North Carolina Building Code Council

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August 13, 2020

Robbie Davis, Chairman
5998 Dortches Boulevard
Rocky Mount, NC 27804

RE: Agenda for the September 1, 2020 NC Building Code Council Meeting

Mr. Davis:

This is officially to notify you and other interested parties of a regularly scheduled meeting of the NC Building Code Council. Persons requiring auxiliary services should notify the Council at least ten business days prior to the meeting.

1. The NC Building Code Council Meeting will begin at 9:00AM on Tuesday, September 1, 2020 (Albemarle Building).
2. Standing Committees will meet in the afternoon on Monday, August 31. Schedule to be set by Chairman.
3. The Agenda is printed as follows:
   A-Items- Administrative items that require Council action but are not subject to Rule-Making.
   B-Items- New amendment petitions introduced at this meeting.
   C-Items- Amendments that have been granted by the Council and advertised in the NC Register for public hearing.
   D-Items- Adoption of amendments by the Council prior to approval by the Rules Review Commission.
   E-Items- Reports from Committees and Staff.
   F-Items- Notice of Appeal Hearings.

Part A – Administrative Items

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

Item A – 2 Approval of minutes of the July 14, 2020 NC Building Code Council Meeting.

Item A – 3 Request by Edgecombe County to perform plan review for buildings listed in 2018 N.C. Administrative Code and Policies, Table 104.1 as is allowed by N.C. Administrative Code, Section 104.1.2 – Local plan review approval. Mr. Wiley Ray Hardee is employed by Edgecombe County as a building inspector. Mr. Hardee has current Level III inspection certificates in all five (5) trade as required by Section 104.1.2.

Item A – 4 Rules Review Commission Meeting Report

Item A – 5 Public Comments

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 September 2020 meeting.

There will be no B items received from the floor.

Item B – 1 Request from Colin Triming representing the NC Fire Code Revisions Committee to amend the 2018 N.C. Fire code, Section 1010.1.9.7 as follows:

[BE] 1010.1.9.7 Delayed egress. Delayed egress locking systems, shall be permitted to be installed on doors serving the following occupancies ~~any occupancy except Group A, E and H~~ in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907**:** ~~The locking system shall be installed and operated in accordance with all of the following:~~

1. Group B, F, I, M, R, S and U occupancies.

2. Group E classrooms with an occupant load of less than 50.

Exception: Delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, serving

a courtroom in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

~~1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.~~

~~2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.~~

~~3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations. If a fire command center is not required by the *International Building Code*, the door locks shall have the capability of being unlocked by a signal from a location approved by the local fire code official.~~

~~4. An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.~~

~~**Exception:** Where *approved*, a delay of not more than 30 seconds is permitted on a delayed egress door.~~

~~5. The egress path from any point shall not pass through more than one delayed egress locking system.~~

~~**Exception:** In Group I-2 or I-3 occupancies, the egress path from any point in the building shall not pass through more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds.~~

~~6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:~~

~~6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.~~

~~6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.~~

~~6.3. The sign shall comply with the visual character requirements in ICC A117.1.~~

~~**Exception:** Where *approved*, in Group I occupancies, the installation of a sign is not required where care recipients who, because of clinical needs, require restraint or containment as part of the function of the treatment area.~~
~~7. Emergency lighting shall be provided on the egress side of the door.~~
~~8. The delayed egress locking system units shall be *listed* in accordance with UL 294.~~

[BE] 1010.1.9.7.1 Delayed egress locking system. The delayed egress locking system shall be installed and operated in accordance with all of the following:

1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.

2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

4. An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.

Exception: Where *approved*, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. The egress path from any point shall not pass through more than one delayed egress locking system.

Exceptions:
1. In Group I-2 or I-3 occupancies, the egress path from any point in the building shall not pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds.

2. In GroupI-1 or I-4 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3. The sign shall comply with the visual character requirements in ICC A117.1.

Exception: Where *approved*, in Group I occupancies, the installation of a sign is not required where care recipients who, because of clinical needs, require restraint or containment as part of the function of the treatment area.

7. Emergency lighting shall be provided on the egress side of the door.

8. The delayed egress locking system units shall be *listed* in accordance with UL294.

Item B – 2 Request from Kerry Sutton representing American Concrete Institute (ACI), Dave Tepke representing ACI Carolinas, Mark LeMay representing International Concrete Repair Institute (ICRI), Bill Brickey representing ICRI Carolinas Chapter, Keith Kesner representing CVM, and Tim Cook representing SKA Consulting Engineering to add the 2018 N.C. Existing Building Code, Section 606.1.1 and add a reference to Chapter 16 as follows:

606.1.1 Repairs to structural concrete. Repairs to structural concrete elements shall comply with ACI 562 and this code.

Exception: Where seismic design governs. ACI 562 shall not be used for evaluation and design.

Add new referenced standard to Chapter 16 as follows:

ACI American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48331

562-19: Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Sutructures 606.1.1

Item B – 3 Request from Kerry Sutton representing American Concrete Institute (ACI), Wm. Kenneth Johnson representing ACI Carolinas Chapter, and Scott Campbell with National Ready Mixed Concrete Association (NRMCA) to add the 2018 N.C. Building Code, Section 1703.1.3.1 as follows:

1703.1.3.1 Concrete Inspection and Testing Personnel. Individuals with current credentials listed in this section or having credentials approved by the building official shall be considered qualified for inspections and tests of concrete as follows:

1. For special inspection *special inspection* of structural concrete - International Code Council *Reinforced Concrete Special Inspector* or American Concrete Institute *Concrete Construction Special Inspector*

2. For prestressed concrete fabrication – Precast/Prestressed Concrete Institute Plant Certification Program personnel requirements

3. For post-installed concrete anchor installation inspection – American Concrete Institute *Post-Installed Concrete Anchor Installation Inspector*

4. For inspection of shotcrete – American Concrete Institute *Shotcrete Inspector*

5. For field sampling and testing of concrete – American Concrete Institute Concrete *Field Testing Technician - Grade I*

6. For laboratory testing of concrete including strength tests – American Concrete Institute *Concrete Laboratory Testing Technician - Level 1* or American Concrete Institute Concrete *Laboratory Testing Technician - Level 2*

7. For laboratory strength testing only - American Concrete Institute *Concrete Strength Testing Technician*

Item B – 4 Request from Drew Crawford to amend the 2018 N.C. Residential Code, Section AQ101 as follows:

Section AQ101 General

AQ101.1 Scope

This appendix shall be applicable to tiny houses used as single dwelling units. Tiny houses shall comply with this code except as otherwise stated in this appendix.

Section AQ102 Definitions

AQ102.1 General

The following words and terms shall, for the purposes of this appendix, have the meanings 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 of 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, open to the main floor on one or more sides with a ceiling height of less than 6 feet 8 inches (2032 mm) and 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 AQ103 Ceiling Height

AQ103.1 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 including, but not limited to, beams, girders, ducts and lighting, shall not extend below these minimum ceiling heights.

Exception: Ceiling heights in lofts are permitted to be less than 6 feet 8 inches (2032 mm).

Section AQ104 Lofts

AQ104.1 Minimum Loft Area and Dimensions

Lofts used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections AQ104.1.1 through AQ104.1.3.

AQ104.1.1 Minimum Area

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

AQ104.1.2 Minimum Dimensions

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

AQ104.1.3 Height Effect on Loft Area

Portions of a loft with a sloped 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.

AQ104.2 Loft Access

The access to and primary egress from lofts shall be of any type described in Sections AQ104.2.1 through AQ104.2.4.

AQ104.2.1 Stairways

Stairways accessing lofts shall comply with this code or with Sections AQ104.2.1.1 through AQ104.2.1.5.

AQ104.2.1.1 Width

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

AQ104.2.1.2 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.

AQ104.2.1.3 Treads and Risers

Risers for stairs accessing a loft shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) 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 four-thirds of the riser height.
2. The riser height shall be 15 inches (381 mm) minus three-fourths of the tread depth.

AQ104.2.1.4 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.

AQ104.2.1.5 Handrails

Handrails shall comply with Section R311.7.8.

AQ104.2.1.6 Stairway Guards

Guards at open sides of stairways shall comply with Section R312.1.

AQ104.2.2 Ladders

Ladders accessing lofts shall comply with Sections AQ104.2.1 and AQ104.2.2.

AQ104.2.2.1 Size and Capacity

Ladders accessing lofts shall have a rung width of not less than 12 inches (305 mm), and 10-inch (254 mm) to 14-inch (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).

AQ104.2.2.2 Incline

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

AQ104.2.3 Alternating Tread Devices

Alternating tread devices accessing lofts shall comply with Sections R311.7.11.1 and R311.7.11.2. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

AQ104.2.4 Ships Ladders

Ship's 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).

AQ104.2.5 Loft Guards

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

Section AQ105 Emergency Escape and Rescue Openings

AQ105.1 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.

Item B – 5 Request from Bridget Herring to amend the 2018 N.C. Residential Code, Section N1101.13 as follows:

N1101.13 (R401.2) Compliance
Projects shall comply with one of the following:
1. Section N1101.14 through N1104.
2. Section N1105 and the provisions of Section N1101.14 labeled "Mandatory."
3. An energy rating index (ERI) approach in Section N1106.
4. ~~North Carolina specific~~ REScheck keyed to the 2018 IECC shall be permitted to demonstrate compliance with this code. Envelope requirements may not be traded off against the use of high efficiency heating or cooling equipment. No tradeoff calculations are needed for required termite inspection and treatment gaps.

Item B – 6 Request from Robert Privott representing the NC Home Builders Association and Jeff Tiller to amend the 2018 N.C. Residential Code, Chapter 44 as follows:

REFERENCED STANDARDS
ASTM
E283-04 Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen .....N1102.4.6, Table N1106.2.1, Table N1106.2.2

Item B – 7 Request from Robert Privott representing N.C. Home Builders Association and Jeff Tiller to add the 2018 N.C. Residential Code, Chapter 2 Definitions as follows:

AIR-IMPERMEABLE INSULATION. An insulation having an air permanence equal to or less than 0.02 L/s-m2 at 75 Pa pressure differential tested according to ASTM E 2178 or E 283 at the thickness applied.

