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

All members of the North Carolina Building Code Council were present for the Council meeting, except Robert Morrow and Tony Sears.

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, March 13, 2018.** 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 September 12, 2017 NC Building Code Council Meeting.

A motion to accept the September 12, 2017 meeting minutes was made, seconded and approved.

Item A – 3 Legislation of Board Members and Per Diem Payments

Steve Grant and Teresa Everett, from NC OSHR – NC Temporary Solutions, discussed the legislation regarding Board Members being established as contractors and Per Diem payments now being paid through Temporary Solutions.

Item A – 4 (a) Section 10 of Senate Bill 16 Ratified Bill

STUDY ELECTRICAL SAFETY FOR SWIMMING POOLS

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

The report was written by Terence Friedman, Assist AG representing the Building Code Council with input from Council members.

A motion to approve was accepted.

Terence Friedman to file report with the Joint Legislative Oversight Committee on Justice and Public Safety.

(b) Section 11 of Senate Bill 16 Ratified Bill
STUDY USE OF UNGRADED LUMBER IN CERTAIN CIRCUMSTANCES
SECTION 11. The Building Code Council shall study under what circumstances it would be appropriate to use lumber that has not been grade stamped under the authority of a lumber grading bureau in construction in North Carolina. The Council shall consider cost, durability, public safety, and any other factors the Council deems necessary. No later than December 1, 2017, the Council shall report its findings and recommendations to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources.

The report was written by Terence Friedman, Assistant AG representing the Building Code Council with input from Council members.

A motion to approve was accepted.

Terence Friedman to file report with the Joint Legislative Oversight Committee on Justice and Public Safety.

(c) Section 1 of Senate Bill Ratified
REQUIRE AGENCIES AND THE OFFICE OF ADMINISTRATIVE HEARINGS TO PROVIDE ADDITIONAL NOTICE OF PETITIONS FOR RULE MAKING
SECTION 1.(a) G.S. 150B-20(a) reads as rewritten:
"(a) Petition. – A person may petition an agency to adopt a rule by submitting to the agency a written rule-making petition requesting the adoption. A person may submit written comments with a rule-making petition. If a rule-making petition requests the agency to create or amend a rule, the person must submit the proposed text of the requested rule change and a statement of the effect of the requested rule change. Each agency must establish by rule the procedure for submitting a rule-making petition to it and the procedure the agency follows in considering a rule-making petition. An agency receiving a rule-making petition shall, within three business days of receipt of the petition, send the proposed text of the requested rule change and the statement of the effect of the requested rule change to the Office of Administrative Hearings. The Office of Administrative Hearings shall, within three business days of receipt of the proposed text of the requested rule change and the statement of the effect of the requested rule change, distribute the information via its mailing list and publish the information on its Web site."

SECTION 1.(b) This section becomes effective January 1, 2018.

All future New Petitions will be scanned and filed with OAH within 3-days after the Building Code Council meeting.

Item A – 5 The Building Code Council held a "called" meeting on November 14, 2017 to elect a Chair and Vice-Chair. Robbie Davis was elected Chair and Daniel Priest was elected Vice-Chair. There were 15 members in attendance.

Item A – 6 Request by Gaurang L. Doshi, representing self, to add the following paragraph to the North Carolina State Building Code:

> After the builder acquires Permit for construction, and before the certificate of occupancy is received, it shall be unlawful for any person, firm, corporation, partnership, association of persons, owner, agent, occupant or anyone having supervision or control of any lot, tract, parcel of land or portion thereof, occupied or unoccupied, improved or unimproved, which is undergoing construction work, within the corporate limits of the state of North Carolina to suffer or permit grass, weeds or brush that is uncultivated to grow to a greater height than 10 inches on any lot, tract, parcel or land within the corporate limits of state of North Carolina, within 100 feet on either side of any lot that is occupied by a residence or business.

Chairman Robbie Davis moved this to a B-item.

Item A – 7 Rules Review Commission Meeting Report

Barry Gupton reported that all September 2017 D-Items have been submitted to the RCC.

Item A – 8 Public Comments

Dan Tingen was recognized for his service on the Building Code Council.

New members, Gary Embler and Bridget Herring, were introduced. Robert Morrow will attend the March meeting.

Randy Muntz with DPS Emergency Management and Dan Brubeck discussed the Building Code impact on insurance. These comments will be sent to the Residential and GC Committees.

Bryan Holland commented on the NEMA Codes & Standards. He also thanked the Building Code Council and staff and praised the 2017 Electrical Code.

Part B – New Petition for Rulemaking

The following Petitions for Rulemaking have been received since the last Council meeting. The Council will vote either to deny or grant these Petitions. The Council will give no further consideration to Petitions that are denied. Petitions that are granted may proceed through the Rulemaking process. The council may send any Petition to the appropriate committee. The hearing will take place during or after the March 13, 2018 meeting.

Item B – 1 Request by Gaurang L. Doshi representing self to amend the NC State Building Code as follows:

After the builder acquires Permit for construction, and before the certificate of occupancy is received, it shall be unlawful for any person, firm, corporation, partnership, association of persons, owner, agent, occupant or anyone having supervision or control of any lot, tract, parcel of land or portion thereof, occupied or unoccupied, improved or unimproved, which is undergoing construction work, within the corporate limits of the state of North Carolina to suffer or permit grass, weeds or brush that is uncultivated to grow to a greater height than 10 inches on any lot, tract, parcel or land within the corporate limits of state of North Carolina, within 100 feet on either side of any lot that is occupied by a residence or business.

