

**Minutes of the North Carolina Building Code Council**  
**September 13, 2016**  
**Raleigh, NC**

All members of the North Carolina Building Code Council were present for the Council Meeting with the exception of Paula Strickland, Lon McSwain and Mack Paul and Leah Barrett.

The following are summary minutes. The official minutes of this meeting are recorded on CD. Anyone desiring verbatim CDs or excerpts from these CDs should contact the Engineering Division of the NC Department of Insurance for information and reproduction costs. The next scheduled NC Building Code Council meeting will be held **Tuesday, December 13, 2016**. The location will be announced 30 days before the meeting.

**Part A – Administrative Items**

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

There were no actual or potential conflicts of interest noted.

**Item A – 2 Approval of minutes of the June 14, 2016 NC Building Code Council Meeting.**

A **motion** to accept the June 14<sup>th</sup> meeting minutes was made, **seconded**, and **approved**, as amended below.

Correction was noted that Daniel Priest clarified he did not second the motion on item D-6 from the June BCC meeting, as stated in the June Minutes, it was Steve Knight.

**Item A – 3 Town of Weaverville Fire Code Ordinance**

**Motion / Second / Approved**, as amended below.

Wayne Hamilton commented on the language.

Volume V was deleted from Section 12-37 (c) of the Town of Weaverville Code.

**Item A – 4 Council discussion on the 2018 codes**

This item was moved to an E item.

**Item A – 5 Rules Review Commission Meeting Report**

Barry Gupton reported that all D-Items from the June 14, 2016 BCC meeting were approved by The Rules Review Commission.

**Item A – 6 Public Comments**

There were none.

## Part B – New Petitions for Rulemaking

The following Petitions for Rulemaking have been received since the last Council meeting. The Council will vote either to deny or grant these Petitions. The Council will give no further consideration to Petitions that are denied. Petitions that are granted may proceed through the Rulemaking process. The Council may send any Petition to the appropriate committee. The hearing will take place during or after the September 2016 meeting.

There were none.

## Part C – Notice of Rulemaking Proceedings and Public Hearing

The following Petitions for Rulemaking have been granted by the Council. Notice of Rulemaking proceedings has been made. The Public Hearing was held September 13, 2016 and the Final Adoption meeting may take place on or after December 13, 2016. The written public comment period expires on October 14, 2016.

### Item C – 1 Request by Dan Hartley, representing BHM Architects, to amend the 2012 NC Building Code, Section 509.2 as follows:

**509.2 Horizontal building separation allowance.** A building shall be considered as separate and distinct buildings for the purpose of determining area limitations, continuity of *fire walls*, limitation of number of *stories* and type of construction where all of the following conditions are met:

1. The buildings are separated with a *horizontal assembly* having a minimum 3-hour *fire-resistance rating*.
2. ~~The building below the *horizontal assembly* is no more than one story above grade plane.~~ Deleted.
3. The building below the *horizontal assembly* is of Type IA construction.
4. Shaft, *stairway*, ramp and escalator enclosures through the *horizontal assembly* shall have not less than a 2-hour *fire-resistance rating* with opening protectives in accordance with Section 715.4.

**Exception:** Where the enclosure walls below the *horizontal assembly* have not less than a 3-hour *fire resistance rating* with opening protectives in accordance with Section 715.4, the enclosure walls extending above the *horizontal assembly* shall be permitted to have a 1-hour *fire-resistance rating*, provided:

1. The building above the *horizontal assembly* is not required to be of Type I construction;
2. The enclosure connects less than four *stories*; and
3. The enclosure opening protectives above the *horizontal assembly* have a minimum 1-hour *fire protection rating*.
5. The building or buildings above the *horizontal assembly* shall be permitted to have multiple Group A occupancy uses, each with an *occupant load* of less than 300, or Group B, M, R or S occupancies.
6. The building below the *horizontal assembly* shall be protected throughout by an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, and shall be permitted to be any of the following occupancies:
  - 6.1. Group S-2 parking garage used for the parking and storage of private motor vehicles;
  - 6.2. Multiple Group A, each with an *occupant load* of less than 300;
  - 6.3. Group B;

- 6.4. Group M;
- 6.5. Group R; and
- 6.6. Uses incidental to the operation of the building (including entry lobbies, mechanical rooms, storage areas and similar uses).