Item B – 8 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C. to amend the 2018 Residential Code, Chapter 44 as follows:

CHAPTER 44
REFERENCED STANDARDS

~~**ANCE**~~

~~UL/CSA/ANCE 60335-2-40—2012 Standard for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Motor compressors M1403.1~~

ASHRAE

34—~~2013~~2019 Designation and Safety Classification of Refrigerants M1411.1

CSA

CSA C22.2 No. 60335-2-40-2019

~~UL/CSA/ANCE 60335-2-40—2012~~ Standard for Household and Similar Electrical Appliances, Part 2-40: Particular Requirements for ~~Motor-compressors~~ Electrical Heat Pumps, Air-Conditioners and Dehumidifiers - 3rd Edition M1402.1, M1403.1

UL

1995—~~2011~~2015 Heating and Cooling Equipment M1402.1, M1403.1, M1407.1

~~UL/CSA/ANCE~~ 60335-2-40-~~2012~~2019 Standard for Household and Similar Electrical Appliances, Part 2-40: Particular Requirements for ~~Motor-compressors~~ Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition M1402.1, M1403.1

Item B – 9 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C./Daikin U.S. to amend the 2018 Residential Code, Section M1402 as follows:

SECTION M1402
CENTRAL FURNACES

M1402.1 (918.1) General.
Oil-fired central furnaces shall conform to ANSI/UL 727. Electric furnaces shall conform to UL 1995 or UL/CSA 60335-2-40. Solid fuel furnaces shall be tested in accordance with UL 391.

Item B – 10 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C./Daikin U.S. to amend the 2018 Residential Code, Section M1403 as follows:

SECTION M1403
HEAT PUMP EQUIPMENT

M1403.1 (918.2) Heat pumps.
Electric heat pumps shall be listed and labeled in accordance with UL 1995 or UL/CSA~~/ANCE~~ 60335-2-40.

Item B – 11 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C./Daikin U.S. to amend the 2018 Mechanical Code, Chapter 15 as follows:

CHAPTER 15
REFERENCED STANDARDS

ASHRAE ASHRAE
1791 Tullie Circle, NE
Atlanta, GA 30329

Standard reference number	Title
15—~~2013~~2019	Safety Standard for Refrigeration Systems 1101.6, 1105.8, 1108.1
34—~~2013~~2019	Designation and Safety Classification of Refrigerants 202, 1102.2.1, 1103.1

CSA	CSA Group 8501 East Pleasant Valley Road Cleveland, OH 44131-5516
Standard reference number	Title
CSA-C22.2 No. 60335-2-40-2019	Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition 908.1, 918.1, 918.2, 1101.2

UL	UL LLC 333 Pfingsten Road Northbrook, IL 60062-2096
Standard reference number	Title
1995—~~2011~~2015	Heating and Cooling Equipment 908.1, 911.1, 918.1, 918.2, 1101.2
UL 60335-2-40-2019	Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition 908.1, 918.1, 918.2, 1101.2

Item B – 12 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C./Daikin U.S. to amend the 2018 Mechanical Code, Section 908 as follows:

SECTION 908
COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS

908.1 General.

A cooling tower used in conjunction with an air-conditioning appliance shall be installed in accordance with the manufacturer's instructions. Factory-built cooling towers shall be listed in accordance with UL 1995 or UL/CSA 60335-2-40.

Item B – 13 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C./Daikin U.S. to amend the 2018 Mechanical Code, Section 918 as follows:

SECTION 918
FORCED-AIR WARM-AIR FURNACES

918.1 Forced-air furnaces.
Oil-fired furnaces shall be tested in accordance with UL 727. Electric furnaces shall be tested in accordance with UL 1995 or UL/CSA 60335-2-40. Solid fuel furnaces shall be tested in accordance with UL 391. Forced-air furnaces shall be installed in accordance with the listings and the manufacturer's instructions.

918.2 Heat pumps.
Electric heat pumps shall be tested in accordance with UL 1995 or UL/CSA 60335-2-40.

Item B – 14 Request from Julius Ballanco representing JB Engineering and Code Consulting, P.C./Daikin U.S. to amend the 2018 Mechanical Code, Section 1101 as follows:

SECTION 1101
GENERAL

1101.2 Factory-built equipment and appliances.
Listed and labeled self-contained, factory-built equipment and appliances shall be tested in accordance with UL 207, 412, 471, or 1995 or UL/CSA 60335-2-40. Such equipment and appliances are deemed to meet the design, manufacture and factory test requirements of this code if installed in accordance with their listing and the manufacturer's instructions.

Item B – 15 Request from Robert Privott representing N.C. Home Builders Association and Jeff Tiller to amend the 2018 Energy Code, Section R406.2 as follows:

R406.2 Mandatory requirements.

Compliance with this section requires that the provisions identified in Sections R401 through R404 labeled as "mandatory" be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table R406.2.1 or Table R406.2.2. ~~Table 402.1.1 or 402.1.3 of the 2012 North Carolina Energy Conservation Code.~~ Minimum standards associated with compliance shall be the ANSI RESNET ICC Standard 301-2014: "Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index." A North Carolina *registered design professional* or certified *HERS rater* is required to perform the analysis if required by North Carolina Licensure laws.

Exception: Supply and return ducts in unconditioned space and outdoors shall be insulated to a minimum R-8. Supply ducts inside semi-conditioned space shall be insulated to a minimum R-4; return ducts inside conditioned and semi-conditioned space are not required to be insulated. Ducts located inside conditioned space are not required to be insulated other than as may be necessary for preventing the formation of condensation on the exterior of cooling ducts.

TABLE R406.2.1
MINIMUM INSULATION AND FENESTRATION REQUIREMENTS FOR ENERGY RATING INDEX COMPLIANCE[a]

	FENESTRATION VALUES			R-VALUES FOR								
CLIMATE ZONE	FENESTRATION U-FACTOR[b,j]	SKYLIGHT[b] U-FACTOR	GLAZED FENSTRATION SHGC[b,k]	CEILING[m]	UNVENTED[p] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-IMPERMEABLE	UNVENTED[p] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-PERMIABLE/ IMPERMEABLE	WOOD FRAME WALL	MASS WALL[l]	FLOOR	BASEMENT[c,o] WALL	SLAB[d]	CRAWL SPACE[c] WALL
3	0.35	0.65	0.3	30	20	15-10[q]	13	5/10	19	10/13[f]	0	5/13
4	0.35	0.6	0.3	38 or 30ci[l]	20	15-10[q]	15, 13+2.5[h]	5/10	19	10/13	10	10/13
5	0.35	0.6	NR	38 or 30ci[l]	25	15-20[q]	19[n], 13+5[h], or 15+3[h]	13/17	30[g]	10/13	10	10/13

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 R2) 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 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 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 either to 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~~ are 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.

p. The air-impermeable insulation shall meet the requirements of the definition in Section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. For one- and two-family dwellings and townhouses, the insulation installation shall meet the requirements of R806.5 of the North Carolina Residential Code. For Residential Buildings other than one- and two-family dwellings and townhouses, the insulation installation shall meet the installation requirements of 1203.3 of the North Carolina Building Code. Exposed rafters shall be covered with R-7 insulation.

q. The value for air-permeable insulation is shown first and that for air-impermeable insulation second. Thus, R-15 + R-10 indicates that the minimum value for air-permeable insulation is R-15, and the minimum value for air-impermeable insulation is R-10. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. The air-permeable insulation shall be installed directly under the air-impermeable insulation. Exposed rafters shall be covered with R-7 insulation.

TABLE R406.2.2
EQUIVALENT U-FACTORS FOR TABLE R406.2.1

CLIMATE ZONE	FENESTRA-TION [d]	SKYLIGHT	CEILING	UNVENTED [e] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-IMPERMEABLE	UNVENTED [e] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK/, AIR-PERMEABLE/ IMPERMEABLE	FRAME WALL	MASS WALL [b]	FLOOR	BASE-MENT [d] WALL	CRAWL SPACE [c] WALL
3	0.35	0.65	0.0350	0.05	0.043 [f]	0.082	0.141	0.047	0.059	0.136
4	0.35	0.60	0.0300	0.05	0.043 [f]	0.077	0.141	0.047	0.059	0.065
5	0.35	0.60	0.0300	0.037	0.034 [f]	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.

e. The air-impermeable insulation shall meet the requirements of the definition in section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. For one- and two-family dwellings and townhouses, the insulation installation shall meet the requirements of R806.5 of the North Carolina Residential Code. Exposed rafters shall be covered with R-7 insulation.

f. For air-permeable/ impermeable applications, Table R406.2.1 shall be followed for minimum insulation values.

Item B – 16 Request from Ryan Miller representing N.C. Building Performance Association (NCBPA) to add the 2018 N.C. Energy Code, Section C408.1.1 as follows:

C408.1.1 Commissioning Provider Qualifications. The commissioning provider shall be a registered engineering firm in the state of North Carolina

and shall have a commissioning certification as accredited by the American National Standards Institute (ANSI) based on the International Standard ANSI/ISO/IEC 17024:2012 ANSI.

Item B – 17 Request from Ryan Miller representing N.C. Building Performance Association (NCBPA) to add the 2018 N.C. Energy Code, Section C408.1.2 as follows:

C408.1.2 Commissioning Provider Relationship. The commissioning provider shall be an independent advocate of the owner and not affiliated with the design or construction team.

Item B – 18 Request from Ryan Miller representing N.C. Building Performance Association (NCBPA) to add the 2018 N.C. Energy Code, Section C408.2.1.1 as follows:

C408.2.1.1 Design Document Review. A commissioning provider shall review the commissioned systems and assemblies in the construction documents upon completion of design development to evaluate compliance with the owner's project requirements.

Item B – 19 Request from Ryan Miller representing N.C. Building Performance Association (NCBPA) to amend the 2018 N.C. Energy Code, Section C408.2.1.3 as follows:

C408.2.1.3 Functional Performance Testing. Functional performance testing specified in Sections C408.2.3.1 through C408.2.3.3 shall be written by a registered design professional, conducted, and provided to the code official.

Item B – 20 Request from Robert Privott representing N.C. Home Builders Association and Jeff Tiller to add the 2018 N.C. Energy Code, Chapter 2 Definitions as follows:

AIR-IMPERMEABLE INSULATION. An insulation having an air permanence equal to or less than 0.02 L/s-m2 at 75 Pa pressure differential tested according to ASTM E 2178 or E 283 at the thickness applied.

Item B – 21 Request from Robert Privott representing N.C. Home Builders Association and Jeff Tiller to amend the 2018 N.C. Energy Code, Section N1106.2 Mandatory Requirements as follows:

N1106.2 Mandatory requirements.

Compliance with this section requires that the provisions identified in Sections N1101 through N1104 labeled as "mandatory" be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table N1106.2.1 or Table N1106.2.2. ~~Table 402.2.3 or 402.1.3 of the 2012 North Carolina~~

~~Energy Conservation Code.~~ Minimum standards associated with compliance shall be the ANSI RESNET ICC Standard 301-2014: "Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an

Energy Rating Index." A North Carolina *registered design professional* or certified *HERS rater* is required to perform the analysis if required by North Carolina Licensure laws.

