circuit-Interrupter Protection.** Where a receptacle outlet is supplied by a branch circuit that requires arc-fault interrupter protection as specified elsewhere in this *Code*, a replacement receptacle at this outlet shall be one of the following:~~

~~(1) A listed outlet branch circuit type arc-fault circuit interrupter receptacle~~

~~(2) A receptacle protected by a listed outlet branch circuit type arc-fault circuit interrupter type receptacle~~

~~(3) A receptacle protected by a listed combination type arc-fault circuit interrupter type circuit breaker~~

~~This requirement becomes effective January 1, 2014.~~

Deleted.

Tim Norris, representing Norris Enterprises, Inc./NCAEC, recommends that the Council adopt this code change.

Terry Cromer, with NCAEC, recommends that the Council adopt this code change.

Item C-14 Request by Tom Brown, Jeff Griffin, Mark Matheny and Reggie Hucks, representing the NC BIA, to amend the 2012 NC Building Code, Section 1008.1.10. The proposed amendment is as follows:

1008.1.10 Panic and fire exit hardware. Doors serving a Group H occupancy and doors serving rooms or spaces with an *occupant load* of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock unless it is panic hardware or *fire exit hardware*.

Exception: A main *exit* of a Group A occupancy in compliance with Section 1008.1.9.3, Item 2.

Electrical rooms with equipment rated ~~1,200~~ 800 amperes or more and over 6 feet (1829 mm) wide that contain overcurrent devices, switching devices or control devices with *exit* or *exit access* doors shall be equipped with panic hardware or *fire exit hardware*. The doors shall swing in the direction of egress travel.

Mark Matheny, representing the NC BIA, recommends that the Council adopt this code change.

Item C-15 Request by Andrew Herring and Jeff Vernon, representing Mecklenburg County, to amend the 2012 NC Building Code, Section 706.2 & Table 706.4. The proposed amendment is as follows:

706.2 Structural stability. *Fire walls* shall have sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall for the duration of time indicated by the required *fire-resistance rating*.

Exception: For *fire walls* separating Group R-2 and S-2 buildings per footnotes c & d of Table 706.4, the structural wall of the S-2 building shall be permitted to serve as the fire wall between the buildings and shall be permitted to be laterally supported by floor construction of the same rating as the wall.

706.3 Materials. *Fire walls* shall be of any *approved* noncombustible materials.

Exception: Buildings of Type V construction.

706.4 Fire-resistance rating. *Fire walls* shall have a *fire-resistance rating* of not less than that required by Table 706.4.

TABLE 706.4
FIRE WALL FIRE-RESISTANCE RATINGS

GROUP	FIRE-RESISTANCE RATING (hours)
A, B, E, H-4, I, R-1, R-2[c,d], U	3[a]
F-1, H-3[b], H-5, M, S-1	3
H-1, H-2	4[b]
F-2, S-2[c,d], R-3, R-4	2

a. In Type II or V construction, walls shall be permitted to have a 2-hour fire-resistance rating.
b. For Group H-1, H-2, or H-3 building, also see Sections 415.4 and 415.5.
c. Where fire walls separate R-2 buildings of Type V construction and S-2 buildings of Type IB construction, the structural rating of the Type IB S-2 structure shall be permitted to satisfy the requirements of Table 706.4.

d. Where fire walls separate R-2 buildings of Type III construction and S-2 buildings of Type IA construction, the structural rating of the Type IA S-2 structure shall be permitted to satisfy the requirements of Table 706.4 provided the floor construction of the S-2 structure complies with Table 721.2.1.1 and meets the equivalent thickness for a 3-hour slab when providing lateral stability to vertical construction.

Wayne Hamilton, representing the NC Fire Service Code Revision Committee, does not recommend that the Council adopt this code change.

Mark Matheny, representing the NC BIA, does not recommend that the Council adopt this code change.

Item C-16 Request by Paul Coats, representing the American Wood Council, to amend the 2012 NC Energy Conservation Code, Table 502.2(1). The proposed amendment is as follows:

Revise as follows:
(Note this is a companion change to a U-factor change, to Table 502.1.2)

