

**Minutes of the North Carolina Building Code Council**  
**April 21<sup>st</sup>, 2011**  
**Raleigh, NC**

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

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 June 13-14, 2011 at the North Carolina Department of Insurance, 322 Chapanoke Road, Raleigh, NC 27603, in the downstairs classroom.

**Part 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.

**Part 2        The following Petitions for Rulemaking have been granted by the Council. Notice of Rulemaking proceedings was posted on February 15, 2011. The Public Hearing was held March 7, 2011 and the written public comment period expired on April 18, 2011. The Final Adoption took place on April 21, 2011.**

**Item - 1       Request by Andy Davis, with The Marwin Company, Inc., to amend the 2012 NC Residential Code, Section N1102.2.3. The proposed amendment is as follows:**

**N1102.2.3 Access hatches and doors.**

**Exceptions:**

1. Pull down stair systems shall be weatherstripped and insulated to ~~an R-5 insulation~~ a maximum U-factor of U-0.17 with a minimum of R-5 insulation value. Non-rigid insulation materials are not allowed. Additional insulation systems that enclose the stair system from above are allowed. Exposed foam plastic ~~must~~ shall meet the provisions of the North Carolina Residential Code.

**The Residential Committee met on February 2, 2011 and recommends the following modified language:**

**Exceptions:**

1. Pull down stair systems shall be weatherstripped and insulated ~~to~~ with a minimum of an R-5 insulation value such that ~~the~~ insulation does shall not interfere with proper operation of the stair. Non-rigid insulation materials are not allowed. Additional insulation systems that enclose the stair system from above are allowed.

Exposed foam plastic must meet the provisions of the *North Carolina Residential Code*.

Motion – David Smith/Second/Approved – The request was approved unanimously as modified. The effective date is January 1, 2012.

**Item – 2 Request by Johnny C. Clark, PE, with the North Carolina Department of Public Instruction, to amend the 2012 NC Mechanical Code, Table 403.3. The proposed amendment is as follows:**

**TABLE 403.3  
REQUIRED OUTDOOR VENTILATION AIR**  
**Education; Delete** footnote “g” from Art Classroom and Science Laboratories.

Motion – Al Bass/Second – Mack Nixon/Approved – The request was approved unanimously as modified. The effective date is September 1, 2011.

**Item – 3 Request by Johnny C. Clark, PE, with the North Carolina Department of Public Instruction, to amend the 2012 NC Mechanical Code, Section 403.3.1.3. The proposed amendment is as follows:**

**Add the following to paragraph 403.3.1.3:**  
**Exception:** K-12 schools shall be exempt from use of this effectiveness factor ( $V_{oz}=V_{bz}$ )

Motion – Al Bass/Second – Cindy Browning/Approved – The request was approved unanimously as modified. The effective date is September 1, 2011.

**Item – 4 Request by Johnny C. Clark, PE, with the North Carolina Department of Public Instruction, to amend the 2012 NC Mechanical Code, Section 403.3.2.3.4. The proposed amendment is as follows:**

**Add the following to paragraph 403.3.2.3.4:**  
**Exception:** K-12 schools shall be exempt from use of this efficiency factor ( $V_{ot}=V_{ou}$ )

Motion – Al Bass/Second – Cindy Browning/Approved – The request was approved unanimously as modified. The effective date is September 1, 2011.

**Item – 5 Request by David Smith, NC Building Code Council, to amend the 2009 NC Residential Code, Section R313.2 and the 2012 NC Residential Code, Section R314.3. The proposed amendment is as follows:**

**2009 NC Residential Code**  
**R313.2 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.

2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, or uninhabitable (unfinished) attic stories ~~and uninhabitable attics~~. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

### **2012 NC Residential Code**

**R314.3 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, or uninhabitable (unfinished) attic stories ~~and uninhabitable attics~~. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

**The Residential Committee met on February 2, 2011 and noted that the words “attics, and uninhabitable (unfinished)” were omitted. The following corrected petition language was granted:**

### **2009 NC Residential Code**

**R313.2 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, or uninhabitable (unfinished) attics, and uninhabitable (unfinished) attic-stories ~~and uninhabitable attics~~. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

**2012 NC Residential Code**

**R314.3 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, or uninhabitable (unfinished) attics, and uninhabitable (unfinished) attic-stories and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

Motion – David Smith/Second – Lon McSwain/Approved – The request was approved as modified. The effective date is January 1, 2012.