Residential Super Committee: Motion to deny made by David Smith. Second made by Keith Hamilton. Denied.
Commercial Super Committee: Motion made by Wayne Hamilton. Second made by Daniel Priest. Denied.
No action taken by the Building Code Council.

Item B - 2 Request by Terry Cromer representing the N.C. Association of Electrical Contractors, Inc. to amend the 2017 North Carolina Electrical Code Amendment 320.23(A) as follows:

320.23 In Accessible Attics. Type AC cables in accessible attics or roof spaces shall be installed as specified in 320.23(A) and (B).

~~**(A) Cabled Run Across the Top of Floor Joists.** Where run across the top of floor joists, or within 2.1 m (7 ft) of the floor or floor joists across the face of ceiling rafters or studding, the cable shall be protected by guard strips that are at least as high as the cable, unless the cables are physically considered outside any floored area. Where this space is not accessible by permanent stairs or ladders, protection shall only be required within 1.8 m (6 ft) of the nearest edge of the scuttle hole or attic entrance where cables are run across the top of floor (ceiling) joists.~~

Replace with:

320.23 In Accessible Attics. Type AC cables in accessible attics or roof spaces shall be installed as specified in 320.23(A) and (B).

(A) Cables Run Across the Top of Floor Joists.
The cable shall be protected by guard strips that are at least as high as the cable where one of the following applies:

1. Where this space is accessible by permanent stairs or ladders, protection shall be required where run across the top of floor joists, or the area

directly over a permanent floor and not exceeding 2.1 m (7 ft) vertically from the floor.

2. Where this space is not accessible by permanent stairs or ladders, protection shall be required within 1.8 m (6 ft) horizontally of the nearest edge of the scuttle hole or attic entrance where run across the top of any flooring, or flooring or ceiling joists. Protection is not required where run across the face of overhead roofing trusts or rafters.

Exception: For the purpose of this section, pull-down type stairs are not to be considered as permanent stairs or ladders.

Residential Super Committee: Motion made by David Smith. Second by Keith Hamilton. Accepted.
Commercial Super Committee: Motion made by Wayne Hamilton. Second. Accepted.
Building Code Council: Motion made by Wade White. Second by David Smith. Granted.

Item B – 3 Request by Terry Cromer representing the N.C. Association of Electrical Contractors, Inc. to amend the 2017 North Carolina Electrical Code Amendment 410.2 as follows:

410.2 Definition.
Closet Storage Space. The volume bounded by the side and back closet walls and planes extending from the closet floor vertically to a height of 1.8 m (6 ft) or to the highest clothes-hanging rod and parallel to the walls at a horizontal distance of 600 mm (24 in.) from the sides and back of the closet walls, respectively, and continuing vertically to the closet ceiling parallel to the walls at a horizontal distance of 300 mm (12 in.) or the width of the shelf, whichever is greater; for a closet that permits access to both sides of a hanging rod, this space includes the volume below the highest rod extending 300 mm (12 in.) on either side of the rod on a plane horizontal to the floor extending the entire length of the rod. See Figure 410.2.

Exception: The area above the door including wall or ceiling space the width of door shall not be considered storage space.

Residential Super Committee: Motion made to accept. Second. Accepted.
Commercial Super Committee: Motion made by Keith Rogers. Second by Wade White. Accepted.
Building Code Council: Motion made by Frank Meads. Second by Keith Hamilton. Granted and sent to Electrical Committee.

Item B – 4 Request by Michael Rettie representing NC BIA to amend the 2018 NC State Building Code Section 202 and the NC State Fire Prevention Code Section 202 as follows:

Section 202 – Definitions

~~**OPEN AIR CAMP CABIN.** A Single story residential building that has three walls consisting of at least twenty percent (20%) screened openings with a maximum height of 44 inches above the finished floor to the bottom of the openings has no heating or cooling system, is occupied for no more than 150 days within any rolling 365 day time span.~~

OPEN AIR CAMP CABIN. A single-story residential building meeting all of the following:

1. Consists of a single room;
   Exception: The building may also contain toilet/bathing rooms arranged to not interrupt the free flow of air through the building.
2. Has a maximum sleeping capacity of 10 which will be permanently posted within the cabin adjacent to the main entry doorway.
3. Has three exterior walls with a minimum of twenty percent (20%) screened opening area in each wall with a maximum height of 44 inches above the finished floor to the bottom of the openings;
4. Has no heating or cooling system;
5. Is occupied for no more than 150 days within any rolling 365-day time span; and
6. A maximum of two such cabins may be located in a single structure. The two cabins must be separated by a fire wall complying with Section 706.

Commercial Super Committee: Motion made by Wayne Hamilton. Second by Daniel Priest. Accepted to send to Commercial Committee.
Building Code Council: Motion made by Wayne Hamilton. Second by Daniel Priest. Granted to send to Commercial Committee.

Item B – 5 Request by Leon Skinner representing the NC Residential Code Standing Committee to amend the NC State Building Code, Volume 2018 NC Residential Code – Appendix H as follows:

Appendix H ~~PATIO COVERS~~ Tiny Houses

(The provisions contained in this appendix are adopted as part of this code.)

SECTION AH101
GENERAL

AH101.1 Scope.
This appendix shall be applicable to tiny houses used as single family dwelling units. Tiny houses shall comply with this code except as otherwise stated in this appendix. Tiny houses built off-site of closed-construction and shipped to its site of installation shall be constructed, inspected, and labeled as a modular home in accordance with NC General Statute 142-139.1. Tiny houses build on-site shall

be open-construction and shall be inspected by the local building official having jurisdiction over the site.