7. The maximum *building height* in feet (mm) shall not exceed the limits set forth in Section 503 for the building having the smaller allowable height as measured from the *grade plane*.

Jason Lettie, representing Cline Designs and Associates, recommends the Council adopt the code change.

Leon Skinner, representing the City of Raleigh, commented on this.

Will Brownlee, representing the Apartment Association of NC, recommends the Council adopt this code change.

**Item C – 2 Request by Ralph Euchner, representing NC Building Code Council, to amend the 2012 NC Plumbing Code, Section 306.2.4 as follows:**

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

Justice Everett, Underground Utility Contractor, City of Raleigh, recommends the Council adopt this code change.

Jim Pendergrass, representing PHCC, recommends the Council adopt this code change.

Rick Whitaker, Plumbing Contractor from Durham, NC, recommends the Council adopt this code change.

**Item C – 3 Request by Robert Privott, representing NC Home Builders Association, to amend the 2012 NC Residential Code, Section AG105.2 as follows:**

**AG105.2 Outdoor swimming pool.** An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above *grade* measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) or 4 inches (102 mm) where concrete or fixed solid material is used measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

Robert Privott spoke on behalf of his proposal.

**Item C – 4 Request by Terry Cromer, representing NC Association of Electrical Contractors, to amend the 2014 NC Electrical Code, Article 680.25(A) Exception as follows:**

**680.25 Feeders.** These provisions shall apply to any feeder on the supply side of panelboards supplying branch circuits for pool equipment covered in Part II of this article and on the load side of the service equipment or the source of a separately derived system.

**(A) Wiring Methods.**

**(1) Feeders.** Feeders shall be installed in rigid metal conduit or intermediate metal conduit. The following wiring methods shall be permitted if not subject to physical damage:

- (1) Liquidtight flexible nonmetallic conduit
- (2) Rigid polyvinyl chloride conduit
- (3) Reinforced thermosetting resin conduit
- (4) Electrical metallic tubing where installed on or within a building
- (5) Electrical nonmetallic tubing where installed within a building
- (6) Type MC cable where installed within a building and if not subject to corrosive environment

*Exception: A An existing feeder within a one-family dwelling unit or two-family dwelling unit between an existing remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an ~~insulated~~ equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A)(5).*

Terry Cromer, representing the NC Association of Electrical Contractors, recommends the Council adopt this code change.

Dan Tingen and Tim Fowler both commented on the language used. Dan Tingen recommended the Electrical Committee review this and make a recommendation.

Brian Holland, representing NEMA, commented on this on item.

[Staff Note: This Exception is not in the 2014 NCEC. Either underline all of Exception or use the 2017 NEC language.]

**Item C – 5 Request by Michael Rettie, representing Orange County Inspection Department, to amend the 2012 NC Residential Code, Section N1102.4.3 and the 2012 NC Energy Conservation Code, Section 402.4.3 as follows:**

**N1102.4.3 Fireplaces.** Site-built masonry fireplaces shall ~~have doors and~~ comply with Section R1006 of the *North Carolina Residential Code* for combustion air.

**402.4.3 Fireplaces.** Site-built masonry fireplaces shall ~~have doors and~~ comply with Section R1006 of the *North Carolina Residential Code* for combustion air.

There were no comments on this item.

**Item C – 6 Request by Patrick Keal, representing Big Ass Solutions, to amend the 2012 NC Mechanical Code, Section 202 as follows:**

**202 General Definitions.**

**High Volume Low Speed Fan.** A ceiling fan that circulates high volumes of air at low rotational speeds. Such fans are greater than 7 feet in diameter.