**Item – 6 Request by David Smith, NC Building Code Council, to amend the 2009 and 2012 NC Residential Code, Section R807.1. The proposed amendment is as follows:**

**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed 100 square feet (9.29 m<sup>2</sup>) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

**Exceptions:**

1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.
2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

Motion – David Smith/Second – Cindy Browning/Approved – The request was approved unanimously as modified. The effective date is January 1, 2012.

**Item – 7 Request by the Electrical Standing Committee to adopt the 2011 NEC with NC Amendments.**

The proposed NC amendments to the 2011 NEC are posted at the following link:

Motion (to also include a list effective date of September 1, 2011) – Alan Perdue/Second – Lon McSwain/Approved – The request was approved unanimously.

**Item – 8 Request by Roger Ballard representing NC Department of Public Instruction to amend the 2009 NC Building Code, Table 715.4. The proposed amendment is as follows:**

**TABLE 715.4 Fire Door and Fire Shutter Fire Protection Ratings**

***(add footnote “c” in Table, to “Fire partitions, corridor walls)***

c. Fire-rated bathroom/restroom doors are not required when opening onto fire-rated halls, corridors, exit access provided:

- (1) no other rooms open off of the bathroom/restroom, and
- (2) no gas or electric appliances other than electric hand dryers are located in the bathroom/restroom, and
- (3) the walls, partitions, floor and ceiling of the bathroom/restroom have a fire rating at least equal to the rating of the hall, corridor or exit access, and
- (4) the bathroom/restroom is not used for any other purpose than it is designed.

Motion – John Hitch/Second – Tom Turner/Approved – The request was approved. The effective date is September 1, 2011.

**Item-8(a) Request by Roger Ballard representing NC Department of Public Instruction to amend the 2012 NC Building Code, Table 715.4. The proposed amendment is as follows:**

**TABLE 715.4 Fire Door and Fire Shutter Fire Protection Ratings**

***(add footnote “c” in Table, to “Fire partitions, corridor walls)***

c. Fire-rated bathroom/restroom doors are not required when opening onto fire-rated halls, corridors, exit access provided:

- (1) no other rooms open off of the bathroom/restroom, and
- (2) no gas or electric appliances other than electric hand dryers are located in the bathroom/restroom, and
- (3) the walls, partitions, floor and ceiling of the bathroom/restroom have a fire rating at least equal to the rating of the hall, corridor or exit access, and
- (4) the bathroom/restroom is not used for any other purpose than it is designed.

Motion – John Hitch/Second – Tom Turner/Approved – The request was approved. The effective date is September 1, 2011.

**Item – 9 Request by Roger Ballard representing NC Department of Public Instruction to amend the 2009 NC Building Code, Section 715.4.7. The proposed amendment is as follows:**

**715.4.7 Door closing.** Fire doors shall be self-closing or automatic-closing in accordance with this section.

**Exceptions:**

1. Fire doors located in common walls separating sleeping units in Group R-1 shall be permitted without automatic-closing or self-closing devices.
2. The elevator car doors and the associated hoistway enclosure doors at the floor level designated for recall in accordance with Section 3003.2 shall be permitted to remain open during Phase I emergency recall operation.
3. Doors from classrooms, with less than 1200 net square feet, in Group E occupancies opening directly onto a 1-hour rated corridor shall be permitted to be installed without self-closing devices.

Motion – Lon McSwain/Second – Alan Perdue/Disapproved – The request was denied unanimously.

