Minutes of the North Carolina Building Code Council
March 10, 2015
Raleigh, NC

All members of the North Carolina Building Code Council were present for the Council Meeting with the exception of Leah Faile and Paula Strickland.

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, June 9, 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 December 9, 2014 NC Building Code Council Meeting.

A **motion** to accept the December 9th meeting minutes was made by Tim Fowler, **seconded** by Ralph Euchner, and **approved** as amended.

Item A – 3 Town of Surf City Fire Code Ordinance.

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

Item A – 4 2012 NC Residential Code Bed and Breakfast Home discussion.

A **motion** for the Chair to appoint a committee for further review was made by Mack Paul/**Second**/**Approved.**

Item A – 5 Rules Review Commission Meeting Report

The D-Items from the December 2014 BCC meeting were approved by the Rules Review Committee.

Item A – 6 Public Comments

-Vaughn Wicker

- **City of Concord Fire Code Ordinance**

Motion to delay item until June BCC Meeting – Frankie Meads/**Second** – Robbie Davis/**Approved.**

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 March 2015 meeting.

Item B – 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

Motion – Lon McSwain/**Second** – John Hitch/**Approved**. The request was granted.

Item B – 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.

Motion – Lon McSwain/**Second** – John Hitch/**Approved**. The request was granted.

Item B – 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.~~ 2.2. Horizontal assemblies at the separation of *dwelling units* and *sleeping units* as required by Section 420.3.
~~3.~~ 3.3. 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.

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

Item B – 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.

Motion – Lon McSwain/**Second** – Mack Paul/**Approved**. The request was granted.

Item B – 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.

Motion – Alan Perdue/**Second** – John Hitch/**Approved**. The request was granted.

Item B – 6 Request by William Coviello, TLI Group Ltd., to amend the 2012 NC Fire Code, Sections 904.2.2. The proposed amendment is as follows:

904.2.2 Commercial metal dust collecting systems and conveyor metal moving systems. When a new technological fire extinguishing agent introduce to the market place does not have any test protocols set by the ANSI/UL that would allow for an independent agency or an U.S.A governmental agency to conduct and certify its acceptance the facility manager may approve the use of this product within his/her plant without requiring the Authority Having Jurisdiction (AHJ) or the Fire Code Official to approval the use of this product. This enables the facility manager to increase the safety for the facilities people, equipment, and building that he/she is directly responsible for. This provides that aqueous-based fire extinguishing solutions or other new technologies provide or exceed the technical equivalency to other fire suppression agents shall also be allowed.

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

Item B – 7 Request by William Coviello, TLI Group Ltd., to amend the 2012 NC Fire Code, Sections 906.2.4 Exceptions. The proposed amendment is as follows:

When a new technological fire extinguishing agent introduce to the market place does not have any test protocols set by the ANSI/UL that would allow for an independent agency or an U.S.A governmental agency to conduct and certify its acceptance the facility manager may approve the use of this product within his/her plant without requiring the Authority Having Jurisdiction (AHJ) or the Fire Code Official to approval the use of this product. This enables the facility manager to increase the safety for the facilities people, equipment, and building that he/she is directly responsible for. This provides that aqueous-based fire extinguishing solutions or other new technologies provide or exceed the technical equivalency to other fire suppression agents shall also be allowed.

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

Item B – 8 Request by William Coviello, TLI Group Ltd., to amend the 2012 NC Fire Code, Sections 906.3.4. The proposed amendment is as follows:

906.3.4 Class D fire hazards.

Exceptions: When a new technological fire extinguishing agent introduce to the market place does not have any test protocols set by the ANSI/UL that would allow for an independent agency or an U.S.A governmental agency to conduct and certify its

acceptance the facility manager may approve the use of this product within his/her plant without requiring the Authority Having Jurisdiction (AHJ) or the Fire Code Official to approval the use of this product. This enables the facility manager to increase the safety for the facilities people, equipment, and building that he/she is directly responsible for. This provides that aqueous-based fire extinguishing solutions or other new technologies provide or exceed the technical equivalency to other fire suppression agents shall also be allowed.