TABLE 502.2(1)
BUILDING ENVELOPE REQUIREMENTS – OPAQUE ASSEMBLIES

Climate Zone	3		4		5	
	All Other	Group R	All Other	Group R	All Other	Group R
Roofs						
Insulation entirely above deck	R - 25 ci	R-25 ci	R - 30 ci	R-30 ci	R - 30 ci	R-30 ci
Metal buildings (with R-5 thermal blocks)[a,b]	R-10 + R-19 FC	R-10 + R-19 FC	R-19 + R-11 Ls	R-19 + R-11 Ls	R-19 + R-11 Ls	R-19 + R-11 Ls
Attic and other - wood framing	R-38	R-38	R-42	R-42	R-42	R-42
Attic and other - steel framing	R-38	R-38	R-49	R-49	R-49	R-49
Walls, Above Grade						
Mass	R-7.6 ci	R-9.5 ci	R-9.5 ci	R-11.4 ci	R-11.4 ci	R-15 ci
Metal building[b]	R-0+R-13 ci	R-0 + R-19 ci	R-0 + R-15.8 ci	R-0 + R-19 ci	R-0 + R-19 ci	R-0 + R-19 ci
Metal framed	R-13 + 7.5 ci	R- 13 + R-7.5 ci	~~R-13 + R-10 ci~~ R-13 + R-7.5ci	~~R-13 + R-12.5 ci~~ R-13 + R-7.5ci	~~R-13 + R-12.5 ci~~ R-13 + R-7.5ci	~~R-13 + R-15 ci~~ R-13 + R-10ci
Wood framed and other	R-13 + R-3.8 ci or R-20	~~R-19, R-13+ R-5, or R-15 + R-3~~[g] R-13 + R-3.8 ci or R-20	~~R-13 + R-7.5 ci~~ R-13 + R-3.8ci or R-20	~~R-19, R-13+ R-5, or R-15 + R-3~~[g] R-13 + R-3.8 ci or R-20	~~R-13 + R-10 ci~~ R-13 + R-3.8 ci or R-20	~~R-19, R-13+ R-5, or R-15 + R-3~~[g] R-13 + R-7.5ci or R-20 + R-3.8ci
Walls, Below Grade						
Below-grade wall[c]	R-7.5 ci	R-7.5 ci	R-7.5 ci	R-10 ci	R-7.5 ci	R-10 ci
Floors						
Mass	R-12.5 ci	R-12.5 ci	R-14.6 ci	R-16.7 ci	R-14.6 ci	R-16.7 ci
Joist / Framing	R-30[e]	R-30[e]	R-38	R-38	R-38	R-38
Slab-on-Grade Floors[d]						
Unheated slabs	NR	R-10 for 24 in.	R-15 for 24 in.	R-15 for 24 in.	R-15 for 24 in.	R-20 for 24 in.
Heated slabs	R-15 for 24 in.	R-15 for 24 in.	R-20 for 24 in.	R-20 for 48 in.	R-20 for 48 in.	R-20 for 48 in.
Opaque Doors						
Swinging	U – 0.70	U – 0.50	U – 0.50	U – 0.50	U – 0.50	U – 0.50
Roll-up or sliding	U - 0.50	U - 0.50	U - 0.50	U - 0.50	U - 0.50	U - 0.50

Loren Ross, representing the American Wood Council, made the Council aware of a typo in the table.

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 10, 2015. The Final Adoption meeting took place on June 9, 2015. 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(a) Request by Paul Coats, PE, CBO, to amend the 2012 NC Building Code, Sections 602.4 and 2302.1, and the 2012 NC Residential Code, Sections R502, R602, and R802. . The proposed amendment is as follows:

2012 NC Building Code:

Add a definition in Chapter 2:
[BS] CROSS-LAMINATED TIMBER. A prefabricated engineered wood product consisting of not less than three layers of solid-sawn lumber or *structural composite lumber* where the adjacent layers are cross oriented and bonded with structural adhesive to form a solid wood element.

Revise as follows:
602.4 Type IV. Type IV construction (Heavy Timber, HT) is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid or laminated wood without concealed spaces. The details of Type IV construction shall comply with the provisions of this section and Section 2304.10. ~~*Fire-retardant treated wood* framing~~ Exterior walls complying with Section ~~2303.2~~ 602.4.1 or 602.4.2 shall be ~~permitted within exterior wall assemblies with a 2-hour rating or less~~ permitted. Minimum solid sawn nominal dimensions are required for structures built using Type IV construction (HT). For glued-laminated members, the equivalent net finished width and depths corresponding to the minimum nominal width and depths of solid sawn lumber are required as specified in Table 602.4. *Cross-laminated timber* (CLT) dimensions used in this section are actual dimensions.

602.4.1 Fire-retardant-treated wood in exterior wall. Fire-retardant wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies with a 2-hour rating or less.

602.4.2 Cross-laminated timber in exterior walls. Cross-laminated timber complying with Section 2303.1.4 shall be permitted within exterior wall assemblies with a 2-hour rating or less, provided the exterior surface of the cross-laminated timber is protected by one of the following:

1. Fire-retardant-treated wood sheathing complying with Section 2303.2 and not less than 15/32 inch (12 mm) thick;

2. Gypsum board not less than ½ inch (12.7 mm) thick; or

3. A noncombustible material

~~**602.4.1**~~ **602.4.3 Columns.** *(no change, only renumbering)*

~~**602.4.2**~~ **602.4.4 Floor framing.** *(no change, only renumbering)*

~~**602.4.3**~~ **602.4.5 Roof framing.** *(no change, only renumbering)*

~~**602.4.4**~~ **602.4.6 Floors.** *(no change, only renumbering)*

602.4.6.1 Cross-laminated timber floors. Cross-laminated timber shall be not less than 4 inches (102 mm) in thickness. Cross-laminated timber shall be

continuous from support to support and mechanically fastened to one another. Cross-laminated timber shall be permitted to be connected to walls without a shrinkage gap providing swelling or shrinking is considered in the design. Corbelling of masonry walls under the floor shall be permitted to be used.

~~602.4.5~~ 602.4.7 Roofs. Roofs shall be without concealed spaces and wood roof decks shall be sawn or glued-laminated, splined or tongue-and-groove plank, not less than 2 inches (51 mm) nominal in thickness~~,~~; 11/8-inch-thick (32 mm) wood structural panel (exterior glue)~~,~~; ~~or of~~ planks not less than 3 inches (76 mm) nominal in width, set on edge close together and laid as required for floors~~.~~; or cross-laminated timber. Other types of decking shall be permitted to be used if providing equivalent *fire resistance* and structural properties.