Patrick Keal, representing Big Ass Solutions, spoke on behalf of his proposal.

**Item C – 7 Request by Patrick Keal, representing Big Ass Solutions, to amend the 2012 NC Mechanical Code, Chapter 15 as follows:**

**Chapter 15**

**Referenced Standards.**

**AMCA**

Air Movement and Control Association International  
30 West University Drive  
Arlington Heights, IL 60004

| Standard<br>Reference Number | Title  | Referenced in Code<br>Section Number |
|------------------------------|--|--------------------------------------|
| <u>540-08</u>                | <u>Test Methods for Louvers Impacted by Wind Borne Debris</u>                              | <u>1609.1.2.1</u>                    |
| <u>230-15</u>                | <u>Laboratory Methods of Testing Air Circulating Fans<br/>for Rating and Certification</u> | <u>2801.5</u>                        |

**UL**

Underwriters Laboratories, Inc.  
333 Pfingsten Road  
Northbrook, IL 60062-2096

| Standard<br>Reference Number         | Title                             | Referenced in Code<br>Section Number |
|--------------------------------------|-----------------------------------|--------------------------------------|
| <u>507-99 9<sup>th</sup> Edition</u> | <u>Standard for Electric Fans</u> | <u>2801.5</u>                        |

Patrick Keal, submitted a correction to his request on the section number quoted.

Barry Gupton, Staff, advised on language that needs removed.

**Item C – 8 Request by Patrick Keal, representing Big Ass Solutions, to amend the 2012 NC Mechanical Code, Section 929 as follows:**

**929 High Volume Low Speed Fans.**

**929.1 General.** Where provided, high volume low speed fans shall be tested and labeled in accordance with AMCA 230, listed and labeled in accordance with UL 507, and installed in accordance with the manufacturer's instructions.

There were no comments on this item.

**Item C – 9 Request by Ed Johnson, representing Campus Safety Products, LLC, to amend the 2012 NC Building Code and Fire Code, Section 1008; and the Existing Building Code, Sections 403 and 704 as follows:**

**2012 NC Building Code**

**1008.1.4.6 Locking arrangements in educational occupancies.** In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1008.1.9.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.

**1008.1.4.6.1 Remote operation of locks.** Remote operation of locks complying with Section 1008.1.4.6 shall be permitted.

**2012 NC Fire Code**

**1008.1.4.6 Locking arrangements in educational occupancies.** In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1008.1.9 of the *North Carolina Building Code*.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.

**2015 NC Existing Building Code**

**403.7 Locking arrangements in educational occupancies.** In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.

2. The door shall be openable from within the room in accordance with Section 1008.1.9 of the North Carolina Building Code.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.

**704.2 Locking arrangements in educational occupancies.** In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1008.1.9 of the North Carolina Building Code.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.

Ed Johnson commented on behalf of his proposal to possibly revise and merge the language used in D-1.

John Woestman, representing Builders Hardware Manufacturers Association, commented on the language.

**Part D – Final Adoption**

With the exception of Item D-1, 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 June 14, 2016. The Final Adoption meeting took place on September 13, 2016. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rulemaking process.

**Commercial Super Committee**

**Steve Knight – Chair**  
**Leah Barrett**  
**Cindy Register**  
**Scott Stevens**  
**Wayne Hamilton**  
**Keith Rogers**  
**Wade White**  
**Robbie Davis**  
**Building Inspector - vacant**

**Residential Super Committee**

**Dan Tingen – Chair**  
**David Smith**  
**Steve Knight**  
**Paula Strickland**  
**Wayne Hamilton**  
**Tim Fowler**  
**Building Inspector - vacant**

**Item D – 1 Request by Ed Johnson & Tommy Faulkner, representing Campus Safety Products, LLC, to amend the 2012 NC Fire Code, Section 1008. The proposed amendment is as follows:**