**Item-9(a) Request by Roger Ballard representing NC Department of Public Instruction to amend the 2012 NC Building Code, Section 715.4.7. The proposed amendment is as follows:**

**715.4.7 Door closing.** Fire doors shall be self-closing or automatic-closing in accordance with this section.

**Exceptions:**

1. Fire doors located in common walls separating sleeping units in Group R-1 shall be permitted without automatic-closing or self-closing devices.
2. The elevator car doors and the associated hoistway enclosure doors at the floor level designated for recall in accordance with Section 3003.2 shall be permitted to remain open during Phase I emergency recall operation.
3. Doors from classrooms, with less than 1200 net square feet, in Group E occupancies opening directly onto a 1-hour rated corridor shall be permitted to be installed without self-closing devices.

Motion – Alan Perdue/Second – Lon McSwain/Disapproved – The request was denied unanimously.

**Item – 10 Request by Ralph Euchner representing the Plumbing Ad-Hoc Committee to adopt the Rainwater Collection and Distribution Systems code language.**

The proposed Appendix C-1, Rainwater Collection and Distribution Systems, is posted at the following link:

Motion – Al Bass/Second – Ralph Euchner/Approved – The request was approved unanimously. The effective date is January 1, 2015.

**[Items 11 through 32 were identified by the Chairman as being cost offsets to balance the adoption of the 2012 Energy Conservation Code. These code changes were accompanied with a letter from Governor Perdue.]**

The Chairman requested that the Council discuss Items 11 through 32 individually prior to taking final action to establish a consensus for approval by a yes/no poll. Items 17, 19, 20, 21(amended), 22(amended), 25, 26 and 30(amended) were identified as having Committee and Council support for adoption. At the conclusion of the poll, the Council voted on each item separately.

**Item – 11 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section 202. The proposed amendment is as follows:**

**202 Definitions**

~~**STORY, ATTIC.** Any story situated wholly or partly in the roof so designated arranged or built as to be used for storage or habitation If an attic which is accessible by a fixed stairway has a 7 foot (2134 mm) clear height for greater than 50 percent of the floor area of the story below then the space shall be considered as a story.~~

Motion/Second/Denied – The request was denied unanimously.

**Item – 12 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section 202. The proposed amendment is as follows:**

~~**WIND BORNE DEBRIS REGION.** Areas within hurricane-prone regions defined as that area east of the inland waterway from the NC/SC state line north to Beaufort Inlet and from that point to include the harrier islands to the NC/VA state line within 1500 feet (0.452km) of the mean high water line of the Atlantic Ocean.~~

Motion – Hawley Truax/Second – Bob Ruffner/Denied – The request was denied unanimously.

**Item - 13 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R302.2.5. The proposed amendment is as follows:**

**R302.2.5 Townhouse eave protection** In townhouse construction (with three or more attached dwellings) Projections extending into the fire separation distance shall have not less than 1 hour fire resistive construction on the underside. Soffit material beyond the fire separation distance shall be securely attached to framing members. ~~and shall be constructed using either noncombustible soffit material; fire retardant treated soffit material; vinyl soffit installed over 3/4-inch (19 mm) wood sheathing or 5/8-inch (16 mm) gypsum board; or aluminum soffit installed over 3/4-inch (19 mm) wood sheathing or 5/8-inch (16 mm) gypsum board. Venting requirements shall be provided in both soffit and underlayments. Vents shall be either nominal 12-inch (51 mm) continuous or equivalent intermittent and shall not exceed the minimum net free air requirements established in Section R806.2 by more than 50 percent.~~

Vents in soffit are not allowed within 4 feet (1219 mm) of fire walls or property lines.

Motion – Alan Perdue/Second – Mack Nixon/Denied – The request was denied unanimously.

**Item - 14 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R314.3.1. The proposed amendment is as follows:**

**R314.3.1 Alterations, repairs and additions.** When alterations, repairs and additions requiring a building permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms. ~~located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.~~ which may be battery powered and shall be designed to emit a recurring signal when batteries are low and need to be replaced.