Cross-laminated timber roofs shall be not less than 3 inches (76 mm) nominal in thickness and shall be continuous from support to support and mechanically fastened to one another.

~~602.4.6~~ 602.4.8 Partitions and walls. Partitions and walls shall comply with Section 602.4.8.1 or 602.4.8.2.

602.4.8.1 Interior walls and partitions. Interior walls and p~~P~~artitions shall be of solid wood construction formed by not less than two layers of 1-inch (25 mm) matched boards or laminated construction 4 inches (102 mm) thick, or of 1-hour fire-resistance-rated construction.

602.4.8.2 Exterior walls. Exterior walls shall be one of the following:

1. Noncombustible materials
2. Not less than 6 inches (152 mm) in thickness and constructed of one of the following:

   2.1 Fire-retardant-treated wood in accordance with Section 2303.2 and complying with Section 602.4.1.

   2.2 Cross-laminated timber complying with Section 602.4.2.

~~602.4.7~~ 602.4.9 Exterior structural members. *(no change, only renumbering)*

2302.1 Definitions.

Insert as follows:
CROSS-LAMINATED TIMBER. A prefabricated engineered wood product consisting of not less than three layers of solid-sawn lumber or *structural composite lumber* where the adjacent layers are cross oriented and bonded with structural adhesive to form a solid wood element.

Revise as follows:
2303.1.4 Structural glued cross-laminated timber. Cross-laminated timbers shall be manufactured and identified in accordance with ANSI/APA PRG 320.

~~2303.1.4~~ 2303.1.5 Wood structural panels. *(no change, only renumbering)*

(Renumber subsequent sections accordingly)

Add to Chapter 35 under APA:
ANSI/APA PRG 320-2012 Standard for Performance-rated Cross Laminated Timber.....2303.1.4

Motion – Robbie Davis/**Second**/**Adopted**.

Item D-1(b) 2012 NC Residential Code:

Add a definition in Chapter 2:
CROSS-LAMINATED TIMBER. A prefabricated engineered wood product consisting of not less than three layers of solid-sawn lumber or *structural composite lumber* where the adjacent layers are cross oriented and bonded with structural adhesive to form a solid wood element.

Revise as follows:
R502.1.6 Cross-laminated timber. Cross-laminated timber shall be manufactured and identified as required by ANSI/APA PRG 320.

Revise as follows:
R502.8.2 Engineered wood products. Cuts, notches and holes bored in trusses, structural glue-laminated members, cross-laminated timber members or I-joists are prohibited except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered in the design of the member by a *registered design professional*.

Revise as follows:
R602.1.3 Cross-laminated timber. Cross-laminated timber shall be manufactured and identified as required by ANSI/APA PRG 320.

~~**R602.1.3**~~ **R602.1.4 Structural log members.** *(no change, only renumbering)*

Revise as follows:
R802.1.5 Cross-laminated timber. Cross-laminated timber shall be manufactured and identified as required by ANSI/APA PRG 320.

~~**R802.1.5**~~ **R802.1.6 Structural log members.** *(no change, only renumbering)*

Revise as follows:
R802.7.2 Engineered wood products. Cuts, notches and holes bored in trusses, structural composite lumber, structural glue-laminated, cross-laminated timber members or I-joists are prohibited except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered in the design of the member by a *registered design professional*.

Add to Chapter 44 under APA:
ANSI/APA PRG 320-2012 Standard for Performance-rated Cross Laminated Timber.....R502.1.6, R602.1.3, R802.1.5

Motion – Robbie Davis/**Second**/**Adopted**.

Item D – 2 Request by Paul Coats, PE, CBO, to amend the 2012 NC Energy Conservation Code, TABLE 502.1.2. The proposed amendment is as follows:

TABLE 502.1.2
BUILDING ENVELOPE REQUIREMENTS OPAQUE ELEMENT, MAXIMUM U-FACTORS

Climate Zone	3		4		5	
	All Other	Group R	All Other	Group R	All Other	Group R
Roofs						
Insulation entirely above deck	U-0.039	U-0.039	U-0.032	U-0.032	U-0.032	U-0.032
Metal buildings (with R-5 thermal blocks[a])	U-0.041	U-0.041	U-0.035	U-0.035	U-0.035	U-0.035
Attic and other	U-0.027	U-0.041	U-0.021	U-0.021	U-0.021	U-0.021
Walls, Above Grade						
Mass	U-0.123	U-0.104	U-0.104	U-0.090	U-0.090	U-0.060
Metal Building	U-0.072	U-0.050	U-0.060	U-0.050	U-0.050	U-0.050
Metal framed	U-0.064	U-0.064	~~U-0.055~~ U-0.064	~~U-0.049~~ U-0.064	~~U-0.049~~ U-0.064	~~U-0.043~~ U-0.055
Wood framed and other	U-0.064	~~U-0.051~~ U-0.064	~~U-0.051~~ U-0.064	~~U-0.045~~ U-0.064	~~U-0.045~~ U-0.064	~~U-0.041~~ U-0.055
Walls, Below Grade						
Below-grade wall[a]	C-0.119	C-0.119	C-0.119	C-0.092	C-0.119	C-0.092
Floors						
Mass	U-0.064	U-0.064	U-0.057	U-0.051	U-0.057	U-0.051
Joist/Framing	U-0.033	U-0.033	U-0.027	U-0.027	U-0.027	U-0.027
Slab-on-Grade Floors						
Unheated slabs	F-0.730	F-0.540	F-0.520	F-0.520	F-0.520	F-0.510
Heated slabs	F-0.860	F-0.860	F-0.688	F-0.688	F-0.688	F-0.688

a. When heated slabs are placed below-grade, below grade walls must meet the *F*-factor requirements for perimeter insulation according to the heated slab-on-grade construction.