**1008.1.11 Emergency lockdown safety mechanisms.** *Approved emergency lockdown safety mechanisms shall be permitted in schools, government, and non-government office environments for the purposes of establishing a secured area in accordance with lockdown plans in Section 404.3.3 and Items 1-8 below:*

1. The emergency lockdown safety mechanism shall be readily distinguishable as engaged or disengaged.

2. Clearly identifiable operating procedures shall be posted on or within close proximity of the installed mechanism.
3. The emergency lockdown safety mechanism shall be readily engaged from the egress side without the use of a key or special knowledge or effort.
4. The emergency lockdown safety mechanism shall have a built-in mechanical feature to prevent unintended engagement.
5. The emergency lockdown safety mechanism shall have the capability to operate on outward swinging doors, inward swinging doors, and free-swinging doors.
6. The emergency lockdown safety mechanism shall be readily disengaged from the ingress side with proper tools and instruction.
7. The mechanism shall be installed 6 inches (152 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. However, the maximum installed height shall be limited such that the emergency lockdown safety mechanism is at least 30 inches (762 mm) from any glass openings within the door.  
A building occupant shall not be required to pass through more than one door equipped with an emergency lockdown safety mechanism before entering an exit.

This item has been postponed until the December 13<sup>th</sup> BCC Meeting to consider with C-9.

**Item D – 2 Request by Leon Skinner, representing the NC Existing Building Code Ad Hoc Committee, to amend the 2015 NC Existing Building Code, Section 1401. The proposed amendment is as follows:**

**1401.2.6 Occupant load increase.** Where the existing occupant load is increased by more than 20 percent or in Group A occupancies where the occupant load is greater than 300, compliance with Chapter 14 is not permitted. Compliance with other methods in this code shall be permitted.

**Commercial Super Committee**

**Motion** To remove comma so interpretation is correct – Ralph Euchner / **Second / Approved**

**Building Code Council**

**Motion / Second / Adopted**

**Item D – 3 Request by Leon Skinner, representing the NC Existing Building Code Ad Hoc Committee, to amend the 2015 NC Existing Building Code, Section 609. The proposed amendment is as follows:**

**ADD SECTION**

**609.4 Water Supply System Test.** Existing water supply systems that are repaired or replaced shall be allowed to be tested and proved tight under a water pressure of normal operating pressure of the existing water supply system. The pressure shall be held at least 15 minutes.

**Residential Super Committee**

**Motion** – Tim Fowler / **Second** - David Smith / **Approved**

**Commercial Super Committee**

**Motion** - To amend language - Robbie Davis / **Second** – Wayne Hamilton / **Approved**



**Building Code Council  
Motion / Second / Adopted**

**Item D – 4 Request by Leon Skinner, representing the City of Raleigh Building & Safety Services, to amend the 2012 NC Plumbing Code, Table 605.3. The proposed amendment is as follows:**

**TABLE 605.3  
WATER SERVICE PIPE**

| MATERIAL   | STANDARD                                       |
|--|--|
| Acrylonitrile butadiene styrene (ABS) plastic pipe                             | ASTMD 1527; ASTMD 2282                         |
| Asbestos-cement pipe   | ASTM C 296                                     |
| Brass pipe   | ASTM B 43                                      |
| Chlorinated polyvinyl chloride (CPVC) plastic pipe                             | ASTMD 2846; ASTM F 441; ASTM F 442; CSA B137.6 |
| Copper or copper-alloy pipe  | ASTM B 42; ASTM B 302                          |
| Copper or copper-alloy tubing (Type K, WK, L, WL)                              | ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447   |
| Cross-linked polyethylene (PEX) plastic tubing                                 | ASTM F 876; ASTM F 877; CSA B137.5             |
| Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe | ASTM F 1281; ASTM F 2262; CAN/CSA B137.10M     |
| Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)     | ASTM F 1986                                    |
| Ductile iron water pipe  | AWWA C151; AWWA C115                           |
| Galvanized steel pipe  | ASTM A 53                                      |
| Polyethylene (PE) plastic pipe   | ASTMD 2239; ASTMD 3035; CSA B137.1             |
| Polyethylene (PE) plastic tubing   | ASTMD 2737; CSA B137.1                         |
| Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe                             | ASTM F 1282; CAN/CSA B137.9                    |
| Polypropylene (PP) plastic pipe or tubing                                      | ASTM F 2389; CSA B137.11                       |
| Polyvinyl chloride (PVC) plastic pipe  | ASTMD 1785; ASTMD 2241; ASTMD 2672; CSA B137.3 |
| Stainless steel pipe (Type 304/304L)   | ASTM A 312; ASTM A 778                         |
| Stainless steel pipe (Type 316/316L)   | ASTM A 312; ASTM A 778                         |
| Polyvinyl Chloride (PVC) Pressure Pipe   | AWWA C-900/NSF-61                              |