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

**Item - 15 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R404.4. The proposed amendment is as follows:**

**R404.4 Retaining walls** Retaining walls that are ~~not laterally supported at the top and that retain in excess of 48~~ || of unbalanced fill support buildings and their accessory structures shall be designed to ensure stability against overturning, sliding, excessive foundation pressure and water uplift. ~~In addition any retaining wall which meets the following:~~

~~1. Any retaining wall systems on a residential site that cross over adjacent property lines regardless of vertical height, and~~



~~2. Retaining walls that support buildings and their accessory structures.~~

~~Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning~~

Motion – Mack Nixon/Second – Bob Ruffner/Denied – The request was denied unanimously.

**Item – 16 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R4403.1. The proposed amendment is as follows:**

**R4403.1 Foundation Wall Footings.** Foundation wall footings in the 120 and 130 mph wind zones shall be a minimum of 8" x ~~24" 15"~~ for houses 2-1/2 stories and less. The footing for a three story building shall be 10" x ~~24" 18"~~. ~~Footings shall be reinforced with three #4 (or two #5 bars) at 3 inches above the bottom of the footing. The bars shall be continuous or lapped 25 inches at all splices.~~

Motion – Hawley Truax/Second – Lon McSwain/Denied – The request was denied unanimously.

**Item – 17 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R311.2. The proposed amendment is as follows:**

**R311.2 Egress door.** At least one exterior egress door shall be provided for each *dwelling* unit. The egress door shall be side-hinged, and shall provide a minimum clear width of 32 inches (813mm) when measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The minimum clear height of the door opening shall not be less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other exterior doors shall not be required to comply with these minimum dimensions. All interior ~~and~~ egress doors and a minimum of one exterior egress doors shall be readily openable from the side from which egress is to be made without the use of a key or special knowledge or effort.

Motion/Second/Adopted – The request was adopted. The effective date is January 1, 2012.

**Item – 18 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R313.1.1. The proposed amendment is as follows:**

**R313.1.1 Carbon monoxide alarms.** In new construction, dwelling units within which fuel-fired appliances are installed or have attached garages shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer

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

**Item – 19 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R403. The proposed amendment is as follows:**

**TABLE R403.  
MINIMUM WIDTH OF CONCRETE OR MASONRY FOOTINGS  
(inches)<sup>a</sup>**

	<b>LOAD BEARING VALUE OF SOIL (psf)</b>			
	<i>1,500</i>	<i>2,000</i>	<i>3,000</i>	<i>4,000</i>
<b><i>Conventional Wood Frame Construction</i></b>				
<i>1-story</i>	<del>16</del> <u>12</u> <sup>b</sup>	<del>16</del> <u>12</u> <sup>b</sup>	12	12
<i>2-story</i>	<del>16</del> <u>15</u> <sup>b</sup>	<del>16</del> <u>15</u> <sup>b</sup>	12	12
<i>3-story</i>	23	17	12	12
<b><i>4-Inch Brick Veneer Over Wood Frame or 8-Inch Hollow Concrete Masonry</i></b>				
<i>1-story</i>	<del>16</del> <u>12</u> <sup>b</sup>	<del>16</del> <u>12</u> <sup>b</sup>	12	12
<i>2-story</i>	<del>16</del> <u>15</u> <sup>b</sup>	<del>16</del> <u>15</u> <sup>b</sup>	12	12
<i>3-story</i>	32	24	16	12
<b><i>8-Inch Solid or Fully Grouted Masonry</i></b>				
<i>1-story</i>	16	16	12	12
<i>2-story</i>	29	21	14	12
<i>3-story</i>	42	32	21	16

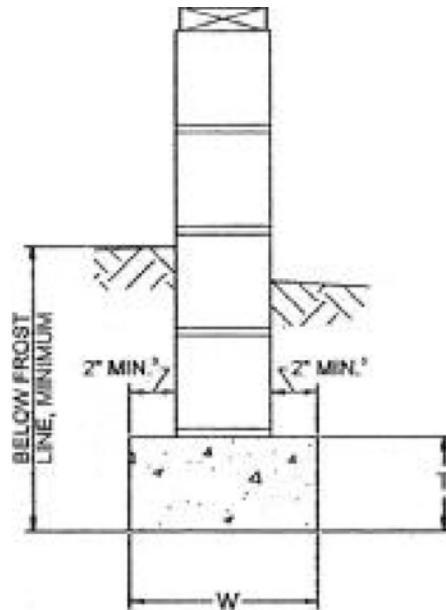
For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

- a. Where minimum footing width is 12 inches, use a single with of solid or fully grouted 12-inch nominal concrete masonry units is permitted.
- b. A minimum footing width of 12" is acceptable for monolithic slab foundations.