Motion – Ralph Euchner/**Second** – David Smith/**Adopted** with modifications.

Item D – 3 Request by Richard Strickland, representing NCDOI-Engineering, to amend the 2012 NC Fire Prevention Code, Section 106. The proposed amendment is as follows:

SECTION 106
INSPECTIONS

In order to preserve and protect public health and safety and to satisfy the requirements of General Statute 153A-364 and General Statute 160A-424, political subdivisions assuming inspection duties, as set out in General Statute 153A-351 and General Statute 160A-411, shall have a periodic inspection schedule for the purpose of identifying activities and conditions in buildings, structures and premises that pose dangers of fire, explosion or related hazards. Such inspection schedule shall be approved by the local governing body and shall be submitted to the Office of State Fire Marshal of the Department of Insurance. In no case shall inspections be conducted less frequently than described in the schedule below:

Once every year	Hazardous, institutional, high-rise assembly except those noted below, and Residential except one- and two family dwellings and only interior common areas of dwelling units of multi-family occupancies. New and existing lodging establishments, including hotels, motels, and tourist homes that provide accommodations for seven or more continuous days (extended-stay establishments), bed and breakfast inns

and bed and breakfast homes as defined in G.S. 30A-247 for the installation and maintenance of carbon monoxide alarms and detectors in accordance with G.S. 143-138(b2).

Motion – Alan Perdue/**Second**/**Adopted** as amended.

Item D – 4 Request by Richard Strickland, representing NCDOI-Engineering, to amend the 2012 NC Fire Prevention Code, Section 908.7. The proposed amendment is as follows:

[Note: Section 908.7, Carbon Monoxide Alarms has been incorporated into this Rule.**]**

Add the following definition to:

SECTION 202
GENERAL DEFINITIONS

[B] PRIVATE GARAGE. A building or portion of a building in which motor vehicles used by the tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit.

SECTION 915
CARBON MONOXIDE DETECTION

915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6. ~~Carbon monoxide detection shall be installed in existing buildings in accordance with Section 1103.9.~~

915.1.1 Where required. Carbon monoxide detection shall be provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

915.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

915.1.3 Forced air furnaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms served by a fuel-burning, forced air furnace.

Exception: Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms where carbon monoxide detection is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

915.1.4 Fuel-burning appliances outside of dwelling units, sleeping units and classrooms. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel-burning fireplaces.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms if there are no communicating openings between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms if carbon monoxide detection is provided in one of the following locations:
   2.1 In an approved location between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

   2.2 On the ceiling of the room containing the fuel-burning appliance or fuel-burning fireplace.

915.1.5 Private garages. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms in buildings with attached private garages.

Exceptions:

1. Carbon monoxide detection shall not be required where there are no communicating openings between the private garage and the dwelling unit, sleeping unit or classroom.
2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms located more than one story above or below a private garage.

3. Carbon monoxide detection shall not be required where the private garage connects to the building through an open-ended corridor.

4. Where carbon monoxide detection is provided in an approved location between openings to a private garage and dwelling units, sleeping units or classrooms, carbon monoxide detection shall not be required in the dwelling units, sleeping units or classrooms.

915.1.6 Exempt garages. For determining compliance with Section 915.1.5, an open parking garage complying with Section 406.5 of the International Building Code or an enclosed parking garage complying with Section 406.6 of the International Building Code shall not be considered a private garage.

915.2 Locations. Where required by Section 915.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through 915.2.3.

915.2.1 Dwelling units. Carbon monoxide detection shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom.

915.2.2 Sleeping units. Carbon monoxide detection shall be installed in sleeping units.

Exception: Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area in the immediate vicinity of the sleeping unit where the sleeping unit or its attached bathroom does not contain a fuel-burning appliance and is not served by a forced air furnace.

915.2.3 Group E occupancies. Carbon monoxide detection shall be installed in classrooms in Group E occupancies. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel.

Exception: Carbon monoxide alarm signals shall not be required to be automatically transmitted to an on-site location that it staffed by school personnel in Group E occupancies with an occupant load of 30 or less.

915.3 Detection equipment. Carbon monoxide detection required by Sections 915.1 through 915.2.3 shall be provided by carbon monoxide alarms complying with Section 915.4 or with carbon monoxide detection systems complying with Section 915.5.

915.4 Carbon monoxide alarms. Carbon monoxide alarms shall comply with Sections 915.4.1 through 915.4.3.

915.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exception: Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

915.4.2 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034.

915.4.3 Combination alarms. Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with UL 2034 and UL 217.

915.5 Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 915.5.1 through 915.5.3.

915.5.1 General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

915.5.2 Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 915.2. These locations supersede the locations specified in NFPA 720.

915.5.3 Combination detectors. Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable

alternative to carbon monoxide detectors, provided they are listed in accordance with UL 2075 and UL 268.