Exception: Supply and return ducts in unconditioned space and outdoors shall be insulated to a minimum R-8. Supply ducts inside semi-conditioned space shall be insulated to a minimum R-4; return ducts inside conditioned and semi-conditioned space are not required to be insulated. Ducts located inside conditioned space are not required to be insulated other than as may be necessary for preventing the formation of condensation on the exterior of cooling ducts.

TABLE N1106.2.1
MINIMUM INSULATION AND FENESTRATION REQUIREMENTS FOR ENERGY RATING INDEX COMPLIANCE[a]

	FENESTRATION VALUES			R-VALUES FOR								
CLIMATE ZONE	FENESTRATION U-FACTOR[b,j]	SKYLIGHT[b] U-FACTOR	GLAZED FENSTRATION SHGC[b,k]	CEILING[m]	UNVENTED[p] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-IMPERMEABLE	UNVENTED[p] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-PERMIABLE/ IMPERMEABLE	WOOD FRAME WALL	MASS WALL[l]	FLOOR	BASEMENT[c,o] WALL	SLAB[d]	CRAWL SPACE[c] WALL
3	0.35	0.65	0.3	30	20	15-10[q]	13	5/10	19	10/13[f]	0	5/13
4	0.35	0.6	0.3	38 or 30ci[l]	20	15-10[q]	15, 13+2.5[h]	5/10	19	10/13	10	10/13
5	0.35	0.6	NR	38 or 30ci[l]	25	15-20[q]	19[n], 13+5[h], or 15+3[h]	13/17	30[g]	10/13	10	10/13

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.- 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 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 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 either to 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~~ are 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.

p. The air-impermeable insulation shall meet the requirements of the definition in Section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. For one- and two-family dwellings and townhouses, the insulation installation shall meet the requirements of R806.5 of the North Carolina Residential Code. For Residential Buildings other than one- and two-family dwellings and townhouses, the insulation installation shall meet the installation requirements of 1203.3 of the North Carolina Building Code. Exposed rafters shall be covered with R-7 insulation.

q. The value for air-permeable insulation is shown first and that for air-impermeable insulation second. Thus, R-15 + R-10 indicates that the minimum value for air-permeable insulation is R-15, and the minimum value for air-impermeable insulation is R-10. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. The air-permeable insulation shall be installed directly under the air-impermeable insulation. Exposed rafters shall be covered with R-7 insulation.

TABLE N1106.2.2
EQUIVALENT U-FACTORS FOR TABLE N1106.2.1[a]

CLIMATE ZONE	FENESTRATION[d]	SKYLIGHT	CEILING	UNVENTED[e] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-IMPERMEABLE	UNVENTED[e] RAFTER ASSEMBLIES IN ATTICS CONTAINING DUCTWORK, AIR-PERMIABLE/ IMPERMEABLE	FRAME WALL	MASS WALL[b]	FLOOR	BASEMENT[d] WALL	CRAWL SPACE[c] WALL
3	0.35	0.65	0.0350	0.05	0.043[f]	0.082	0.141	0.047	0.059	0.136
4	0.35	0.60	0.0300	0.05	0.043[f]	0.077	0.141	0.047	0.059	0.065
5	0.35	0.60	0.0300	0.037	0.034[f]	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.

e. The air-impermeable insulation shall meet the requirements of the definition in section R202. Air-impermeable insulation shall be installed in direct contact with the underside of the structural roof sheathing. For one- and two-family dwellings and townhouses, the insulation installation shall meet the requirements of R806.5 of the North Carolina Residential Code. Exposed rafters shall be covered with R-7 insulation.

f. For air-permeable/ impermeable applications, Table N1106.2.1 shall be followed for minimum insulation values.

Item B – 22 Request by the NC Building Code Council, Electrical Ad-Hoc Committee, to adopt the 2020 North Carolina Electrical Code. The Base Document for the 2020 NC Electrical Code is the 2020 National Electrical Code. The 2020 NC Ad-Hoc Committee amendments are posted at the link below and are replacements to the Sections printed in the Base Documents.

https://www.ncosfm.gov/codes/building-code-council-bcc/bcc-ad-hoc-committee-meeting-information

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 will be held on September 1, 2020 and the Final Adoption meeting may take place on or after December 7, 2020. The written public comment period expires on October 14, 2020.

Item C – 1 Request from Bob Haynes representing the NCBIA Code Revisions Committee to add the 2018 N.C. Administrative code, Section 106.4 as follows:

106.4 Site address signage. It is the responsibility of the permit applicant or designee to post the 911 site address on an active jobsite at the commencement of work regulated by the NC Building Codes. The signage shall be temporary or permanent per 106.4.1 or 106.4.3.

106.4.1 Temporary signage. Signage to identify a construction site location can be temporary. Acceptable temporary signage may include such items as a permit placard, an address written on job box, yard signage or other approved temporary method. Temporary street name markers shall be required if permanent street signs are not in place for new developments or subdivisions.

106.4.2 Temporary Signage Location. Address signage shall be placed such that it is clearly legible from the street or road that fronts the property at all times during construction.

106.4.3 Permanent signage. Address signage meeting the requirements of the *International Residential Code* Section R319 for One- and Two-family Dwellings, *International Building Code* Section 501.2 *or International Fire Code* Section 505.1 for commercial buildings shall be deemed as meeting the requirements of this section.

NOTE: The item that would have been Item C-2 was withdrawn as a B item. Therefore, there is no C-2 item for this meeting.

NOTE: The item that would have been Item C-3 was withdrawn as a B item. Therefore, there is no C-3 item for this meeting.

NOTE: The item that would have been Item C-4 was withdrawn as a B item. Therefore, there is no C-4 item for this meeting.

Item C – 5 Request from Keith Rogers representing the Mechanical/Plumbing Standing committee to amend the 2018 N.C. Plumbing Code, Section 405.3.1 as follows:

405.3.1 Water closets, urinals, lavatories and bidets.
A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction, or closer than 30 inches (762 mm) center to center between adjacent fixtures. There shall be not less than a 21-inch (533 mm) clearance in front of the water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) in width and not less than 60 inches (1524 mm) in depth for floor-mounted water closets and not less than 30 inches (762 mm) in width and 56 inches (1422 mm) in depth for wall-hung water closets.

Exceptions:
~~**Exception:**~~
1. For detached one- and two-family dwellings and townhouses, see the *North Carolina Residential Code*, ~~Figure~~ Section R307.1 for minimum fixture clearances.
2. *Private* side by side lavatories may be less than 30 inches (762 mm) center to center.

Item C – 6 Request from Clint Latham representing the City of Raleigh to amend the 2018 N.C. Fuel Gas Code, Section 311 and add Section 311.4.2.4 as follows:

311.4.2 Locations. Where required by Section 311.4.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 311.4.2.1 through ~~311.4.2.3~~ 311.4.2.4.

311.4.2.4 Group A-2 occupancies. Carbon monoxide detection shall be installed in A-2 occupancies in all the following locations:
1. On the ceiling of the room containing the fuel-burning *appliance* or fuel-burning *fireplace*.
2. In an *approved* location where the room or area is served by a forced air furnace.

Item C – 7 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 N.C. Fuel Gas Code, Chapter 2 Definitions as follows:

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Item C – 8 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 N.C. Mechanical Code, Chapter 2 Definitions as follows:

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Item C – 9 Request from Clint Latham representing the City of Raleigh to amend the 2018 N.C. Mechanical Code, Section 313.4.2 and add Section 313.4.2.4 as follows:

313.4.2 Locations. Where required by Section 313.4.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 313.4.2.1 through ~~313.4.2.3~~ 313.4.2.4.

313.4.2.4 Group A-2 occupancies. Carbon monoxide detection shall be installed in A-2 occupancies in all the following locations:

1. On the ceiling of the room containing the fuel-burning *appliance* or fuel-burning *fireplace*.
2. In an *approved* location where the room or area is served by a forced air furnace.

Item C – 10 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 N.C. Existing Building Code, Chapter 2 Definitions as follows:

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Item C – 11 Request from Clint Latham representing the City of Raleigh to amend the 2018 N.C. Existing Building Code, Section 402.6 as follows:

402.6 Carbon monoxide alarms in existing portions of a building. Where an addition is made to a building or structure of a Group A-2, I-1, I-2, I-4 or R occupancies, or classrooms are added in Group E occupancies, the *existing building* shall be provided with carbon monoxide alarms in accordance with Section 915 of the *North Carolina Building Code*, except that the carbon monoxide alarms shall be allowed to be solely battery operated.

Item C – 12 Request from Clint Latham representing the City of Raleigh to amend the 2018 N.C. Fire Code, Section 915.2 and add Section 915.2.4 as follows:

915.2 Locations. Where required by Section 915.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through ~~915.2.3~~ 915.2.4

915.2.4 Group A-2 occupancies. Carbon monoxide detection shall be installed in A-2 occupancies in all the following locations:

1. On the ceiling of the room containing the fuel-burning appliance or fuel-burning *fireplace*.
2. In an *approved* location where the room or area is served by a forced air furnace.

Item C – 13 Request from Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 N.C. Fire Code, Section 315.3.1 as follows:

315.3.1 Ceiling clearance.

Storage shall be maintained 2 feet (610 mm) or more below the ceiling in nonsprinklered areas of buildings or not less than 18 inches (457 mm) below sprinkler head deflectors in sprinklered areas of buildings.

Exceptions:

1. The 2-foot (610 mm) ceiling clearance is not required for storage along walls in nonsprinklered areas of buildings.
2. The 18-inch (457 mm) ceiling clearance is not required for storage along walls in areas of buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

Item C – 14 Request from Colin Triming representing the NC Fire code Revision Committee to amend the 2018 N.C. Fire Code, Section 907.2.1 and the 2018 N.C. Building Code, Section 907.2.1 as follows:

907.2.1 Group A.

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more., or where the Group A occupant load is more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.10 and 711.2.4 of the *International Building Code* shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

Item C - 15 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 N.C. Fire Code, Section 2303.2.1 as follows:

2303.2.1 Height.
The height of the emergency disconnect switch shall be not less than 42 inches (1067 mm) and not more than 48 inches (1372 mm) measured vertically, from the floor level to the activating button.

Item C - 16 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 N.C. Fire Code, Chapter 2 Definitions as follows:

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Item C – 17 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 N.C. Residential Code, Chapter 2 Definitions as follows:

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Item C – 18 Request from David Smith representing the Residential Ad Hoc Committee to amend the 2018 N.C Residential Building, Section R404.4 as follows:

R404.4 Retaining walls. Retaining walls ~~that are not laterally supported at the top and that retain in excess of 48 inches (1219 mm) of unbalanced fill, shall be designed to ensure stability against overturning, sliding, excessive foundation pressure and water uplift. In addition, any retaining wall~~ that ~~meets~~ meet the following shall be designed by a *registered design professional*.