**Commercial Super Committee**

**Motion – Robbie Davis / Second – Wade White / Approved**

**Building Code Council**

**Motion / Second / Adopted**

**Item D – 5 Request by Bill Collins, representing Baker Residential, to amend the 2012 NC Residential Code, Section R905.10. The proposed amendment is as follows:**

**R905.10 Metal roof panels.** The installation of metal roof panels shall comply with the provisions of this section. Ridge/Hip Flashing and sealant shall be installed per the manufacturer’s instructions.

## **Residential Super Committee**

### **Motion to Deny – David Smith / Second / Denied**

## **Part E – Reports**

### **Chairman’s Report**

Dan Tingen reported the Commissioner agreed to get financial commitment from the legislature for On-line Codes. This would be used to develop a code presentation for the public to use at no charge. Results of this could be seen by December or January. He discussed how the money allocated for this would have to be spent by June 2017. Terrance Friedman also commented on this process and how it works.

The Chairman recognized Dominic Sims for his outstanding help and leadership with the ICC.

Travel reimbursements were also discussed. The goal is to have the Council members reimbursed on a monthly basis rather than quarterly going forward.

A new list of all Committees and their members was passed out.

### **Ad Hoc Committee Reports**

There were none.

### **Standing Committee Reports**

The Standing Administration Committee recommended removal of commentary, Section 107.1.5

### **Motion to Approve / Second / Passed**

### **Election of Officers**

Dan Tingen was elected as Chairman and Steve Knight was elected as Vice Chairman.

### **Staff Reports**

Barry Gupton spoke about the Ad-Hoc Committees and the 2018 Codes. He asked the committees to review their work and report back as to whether or not their code changes will have a substantial economic impact. If so, he will need the information to prepare a fiscal note for OSBM. Cindy Register stated the Electrical Code change process could be 1 million and Energy expects to have a significant impact of several million. Fuel Gas/Mechanical/ Plumbing, Residential, Fire/Building, and Existing all foresaw no substantial impact with their changes. He also stated if any information could be controversial, it should not be submitted through the packages as this can cause delays and hold up the process.

Dan Tingen requested hard copies of all the changes to be adopted for the Council members to reference.

Barry gave an update of OSFM’s move to the basement of the Department of Administration Building and advised of new staff phone numbers.

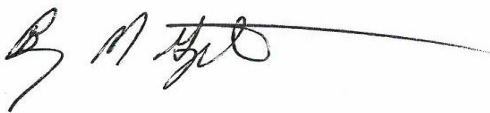
### **Public Comments**

There were none.

**Part F – Appeals**

Terrance Friedman discussed upcoming appeals. The Redwood Living Appeal is scheduled for November 2, 2016. Both the Residential Super Committee and the Commercial Super Committee will be present. The Davis & Weeks Appeal is scheduled for December 14, 2016. The Residential Super Committee will be present. Both hearings will start at 10:00 am in the Cameron Room (B-202) in the basement of the NC Administration Building, 116 West Jones Street, Raleigh NC 27603.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Gupton", with a long horizontal line extending to the right.

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