915.6 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced.

Revise Chapter 47 as follows:
NFPA 720 – ~~09 –~~ 12

[Note: This Rule will also be printed in the 2012 NC Building Code, Section 915, 2012 NC Fuel Gas Code, Section 311.4, and 2012 NC Mechanical Code, Section 313.4, Carbon Monoxide Detection.**]**

Motion – Ralph Euchner/**Second**/**Adopted** with companion language.

Item D – 5 Request by Jerry Fraker, City of Raleigh, to amend the 2012 NC Plumbing Code, Section 715.1. The proposed amendment is as follows:

715.1 Sewage backflow. ~~Where the flood level rims of plumbing fixtures are~~ Where plumbing fixtures are installed on a floor with a finished floor elevation below the elevation of the manhole cover of the next upstream manhole in the *public sewer*, such fixtures shall be protected by a backwater valve installed in the *building drain*, *branch* of the *building drain* or horizontal *branch* serving such fixtures. ~~Plumbing fixtures having flood level rims above the~~ Plumbing fixtures installed on a floor with a finished floor elevation above the elevation of the manhole cover of the next upstream manhole in the *public sewer* shall not discharge through a backwater valve.

Motion – Al Bass/**Second** – David Smith/**Adopted**.

Item D – 6 Request by Ron George, CPD, President, Plumb-Tech Design & Consulting Services, LLC, on behalf of Wavin, HEPVO, to amend the 2012 NC Plumbing Code, Sections 1002.1, 1002.3, 1002.4, & Chapter 13 REFERENCED STANDARDS. The proposed amendment is as follows:

1002.1 Fixture traps. Each plumbing fixture shall be separately trapped by a liquid-seal trap, except as otherwise permitted by this code. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches (610 mm), and the horizontal distance shall not exceed 30 inches (762 mm) measured from the centerline of the fixture outlet to the centerline of the inlet of the trap. The height of a clothes washer standpipe above a trap shall conform to Section 802.4. A fixture shall not be double trapped.

Exceptions:

1. This section shall not apply to fixtures with integral traps.

2. A combination plumbing fixture or up to three similar fixtures is permitted to be installed on one trap, provided that one compartment is not more than 6 inches (152 mm) deeper than the other compartment and the waste outlets are not more than 30 inches (762 mm) apart.

3. A grease interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be permitted

to serve as the trap for a single fixture or a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm) and the *developed length* of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches (1524 mm).

4. The connection of a laundry tray complying with Section 802.4.

5. In 1 and 2 family applications or in residential applications, devices that comply with ASME A112.18.8-2009 "In-Line Sanitary Waste Valves for Plumbing Drainage Systems" shall not be required to have a liquid seal.

6. Devices conforming to ASME A112.18.8 shall be used on fixture drains 1½ inches in diameter and smaller.

1002.3 Prohibited traps. The following types of traps are prohibited:

1. Traps that depend on moving parts to maintain the seal.
2. Bell traps.
3. Crown-vented traps.
4. Traps not integral with a fixture and that depend on interior partitions for the seal, except those traps constructed of an *approved* material that is resistant to corrosion and degradation.
5. "S" traps.
6. Drum traps.

Exceptions:

1. Drum traps used as solids interceptors and drum traps serving chemical waste systems shall not be prohibited.

2. In residential applications or in 1 and 2 family dwellings, devices that comply with ASME A112.18.8-2009 "In-Line Sanitary Waste Valves for Plumbing Drainage Systems" shall be permitted.

1002.4 Trap seals. Each fixture trap shall have a liquid seal of not less than 2 inches (51 mm) and not more than 4 inches (102 mm), or deeper for special designs relating to accessible fixtures. Where a trap seal is subject to loss by evaporation, a trap seal primer valve shall be installed. Trap seal primer valves shall connect to the trap at a point above the level of the trap seal. A trap seal primer valve shall conform to ASSE 1018 or ASSE 1044.

Approved Means of Maintaining Trap Seals. Approved means of maintaining trap seals include the following, but are not limited to the methods cited:

1. A listed trap seal primer conforming to ASSE 1018 and ASSE 1044.
2. A hose bibb or bibbs within the same room.

3. Drainage from an untrapped lavatory discharging to the tailpiece of those fixture traps which require priming. All fixtures shall be in the same room and on the same floor level as the trap primer.

4. Barrier type floor drain trap seal protection devices meeting ASSE Standard 1072.

5. Deep seal p-trap.

6. Devices conforming to ASME A112.18.8 "In-Line Sanitary Waste Valves for Plumbing Drainage Systems."

[NOTE: The Council needs to ask for a revised version of the above code change**]**

CHAPTER 13: REFERENCED STANDARDS

Standard Reference Number	Title	Referenced in code section number
A112.18.8—2009	In-Line Sanitary Waste Valves for Plumbing Drainage Systems	1002.1, 1002.3, 1002.4

Motion – Al Bass/**Second** – David Smith/**Denied**.

Item D – 7 Request by Terry Cromer, NC Association of Electrical Contractors, to amend the 2011 NEC, Section 300.9. The proposed amendment is 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) 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.

Motion – Cindy Register/**Second** – Wade White/**Adopted** with substitute language.