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~~.~~.
3. Retaining walls exceeding 4 feet (1524 mm) of unbalanced backfill height, or
4. Retaining wall systems providing a cumulative vertical relief greater than 5 feet (1524 mm)
   in height within a horizontal distance of 50 feet (15 m) or less

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

Item C – 19 Request from Leon Skinner representing the Residential Ad Hoc Committee to amend the 2018 N.C. Residential Code, Sections R101.2.2 Accessory structures, Section R202 Definitions, and Section R327 Docks, Piers, Bulkheads, and Waterway Structures as follows:

R101.2.2 Accessory structures.
Only the following *accessory structures* shall meet the provisions of this code.

1. Decks, see Appendix M,

2. Gazebos,

3. Retaining walls, see Section R404.4,

4. Detached masonry chimneys located less than 10 feet (3048 mm) from other buildings or lot lines,

5. Swimming pools and spas, see Appendix V,

6. Detached carports,

   Exception: Portable lightweight carports not exceeding 400 square feet (37 m^2) or 12 foot (3658 mm) mean roof height.

7. *Docks, piers, bulkheads*, and waterway structures, see Section R327.

Section R202 Definitions.

ACCESSORY BUILDING. ~~In one- and two-family *dwellings* not more than three stories *above grade plane* in height with a separate means of egress, a.~~ A building that does not contain a sleeping room, the use of which is ~~incidental~~ accessory to that of the ~~main building~~ dwelling ~~and~~ that is detached and located on the same lot as the dwelling. ~~An accessory building~~ and is roofed over ~~and~~ with more than 50 percent of its exterior walls ~~are~~ enclosed. ~~Examples of accessory buildings are garages, storage buildings, workshops, boat houses, treehouses, and similar structures.~~

ACCESSORY STRUCTURE. A structure that is accessory to the dwelling and not defined as an *accessory building*. Examples of accessory structures are fencing, decks, gazebos, arbors, retaining walls, barbecue pits, detached chimneys, playground equipment, yard art, *docks,* piers, etc.

PRIVATE POND. A body of water owned entirely by a single property owner and located on the same parcel of land as a detached single-family dwelling.

SECTION R327 DOCKS, PIERS, BULKHEADS AND WATERWAY STRUCTURES

R327.1 General.

Docks, piers, bulkheads and waterway structures shall be constructed in accordance with Chapter 36 of the *North Carolina Building Code.*

Exceptions: Structures complying with the following are not required to meet the provisions of this code.

a. *Docks* and ~~&~~ *Piers* built over p*rivate ponds.*

b. Fixed in place walkways, *docks*, and *piers* not covered in "Exception a" and not exceeding 144 square feet for single family dwelling.

c. Minor *repairs* to existing *docks*, *piers* and waterway structures.

~~1. Fixed piers associated with a one- or two- family dwelling meeting all of the following:~~

~~1.1 A maximum of four boat slips for a single owner of a one- or two-family dwelling or two adjacent, riparian owners.~~

~~1.2 A maximum height of 15 feet (4572 mm) measured from deck to mud line at any location along the pier.~~

1.3 A maximum normal pool depth of 13 feet (3962 mm) on lakes and ponds and a maximum mean low water depth of 7 feet (2134 mm) in other locations.

1.4 A maximum walkway width of 6 feet (1829 mm).

1.5 A maximum pile spacing of 8 feet (2438 mm), in both directions.

1.6 A maximum of 576 sq. ft. (53.5 m^2) for non-walkways areas.

1.7 A maximum boat slip length of 40 feet (12.2 m).

1.8 A maximum roofed area of 576 sq. ft. (53.5 m^2) with an additional maximum 2 foot (610 mm) overhang.

1.9 Constructed with no enclosed or multilevel structures.

1.10 Supports a boatlift with a maximum design capacity no greater than 16,000 pounds (71.2 kN).

1. Floating docks associated with a one- or two- family dwelling meeting all of the following:

a. A maximum of four boat slips for a single owner of a one- or two- family dwelling or two adjacent, riparian owners.

b. A maximum normal pool depth of 20 feet (6096 mm) for docks with guide piles on lakes and ponds and a maximum mean low water of 10 feet (3048 mm) for docks with guide piles in other locations.

c. A maximum boat slip length of 40 feet (12.2 m).

d. Finger piers, crosswalks or other floating surfaces having a minimum width of 3 feet (914 mm) wide to a maximum of 6 feet (1829 mm) wide, except for a single 8 foot x 16 foot (2438 mm x 4877 mm) section.

e. When constructed with a roof the following conditions exist:
   i. Ultimate design wind speed is 115 mph (51 m/s) or less;
   ii. Roof load is 20 psf (0.96 kPa) or less;
   iii. A maximum eave height of 10 feet (3048 mm);
   iv. A maximum roof slope of 4:12;
   v. A maximum roofed area of 576 sq. ft. (53.5 m^2) with an additional maximum 2 foot (610 mm) overhang;
   vi. A minimum boat slip width of 12 feet (3658 mm);
   vii. A minimum floating dock width of 4 feet (1219 mm) along both sides of the boat slip;

~~viii. A maximum dead load of 12 psf (0.57 kPa);~~

~~ix. Floating structures supporting roof structures are balanced or anchored to reduce the possibility of tipping.~~

~~f. Constructed with no enclosed or multilevel structures.~~

~~g. Supports a boat lift with a maximum design capacity no greater than 16,000 pounds (71.2 kN).~~

Item C – 20 Request from David Smith representing the Residential Ad Hoc Committee to add 2018 N.C. Residential Building Code, Sections R328 Demolition and R 328.1 Demolition as follows:

SECTION R328 DEMOLITION

R328.1 Demolition. Where a building or structure regulated by this code has been demolished or removed, the lot shall not create a new hazard to the site or to adjoining properties. All utilities shall be properly terminated.

Item C – 21 Request from Jackie Flemming and Doug Allen P.E. representing Simpson Strong-Tie to amend the 2018 Residential Building Code, Section R4603.6.1 as follows:

R4603.6.1 Tying at corners. At corners, girders shall be connected to the pile with a minimum 3/16 × 4 × 18-inch (5 × 102 × 467 mm) hot dip galvanized strap bolted with two 5/8 inch (15.9 mm) galvanized through bolts on the exterior and a minimum L4 x 3/16 x 1'-6" (102 × 5 × 467 mm) galvanized steel angle bolted with two 5/8 inch (15.9 mm) galvanized through bolts on the interior in accordance with Figure R4603.6(d1), or with a minimum of (2) 3/16" x 4" x 18" (5x102x467 mm) hot dip galvanized straps installed on the outside of the girders with fasteners per table R4603.6.1 and in accordance with Figure R4603.6 (d2).

Table R4603.6.1Minimum Fastening of Corner Beams and Girder to Pilings

Amount Piling is Notched	Associated Figure	Hardware	Fasteners
> 50%[1]	R4603.6(d)	one 3/16"x4"x18"	six 5/8" bolts[2]
		one L4x3/16x18"	
	R4603.6 (e)	one 3/16"x4"x18"	eight 0.27"x4" each[3]

1. Where piling is notched over 50%, use strap as required in Section 4603.6. Install the specified number of bolts or screws in each end of the strap.
2. Bolts shall be 5/8" diameter hot dipped galvanized through bolts with nuts and washers.
3. Screws shall be 0.270" (6.9 mm) minimum in diameter, hot dipped galvanized to a minimum of A153, Class C, and having a minimum length of 4", and also shall be long enough to penetrate at least one inch through the remaining pile and into the girder.

R4603.6.2 Bracing of Pilings. Bracing of pile foundations is required where the clear height from ground to sill, beam or girder exceeds 10 feet (3048 mm) or the dwelling is more than one story above piles. A line of X-bracing is defined as a row of piles with X-bracing provided in at least two bays. A line of X-bracing shall be provided at all exterior pile lines. Where the

perimeter lines of X-bracing exceed 40 feet (12 192 mm), an additional line of X-bracing shall be provided near the center of the building. See Figure R4603.6(e)(f). X-bracing shall be with 2 × 10s through bolted with two 3/4-inch (19.1 mm) bolts at each end. The code official is permitted to accept alternate bracing designs if they bear the seal of a registered design professional.