SECTION AH102
DEFINITION

AH102.1 General
The following word and term shall, for the purposes of this appendix, have the meaning shown herein. Refer to Chapter 2 of this code for general definitions.

EGRESS ROOF ACCESS WINDOW. A skylight or roof window designed and installed to satisfy the emergency escape and rescue opening requirements in Section R310.2.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a loft.

LOFT. A floor level located more than 30 inches (762 mm) above the main floor and open to it on at least one side with a ceiling height of less than 6 feet 8 inches (2032 mm), used as a living or sleeping space.

TINY HOUSE. A dwelling that is 400 square feet (37 m^2) or less in floor area excluding lofts.

SECTION AH103
CEILING HEIGHT

AH103.1 Minimum ceiling height. Habitable space and hallways in tiny houses shall have a ceiling height of not less than 6 feet 8 inches (2032 mm). Bathrooms, toilet rooms, and kitchens shall have a ceiling height of not less than 6 feet 4 inches (1930 mm). Obstructions shall not extend below these minimum ceiling heights including beams, girders, ducts, lighting and other obstructions.

> **Exception:** Ceiling heights in lofts are permitted to be less than 6 feet 8 inches.

SECTION AH104
LOFTS

AH104.1 Minimum loft area and dimensions. Lofts used as a sleeping or living space shall meet the minimum area and dimension requirements Sections AH104.1.1 through AH104.1.3.

> **AH104.1.1 Minimum area.** Lofts shall have a floor area of not less than 35 square feet (3.25 m^2).

AH104.1.2 Minimum dimensions. Lofts shall be not less than 5 feet (1524 mm) in any horizontal dimension.

AH104.1.3 Height effect on loft area. Portions of a loft with a sloping ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

Exception: Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal (50-percent slope) portions of a loft with a sloped ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

AH104.2 Loft access. The access to and primary egress from lofts shall be any type described in Sections AH104.2.1 through AH104.2.4.

AH104.2.1 Stairways. Stairways accessing lofts shall comply with this code or with Sections AH104.2.1.1 through AH104.2.1.5.

AH104.2.1.1 Width. Stairways accessing a loft shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The minimum width below the handrail shall not be less than 20 inches (508 mm).

AH104.2.1.2 Headroom. The headroom in stairways accessing a loft shall be not less than 6 feet 2 inches (1880 mm), as measured vertically, from a sloped line connecting the tread or landing platform nosings in the middle of their width.

AH104.2.1.3 Treads and risers. Risers for stairs accessing a loft shall be not less than 7 inches (178 mm) and not more than 12 inches (305mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas;

1. The tread depth shall be 20 inches (508 mm) minus 4/3 of the riser height,

2. The riser height shall be 15 inches (381 mm) minus ¾ of the tread depth.

AH104.2.1.4 Landing Platforms. The top tread and riser of stairways accessing lofts shall be constructed as a landing platform where the loft ceiling height is less than 6 feet 2 inches (1880 mm) where the stairway meets the loft. The landing platform shall be 18 inches to 22 inches (457 to 559 mm) in depth measured from the nosing of the landing

platform to the edge of the loft, and 16 to 18 inches (406 to 457 mm) in height measured from the landing platform to the loft floor.

AH104.2.1.5 Handrails. Handrails shall comply with Section R311.7.8.

AH104.2.1.6 Stairway guards. Guards at open sides of stairways shall comply with Section R312.1.

AH104.2.2 Ladders. Ladders accessing lofts shall comply with Sections AH104.2.1 and AH104.2.2.

AH104.2.2.1 Size and capacity. Ladders accessing lofts shall have a rung width of not less than 12 inches (305 mm) and 10 inches (254 mm) to 14 inches (356 mm) spacing between rungs. Ladders shall be capable of supporting a 200 pound (75 kg) load on any rung. Rung spacing shall be uniform within 3/8-inch (9.5 mm).

AH104.2.2.2 Incline. Ladders shall be installed at 70 to 80 degrees from horizontal.

AH104.2.4 Ships ladders. Ships ladders accessing lofts shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches (508 mm).

AH104.2.5 Loft Guards. Loft guards shall be located along the open side of lofts. Loft guards shall not be less than 36 inches (914 mm) in height or one-half of the clear height to the ceiling, whichever is less.

SECTION AH105
EMERGENCY ESCAPE AND RESCUE OPENINGS

AH105.1 General. Tiny houses shall meet the requirements of Section R310 for emergency escape and rescue openings.

Exception: Egress roof access windows in lofts used as sleeping rooms shall be deemed to meet the requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches (1118 mm) above the loft floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.

Residential Super Committee: Motion made by David Smith. Second by Keith Hamilton. Accepted.
Building Code Council: Motion made by Daniel Priest. Second by Keith Rogers. Granted.

Item B – 6 Request by Leon Skinner representing the City of Raleigh to amend the NC State Building Code, Volume 2018 NC Mechanical Code – Section 306.5 as follows:

306.5 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring periodic maintenance are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope). Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Exception: Where permanent means of access is technically infeasible, wall-mounted equipment and appliance maintenance, replacement and repairs that are over 16 feet can be serviced by motorized equipment *upon approval*.-The owner/tenant shall provide a maintenance service and cleaning schedule contract which shall be renewed annually.

Residential Super Committee: Motion made by Keith Rogers. Second by Wade White. Accepted.
Commercial Super Committee: Motion by Ralph Euchner. Second by Daniel Priest. Accepted.
Building Code Council: Motion. Second. Granted.