Item D – 8 Request by Leon Skinner, representing the NCEBC Ad-Hoc Committee, to amend the 2015 NC Existing Building Code, Sections 202, 403.7, 703.2, 1203.13, and 1401.2.6. The proposed amendment is as follows:

(Add the following definition to Section 202)

[B] PRIVATE GARAGE. A building or portion of a building in which motor vehicles used by the tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit.

(Add Section to Chapter 4)
403.7 Carbon monoxide detection.

403.7.1 General. Carbon monoxide detection shall be installed in accordance with Sections 403.7.1 through 403.7.6. For one- and two-family dwellings and townhouses, carbon monoxide alarms shall be installed in accordance with Section 403.7.7.

403.7.1.1 Where required. Carbon monoxide detection shall be provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 403.7.2 where any of the conditions in Sections 403.7.1.2 through 403.7.1.6 exist.

403.7.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

403.7.1.3 Forced air furnaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms served by a fuel-burning, forced air furnace.

Exception: Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms where carbon monoxide detection is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

403.7.1.4 Fuel-burning appliances outside of dwelling units, sleeping units and classrooms. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel-burning fireplaces.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms if there are no communicating openings between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms if carbon monoxide detection is provided in one of the following locations:

   2.1. In an approved location between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

2.2. On the ceiling of the room containing the fuel-burning appliance or fuel-burning fireplace.

403.7.1.5 Private garages. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms in buildings with attached private garages.

Exceptions:

1. Carbon monoxide detection shall not be required where there are no communicating openings between the private garage and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms located more than one story above or below a private garage.

3. Carbon monoxide detection shall not be required where the private garage connects to the building through an open-ended corridor.

4. Where carbon monoxide detection is provided in an approved location between openings to a private garage and dwelling units, sleeping units or classrooms, carbon monoxide detection shall not be required in the dwelling units, sleeping units or classrooms.

403.7.1.6 Exempt garages. For determining compliance with Section 403.7.1.5, an open parking garage complying with Section 406.5 of the International Building Code or an enclosed parking garage complying with Section 406.6 of the International Building Code shall not be considered a private garage.

403.7.2 Locations. Where required by Section 403.7.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 403.7.2.1 through 403.7.2.3.

403.7.2.1 Dwelling units. Carbon monoxide detection shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom.

403.7.2.2 Sleeping units. Carbon monoxide detection shall be installed in sleeping units.

Exception: Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area in the immediate vicinity of the sleeping unit where the sleeping unit or its attached bathroom does not contain a fuel-burning appliance and is not served by a forced air furnace.

403.7.2.3 Group E occupancies. Carbon monoxide detection shall be installed in classrooms in Group E occupancies. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel.

Exception: Carbon monoxide alarm signals shall not be required to be automatically transmitted to an on-site location that is staffed by school personnel in Group E occupancies with an occupant load of 30 or less.

403.7.3 Detection equipment. Carbon monoxide detection required by Sections 403.7.1 through 403.7.2.3 shall be provided by carbon monoxide alarms complying with Section 403.7.4 or with carbon monoxide detection systems complying with Section 403.7.5.

403.7.4 Carbon monoxide alarms. Carbon monoxide alarms shall comply with Sections 403.7.4.1 through 403.7.4.3.

403.7.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exception: Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

403.7.4.2 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034.

403.7.4.3 Combination alarms. Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with UL 2034 and UL 217.

403.7.5 Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 403.7.5.1 through 403.7.5.3.

403.7.5.1 General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

403.7.5.2 Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 403.7.2. These locations supersede the locations specified in NFPA 720.

403.7.5.3 Combination detectors. Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided they are listed in accordance with UL 2075 and UL 268.

403.7.6 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced.

403.7.7 Carbon monoxide alarms for one- and two-family dwellings and townhouses. Where interior work requiring a permit occurs, or where one or more sleeping rooms are added or created or where fuel fired appliances or fireplaces are added or replaced, carbon monoxide alarms shall be provided in accordance with Section 403.7.7.1

Exception: Work involving the exterior surfaces of dwellings, such as replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, or the installation of a fuel-fire appliance that cannot introduce carbon monoxide to the interior of the dwelling.

403.7.7.1 Where required. One- and two-family dwellings and townhouses within which fuel fired appliances or fireplaces are installed or that have attached garages shall be provided with an approved carbon monoxide alarm installed outside each separate sleeping area in the immediate vicinity of the bedrooms(s) as directed by the alarm manufacturer.

403.7.7.2 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions. Battery powered, plug-in or hard wired alarms are acceptable for use.

(Add Section to Chapter 4)
404.7. Carbon monoxide detection. Carbon monoxide detection shall be installed in accordance with Section 403.7.

(Add Section to Chapter 6
603.3. Carbon monoxide detection. Carbon monoxide detection shall be installed in accordance with Section 403.7.

(Add Section to Chapter 7)
703.3. Carbon monoxide detection. Carbon monoxide detection shall be installed in accordance with Section 403.7.

(Delete/Add Section to Chapter 8)
~~**804.4.2 Carbon monoxide alarms for detached one- and two-family dwellings and townhouses.** Detached one-and two- family dwellings and townhouses requiring a permit for interior work or the replacement or addition of a fuel-fired appliance shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s).~~

~~**804.4.2.1 Alarm requirements.** The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions. Battery powered, plug in or hard wired alarms are acceptable for use.~~

804.4.2. Carbon monoxide detection. Carbon monoxide detection shall be installed in accordance with Section 403.7.

(Add Section to Chapter 12)
1203.14. Carbon monoxide detection. Carbon monoxide detection shall be installed in accordance with Section 403.7.