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

Item B – 9 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.

Motion – David Smith/**Second** – Ralph Euchner/**Approved**. The request was granted.

Item B-10 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.

Motion – David Smith/**Second** – Ralph Euchner/**Approved**. The request was granted.

Item B-11 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.

Motion – David Smith/**Second** – Ralph Euchner/**Approved**. The request was granted.

Item B-12 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.~~

Motion – David Smith/**Second** – Ralph Euchner/**Approved**. The request was granted.

Item B-13 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.~~

Motion – David Smith/**Second** – Ralph Euchner/**Approved** as amended. The request was granted.

Item B-14 **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]

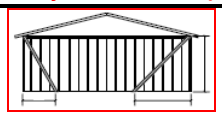
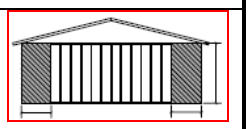
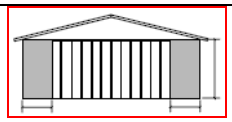
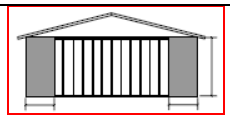
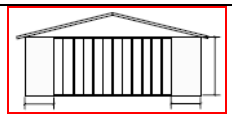
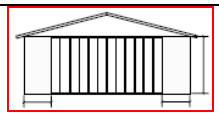
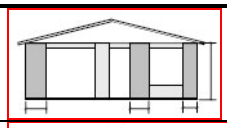
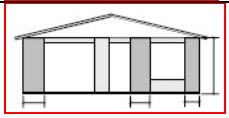
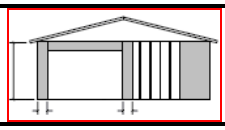
Method	Minimum Brace Material Thickness or Size	Minimum Brace Panel Length or Brace Angle	Connection Criteria		*Illustration of Bracing Method (illustrates method only, not location)*
			Fasteners	Spacing	
LIB Let-in Bracing	1x4 wood brace (or approved metal brace installed per manufacturer instructions)	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-SFD cannot be mixed on the same story.

Motion – David Smith/**Second** – John Hitch/**Approved** as amended. The request was granted.

Item B-15 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.

Motion – David Smith/**Second** – Steve Knight/**Approved**. The request was granted.

Item B-16 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.~~

Motion/**Second**/**Approved**. The request was granted.

Item B-17 Request by Tom Brown, Jeff Griffin, Mark Matheny and Reggie Hucks, representing the NC BIA, to amend the 2012 NC Residential Code, Section R324 & R324.1. The proposed amendment is as follows:

SECTION R324
DEMOLITION

R324.1 Demolition. Footprint area and 10' away from buildings that have been demolished or removed shall be filled so as not to trap water and create a hazard and maintained to existing grade or in accordance with the ordinances of the Jurisdiction having authority. Surface drainage shall not be diverted to adjacent lots. Hazardous debris shall be removed and site left is a safe condition.

Motion – Frankie Meads/**Second** – Robbie Davis/**Denied**. The request was denied.

Item B-18 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.

Motion – Lon McSwain/**Second** – Cindy Register/**Approved**. The request was granted. The hearing for this item will be coordinated with the 2014 NEC submittal.

Item B-19 Request by Tom Brown, Jeff Griffin, Mark Matheny and Reggie Hucks, representing the NC BIA, to amend the 2012 NC Building Code and the 2012 NC Residential Code, Chapter 2 Definitions. The proposed amendment is as follows:

OCCUPANCY. A building or part of a building whose use, or intended use, is for the shelter or support of persons, animals or property.

Motion – Robbie Davis/**Second** – Al Bass/**Denied**. The request was denied.

Item B-20 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.

Motion – Lon McSwain/**Second** – David Smith/**Approved**. The request was granted.

Item B-21 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

Motion/Second/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 March 10, 2015 and the Final Adoption meeting may take place on or after June 9, 2015. The written public comment period expires on April 17, 2015.

Item C-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

Paul Coats, with CBO, recommends that the council adopt this code change.

Item C-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 PRB 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 PRB 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

Paul Coats, with CBO, recommends that the council adopt this code change.