Item B – 7 Request by Leon Skinner representing the City of Raleigh to amend the NC State Building Code, Volume 2018 NC Mechanical Code – Section 306.5 as follows:

1013.6.1 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring periodic maintenance are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope). Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Exception: Where permanent means of access is technically infeasible, wall-mounted equipment and appliance maintenance, replacement and repairs that are over 16 feet can be serviced by motorized equipment *upon approval*.-The owner/tenant shall provide a maintenance service and cleaning schedule contract which shall be renewed annually.

Residential Super Committee: Motion made by Daniel Priest. Second by Wade White. Accepted.
Commercial Super Committee: Motion made by Ralph Euchner. Second by Keith Hamilton. Accepted.
Building Code Council: Motion. Second. Granted.

Item B – 8 Request by Daniel Priest representing the NC Building Code Council to amend the NC State Building Code, Volume 2018 Administrative Code and Policies, Section 106 as follows:

106.3 Permit Application.
106.3.1 Information required. A permit application shall be filed with the Inspection Department on a form furnished for that purpose. The Inspection Department shall make available a list of information which must be submitted with the building permit application, including a complete building code summary (*see* Appendix A of the Administrative Code and Policies). The Inspection Department's building code summary shall be in the exact format as, and contain only the information in, Appendix B of the Administrative Code and Policies. The Inspection Department shall only modify its building code summary as set forth in section 103.5 Modifications, or as necessary to reflect any changes by the Office of State Fire Marshal to Appendix B which have been approved of by the Building Code Council.

2018 APPENDIX B1
BUILDING CODE SUMMARY FOR EXISTING COMMERCIAL BUILDINGS
(EXCEPT 1 AND 2-FAMILY DWELLINGS, TOWNHOUSES, AND CHANGE OF USE)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: _____

Address: _____ Zip Code _____

Owner/Authorized Agent: _____ Phone # (____) ____ - _____ E-Mail _____

Owned By: Private

Code Enforcement Jurisdiction: County (indicate name of jurisdiction)

LEAD DESIGNER: _____

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural				(___)___	
Civil				(___)___	
Electrical				(___)___	
Fire Alarm				(___)___	
Plumbing				(___)___	
Mechanical				(___)___	
Sprinkler-Standpipe				(___)___	
Structural				(___)___	
Retaining Walls >5' High				(___)___	
Other				(___)___	

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC EXISTING BUILDING CODE: ☐ Prescriptive ☐ Alteration Level I ☐ Historic Property
(check all that apply) ☐ Repair ☐ Alteration Level II

CONSTRUCTED: (date) _____ **RENOVATED:** (date) _____

BASIC BUILDING DATA

Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B

Sprinklers: ☐ No ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☐ No Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Fire District: ☐ No ☐ Yes (Primary) **Flood Hazard Area:** ☐ No ☐ Yes

Special Inspections Required: ☐ Yes ☐ No

If special inspections are required, contact the local inspection jurisdiction for additional procedures and requirements.

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	SUB-TOTAL
6th Floor		
5th Floor		
4th Floor		
3rd Floor		
2nd Floor		
Mezzanine		
1st Floor		
Basement		
TOTAL		

ALLOWABLE AREA

Primary Occupancy Classification(s):

Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

This separation is not exempt as a Non-Separated Use (see exceptions).

Special Uses (Chapter 4 – List Code Sections): _____

Special Provisions: (Chapter 5 – List Code Sections): _____

Mixed Occupancy: ☐ No ☐ Yes Separation: _____ Hr. Exception: _____

☐ Non-Separated Use (508.3)

☐ Separated Use (508.4) - See below for area calculations For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\textit{Actual Area of Occupancy A}}{\textit{Allowable Area of Occupancy A}} + \frac{\textit{Actual Area of Occupancy B}}{\textit{Allowable Area of Occupancy B}} \leq 1$$

_____ + _____ + ... = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)

[2] Unlimited area applicable under conditions of Section 507.

[3] Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2).

[4] The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)			
Building Height in Stories (Table 504.4)			

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
		REQ'D	PROVIDED (W/_____ * REDUCTION)				
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation							
Fire Barrier Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

Fire Separation Distance (Feet) from Property lines	Degree of openings Protection (Table 705.8)	Allowable area (%)	Actual shown on plans (%)

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☐ Yes
Exit Signs: ☐ No ☐ Yes
Fire Alarm: ☐ No ☐ Yes
Smoke Detection Systems: ☐ No ☐ Yes ☐ Partial _____
Carbon Monoxide Detection: ☐ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☐ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☐ Occupant loads for each area
- ☐ Exit access travel distances (1017)
- ☐ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- ☐ Dead end lengths (1020.4)
- ☐ Clear exit widths for each exit door
- ☐ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☐ Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☐ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

Total Units	Accessible Units Required	Accessible Units Provided	Type A Units Required	Type A Units Provided	Type B Units Required	Type B Units Provided	Total accessible Units provided

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
TOTAL						

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS / TUBS	DRINKING F
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR
SPACE	EXISTING									
	NEW									
	REQUIRED									

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ (If checked the remainder of this section is not applicable.)