(Add Section to Chapter 14)
1401.2.6 Carbon monoxide detection. Group R occupancies and classrooms in Group E occupancies shall be provided with carbon monoxide detection in accordance with Section 403.7.

Motion – Ralph Euchner/**Second** – David Smith/**Adopted** as amended.

Item D – 9 **Request by Leon Skinner, representing the NCEBC Ad-Hoc Committee, to amend the 2015 NC Existing Building Code, Sections 403, 404, 603, and 703. The proposed amendment is as follows:**

(Add Section to Chapter 4)
403.6.1 Smoke alarms in one- and two-family dwellings and townhouses. Detached one- and two-family dwellings and townhouses shall be provided with smoke alarms installed in accordance with Section 804.4.1.

404.6 Smoke alarms. Smoke alarms shall be provided and installed in accordance with Section 804.4.

(Add Section to Chapter 6)
603.2 Smoke alarms. Smoke alarms shall be provided and installed in accordance with Section 804.4.

(Add Section to Chapter 7)
703.2 Smoke alarms. Smoke alarms shall be provided and installed in accordance with Section 804.4.

(Add Section to Chapter 12)
1203.13 Smoke alarms. Smoke alarms shall be provided and installed in accordance with Section 804.4.

Motion – David Smith/**Second** – Lon McSwain/**Adopted** as amended.

Item D-10 **Request by Ralph Euchner, representing the Fuel Gas Committee, to amend the 2012 NC Fuel Gas Code, Section 310.1.1 CSST. The proposed amendment is as follows:**

310.1.1 CSST. Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system ~~at the point where the gas service enters the building~~. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent.

CSST with an arc-resistant jacket listed by an approved agency for installation without the direct bonding, as prescribed in this section, shall be installed in accordance with Section 310.1 and the manufacturer's installation instructions.

(Chapter 8, Revise the Standard Name and Date)
~~ANSI LC 1-97 Interior Gas Piping Systems Using Corrugated Stainless Steel Tubing with Addenda LC1a-1999 and LC1b-2001~~
ANSI LC 1-2014/CSA 6.26b Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)

Motion – Ralph Euchner/**Second** – David Smith/**Adopted** as amended.

Item D-11 Request by David Smith, representing the Residential Standing Committee, and Ralph Euchner representing the Energy Standing Committee, to amend the 2012 NC Energy Conservation Code, Tables 402.1.1 and 402.1.3 and Sections 402.3.5 and 402.5; the 2012 NC Residential Code, Tables N1102.1, N1102.1.2 and Sections N1102.3.5 and N1102.5. The proposed amendment is as follows:

For the 2012 NCECC, Chapter 4, modify Table 402.1.1 as follows:

TABLE 402.1.1

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION U-FACTOR b, l	SKYLIGHTb U-FACTOR	GLAZED FENESTRATION SHGC b,e, m	CEILING R-VALUEk	WOOD FRAME WALL R-VALUE e	MASS WALL R-VALUEi	FLOOR R-VALUE	BASEMENTc WALL R-VALUE	SLABd R-VALUE & DEPTH	CRAWL SPACEc WALL R-VALUE
3	0.35	0.65	0.30	30	13	5/10	19	10/13f	0	5/13
4	0.35	0.60	0.30	38 or 30 cont. j	15, 13+2.5h	5/10	19	10/13	10	10/13
5	0.35	0.60	NR	38 or 30 cont. j	19, 13+5, or 15+3eh	13/17	30g	10/13	10	10/13

l. In addition to the exemption in Section 402.3.3, 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.

m. In addition to the exemption in Section 402.3.3, 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.

For the 2012 NCECC, Chapter 4, modify Table 402.1.3 as follows:

TABLE 402.1.3

EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION U-FACTOR e	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTORb	FLOOR U-FACTOR	BASEMENT WALL U-FACTORd	CRAWL SPACE WALL U-FACTORc
3	0.35	0.65	0.035	0.082	0.141	0.047	0.059	0.136
4	0.35	0.60	0.030	0.077	0.141	0.047	0.059	0.065
5	0.35	0.60	0.030	0.061	0.082	0.033	0.059	0.065

e. 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.

For the 2012 NCECC, Chapter 4, add an exception to:

402.3.5 Thermally isolated conditioned sunroom U-factor and SHGC. The maximum fenestration U-factor shall be 0.40 and the maximum skylight *U*-factor shall be 0.75. Sunrooms with cooling systems shall have a maximum fenestration SHGC of 0.40 for all glazing.

New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements. Sunroom additions shall maintain thermal isolation; and shall be served by a separate heating or cooling system, or be thermostatically controlled as a separate zone of the existing system.

Exception: A maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 and, when cooling is provided, a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty.

402.5 Maximum fenestration *U*-factor and SHGC (Mandatory Requirements). The area-weighted average maximum fenestration *U*-factor permitted using trade-offs from Section 402.1.4 shall be 0.40. Maximum skylight *U*-factors shall be 0.65 in zones 4 and 5 and 0.60 in zone 3. The area-weighted average maximum fenestration SHGC permitted using trade-offs from Section 405 in Zones 3 and 4 shall be 0.40.