Item C – 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-0.064
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-0.064
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.

Paul Coats, with CBO, recommends that the council adopt this code change.

Item C – 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 (hotels, motels, bed and breakfast homes and inns, tourist homes, and extended stay lodging establishments for the installation and maintenance of carbon monoxide

	alarms and/or detectors in accordance with G.S. 143-138(b2).
Once every two years	Industrial and educational (except public schools).
Once every three years	Assembly occupancies with an occupant load less than 100, business, mercantile, storage, churches, synagogues, and miscellaneous Group U occupancies.

Frequency rates for inspections of occupancies as mandated by the North Carolina General Statutes shall supersede this schedule. Nothing in this section is intended to prevent a jurisdiction from conducting more frequent inspections than the schedule listed above or the schedule filed with the Office of State Fire Marshal of the Department of Insurance.

On unattended or vacant structures, the fire code official shall affix a letter on the premises in a conspicuous place at or near the entrance to such premises requesting an inspection in accordance with this section. This order of notice shall be mailed by registered or certified mail with return receipt requested, to the last known address of the owner, occupant or both. If the owner, occupant or both shall fail to respond to said notice within 10 calendar days, these actions by the fire code official shall be deemed to constitute an inspection in accordance with this section.

Robert Privott, NCHBA, recommends that the council adopt this code change.

Duke Geraghty, with OBHBN, does not recommend that the council adopt this code change.

Item C – 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:

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.

[NOTE: The numbering needs to be coordinated with the current code**]**

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.

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

There were no comments on this item.

Item C – 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.

There were no comments on this item.

Item C – 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. <u>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.</u>

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

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

Conrad Gohlinghorst, with All Seasons Marketing, Inc., recommends that the council adopt this code change.

Mark Matheny, NCBIA, was neither for nor against this code change. He mentioned that there needed to be clarification to revise this version.

Item C – 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)~~ unless all fittings and enclosures are approved for outdoors. Where condensation is known to be a problem the requirements of 300.7(A) shall apply.

Robert Privott, NCHBA, recommends that the council adopt this code change.

Robert Osborne, with UL, does not recommend that the council adopt this code change.

Tim Norris, NEI, does not recommend that the council adopt this code change.

Brian Holland, NEMA, does not recommend that the council adopt this code change.

Terry Cromer, NC Association of Electrical Contractors, recommends that the council adopt this code change.

Item C – 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.

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.

Add Section Chapter 7

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

Add Section to Chapter 12

1203.13 Carbon monoxide detection. Group I-1, I-2, I-4 and R occupancies and classrooms in Group E occupancies shall be provided with carbon monoxide detection 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.

Leon Skinner, City of Raleigh, recommends that the council adopt this code change.

Item C – 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 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

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

Leon Skinner, City of Raleigh, recommends that the council adopt this code change.

Item C-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.

ADD THE FOLLOWING NEW TEXT:

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.

Mark McGuire recommends that the council adopt this code change.

Item C-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-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 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.

Robert Privott, NCHBA, recommends that the council adopt this code change.

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 December 9, 2014. The Final Adoption meeting took place on March 10, 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 Request by Clint Latham, representing the North Carolina Plumbing Inspectors Association, to amend the 2012 NC Plumbing Code, Section 706.4. The proposed amendment is as follows:

706.4 Heel- or side-inlet quarter bends. ~~Heel inlet quarter bends shall be an acceptable means of connection, except where the quarter bend serves a water closet. A low-heel inlet shall not be used as a wet-vented connection. Side-inlet quarter bends shall be an acceptable means of connection for drainage, wet venting and *stack* venting arrangements.~~ Deleted.

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

Motion – Al Bass/**Second** – Robbie Davis/**Adopted** with an effective date of January 1, 2016.

Item D – 2 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.