Exempt Building: ☐ Provide code or statutory reference:

Climate Zone: ☐ 3A ☐ 4A ☐ 5A

Method of Compliance:

Energy Code	☐ Performance	☐ Prescriptive
ASHRAE 90.1	☐ Performance	☐ Prescriptive
Other	☐ Performance (specify source)	_____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Wind (I_W) _____
Snow (I_S) _____
Seismic (I_E) _____

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE-7)
Exposure Category _____

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D

Provide the following Seismic Design Parameters:

Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV

Spectral Response Acceleration S_S_____%g S_1_____%g

Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data

Basic structural system (check one)

☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☐

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: _____
summer dry bulb: _____

Interior design conditions

winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____

Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System

Unitary
- description of unit: _____
- heating efficiency: _____
- cooling efficiency: _____
- size category of unit: _____

Boiler
- Size category. If oversized, state reason.: _____

Chiller
- Size category. If oversized, state reason.: _____

List equipment efficiencies: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:

Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)

lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

☐ C406.2 More Efficient HVAC Equipment Performance
☐ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

Residential Super Committee: Motion made by Wayne Hamilton. Second by Leon Skinner. Motion accepted to go to Administrative Committee.
Building Code Council: Motion made by Ralph Euchner. Second by Wayne Hamilton. 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 December 12, 2017 and the Final Adoption meeting may take place on or after March13, 2018. The written public comment period expires on January 16, 2018.

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

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

Cliff Isaac of the NC Department of Insurance spoke in favor of this amendment.

Robert Privott of the NC Home Builders Association spoke against this amendment.

Tony Beasley of the Town of Garner Inspections Department spoke in favor of this amendment.

Ricky Frady of the Catawba County Inspections Department spoke in favor of this amendment.

Duke Garity, homebuilder, spoke against this amendment.

Ben Edwards spoke in favor of this amendment.

Mark Matheny of the NC BIA spoke in favor of this amendment.

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

In buildings that contain dwellings or sleeping units that have a pool dedicated to the residents, a percentage reduction of the total required fixtures provided for a pool and pool deck without bleachers and grandstands may be taken equal to the percentage of ~~total~~ residential units whose entries fall within a 500 ~~feet~~ foot

horizontal travel distance of the pool deck. In multi-story structures, the residential units located not more than one story above or below the pool and pool deck may be included in the percentage. Travel from the pool to the required toilet facilities shall be on an accessible route.

Leon Skinner of the City of Raleigh, spoke in favor of this amendment.

Mark Matheny of the NC BIA spoke in favor of this amendment.

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 on September 12, 2017. The Final Adoption meeting took place on December 12, 2017. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rulemaking process.

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

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

The 2017 National Electrical Code is available at the link below for purchase or for public access.
http://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70

Residential Super Committee: Motion to accept. Second. Passed.
Commercial Super Committee: Motion to accept made by Daniel Priest. Second by Eric Tjalma. Passed.
Building Code Council: Motion by Ralph Euchner to adopt the 2017 NEC with NC Amendments (no alternates). Second by Steve Knight. Adopted.

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

204.3.4 Information Required. A permit application shall be filed with the Inspection Department on a form furnished for that purpose. The Inspection

Department shall make available a list of information which must be submitted with the building application permit application, including a complete building code summary (see Appendix B) and a permit application information (see Appendix A). The Inspection Department's building code summary shall be in the exact format as, and contain only the information in, Appendix B of the Administrative Code and Policies. The Inspection Department shall only modify its building code summary as set forth in section 103.5 Modifications, or as necessary to reflect any changes by the Building Code Council to Appendix B of the Administrative Code and Policies.
The 2018 Appendix B – Building Code Summary is available at the link below for public access.
http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Enforcement_-_Design_Tools&user=Code_Enforcement_Resources

Commercial Super Committee: Motion to accept made by Wade White. Second by Wayne Hamilton.
Building Code Council: Motion to accept made by Keith Rogers. Second by Wayne Hamilton. Approved.

NOTE: Chapter 2 is provided as procedural policies. Items discussed in this chapter are intended as commentary to the General Statutes.

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

1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code.*
Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

Item D – 4 Request by the NC Building Code Council, representing the NC General Assembly, to amend the 2012 NC Energy Code, Section 101.2 as follows:
101.2 Scope. This code applies to *residential* and *commercial* buildings.
Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2012 North Carolina Building Code. This exclusion shall apply to the entire building area.

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

101.12 Energy conservation. Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy

classification is Group F, S, or U. This exclusion shall apply to the entire building area.

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

1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code.*
Exception: Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

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

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

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

C101.2 Scope.
This code applies to *commercial buildings* and the buildings' sites and associated systems and equipment.

Exceptions:

1. Energy expended in support of *process energy* applications does not invoke energy conservation code requirements or building thermal envelope requirements unless otherwise required in specific sections of this code.

2. Per G.S. 1430138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2018 North Carolina Building Code. This exclusion shall apply to the entire building area.

Commercial Super Committee: Motion to accept Items D-3 through D-8 made by Daniel Priest. Second by Wade White. Accepted.
Building Code Council: Motion to adopt made by Daniel Priest. Second by Wade White. Adopted.

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

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

1. Surface burning characteristics. The flame-spread index and smoke developed index of forming material, other than foam plastic, left exposed on the interior shall comply with Section R302. The surface burning characteristics of foam plastic used in insulating concrete forms shall comply with Section R316.3.

2. Interior covering. Stay-in-place forms constructed of rigid foam plastic shall be protected on the interior of the building as required by Section R316. Where gypsum board is used to protect the foam plastic, it shall be installed with a mechanical fastening system. Use of adhesives in addition to mechanical fasteners is permitted.

3. Exterior wall covering. Stay-in-place forms constructed of rigid foam plastics shall be protected from sunlight and physical damage by the application of an approved exterior wall covering complying with this code. Exterior surfaces of other stay-in-place forming systems shall be protected in accordance with this code.