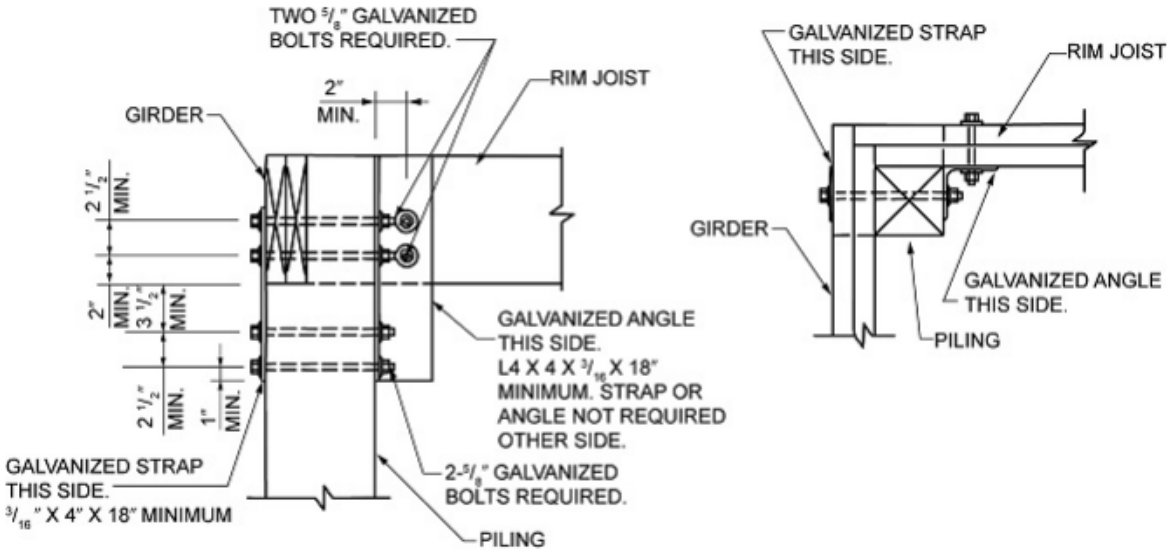


FIGURE R4603.6(d)
CORNER PILE CONNECTION

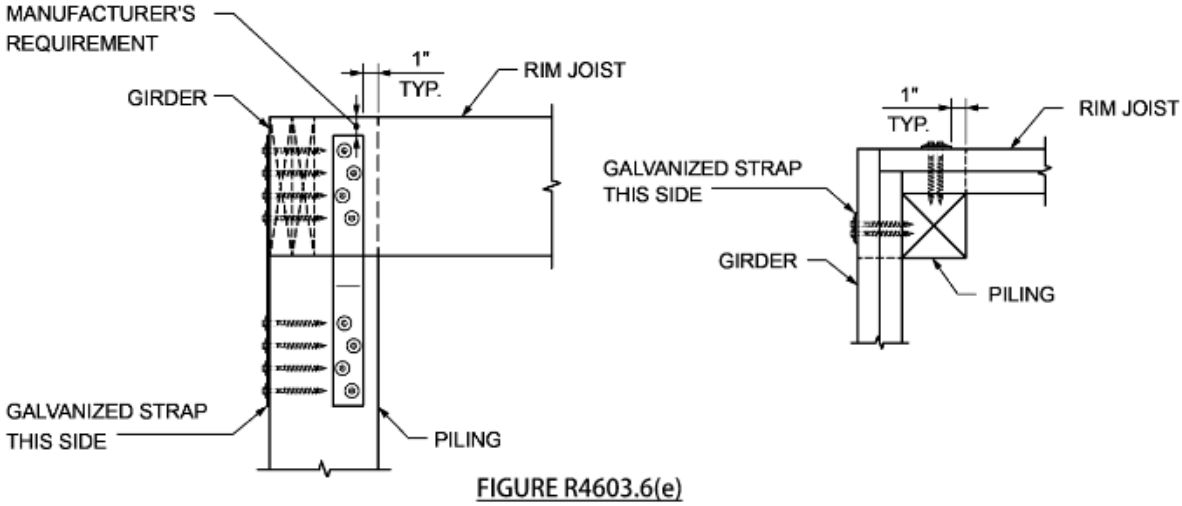


FIGURE R4603.6(e)
CORNER PILE CONNECTION

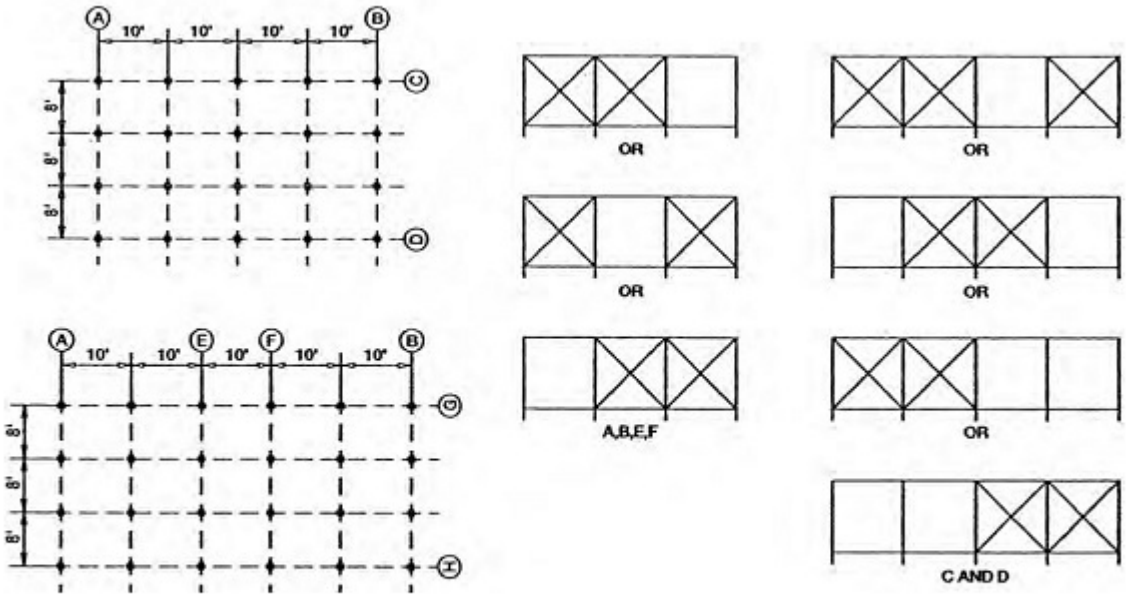


FIGURE R4603.6(e)
ELEVATIONS (SHOWING POSSIBLE ARRANGEMENT OF X-BRACING IN LINE) (G AND H SIMILAR)

NOTE: The item that would have been Item C-22 was withdrawn as a B item. Therefore, there is no C-22 item for this meeting.

Item C – 23 Request from Robert Privott representing the N.C. Home Builders Association to amend the 2018 N.C. Residential Code, Section N1101.13 (R401.2) as follows:

IRC Chapter 11

N1101.13 (R401.2) Compliance

Projects shall comply with one of the following:

1. Sections N1101.14 through N1104.

2. Section N1105 and the provisions of Sections N1101.14 through N1104 labeled "Mandatory."

3. An energy rating index (ERI) approach in Section N1106.

4. North Carolina specific REScheck™ shall be permitted to demonstrate compliance with this code. Envelope requirements may not be traded off against the use of high efficiency heating or cooling equipment. No trade-off calculations are needed for required termite inspection and treatment gaps.

5. Rated in accordance with ANSI/RESNET/ICC 301-2019 Standard for the Calculation and Labeling of Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index with a maximum energy rating index (ERI) less than or equal to the appropriate value indicated in one of the following tables as applicable, when compared to the ERI reference design:

MAXIMUM ENERGY RATING INDEX
(without calculation of on-site renewable energy)

CLIMATE ZONE	JAN. 1, 2019 – Dec. 31, 2022	JAN. 1,2023 AND FORWARD
3	65	61
4	67	63
5	67	63

MAXIMUM ENERGY RATING INDEX
(including calculation of on-site renewable energy)

CLIMATE ZONE	JAN. 1, 2019 – Dec. 31, 2022	JAN. 1,2023 AND FORWARD
3	51	42
4	54	50
5	55	51

Item C – 24 Request from Leon Skinner representing the N.C. Residential Ad-Hoc Committee to amend the 2018 N.C. Residential Code, Sections R905.2.8.5 and R908.3 as follows:

R905.2.8.5 Drip Edge. Deleted. Not required unless required by the roof covering manufacturer installation instructions. The drip edge placed around the edge of a roof prior to installing the roofing material is designed so that water runs off over the drip edge and falls from a slight projection at the bottom edge of the roof rather than running back under, or along the eaves. Metal, wood or exterior composite materials can be used for the drip edge.

R908.3 Roof replacement. Roof replacement shall include the removal of existing layers of roof coverings down to the roof deck and replacement of up to 15% of the total existing roof deck. Replacement of up to 15% of the total roof deck shall not be considered structural work.

Item C – 25 Request from Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 N.C. Building Code, Section 1010.1.9.7 and the 2018 N.C. Fire Code, Section 1010.1.9.7 as follows:

1010.1.9.7 Delayed egress. Delayed egress locking systems, shall be permitted to be installed on doors serving any occupancy except Group A, E and H in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907. The locking system shall be installed and operated in accordance with all of the following:
Exception: Group E classrooms with an occupant load of less than 50.

Item C – 26 Request from Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 N.C. Building Code, Chapter 2 Definitions as follows:

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

Item C - 27 Request from Clint Latham representing the City of Raleigh to amend the 2018 N.C. Building Code, Section 915.2.1 and add Section 915.2.4 as follows:

[F] 915.2 Locations. Where required by Section 915.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through ~~915.2.3~~ 915.2.4.

[F] 915.2.4 Group A-2 occupancies. Carbon monoxide detection shall be installed in A-2 occupancies in all the following locations:

1. On the ceiling of the room containing the fuel-burning appliance or fuel-burning *fireplace.*
2. In an *approved* location where the room or area is served by a forced air furnace.

Item C – 28 Request from Bryan Dale Robinson representing the City of Raleigh to amend the 2018 N.C. Building Code, Section 428.2 as follows:

428.2 Residential care homes. Homes keeping no more than six adults or six unrestrained children who are able to respond and evacuate the facility without assistance, determined by the state agency having jurisdiction to be licensable, shall be classified as single-family residential (North Carolina Residential Code) and comply with the requirements of this section and the North Carolina Residential Code for detached one- and two-family dwellings and townhouses.

Item C – 29 Request from Bryan Dale Robinson representing the City of Raleigh to amend the 2018 N.C. Building Code, Section 428.3 as follows:

428.3 Licensed Small Residential Care Facilities. The following facilities when determined by the State Agency having jurisdiction to be licensable, shall be classified as Single-Family Residential and comply with the requirements of this section and the North Carolina Residential Code for detached on- and two-family dwellings and townhouses.

1. Residential Care Facilities keeping no more than six adults or six unrestrained children with no more than three who are unable to respond and evacuate without assistance.

2. Residential Care Facilities keeping no more than five adults or five children who are unable to respond and evacuate without assistance, when certifiable for Medicaid reimbursement, and when staffed 24-hours per day with at least two staff awake at all times.

3. Residential Care Facilities keeping no more than nine adults or nine children who are able to respond and evacuate without assistance.

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 July 14, 2020. The Final Adoption meeting will take place on September 1, 2020. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rulemaking process. The effective date is January 1, 2021 unless otherwise noted.

Item D – 1 Request from Wayne Hamilton representing the NC Building Code Council to amend the 2018 NC Fire Code, Sections 202, 304, and add Sections 304.4.3 and 304.4.4 as follows:

Valet Trash Collection Service. A scheduled trash removal service that collects occupant-generated rubbish, trash, or recyclable materials from dwelling units, where the trash is placed outside of the dwelling units for a limited time and in an approved container.

304.4 Valet Trash Collection Services for R-2 Apartment Occupancies

304.4.3 Policies and procedures. Apartment management shall have written policies and procedures in place, enforce compliance, and upon request provide a copy of such policies and procedures to the authority having jurisdiction.

304.4.4 Revocation. The use of doorstep refuse and recycling collection containers in apartment occupancies is revocable by the *fire code official* for violations of this section.

Item D – 2 Request from Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 NC Fire Code, Section 609.2 and Chapter 80 as follows:

[M] 609.2 Where required.

A Type 1 hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease or smoke.

Exceptions:
1. A Type 1 hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5mg/m^3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236m^3/s) in accordance with UL 710B.
2. Domestic cooking appliances used for commercial purposes in accordance with Section 507.1.2 of the *International Mechanical Code*.

3. Factory-built commercial exhaust hoods that are *listed* and *labeled* in accordance with UL 710, and installed in accordance with Section 304.1 of the *International Mechanical Code*, shall not be required to comply with Sections 507.1.5, 507.2.3, 507.2.5, 507.2.8, 507.3.1, 507.3.3, 507.4 and 507.5 of the *International Mechanical Code*.

4. Factory-built commercial cooking recirculating systems that are *listed* and *labeled* in accordance with UL 710B, and installed in accordance with Section 304.1 of the *International Mechanical Code*, shall not be required to comply with Sections 507.1.5, 507.2.3, 507.2.5, 507.2.8, 507.3.1, 507.3.3, 507.4 and 507.5 of the *International Mechanical Code*. Spaces in which such systems are located shall be considered to be kitchens and shall be ventilated in accordance with Table 403.3.1.1 of the *International Mechanical Code*. For the purpose of determining the floor area required to be ventilated, each individual appliance shall be considered as occupying not less than 100 square feet (9.3m2).