Item D – 3 Request by Ken Szymanski, representing the Apartment Association of North Carolina, to amend the 2011 NEC, Article 230.2 (B). The proposed amendment is as follows:

230.2 (B) Special Occupancies. By special permission, additional services shall be permitted for ~~either~~ any of the following:

(1) Multiple-occupancy buildings where there is no available space for service equipment accessible to all occupants

(2) A single building or other structure sufficiently large to make two or more services necessary. Buildings or other structures large enough to allow each service location to be separated by at least 50 feet, meet the criteria for sufficiently large.

Motion to approve with modified language – Frankie Meads/**Second** – Tim Fowler/**Adopted** as amended with an effective date of January 1, 2016.

Item D – 4 Request by Amy Musser, representing Vandemusser Design, PLLC, to amend the 2012 NC Energy Conservation Code, Section 402.5. The proposed amendment is as follows:

TABLE 405.5.2(1)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS
(Air exchange rate and Mechanical ventilation components only)

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Air exchange rate	~~Specific leakage area (SLA)d = 0.00028 or 5 ACH50.~~ 5 ACH50 The mechanical ventilation rate shall be in addition to the air leakage rate and the same as in the proposed design, but no greater than continuous operation at 0.01 x CFA + 7.5 (N_{br} + 1) where: CFA = conditioned floor area N_{br} = number of bedrooms Energy recovery shall not be assumed for mechanical ventilation.	For residences that are not tested, the same as the standard reference design. For tested residences, the measured air exchange rate. [e] The mechanical ventilation rate shall be in addition to the air leakage rate and shall be as proposed. [f]
Mechanical ventilation	None, except where mechanical ventilation is specified by the proposed design, in which case: Annual vent fan energy use: kWh/yr = 0.03942 x CFA + 29.565 X (N_{br} + 1) where: CFA = conditioned floor area N_{br} = number of bedrooms	As proposed

Motion – Ralph Euchner/**Second** – Al Bass/**Adopted** with an effective date of January 1, 2016.

Item D – 5 Request by Larry Gill, representing IPEX USA LLC, to amend the 2012 NC Fuel Gas Code, Section 502.1. The proposed amendment is as follows:

502.1 General. All vents, except as provided in Section 503.7, shall be *listed* and *labeled*. Type B and BW vents shall be tested in accordance with UL 441. Type L vents shall be tested in accordance with UL 641. Vents for Category II, ~~and~~ III and IV appliances shall be tested in accordance with UL 1738. ~~Plastic vents for Category IV appliances shall not be required to be *listed* and *labeled* where such vents are as specified by the *appliance* manufacturer and are installed in accordance with the *appliance* manufacturer's installation instructions.~~

Motion – Ralph Euchner/**Second** – Al Bass/**Denied**.

Item D – 6 Request by Gary Phillips, representing VIM Products, to amend the 2012 NC Plumbing Code, Section 417.5.2. The proposed amendment is as follows:

417.5.2.6 Liquid-type, trowel-applied, load-bearing, bonded waterproof materials. Liquid-type, trowel-applied, load-bearing, bonded waterproof materials shall meet the requirements of ANSI A118.10 and shall be applied in accordance with the manufacturer's instructions.

Motion – Al Bass/**Second** – Robbie Davis/**Adopted** with an effective date of January 1, 2016.

Item D – 7 Request by Jonathan P. Leonard, representing Charlotte Fire Department, to amend the 2012 NC Fire Code, Section 310.9. The proposed amendment is as follows:

310.9 Hookah or water pipe use. The use of hookahs or similar devices within buildings shall comply with all of the following:

1. An *approved* ventilation system is required.
   - 1.1 The room or building shall comply with the *North Carolina Mechanical Code* Section 403.3 for a smoking lounge.
   - 1.2 Carbon monoxide accumulation shall be controlled in accordance with the *North Carolina Mechanical Code* Section 502.
2. Coals shall be transported from the preparation area in an *approved* noncombustible container.
3. Hookah pipes shall be located and positioned in such a manner as to prevent overturning.
4. Disposal, use, or handling of ashes and coals shall comply with Sections 305.1 and 305.2.

Motion to approve with substitute language – Alan Perdue/**Second**/**Adopted** with an effective date of January 1, 2016.