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

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

4.3. On the interior side of basement walls.

Motion made by David Smith to table items D-9, D-11 and D-12 until March 2018. Second by Leon Skinner. Approved.

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

Add definition for Farm Building.

Farm Building. Any building not used for sleeping purposes that is not accessed by the general public and is used primarily for a farm purpose. Farm

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

Proposed revised language to match Building/Fire Codes.

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

Residential Super Committee: Motion to accept made by David Smith. Second by Keith Hamilton. Accepted.
Building Code Council: Motion to adopt as modified made by Frankie Meads. Second by Charles Conner. Adopted.

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

R318.4.5.1 Inspection and treatment gaps.
Foam plastic in contact with the ground shall not be continuous to the bottom of the weather-resistant siding. A clear and unobstructed 2-inch (51mm) minimum inspection gap shall be maintained from the bottom of the weather-resistant siding to the top of any foam plastic. A minimum 4-inch (102 mm) treatment gap shall be provided beginning not more than 6 inches (152 mm) below grade. The top and bottom edges of the foam plastic installed between the inspection gap and the treatment gap shall be cut at a 45-degree (0.79 rad) angle. See Appendix O. ~~For additional requirements for ICF foundations see Section R404.1.3.3.6.1.~~
Exception: For ICF foundations see Section R404.1.3.3.6.1

Motion made by David Smith to table items D-9, D-11 and D-12 until March 2018. Second by Leon Skinner. Approved.

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

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

1. Surface burning characteristics. The flame-spread index and smoke developed index of forming material, other than foam plastic, left exposed on the interior shall comply with Section R302. The surface burning characteristics of foam plastic used in insulating concrete forms shall comply with Section R316.3.

2. Interior covering. Stay-in-place forms constructed of rigid foam plastic shall be protected on the interior of the building as required by Section R316. Where gypsum board is used to protect the foam plastic, it shall be installed with a mechanical fastening system. Use of adhesives in addition to mechanical fasteners is permitted.

3. Exterior wall covering. Stay-in-place forms constructed of rigid foam plastics shall be protected from sunlight and physical damage by the application of an approved exterior wall covering complying with this code. Exterior surfaces of other stay-in-place forming systems shall be protected in accordance with this code.

4. Deleted. ~~Termite protection. In areas where the probability of termite infestation is "very heavy" as indicated by Table R301.2(1) or Figure R301.2(6), foam plastic insulation shall be permitted below grade on foundations walls in accordance with Section R318.4.~~

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

4.1. Where in addition to the requirements in Section R318.1, ~~an approved~~ a method of protecting the foam plastic and structure from subterranean termite damage is provided.

4.2. The structural members of walls, floors, ceilings and roofs are entirely of noncombustible materials or pressure-preservative-treated wood.

4.3. On the interior side of basement walls.

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

Motion made by David Smith to table items D-9, D-11 and D-12 until March 2018. Second by Leon Skinner. Approved.

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

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

CLIMATE ZONE	FENESTRATION b , j *U*-FACTOR	SKYLIGHT b *U*-FACTOR	GLAZED FENESTRATION SHGCb, e , k	CEILING *R*-VALUEm	WOOD FRAME WALL *R*-VALUE	MASS WALL *R*-VALUEi	FLOOR R-VALUE	BASEMENT c,o WALL *R*-VALUE	SLABd *R*-VALUE & DEPTH	CRAWL SPACEc WALL *R*-VALUE
3	0.35	~~0.55~~ 0.65	0.30	~~38 or 30ci~~ 30	~~15 or 13+2.~~[~~6h~~] 13	~~5/13 or 5/10ci~~ 5/10	19	~~5/13~~[f] 10/13[f]	0	5/13
4	0.35	~~0.55~~ 0.60	0.30	38 or 30cont[j]	15 or 13+2.5[h]	~~5/13 or 5/10ci~~ 5/10	19	10 /~~15~~ 13	10[d]	10/~~15~~ 13
5	0.35	~~0.55~~ 0.60	NR	38 or 30cont[j]	~~19 [n] or~~ 15, 13+5[h] or 15+3[e,h]	13/17 ~~or13/2.5~~[ei]	30[g]	10/ ~~15~~ 13	10[d]	10 /~~19~~ 13

For SI: 1 foot = 304.8 mm.

a. R-values are minimums. U-factors and SHGC are maximums.

b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. " 10/13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall or crawl space wall.

d. For monolithic slabs, insulation shall be applied from the inspection gap downward to the bottom of the footing or a maximum of 18 inches below grade whichever is less. For floating slabs, insulation shall extend to the bottom of the foundation wall or 24 inches, whichever is less. (See Appendix O) R-5 shall be added to the required slab edge R-values for heated slabs.

e. R-19 fiberglass batts compressed and installed in a nominal 2 × 6 framing cavity is deemed to comply. Fiberglass batts rated R-19 or higher compressed and installed in a 2 × 4 wall is not deemed to comply.

f. Basement wall insulation is not required in warm-humid locations as defined by Figure ~~N1101.2(1)~~ and (2) N1101.7 and Table ~~N1101.2.~~ N1101.7

g. Or insulation sufficient to fill the framing cavity, R-19 minimum.

h. "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. 15+3 means R-15 cavity insulation plus R-3 insulated sheathing. If structural sheathing covers 25 percent or less of the exterior, insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2. 13+2.5 means R-13 cavity insulation plus R-2.5 sheathing.

i. For Mass Walls, the second R-value applies when more than half the insulation is on the interior of the mass wall.

j. R-30 shall be deemed to satisfy the ceiling insulation requirement wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Otherwise R-38 insulation is required where adequate clearance exists or insulation must extend to either the insulation baffle or within 1" of the attic roof deck.

k. Table value required except for roof edge where the space is limited by the pitch of the roof, there the insulation must fill the space up to the air baffle.