5. Where cooking appliances are equipped with integral down-draft exhaust systems and such appliances and exhaust systems are listed and labeled for the application in accordance with NFPA 96, a hood shall not be required at or above them.

Chapter 80 – Referenced Standards

UL 710-2012
Exhaust Hoods for Commercial Cooking Equipment

Item D – 3 Request from Colin Triming representing the NC Fire Code Revision Committee to add the 2018 NC Fire Code, Section 3103.3.1 as follows:

3103.3.1 Special amusement building.
Tents and other *membrane structures* erected as a *special amusement building* shall be equipped with an *automatic sprinkler system* in accordance with Section 411.3 of the *International Building Code*.

Item D – 4 Request from Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 NC Fire Code, Section 3103.6 as follows:

3103.6 Construction documents.
A detailed site and floor plan for *tents* or *membrane structures* with an *occupant load* of 50 or more shall be provided with each application for approval. The *tent* or *membrane structure* floor plan shall indicate details of the *means of egress* facilities, seating capacity, arrangement of the seating and location and type of heating and electrical equipment. The *construction documents* shall include an analysis of structural stability.

Item D – 5 Request from James Anthony representing the Anthony Property Group to amend the 2018 NC Residential Code, Section 202 Definitions as follows:

Family. Family is an individual, two or more persons related by blood, marriage or law, or a group of not more than any ~~five~~ eight persons living together in a *dwelling unit*. Servants having common housekeeping facilities with a family consisting of an individual, or more persons related by blood, marriage or law, are a part of the family for this code.

Item D – 6 Request from Carl Martin representing the NC Department of Insurance to amend the 2018 NC Building Code, Section 705.12 as follows:

705.12 Soffit in Group R.
In Group R buildings of combustible construction, the soffit material shall be securely attached to framing members and shall be constructed using one of the following methods:

1. Non-combustible soffit material,
2. Fire retardant treated soffit material,
3. Vinyl soffit installed over 3/4-inch wood sheathing,
4. Vinyl soffit installed over 5/8-inch gypsum board,

5. Aluminum soffit installed over 3/4-inch wood sheathing, or
6. Aluminum soffit installed over 5/8-inch gypsum board.

Venting requirements shall apply to both soffit and underlayment and shall be per Section 1203.2. ~~Vent openings shall not be located within 5 feet horizontally of any unprotected wall opening located within 3 feet vertically below the soffit.~~

Exceptions:

1. Vinyl and aluminum soffit material may be installed without wood sheathing or gypsum backing board if the exterior wall finish is noncombustible for a minimum distance of 10 feet above finished grade or the *building* is equipped throughout with an *automatic sprinkler system* in accordance with 903.3.1.1.
2. ~~Location of vent openings in soffits shall not be limited in buildings equipped throughout with an automatic sprinkler system complying with Section 903.3.1.1.~~ Detached one- and two- family dwellings and townhouses.

Item D – 7 Request from David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC Residential Code, Section R302.1.1 Soffit Protection as follows:

R302.1.1 Soffit protection. In construction using vinyl or aluminum soffit material, the following application shall apply. Soffit assemblies located on buildings with less than a ~~**10**~~ **5** feet (3048 mm) fire separation distance shall be securely attached to framing members and applied over fire-retardant-treated wood, 23/32-inch (18.3 mm) wood sheathing or 5/8-inch (15.9 mm) exterior grade or moisture resistant gypsum board. Venting requirements shall be provided in both soffit and underlayments. Vents shall be either nominal 2-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. *Townhouse* construction shall meet the additional requirements of Sections R302.2.5 and R302.2.6.

Exceptions:

1. Any portion of soffits having ~~**10**~~ **5** feet (3048 mm) or more *fire separation distance*.

2. Roof rake lines where the soffit does not communicate to the attic are not required to be protected per this section.

3. Soffits with less than 3 feet (914 mm) *fire separation distance* shall meet the projection fire rating requirements of Table R302.1.

4. Soffits between buildings located on the same lot.

Item D – 8 Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC Residential Building Code, Tables R602.3(3), R602.10.1 and R602.10.3 as follows:

Table R602.10.3
REQUIRED LENGTH OF BRACING ALONG EACH SIDE OF A CIRCUMSCRIBED RECTANGLE[a,b,c,d,e,f,g,h]

7/16-inch Wood Structural Panel Sheathing with ½-inch gypsum on inside wall
Panels are blocked
Nails to be 8d common or galvanized box (2-1/2 inches long X 0.113-inch diameter)
6-inch nail spacing on edges and 6-inch nail spacing in field
Each story is 10 feet maximum
Maximum stud spacing of 24 inches
Maximum roof slope 12:12
Building length to width ratio is 2

WIND SPEED	EAVE TO RIDGE HEIGHT (feet)	STORIES SUPPORTED	WALL PERPENDICULAR TO WIND (Wall Wind Loads) Building Width in Feet														
			10	~~15~~	20	~~25~~	30	~~35~~	40	~~45~~	50	~~55~~	60	~~65~~	70	~~75~~	80
			Length (ft) of Braced Panel in Each Exterior Wall														
115	10	Roof Only	~~2.0~~ 1.6	~~2.0~~	~~2.5~~ 3.2	~~3.0~~	~~3.5~~ 4.8	~~4.0~~	~~4.5~~ 6.4	~~5.0~~	~~5.5~~ 8.0	~~6.0~~	~~6.5~~ 9.6	~~7.0~~	~~7.5~~ 11.2	~~8.0~~	~~8.5~~ 12.8
		Roof +1 story	~~3.0~~ 2.9	~~4.0~~	~~5.5~~ 5.9	~~6.5~~	~~8.0~~ 8.8	~~9.0~~	~~10.0~~ 11.8	~~11.0~~	~~12.5~~ 14.7	~~13.5~~	~~14.5~~ 17.7	~~16.0~~	~~17.0~~ 20.6	~~18.0~~	~~19.0~~ 23.6
		Roof +2 stories	~~4.5~~ 4.4	~~6.5~~	~~8.5~~ 8.8	~~10.5~~	~~12.0~~ 13.2	~~14.0~~	~~16.0~~ 17.7	~~17.5~~	~~19.5~~ 22.1	~~21.0~~	~~23.0~~ 26.5	~~24.5~~	~~26.5~~ 30.9	~~28.5~~	~~30.0~~ 35.3
	15	Roof Only	2.0	~~2.0~~	~~3.0~~ 4.0	~~3.5~~	~~4.0~~ 6.1	~~4.5~~	~~5.5~~ 8.1	~~6.0~~	~~6.5~~ 10.1	~~7.0~~	~~8.0~~ 12.1	~~8.5~~	~~9.0~~ 14.2	~~9.5~~	~~10.0~~ 16.2
		Roof +1 story	~~3.5~~ 3.3	~~4.5~~	~~6.0~~ 6.6	~~7.0~~	~~8.5~~ 10.0	~~9.5~~	~~11.0~~ 13.3	~~12.0~~	~~13.5~~ 16.6	~~15.0~~	~~16.0~~ 19.9	~~17.5~~	~~18.5~~ 23.3	~~20.0~~	~~21.0~~ 26.6
		Roof +2 stories	~~5.0~~ 4.8	~~7.0~~	~~9.0~~ 9.6	~~11.0~~	~~13.0~~ 14.5	~~15.0~~	~~16.5~~ 19.3	~~18.5~~	~~20.5~~ 24.1	~~22.5~~	~~24.5~~ 28.9	~~26.0~~	~~28.0~~ 33.8	~~30.0~~	~~32.0~~ 38.6
	20	Roof Only	~~2.0~~ 2.4	~~2.5~~	~~3.5~~ 4.7	~~4.0~~	~~4.5~~ 7.1	~~5.5~~	~~6.0~~ 9.4	~~7.0~~	~~7.5~~ 11.8	~~8.5~~	~~9.0~~ 14.2	~~10.0~~	~~10.5~~ 16.5	~~11.5~~	~~12.0~~ 18.9
		Roof +1 story	~~3.5~~ 3.7	~~5.0~~	~~6.5~~ 7.4	~~8.0~~	~~9.0~~ 11.1	~~10.5~~	~~12.0~~ 14.8	~~13.5~~	~~14.5~~ 18.5	~~16.0~~	~~17.5~~ 22.2	~~18.5~~	~~20.0~~ 25.9	~~21.5~~	~~23.0~~ 29.6
		Roof +2 stories	~~5.0~~ 5.2	~~7.5~~	~~9.5~~ 10.5	~~11.5~~	~~13.5~~ 15.7	~~15.5~~	~~17.5~~ 20.9	~~19.5~~	~~21.5~~ 26.2	~~23.5~~	~~25.5~~ 31.4	~~27.5~~	~~29.5~~ 36.6	~~31.5~~	~~33.5~~ 41.9
120	10	Roof Only	~~2.0~~ 1.8	~~2.0~~	~~2.5~~ 3.7	~~3.0~~	~~3.5~~ 5.5	~~4.0~~	~~5.0~~ 7.4	~~5.5~~	~~6.0~~ 9.2	~~6.5~~	~~7.0~~ 11.0	~~7.5~~	~~8.0~~ 12.9	~~8.5~~	~~9.0~~ 14.7
		Roof +1 story	~~3.5~~ 3.2	~~4.5~~	~~6.0~~ 6.4	~~7.0~~	~~8.5~~ 9.7	~~9.5~~	~~11.0~~ 12.9	~~12.0~~	~~13.5~~ 16.1	~~14.5~~	~~16.0~~ 19.3	~~17.0~~	~~18.5~~ 22.6	~~19.5~~	~~21.0~~ 25.8
		Roof +2 stories	~~5.0~~ 4.8	~~7.0~~	~~9.5~~ 9.6	~~11.5~~	~~13.0~~ 14.4	~~15.0~~	~~17.0~~ 19.3	~~19.0~~	~~21.0~~ 24.1	~~23.0~~	~~25.0~~ 28.9	~~27.0~~	~~29.0~~ 33.7	~~31.0~~	~~32.5~~ 38.5
	15	Roof Only	~~2.0~~ 2.2	~~2.5~~	~~3.0~~ 4.4	~~3.5~~	~~4.5~~ 6.6	~~5.0~~	~~6.0~~ 8.8	~~6.5~~	~~7.0~~ 11.0	~~8.0~~	~~8.5~~ 13.2	~~9.0~~	~~10.0~~ 15.4	~~10.5~~	~~11.0~~ 17.6
		Roof +1 story	~~3.5~~ 3.6	~~5.0~~	~~6.5~~ 7.3	~~8.0~~	~~9.0~~ 10.9	~~10.5~~	~~12.0~~ 14.5	~~13.5~~	~~14.5~~ 18.2	~~16.0~~	~~17.5~~ 21.8	~~19.0~~	~~20.0~~ 25.4	~~21.5~~	~~23.0~~ 29.1
		Roof +2 stories	~~5.5~~ 5.3	~~7.5~~	~~10.0~~ 10.5	~~12.0~~	~~14.0~~ 15.8	~~16.0~~	~~18.0~~ 21.0	~~20.0~~	~~22.5~~ 26.3	~~24.5~~	~~26.5~~ 31.6	~~28.5~~	~~30.5~~ 36.8	~~32.5~~	~~34.5~~ 42.1
	20	Roof Only	~~2.0~~ 2.6	~~3.0~~	~~3.5~~ 5.1	~~4.5~~	~~5.0~~ 7.7	~~6.0~~	~~6.5~~ 10.3	~~7.5~~	~~8.5~~ 12.8	~~9.0~~	~~10.0~~ 15.4	~~10.5~~	~~11.5~~ 18.0	~~12.5~~	~~13.0~~ 20.5
		Roof +1 story	4.0	~~5.5~~	~~7.0~~ 8.1	~~8.5~~	~~10.0~~ 12.1	~~11.5~~	~~13.0~~ 16.2	~~14.5~~	~~16.0~~ 20.2	~~17.5~~	~~19.0~~ 24.3	~~20.5~~	~~22.0~~ 28.3	~~23.5~~	~~25.0~~ 32.4
		Roof +2 stories	~~5.5~~ 5.7	~~8.0~~	10.5 11.4	~~12.5~~	14.5 17.1	~~17.0~~	~~19.0~~ 22.8	~~21.5~~	~~23.5~~ 28.5	~~25.5~~	~~28.0~~ 34.2	~~30.0~~	~~32.0~~ 39.9	~~34.5~~	~~36.0~~ 45.6
130	10	Roof Only	~~2.0~~ 2.2	~~2.5~~	~~3.0~~ 4.3	~~3.5~~	~~4.5~~ 6.5	~~5.0~~	~~5.5~~ 8.6	~~6.5~~	~~7.0~~ 10.8	~~7.5~~	~~8.0~~ 12.9	~~9.0~~	~~9.5~~ 15.1	~~10.0~~	~~11.0~~ 17.3
		Roof +1 story	~~4.0~~ 3.8	~~5.5~~	~~7.0~~ 7.6	~~8.5~~	~~10.0~~ 11.4	~~11.5~~	~~13.0~~ 15.1	~~14.5~~	~~16.0~~ 18.9	~~17.5~~	~~18.5~~ 22.7	~~20.0~~	~~21.5~~ 26.5	~~23.0~~	~~24.5~~ 30.3
		Roof +2 stories	~~6.0~~ 5.7	~~8.5~~	~~11.0~~ 11.4	~~13.0~~	~~15.5~~ 17.0	~~18.0~~	~~20.0~~ 22.7	~~22.5~~	~~24.5~~ 28.4	~~27.0~~	~~29.5~~ 34.1	~~31.5~~	~~34.0~~ 39.8	~~36.0~~	~~38.5~~ 45.5
	15	Roof Only	~~2.0~~ 2.6	~~3.0~~	~~3.5~~ 5.2	~~4.5~~	~~5.0~~ 7.7	~~6.0~~	~~7.0~~ 10.3	~~7.5~~	~~8.5~~ 12.9	~~9.0~~	~~10.0~~ 15.5	~~10.5~~	~~11.5~~ 18.1	~~12.5~~	~~13.0~~ 20.7
		Roof +1 story	~~4.0~~ 4.3	~~6.0~~	~~7.5~~ 8.5	~~9.0~~	~~11.0~~ 12.8	~~12.5~~	~~14.0~~ 17.1	~~15.5~~	~~17.0~~ 21.3	~~19.0~~	~~20.5~~ 25.6	~~22.0~~	~~23.5~~ 29.9	~~25.5~~	~~27.0~~ 34.1
		Roof +2 stories	~~6.0~~ 6.2	~~9.0~~	~~11.5~~ 12.4	~~14.0~~	~~16.5~~ 18.6	~~19.0~~	~~21.5~~ 24.8	~~23.5~~	~~26.0~~ 31.0	~~28.5~~	~~31.0~~ 37.2	~~33.5~~	~~36.0~~ 43.4	~~38.0~~	~~40.5~~ 49.7
	20	Roof Only	~~2.5~~ 3.0	~~3.5~~	~~4.5~~ 6.0	~~5.0~~	~~6.0~~ 9.0	~~7.0~~	~~8.0~~ 12.0	~~9.0~~	~~10.0~~ 15.1	~~10.5~~	~~11.5~~ 18.1	~~12.5~~	~~13.5~~ 21.1	~~14.5~~	~~15.5~~ 24.1
		Roof +1 story	~~4.5~~ 4.7	~~6.5~~	~~8.0~~ 9.5	~~10.0~~	~~11.5~~ 14.2	~~13.5~~	~~15.0~~ 19.0	~~17.0~~	~~18.5~~ 23.7	~~20.5~~	~~22.0~~ 28.5	~~24.0~~	~~25.5~~ 33.2	~~27.5~~	~~29.0~~ 38.0
		Roof +2 stories	~~6.5~~ 6.7	~~9.5~~	~~12.0~~ 13.5	~~14.5~~	~~17.5~~ 20.2	~~20.0~~	~~22.5~~ 26.9	~~25.0~~	~~27.5~~ 33.7	~~30.0~~	~~32.5~~ 40.4	~~35.5~~	~~38.0~~ 47.1	~~40.5~~	~~43.0~~ 53.8