Motion/Second/Adopted – The request was adopted. The effective date is January 1, 2012.

**Item – 20 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R403.3(1). The proposed amendment is as follows:**

**FIGURE R403.3 (1)  
CONCRETE AND MASONRY FOUNDATION DETAILS**



1. Foundations shall extend not less than 12 inches below the natural grade or engineered fill finished grade and in no case less than the frost line depth.  
**REMAINING NOTES TO REMAIN THE SAME**

Motion/Second – David Smith/Adopted – The request was adopted. The effective date is January 1, 2012.

**Item – 21 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R408.1.1. The proposed amendment is as follows:**

**R408.1.1 Foundation vent sizing.** The minimum net area of ventilation openings shall be not less than 1 square foot (0.0929 m<sup>2</sup>) for each 150 square feet (13.9 m<sup>2</sup>) of crawl space ground area

**Exception:** The total area of ventilation openings may be reduced to 1/1,500 of the of the crawl space ground area under-floor area where the ground surface is treated with an approved vapor retarder material and the required openings are placed so as to provide cross-ventilation of the space. The installation of operable louvers shall not be prohibited.

**The proposed language was modified as shown below based on public comment and Council discussion.**

**R408.1.1 Foundation vent sizing.** The minimum net area of ventilation openings shall be not less than 1 square foot (0.0929 m<sup>2</sup>) for each 150 square feet (13.9 m<sup>2</sup>) of crawl space ground area

**Exception:** The total area of ventilation openings may be reduced to 1/1,500 of the of the ~~crawl space ground area~~ under-floor area where the ground surface is treated with an approved vapor retarder material in accordance with Section R408.2 and the required openings are placed so as to provide cross-ventilation of the space. The installation of operable louvers shall not be prohibited.

Motion – David Smith/Second – Mack Nixon/Adopted as Modified. The effective date is January 1, 2012.

**Item – 22 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R408.2. The proposed amendment is as follows:**

~~**R408.2 Ground vapor retarder.** Requires full coverage ground vapor retarders for all wall vented ground spaces. Wall vented crawl spaces shall be protected from water entry by the evaporation of water from the ground surface. 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 (305 mm). Where there is no evidence that the ground water 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. The floor of the crawl space shall be graded so that it drains to one or more low spots. 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.~~

**The proposed language was modified as shown below based on public comment and Council discussion.**

~~**R408.2 Ground vapor retarder.** Requires full coverage ground vapor retarders for all wall vented ground spaces. Wall vented crawl spaces shall be protected from water entry by the evaporation of water from the ground surface. 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 (305 mm). Where there is no evidence that the ground water 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. ~~The floor of the crawl space shall be graded so that it drains to one or more low spots.~~ 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 – Steve Knight/Adopted as Modified. The effective date is January 1, 2012.

**Item – 23 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R703.2. The proposed amendment is as follows:**

**R703.2 ~~Water-resistive barrier~~ Weather-resistant sheathing paper.** One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D 226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls as required by Table 703.4. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm). Where joints occur, felt shall be lapped not less than 6 inches (152 mm). The felt or other approved material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1.

**Exception:** Omission of the water-resistive barrier is permitted in the following situations:

1. In detached accessory buildings.
2. Under exterior wall finish materials as permitted in Table R703.4.
3. Under paperbacked stucco lath when the paper backing is an approved weather-resistive sheathing paper.
4. Under panel siding with shiplap joints or battens.