Proposed revised language to coordinate R/U – Values in the Energy and Residential Codes.

R402.1.2 Insulation and fenestration criteria.

The *building thermal envelope* shall meet the requirements of Table R402.1.2, based on the climate zone specified in Chapter 3.

TABLE R402.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR[b, j]	SKYLIGHT *U*-FACTOR[b]	GLAZED FENESTRATION SHGC[b, k]	CEILING *R*-VALUE[m]	WOOD FRAME WALL *R*-VALUE	MASS WALL *R*-VALUE[i]	FLOOR *R*-VALUE	BASEMENT WALL *R*-VALUE[c,o]	SLAB *R*-VALUE & DEPTH[d]	CRAWL SPACE WALL *R*-VALUE[c]
3	0.35	~~0.55~~ 0.65	0.30	30 ~~38 or 30ci~~[l]	13 ~~15 or~~ [h] ~~13+2.5~~	~~5/13 or~~ ~~5/10ci~~ 5/10	19	[f] 10 ~~5~~/13	0	5/13
4	0.35	~~0.55~~ 0.60	0.30	38 or 30ci[l]	15 or [h] 13+2.5	~~5/13 or~~ ~~5/10ci~~ 5/10	19	10 /13 ~~15~~	10[d]	10/13 ~~15~~
5	0.35	~~0.55~~ 0.60	NR	38 or 30ci[l]	19[n] or [h] 13+5 Or [h] 15+3	13/17 ~~or~~ ~~13/12.5ci~~	[g] 30	10/13 ~~15~~	10[d]	10 /13 ~~19~~

For SI: 1 foot = 304.8 mm.

a. R-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.
b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
c. "10/~~15~~ 13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-~~15~~ 13 cavity insulation at the interior of the basement wall or crawl space wall. "
d. For monolithic slabs, insulation shall be applied from the inspection gap downward to the bottom of the footing or a maximum of 24 inches below grade whichever is less. For floating slabs, insulation shall extend to the bottom of the foundation wall or 24 inches, whichever is less. (See Appendix 2) R-5 shall be added to the required slab edge *R*-values for heated slabs
e. Deleted.
f. Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.
g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
h. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation. If structural sheathing covers 25 percent or less of the exterior, insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.
i. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.
j. In addition to the exemption in Section R402.3.3, 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.

k. In addition to the exemption in Section R402.3.3, 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.
l. R-30 shall be deemed to satisfy the ceiling insulation requirement wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Otherwise R-38 insulation is required where adequate clearance exists or insulation must extend to either the insulation baffle or within 1" of the attic roof deck.
m. Table value required except for roof edge where the space is limited by the pitch of the roof, there the insulation must fill the space up to the air baffle.
n. R -19 fiberglass batts compressed and installed in a nominal 2 × 6 framing cavity is deemed to comply. Fiberglass batts rated R-19 or higher compressed and installed in a 2x4 wall is not deemed to comply.
o. Basement wall meeting the minimum mass wall specific heat content requirement may use the mass wall R-value as the minimum requirement.

R402.1.4 *U*-factor alternative.

An assembly with a *U*-factor equal to or less than that specified in Table R402.1.4 shall be permitted as an alternative to the *R*-value in Table R402.1.2.

TABLE R402.1.4
EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR [d]	SKYLIGHT *U*-FACTOR	CEILING *U*-FACTOR	FRAME WALL *U*-FACTOR	MASS WALL *U*-FACTOR[b]	FLOOR *U*-FACTOR	BASEMENT WALL *U*-FACTOR	CRAWL SPACE WALL *U*-FACTOR
3	0.35	~~0.55~~ 0.65	~~0.030~~ 0.035	~~0.077~~ 0.082	0.141	0.047	0.059[c] ~~0.091~~[c]	0.136
4	0.35	~~0.55~~ 0.60	0.030	0.077	0.141	0.047	0.059	0.065
5	0.35	~~0.55~~ 0.60	0.030	0.061	0.082	0.033	0.059	0.065

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.
b. When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.07 in Climate Zone 3, 0.07 in Climate Zone 4, and 0.054 in Climate Zone 5.
c. Basement wall *U*-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.
d. 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.

N1102.1.2 Insulation and fenestration criteria.
The *building thermal envelope* shall meet the requirements of Table N1102.1.2, based on the climate zone specified in N1101.7.

TABLE N1102.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR[b, j]	SKYLIGHT *U*-FACTOR[b]	GLAZED FENESTRATION SHGC[b, k]	CEILING *R*-VALUE[m]	WOOD FRAME WALL *R*-VALUE	MASS WALL *R*-VALUE[i]	FLOOR *R*-VALUE	BASEMENT WALL *R*-VALUE[c,o]	SLAB *R*-VALUE & DEPTH[d]	CRAWL SPACE WALL *R*-VALUE[c]
3	0.35	~~0.55~~ 0.65	0.30	30 ~~38 or 30ci~~[j]	13 ~~15 or 13+2.5~~[h]	~~5/13 or 5/10ci~~ 5/10	19	10 ~~5~~/13[f]	0	5/13
4	0.35	~~0.55~~ 0.60	0.30	38 or 30ci[l]	15 or 13+2.5[h]	~~5/13 or 5/10ci~~ 5/10	19	10 /13 ~~15~~	10[d]	10/13 ~~15~~
5	0.35	~~0.55~~ 0.60	NR	38 or 30ci[l]	19[n] or 13+5[h] Or 15+3[h]	13/17 ~~or 13/12.5ci~~	30[g]	10/13 ~~15~~	10[d]	10 /13 ~~19~~