a. If the stud spacing is reduced to 16 inches, table values for 7/16-inch sheathing may be multiplied by 0.93.

b. If the stud spacing is reduced to 16 inches or the sheathing thickness is greater then 7/16-inch, the interior field nail spacing may be increased to 12 inches.

c. If the ½-inch gypsum is not applied to the inside of the wall, the table lengths are to be multiplied by 1.22.

d. Table values shall be multiplied by the following values for different wall heights:

8ft. walls	0.87
9ft. walls	0.92
11ft. walls	1.08
12ft. walls	1.15

e. If 3/8-inch wood structural sheathing is used instead of 7/16-inch wood structural sheathing, table lengths are to be multiplied by 1.07.
f. If ½-inch structural fiberboard is used instead of 7/16-inch wood structural sheathing, table lengths are to be multiplied by 1.31.
g. Interpolation is permitted, extrapolation is prohibited.
h. For Exposure Category C or D, multiply the required length of bracing by a factor of 1.5 or 1.8 respectively.

Roof Only Roof + 1 Story Roof + 2 Stories

~~a. Interpolation shall be permitted; extrapolation shall be prohibited.~~
~~b. For Exposure Category C or D, multiply the required length of bracing by a factor of 1.3 or 1.6, respectively.~~
~~c. For wall heights other than 10 feet (3048 mm), multiply the required length of bracing by the following factors; 0.90 for 8 feet (2438mm), 0.95 for 9 feet (2743 mm), 1.05 for 11 feet (3353) and 1.10 for 12 feet (3658 mm).~~
~~d. Where minimum ½ inch gypsum wall board interior finish is not provided, the required bracing amount for the affected rectangle side shall be multiplied by 1.40.~~
~~e. A floor, habitable or otherwise, contained wholly within the roof rafters or roof trusses need not be considered a story for purposes of determining wall bracing provided the eave to ridge height does not exceed 20 feet (6096 mm) and the openings in the roof do not exceed 48 inches (1219 mm) in width.~~
~~f. Perpendicular sides to the front and rear sides are the left and right sides. Perpendicular sides to the left and right sides are the front and rear sides.~~

TABLE R602.3(3)

REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES[a b c]

MINIMUM NAIL		MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	~~MINIMUM NOMINAL~~ PANEL THICKNESS (inches)	MAXIMUM WALL STUD SPACING (inches)	PANEL NAIL SPACING		ULTIMATE DESIGN WIND SPEED V_{ult} (mph)		
Size	Penetration (inches)				Edges (inches o.c.)	Field (inches o.c.)	Wind exposure category		
							B	C	D
6d Common (2.0" X 0.113")	1.5	24/0	3/8	16	6	12	140	115	110
8d Common (2.5" x 0.131")	1.75	24/16	7/16	16	6	12	170	140	135
				24	6	12	140	115	110

For SI: I inch = 25.4 mm, I mile per hour = 0.447 m/s.

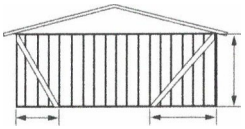
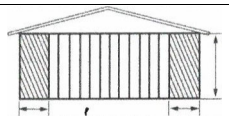
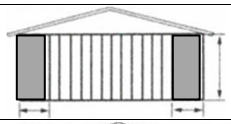
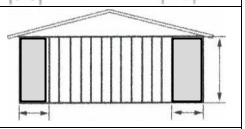
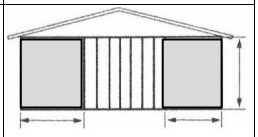
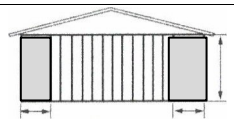
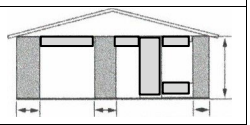
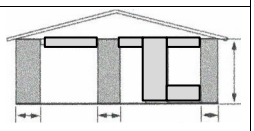
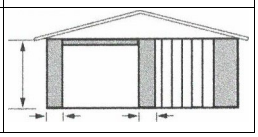
a. Panel strength axis parallel or perpendicular to supports. Three-ply plywood sheathing with studs spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports.

b. Table is based on wind pressures acting toward and away from building surfaces in accordance with Section R301.2. Lateral bracing requirements shall be in accordance with Section R602.10.

c. Wood structural panels with span ratings of Wall-16 or Wall-24 shall be permitted as an alternate to panels with a 24/0 span rating. Plywood siding rated 16 o.c. or 24 o.c. shall be permitted as an alternate to panels with a 24/16 span rating. Wall-16 and Plywood siding 16 o.c. shall be used with studs spaced not more than 16 inches on center.