**TABLE R703.4**  
**WEATHER-RESISTANT SIDING ATTACHMENT AND MINIMUM THICKNESS**(reprint from 2006

WALL COVERING

**TABLE R703.4**  
**WEATHER-RESISTANT SIDING ATTACHMENT AND MINIMUM THICKNESS**

SIDING MATERIAL	NOMINAL THICKNESS <sup>a</sup> (inches)	JOINT TREATMENT	SHEATHING PAPER REQUIRED	TYPE OF SUPPORTS FOR THE SIDING MATERIAL AND FASTENERS <sup>b,c,d</sup>						
				Wood or wood structural panel sheathing	Fiberboard sheathing into stud	Gypsum sheathing into stud	Foam plastic sheathing into stud	Direct to studs	Number or spacing of fasteners	
Horizontal aluminum <sup>f</sup>	Without insulation	0.019 <sup>g</sup>	Lap	Yes Note m	0.120 nail 1 1/2" long	0.120 nail 2" long	0.120 nail 2" long	0.120 nail <sup>h</sup>	Not allowed	Same as stud spacing
		0.024	Lap	Yes Note m	0.120 nail 1 1/2" long	0.120 nail 2" long	0.120 nail 2" long	0.120 nail <sup>h</sup>	Not allowed	
	With insulation	0.019	Lap	Yes Note m	0.120 nail 1 1/2" long	0.120 nail 2 1/4" long	0.120 nail 2 1/2" long	0.120 nail <sup>h</sup>	0.120 nail 1 1/2" long	
Brick veneer Concrete masonry veneer	2 2	Section R 703	Yes	See Section R703 and Figure R703.7 <sup>h</sup>						
Hardboard <sup>i</sup> Panel siding-vertical	7/16	Note r	Yes Note y	Note o	Note o	Note o	Note o	Note o	Note o	6" panel edges 12" inter. sup. <sup>j</sup>
Hardboard <sup>i</sup> Lap-siding-horizontal	7/16	Lap Note r	Yes	Note q	Note q	Note q	Note q	Note q	Note q	Same as stud spacing 2 per bearing
Steel <sup>i</sup>	29 ga.	Lap	Yes	0.113 nail 1 3/4" Staple-1 3/4"	0.113 nail 2 1/4" Staple-2 1/4"	0.113 nail 2 1/2" Staple-2 1/2"	0.113 nail <sup>h</sup> Staple <sup>h</sup>	Not allowed	Same as stud spacing	
Stone veneer	2	Section R 703	Yes	See Section R703 and Figure R703.7 <sup>h</sup>						
Particleboard panels	3/8 - 1/2	Note r	Yes	6d box nail	6d box nail	6d box nail	box nail <sup>h</sup>	6d box nail, 3/8 not allowed	6" panel edge 12" inter. sup.	
	5/8	Note r	Yes	6d box nail	8d box nail	8d box nail	box nail <sup>h</sup>	6d box nail		
Plywood panel <sup>i</sup> (exterior grade)	3/8	Note r	Yes	0.099 nail-2"	0.113 nail-2 1/2"	0.099 nail-2"	0.113 nail <sup>h</sup>	0.099 nail-2"	6" on edges	
Vinyl siding <sup>g</sup>	0.035	Lap	Yes Note m	0.120 nail 1 1/2" Staple-1 3/4"	0.120 nail 2" Staple-2 1/2"	0.120 nail 2" Staple-2 1/2"	0.120 nail <sup>h</sup> Staple <sup>h</sup>	Not allowed	Same as stud spacing	
Wood <sup>h</sup> Rustic, drop	3/8 Min	Lap	Yes	Fastener penetration into stud-1"				0.113 nail-2 1/2" Staple-2"	Face nailing up to 6" widths, 1 nail per bearing; 8" widths and over, 2 nails per bearing	
Shiplap	19/32 Average	Lap	Yes							
Bevel	7/16	Lap	Yes							
Butt tip	3/16	Lap	Yes							
Fiber cement panel siding <sup>g</sup>	5/16	Note t	Yes Note y	6d corrosion resistant nail <sup>h</sup>	6d corrosion resistant nail <sup>h</sup>	6d corrosion resistant nail <sup>h</sup>	—	4d corrosion resistant nail <sup>h</sup>	6" oc on edges, 12" oc on intermed. studs	
Fiber cement lap siding <sup>g</sup>	5/16	Lap Note w	Yes Note y	6d corrosion resistant nail <sup>h</sup>	6d corrosion resistant nail <sup>h</sup>	6d corrosion resistant nail <sup>h</sup>	—	6d corrosion resistant nail <sup>h</sup>	Note x	