For SI: 1 foot = 304.8 mm.

a. R-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.
b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
c. "10/~~15~~ 13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-~~15~~ 13 cavity insulation at the interior of the basement wall or crawl space wall. "
d. For monolithic slabs, insulation shall be applied from the inspection gap downward to the bottom of the footing or a maximum of 24 inches below grade whichever is less . For floating slabs, insulation shall extend to the bottom of the foundation wall or 24 inches, whichever is less. (See Appendix O) R-5 shall be added to the required slab edge *R*-values for heated slabs
e. Deleted.
f. Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.7 and Table N1101.7.
g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
h. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation. If structural sheathing covers 25 percent or less of the exterior, insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.
i. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.
j. 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.

k. 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.
l. R-30 shall be deemed to satisfy the ceiling insulation requirement wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Otherwise R-38 insulation is required where adequate clearance exists or insulation must extend to either the insulation baffle or within 1" of the attic roof deck.
m. Table value required except for roof edge where the space is limited by the pitch of the roof, there the insulation must fill the space up to the air baffle.
n. R -19 fiberglass batts compressed and installed in a nominal 2 × 6 framing cavity is deemed to comply. Fiberglass batts rated R-19 or higher compressed and installed in a 2x4 wall is not deemed to comply.
o. Basement wall meeting the minimum mass wall specific heat content requirement may use the mass wall R-value as the minimum requirement.

N1102.1.4 *U*-factor alternative.

An assembly with a *U*-factor equal to or less than that specified in Table N1102.1.4 shall be permitted as an alternative to the *R*-value in Table N1102.1.2.

TABLE N1102.1.4
EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR [d]	SKYLIGHT *U*-FACTOR	CEILING *U*-FACTOR	FRAME WALL *U*-FACTOR	MASS WALL *U*-FACTOR[b]	FLOOR *U*-FACTOR	BASEMENT WALL *U*-FACTOR	CRAWL SPACE WALL *U*-FACTOR
3	0.35	~~0.55~~ 0.65	~~0.030~~ 0.035	~~0.077~~ 0.082	0.141	0.047	0.059[c] ~~c~~ ~~0.091~~	0.136
4	0.35	~~0.55~~ 0.60	0.030	0.077	0.141	0.047	0.059	0.065
5	0.35	~~0.55~~ 0.60	0.030	0.061	0.082	0.033	0.059	0.065

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.
b. When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.07 in Climate Zone 3, 0.07 in Climate Zone 4, and 0.054 in Climate Zone 5.
c. Basement wall *U*-factor of 0.360 in warm-humid locations as defined by Figure N1101.7 and Table N1101.7.
d. 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.

Residential Super Committee: Motion to accept made by Keith Hamilton. Second by Steve Knight. Accepted with changes.
Commercial Super Committee: Motion to accept made by Keith Rogers. Second by Daniel Priest. Accepted.
Building Code Council: Motion to adopt as modified made by Steve Knight. Second by Ralph Euchner. Adopted.

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

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

Residential Super Committee: Motion to accept made by David Smith. Second by Keith Hamilton. Accepted.
Commercial Super Committee: Motion to accept made by Keith Rogers. Second by Daniel Priest. Accepted.
Building Code Council: Motion to adopt made by Frankie Meads. Second by Gary Embler. Adopted.

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

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

Residential Super Committee: Motion to accept made by David Smith. Second by Keith Hamilton. Accepted.
Commercial Super Committee: Motion to accept made by Daniel Priest. Second by Wade White. Accepted.
Building Code Council: Motion to adopt made by Ralph Euchner. Second by Eric Tjalma. Adopted.

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

Amendment 680.21(C)(2)
(C) GFCI Protection. Outlets supplying pool pump motors connected to single-phase, 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel.

(2) Existing Pool Pump Motor Branch Circuit and Overcurrent Protection. All existing single-phase, 120-volt through 240-volt branch circuits and overcurrent devices that supply power to a pool pump motor by direct connection or outlet shall comply with the provisions of 680.21(C) when the branch circuits or overcurrent devices are altered, installed, modified, relocated, repaired, or replaced.

Residential Super Committee: Motion to accept made by Leon Skinner. Second by Keith Hamilton. Accepted.
Commercial Super Committee: Motion to accept made by Daniel Priest. Second by Keith Rogers. Accepted.
Building Code Council: Motion to adopt made by Gary Embler. Second by Eric Tjalma. Adopted.

Part E – Reports

- **Chairman's Report**
  Chairman Robbie Davis discussed placing new members on committees.
  He discussed ethics requirements.
  He asked Daniel Priest to take his place as chair of the Building Committee.

- **Ad-Hoc Committee Reports**
  An Ad-Hoc Committee was appointed to discuss Foam Plastic/Termite concerns.

- **Standing Committee Reports**
  None

- **Staff Reports**
  Cliff Isaac reported that he has visited over 32 departments throughout the state "building bridges." He discussed the 7 C's course. The pilot class was in November with more classes to follow in the coming months.

  Barry Gupton reported the 2018 codes will be published in July 2017 and will be effective January 1, 2019.

- **Public Comments**
  Vaughn Wicker announced his retirement from ICC after 24 years and thanked the Building Code Council.

Adjourned.