Item D – 8 Request by Wayne Hamilton, representing the NC Fire Service Code Revision Committee, to amend the 2012 NC Fire Code, Section 605.11. The proposed amendment is as follows:

Add new NC Fire Code section as follows:

605.11 Solar photovoltaic power systems. Solar photovoltaic power systems shall be installed in accordance with Sections 605.11.1 through 605.11.2, the *International Building Code* and NFPA 70.

605.11.1 Access and pathways. Roof access, pathways, and spacing requirements shall be provided in accordance with Sections 605.11.1.1 through 605.11.1.3.3.

Exceptions:

1. Detached, non-habitable Group U structures including, but not limited to, parking shade structures, carports, solar trellises, and similar structures.

2. Roof access, pathways and spacing requirements need not be provided where the fire chief has determined that rooftop operations will not be employed.

605.11.1.1 Roof access points. Roof access points shall be located in areas that do not require the placement of ground ladders over openings such as windows or doors, and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires or signs.

605.11.1.2 Solar photovoltaic systems for Group R-3 buildings. Solar photovoltaic systems for Group R-3 buildings shall comply with Sections 605.11.1.2.1 through 605.11.1.2.5.

Exception: These requirements shall not apply to one and two family dwelling and townhomes.

605.11.1.2.1 Size of solar photovoltaic array. Each photovoltaic array shall be limited to 150 feet (45 720 mm) by 150 feet (45 720 mm). Multiple arrays shall be separated by a 3-foot-wide (914 mm) clear access pathway.

605.11.1.2.2 Hip roof layouts. Panels and modules installed on Group R-3 buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels and modules are located. The access pathway shall be at a location on the building capable of supporting the fire fighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.1.2.3 Single-ridge roofs. Panels and modules installed on Group R-3 buildings with a single ridge shall be located in a manner that provides two, 3-foot-wide (914 mm) access pathways from the eave to the ridge on each roof slope where panels and modules are located.

Exception: This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.1.2.4 Roofs with hips and valleys. Panels and modules installed on Group R-3 buildings with roof hips and valleys shall not be located closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.1.2.5 Allowance for smoke ventilation operations. Panels and modules installed on Group R-3 buildings shall be located not less than 3 feet (914 mm) from the ridge in order to allow for fire department smoke ventilation operations.

Exception: Panels and modules shall be permitted to be located up to the roof ridge where an alternative ventilation method *approved* by the fire chief has been provided or where the fire chief has determined vertical ventilation techniques will not be employed.

605.11.1.3 Other than Group R-3 buildings. Access to systems for buildings, other than those containing Group R-3 occupancies, shall be provided in accordance with Sections 605.11.1.3.1 through 605.11.1.3.3.

Exception: Where it is determined by the fire code official that the roof configuration is similar to that of a Group R-3 occupancy, the residential access and ventilation requirements in Sections 605.11.1.2.1 through 605.11.1.2.5 shall be permitted to be used.

605.11.1.3.1 Access. There shall be a minimum 6 foot-wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either axis of the building is 250 feet (76 200 mm) or less, the clear perimeter around the edges of the roof shall be permitted to be reduced to a minimum 4 foot wide (1290 mm).

605.11.1.3.2 Pathways. The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. The pathway shall be over areas capable of supporting fire fighters accessing the roof.

2. The centerline axis pathways shall be provided in both axes of the roof. Centerline axis pathways shall run where the roof structure is capable of supporting fire fighters accessing the roof.

3. Pathways shall be a straight line not less than 4 feet (1290 mm) clear to roof standpipes or ventilation hatches.

4. Pathways shall provide not less than 4 feet (1290 mm) clear around roof access hatch with not less than one singular pathway not less than 4 feet (1290 mm) clear to a parapet or roof edge.

605.11.1.3.3 Smoke ventilation. The solar installation shall be designed to meet the following requirements:

1. Arrays shall not be greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.

2. Smoke ventilation options between array sections shall be one of the following:

2.1 A pathway 8 feet (2438 mm) or greater in width.

2.2 A 4-foot (1290 mm) or greater in width pathway and bordering roof skylights or gravity-operated dropout smoke and heat vents on not less than one side.