For SI: 1 inch = 25.4 mm.

- Based on stud spacing of 16 inches on center. Where studs are spaced 24 inches, siding shall be applied to sheathing approved for that spacing.
- Nail is a general description and shall be T-head, modified round head, or round head with smooth or deformed shanks.
- Staples shall have a minimum crown width of 7/16-inch outside diameter and be manufactured of minimum No. 16 gage wire.
- Nails or staples shall be aluminum, galvanized, or rust-preventive coated and shall be driven into the studs for fiberboard or gypsum backing.
- Aluminum nails shall be used to attach aluminum siding.
- Aluminum (0.019 inch) shall be unbacked only when the maximum panel width is 10 inches and the maximum flat area is 8 inches. The tolerance for aluminum siding shall be +0.002 inch of the nominal dimension.
- Deleted.
- All attachments shall be coated with a corrosion-resistive coating.
- Shall be of approved type.
- Three-eighths-inch plywood shall not be applied directly to studs spaced greater than 16 inches on center when long dimension is parallel to studs. One-half-inch plywood shall not be applied directly to studs spaced greater than 24 inches on center. The stud spacing shall not exceed the panel span rating provided by the manufacturer unless the panels are installed with the face grain perpendicular to studs or over sheathing approved for that stud spacing.

(continued)

NCRC)

**Footnotes to Table R703.4—continued**

- k. Woodboard sidings applied vertically shall be nailed to horizontal nailing strips or blocking set 24 inches on center. Nails shall penetrate 1.5 inches into studs, studs and wood sheathing combined, or blocking. A weather-resistant membrane shall be installed weatherboard fashion under the vertical siding unless the siding boards are lapped or battens are used.
- l. Hardboard siding shall comply with AHA A135.6.
- m. A weather-resistant sheathing paper is not required if all of the following conditions are met:
  - 1. Design wind speed is 110 mph (48 m/s) or less.
  - 2. All horizontal sheathing joints are flashed with an approved corrosion-resistive material or draped with a minimum 6 mil polyethylene.
- n. Vinyl siding shall comply with ASTM D 3679.
- o. Minimum shank diameter of 0.092 inch, minimum head diameter of 0.225 inch, and nail length must accommodate sheathing and penetrate framing 1.5 inches.
- p. When used to resist shear forces, the spacing must be 4 inches at panel edges and 8 inches on interior supports.
- q. Minimum shank diameter of 0.099 inch, minimum head diameter of 0.240 inch, and nail length must accommodate sheathing and penetrate framing 1.5 inches.
- r. Vertical end joints shall occur at studs and shall be covered with a joint cover or shall be caulked.
- s. Fiber cement siding shall comply with the requirements of ASTM C 1186.
- t. See Section R703.10.1.
- u. Minimum 0.102 inch smooth shank, 0.255 inch round head.
- v. Minimum 0.099 inch smooth shank, 0.250 inch round head.
- w. See Section R703.10.2.
- x. Face nailing: 2 nails at each stud. Concealed nailing: one 11 gage 1<sup>1</sup>/<sub>2</sub> galv. roofing nail (0.371 inch head diameter, 0.120 inch shank) or 6d galv. box nail at each stud.
- y. See Section R703.2, Exceptions.
- z. Minimum nail length must accommodate sheathing and penetrate framing 1.5 inches.

Motion – Lon McSwain/Second – Bob Ruffner/Denied – The request was denied unanimously.