Exception: 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.

For the 2012 NC Residential Code, Chapter 11, modify Table N1102.1as follows:

TABLE N1102.1

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENTa

CLIMATE ZONE	FENESTRATION U-FACTOR b, l	SKYLIGHTb U-FACTOR	GLAZED FENESTRATION SHGC b,e, m	CEILING R-VALUEk	WOOD FRAME WALL R-VALUE e	MASS WALL R-VALUEi	FLOOR R-VALUE	BASEMENTc WALL R-VALUE	SLABd R-VALUE & DEPTH	CRAWL SPACEc WALL R-VALUE
3	0.35	0.65	0.30	30	13	5/10	19	10/13f	0	5/13
4	0.35	0.60	0.30	38 or 30 cont. j	15, 13+2.5h	5/10	19	10/13	10	10/13
5	0.35	0.60	NR	38 or 30 cont. j	19, 13+5, or 15+3eh	13/17	30g	10/13	10	10/13

l. In addition to the exemption in Section 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.

m. In addition to the exemption in Section 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.

For the 2012 NC Residential Code, Chapter 11, modify Table N1102.1.2 as follows:

TABLE N1102.1.2

EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION U-FACTOR e	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR[b]	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR[d]	CRAWL SPACE WALL U-FACTOR[c]
3	0.35	0.65	0.035	0.082	0.141	0.047	0.059	0.136
4	0.35	0.60	0.030	0.077	0.141	0.047	0.059	0.065
5	0.35	0.60	0.030	0.061	0.082	0.033	0.059	0.065

e. 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.

For the 2012 NC Residential Code, add an exception to:

N1102.3.5 Thermally isolated conditioned sunroom *U*-factor and SHGC. The maximum fenestration *U*-factor shall be 0.40 and the maximum skylight *U*-factor shall be 0.75. Sunrooms with cooling systems shall have a maximum fenestration SHGC of 0.40 for all glazing.

New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements. Sunroom additions shall maintain thermal isolation; and shall be served by a separate heating or cooling system, or be thermostatically controlled as a separate zone of the existing system.

Exception: A maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 and, when cooling is provided, a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty.

N1102.5 Maximum fenestration *U*-factor and SHGC. The area-weighted average maximum fenestration *U*-factor permitted using trade-offs from Section 1102.1.3 shall be 0.40. Maximum skylight *U*-factors shall be 0.65 in zones 4 and 5 and 0.60 in zone 3.

Exception: 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.

Motion – David Smith/**Second** – Ralph Euchner/**Adopted**.

Item D–12 Request by Terry Cromer, NC Association of Electrical Contractors, to amend the 2011 NC Electrical Code, Article 338.10(B)(4)(a) as follows:

(4) Installation Methods for Branch Circuits and Feeders.

(a) *Interior Installations.* In addition to the provisions of this article, Type SE service-entrance cable used for interior wiring shall comply with the installation requirements of Part II of Article 334, excluding 334.80. ~~Where installed in thermal insulation the ampacity shall be in accordance with the 60°C (140°F) conductor temperature rating. The maximum conductor temperature rating shall be permitted to be used for ampacity adjustment and correction purposes, if the final derated ampacity does not exceed that for a 60°C (140°F) rated conductor.~~

[NOTE]: Item was held from the March Council Meeting and was sent back to the Electrical Committee for review.

Motion – Cindy Register/**Second** – Al Bass/**Denied**.

Part E – Reports

Chairman's Report
-Dan Tingen read a letter from the Governor's Office stating the receipt of a letter of resignation from John Hitch. Mr. Hitch then made comments and thanked Mr. Tingen and the Council for their leadership and service. Mr. Tingen thanked Mr. Hitch for his years of service to the NC Building Code Council. Mr. Tingen also announced that Al Bass would not be seeking reappointment to the NC BCC when his term is complete and thanked him for his service. Alan Perdue and Lon McSwain will also not be seeking reappointment and Chairman Tingen thanked them both for their service to the Council.

-Dan Tingen announced that it is time to begin Ad-hoc committee meetings dealing with code re-writes. He stated that he would be working with the respective chairmen of the committees to appoint members.

-The Chair has not appointed an Ad-hoc Committee to discuss Resort Homes and Bed & Breakfast Homes because of the upcoming appeal dealing with this issue.

Ad Hoc Committee Reports
-David Smith reported that the Residential Ad Hoc Committee has met and will continue.

Standing Committee Reports
There were none.

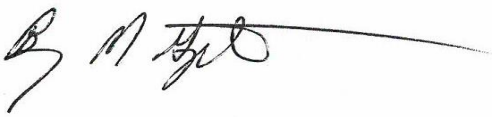
Staff Reports
-Barry Gupton recognized two new employees to OSFM. Bill Kirk is the new Residential Code Consultant and Natalia Santiago in the Plan Review section.

Public Comments
There were none.

Part F – Appeals
Letendre – NCDOI – scheduled for 10am, Tuesday, August 11, 2015 at the NCDOI, Dobbs Building, Jim Long Hearing Room.

Chapel of the the Cross – NCDOI – scheduled for 9am, Wednesday, September 16, 2015 at the NCDOI, Chapanoke Road Office.

Sincerely,



Barry Gupton, P.E.
Secretary, NC Building Code Council