2.3 A 4-foot (1290 mm) or greater in width pathway and bordering all sides of non-gravity-operated dropout smoke and heat vents.

2.4 A 4-foot (1290 mm) or greater in width pathway and bordering 4-foot by 8-foot (1290 mm by 2438 mm) "venting cutouts" every 20 feet (6096 mm) on alternating sides of the pathway.

605.11.2 Ground-mounted photovoltaic arrays. Ground-mounted photovoltaic arrays shall comply with Section 605.11 and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.

Motion – Alan Perdue/**Second** – Lon McSwain/**Adopted** with an effective date of January 1, 2016.

Item D – 9 Request by Michael Rettie, representing the Orange County Inspections Department, to amend the 2012 NC Residential Code, Section R302.6, TABLE R302.6, & the NC Residential-Mechanical Code: 603.7. The proposed amendment is as follows:

R302.6 Dwelling and finished habitable space/garage fire separation. The garage shall be separated as required by TABLE R302.6. Openings in garage walls shall comply with Section R302.5. This provision does not apply to garage walls that are perpendicular to the adjacent *dwelling unit* wall.

TABLE R302.6
FINISHED HABITABLE, DWELLING/GARAGE SEPARATION

SEPARATION	MATERIAL
From the residence and attics	Not less than ½-inch gypsum board or equivalent applied to the garage side
From all habitable rooms above the garage	Not less than 5/8-inch Type X gypsum board or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than ½-inch gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than ½-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area

603.7 Rigid duct penetrations. Ducts in a private garage and ducts penetrating the walls or ceilings separating a *dwelling* unit or finished habitable space from a private garage shall be continuous and constructed of a minimum 26 gage [0.0187 inch (0.4712 mm)] galvanized sheet metal or other approved noncombustible material and shall not have openings into the garage…

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

Item D-10 Request by David Smith, representing the NC Residential Ad-hoc Committee, to amend the 2012 NC Residential Code, Section R311.7.1. The proposed amendment is as follows:

R311.7.1 Width. Stairways shall not be less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches (114 mm) on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 31½ inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

Exceptions:

1. The width of spiral stairways shall be in accordance with Section R311.7.9.1.

2. Stairways not required for egress may be as narrow as 26 inches.

Motion – David Smith/**Second** – Ralph Euchner/**Adopted** with an effective date of January 1, 2016.

Part E – Reports

Chairman's Report
-Dan Tingen met with Rick McIntyre, Dominic Sims and Vaughn Wicker to discuss making the Building Code online presence more user friendly.

-Dan Tingen met with the Administrative Committee to discuss Administrative Code and Policies Section 204.3.5. A **motion** to reprint the exceptions under Section 204.3.5 as worded in the General Statutes was made by Robbie Davis, **Seconded** by Tim Fowler, and **Adopted**.

-The Chair will appoint an Ad-hoc Committee to discuss Resort Homes and Bed & Breakfast Homes, and the committee will keep the Council up to date on the progress.

Ad Hoc Committee Reports
-Cindy Register reported that the Electrical Ad Hoc Committee is still working with the economic analysis and will submit soon.

-David Smith reported that the Residential Ad Hoc Committee is meeting and will continue to meet before the next council meeting.

Standing Committee Reports
There were none.

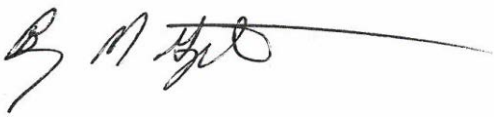
Staff Reports
-Chris Noles announced that Cliff Isaac, NCDOI Staff, resigned from OSFM.

Public Comments
-Mark Matheny, NCBIA, announced that the NC Building Inspector's Association offers classes for education hours, three times a year throughout the state.

-Dave Crawford, Executive Vice President of AIA NC, asked to discuss the Administrative Code and Policies Section 204.3.5.

Part F – Appeals
Quality-Built – NCDOI – scheduled for 9am, Tuesday, March 10, 2015 at the NCDOI, at the Chapanoke Office.

Sincerely,



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