**Item – 24 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R703.7.4.2. The proposed amendment is as follows:**

**R703.7.4.2 Air space.** The veneer shall be separated from the sheathing by an air space of a minimum of nominal 1 inch (25.4 mm) air space but not more than 4.5 inches (114 mm). The weather-resistant membrane or asphalt saturated felt required by Section R703.2 is not required over water repellant sheathing materials.

Motion – Lon McSwain/Second – Bob Ruffner/Denied – The request was denied unanimously.

**Item – 25 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R802.3. The proposed amendment is as follows:**

**R802.3 Framing details.** Rafters shall be framed to ridge board or to each other with a gusset plate as a tie. Ridge board shall be at least 1-inch (25.4 mm) nominal thickness and not less in depth than the cut end of the rafter. Opposing rafters at the ridge must align within the thickness of the ridge member. Regularly spaced hip and valley rafters need not align. At all valleys and hips there shall be a valley or hip rafter not less than 2-inch (51 mm) nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than three units vertical in 12 units horizontal (25-percent slope), structural members that support rafters and ceiling joists, such as ridge beams, hips and valleys, shall be designed as beams.

Motion – Mack Nixon/Second – David Smith/Adopted – The request was adopted. The effective date is January 1, 2012.

**Item – 26 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R807.1. The proposed amendment is as follows:**

**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed ~~100~~ 400 square feet (9.29 m<sup>2</sup>) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm) by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section MI305.1.3 for access requirements where mechanical equipment is located in attics.

**Exception:** Concealed areas not located over the main structure including porches areas behind knee walls, dormers, bay windows etc. are not required to have access.

Motion – David Smith/Second – Mack Nixon/Adopted – The request was adopted. The effective date is January 1, 2012.

**Item – 27 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Appendix M. The proposed amendment is as follows:**

**Appendix M:**

**Section AM111- Figure AM111**

Rail Posts – Remove bolting requirement

Riser Openings – remove solid riser/opening restrictions

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

**Item – 28 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Administrative Code and Policies, Section 107.2. The proposed amendment is as follows:**

**107.2 Inspection requests.** It shall be the duty of the permit holder or his or her agent to notify the code enforcement official when work is ready for inspection and to provide access to and means for inspection of the work for any inspections that are required by this code.

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

**Item – 29 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2008 NC Electrical Code, Section 338.10(B) (4)(a). The proposed amendment is as follows:**

**Section 338.10(B) (4) (a)**

**(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.

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

**Item – 30 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Fire Code, Section 101.2.1. The proposed amendment is as follows:**

**101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically referenced in the code text ~~adopted by the local governing authority having jurisdiction.~~

**The proposed language was modified as shown below based on public comment and Council discussion.**

**101.2.1 Appendices.** Provisions in the appendices shall not be enforceable unless specifically adopted by the local governing authority having jurisdiction and subsequently approved for use by the Building Code Council.

Motion – David Smith/Second – Bob Ruffner/Adopted as Modified. The effective date is January 1, 2012.

**Item – 31 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Plumbing Code, Section 502.5. The proposed amendment is as follows:**

**502.5 Water heaters installed in garages.** Water heaters having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the garage floor. Appliances shall be located or protected so that they are not subject to physical damage by a moving vehicle.

**Exception(s):**

1. Elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition.
2. Electric water heaters.

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

**Item – 32 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Building Code, Section 903.2.7. The proposed amendment is as follows:**

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

**Exceptions:**

1. An automatic sprinkler system is not required in new adult and child care facilities in existing Groups R-3 and R-4 occupancies.
2. An automatic sprinkler system is not required throughout all buildings with a Group R-2 fire area where two stories or less in height, including basements, or where having 16 or less dwelling units.

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


**Part 3 Reports**

There were none.

**Part 4 Appeal – Executive Session to discuss order from the David Faustin Appeal**

Dan Tingen stated that the Council went into Closed Session to consult with the Council's Attorney to finalize the Order that was issued with regards to the Black Forest Appeal.

Sincerely,



Christian Noles, P.E.  
Secretary, NC Building Code Council