TABLE R602.10.1

BRACING METHODS[a,b]

METHOD	MINIMUM BRACE MATERIAL THICKNESS	MINIMUM BRACE PANEL LENGTH OR BRACE ANGLE	CONNECTION CRITERIA		FIGURE OF BRACING METHOD, NOT NECESSARILY LOCATION
			Fasteners	Spacing	
LIB Let-in-bracing	1 x 4 wood brace (or approved metal brace installed per manufacturer instructions)	45° angle for maximum 16" o.c. stud spacing	2-8d common nails or 3-8d ($2^1/_2$" long x 0.113 " dia.) nails	Per stud and top and bottom plates	
DWB Diagonal wood boards	¾" (l" nominal)	48"	2-8d ($2^1/_2$" long x 0.113" diameter) or 2 - $1^3/_4$"-long-staples	Per stud and top and bottom plates	
WSP Wood Structural panel	3/8"	48"[d]	~~6d common nail or 8d ($2^1/_2$" long x0.113" diameter) nail~~ [See Table R602.3(3)]	6" edges 12" field	
SFB Structural fiberboard sheathing	1/2"	48"[d]	$1^1/_2$" long x 0.120" diameter galvanized roofing nails	3 " edges 6" field	
GB Gypsum board installed on both sides of wall	1/2"	96" for use with R602.10.2 48 " for use with R602.10.3	Minimum 5d cooler nails or #6 screws	7" edges 7" field	
PCP Portland cement plaster	3/4" (maximum 16" o.c. stud spacing)	48"	$1^1/_2$" long. 11 gage, $^7/_{16}$" diameter head nails or 7/8" long 6 gage staples	6" o.c. on all framing members	
CS-WSP[e,i] Continuously Sheathed SFB	3/8"	24" adjacent to window not more than 67% of wall height: 30" adjacent to door or window greater than 67% and less than 85% of wall height. 48" for taller openings.	Same as WSP	Same as WSP	
CS-SFB[e,i] Continuously sheathed SFB	1/2"		Same as. SFB	Same as SFB	
PF Portal Frame[f,g,h]	7/16"	See Figure R602.10.1	See Figure R602.10.1	See Figure R602.10.1	

Notes:

a. Alternative bracing materials and methods shall comply with Section 105 of the *North Carolina Administrative Code and Policies*, and shall be permitted to be used as a substitute for any of the bracing materials listed in Table R602.10. 1 provided at least equivalent performance is demonstrated, Where the tested bracing strength or stiffness differs from tabulated materials. the bracing amount required for the alternative material shall be permitted to be factored to achieve equivalence.

b. All edges of panel-type wall bracing required from ~~Tables~~ Section R602.10.2 ~~and~~ or Section R602.10.3 shall be attached to framing or blocking, except GB bracing horizontal joints shall not be required to be blocked when joints are finished.

c. Two LIB braces installed at a 60°angle shall be permitted to be substituted for each 45° angle LIB brace.

d. For 8-foot (2483 mm) or 9-foot (2743 mm) wall height. brace panel minimum length shall be permitted to be reduced to 36-inch (914 mm) or 42-inch length (1067 mm). respectively, where not located adjacent to a door opening. A braced wall panel shall be permitted to be reduced to a 32-inch (813 mm.) length when studs at each end of the braced wall panel are anchored to foundation or framing below using hold-down device with minimum 2,800 pounds design tension capacity, For detached single story garages and attached garages supporting roof only. a minimum 24-inch (610 mm) brace panel length shall be permitted on one wall containing one or more garage door openings.

e. Bracing methods designated CS-WSP and CS-SFB shall have sheathing installed on all sheathable surfaces above. below, and between wall openings.

f. For purposes of bracing in accordance with Section R602.10.2. two portal frame brace panels with wood structural panel sheathing applied to the exterior face of each brace panel as shown in Figure R602.10.1 shall be considered equivalent to. one braced wall panel:

g. Structural fiberboard (SFB) shall not be used in portal frame construction.

h. No more than three portal frames shall be used in a single building elevation.

i. CS-WSP and CS-SFB cannot be mixed on the same story. Gable ends shall match the panel type of the wall below.

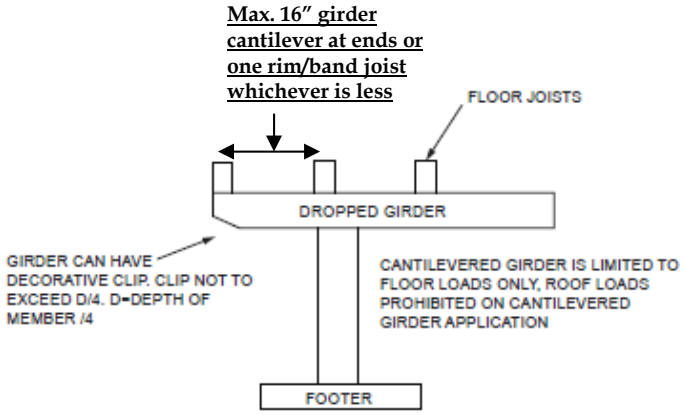
Item D – 9 (NOTE: This was Item D – 2 on the July 14, 2020 agenda.)

Request by Reuben E. Clark representing CMI to amend the 2017 NEC, Section 680.26(B)(2)(b) as follows:

(6) This method shall only be permitted for above-ground pools, for in ground pools a copper grid is required as per 680.26(B)(1)(b).

Item D – 10 (NOTE: This item was Item D – 5 on the July 14, 2020 agenda.)

Request by David Smith, representing the Residential Ad-hoc Committee to amend the 2018 N.C. Residential Building Code, Appendix M as follows:



For SI: 1 inch = 25.4 mm.

FIGURE AM105.1(4)
CANTILIEVERED DROPPED GIRDER

SECTION AM105
GIRDER SUPPORT AND SPAN

AM105.1 General. Girders shall bear directly on the support post with the post attached at top to prevent lateral displacement or be connected to the side of the posts with two 5/8-inch (16 mm) hot-dip galvanized bolts with nut and washer. Girder spans are per Table R602.7(1) and (2). Girder support is permitted to be installed in accordance with Figure AM105.1(1) for top mount; Figure AM105.1(2) for side mount and Figure AM105.1(3) for split girders. See Figure AM105.1(4) for cantilevered girders. Girders may also be cantilevered off ends of support post no more than one joist spacing or 16 inches, whichever is greater per Figure AM105.1(4).

~~**AM105.2 Girder span for uncovered porches and decks**. Maximum allowable spans for wood deck girders, as shown in Figure AM105.2, shall be in accordance with Table AM105.2. Girder plies shall be fastened with two rows of 10d (3-inch × 0.128-inch) nails minimum at 16 inches (406 mm) on center along each edge. Girders shall be permitted to canti-lever at each end up to one-fourth of the actual beam span. Splices of multispan beams shall be located at interior post locations.~~

~~**AM105.3 Girder span for roofed porches and decks**. Girder spans for covered decks shall be in accordance with Tables R602.7(1) and (2).~~

SECTION AM106
JOIST SPANS AND CANTILEVERS

AM106.1 Joist spans ~~for uncovered porches and decks~~ and cantilevers. Joists spans shall be based upon Table R502.3.1(2) with 40lbs per sq ft of live load and 10 lbs per sq ft of dead load. Floor joists for exterior decks may be cantilevered per Table R502.3.3(1). ~~Maximum allowable spans for wood deck joists, as shown in Figure AM106.1, shall be in accordance with Table AM106.1. Deck joists shall be permitted to cantilever not greater than one-fourth of the actual, adjacent joist span.~~

~~**AM106.1.1 Lateral restraint at supports**. Joist ends and bearing locations shall be provided with lateral restraint to prevent rotation. Where lateral restraint is provided by joist hangers or blocking between joists, their depth shall equal not less than 60 percent of the joist depth. Where lateral restraint is provided by rim joists, they shall be secured to the end of each joist with not less than (3) 10d (3-inch × 0.128-inch) nails or (3) No. 10 × 3-inch (76 mm) long wood screws.~~

~~**AM106.2. Roofed porches and decks.** Joists spans shall be in accordance with Table R502.3.1(2) with 40-pounds per-square-foot live load and 10-pounds per-square-foot dead load. Cantilevered floor joists shall be in accordance with Table R502.3.3(1).~~

TABLE AM105.2
DECK GIRDER SPAN LENGTHS[a, b]
(feet – inches)

SPECIES[c]	SIZE[d]	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern pine	2 – 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 – 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 – 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 – 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 – 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 – 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 – 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 – 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir-larch[e], hem-fir[e], spruce-pine-fir[e], redwood, western cedars, ponderosa pine[f], red pine[f]	3 × 6 or 2 – 2 × 6	5-5	[illegible]-8	4-2	3-10	3-6	3-1	2-9
	3 × 8 or 2 – 2 × 8	6-[illegible]	5-1[illegible]	[illegible]-4	4-10	4-6	4-1	3-8
	3 × 10 or 2 – 2 × 10	8-4	[illegible]-2	[illegible]-2	5-11	5-6	5-1	4-8
	3 × 12 or 2 – 2 × 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 × 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 × 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 × 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 × 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3 – 2 × 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3 – 2 × 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3 – 2 × 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3 – 2 × 12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

a. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 180 at cantilever with a 220-pound point load applied at the end.

b. Girders supporting deck joists from one side only.

c. No. 2 grade, wet service factor.

d. Girder depth shall be greater than or equal to depth of joists with a flush beam condition.

e. Includes incising factor.

f. Northern species. Incising factor not included.

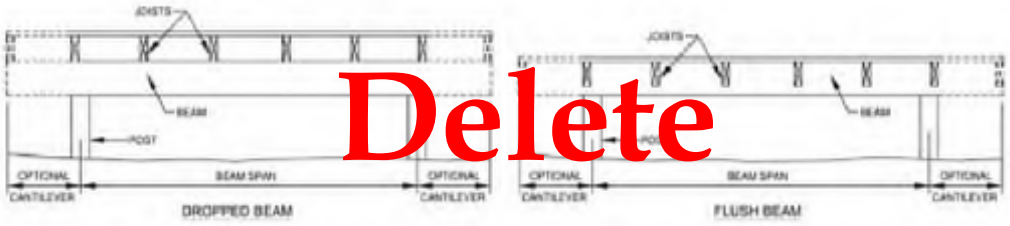


FIGURE AM105.2
TYPICAL DECK GIRDER SPANS

APPENDIX M

TABLE AM106.1
DECK JOIST SPANS FOR COMMON LUMBER SPECIES[f]
(feet – inches)

SPECIES[a]	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER[b] (Inches)			SPACING OF DECK JOISTS WITH CANTILEVERS[c] (Inches)		
		12	16	24	12	16	24
Southern pine	2 × 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 × 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 × 10	16-2	14-0	11-5	14-6	14-0	11-5
	2 × 12	18-0	16-6	13-6	18-0	16-6	13-6
Douglas fir-larch[d], hem-fir[d], spruce-pine-fir[d]	2 × 6	9-6	8-8	7-1	6-3	6-3	6-3
	2 × 8	12-6	11-5	9-4	9-5	9-5	9-1
	2 × 10	15-8	13-7	11-1	13-7	13-7	11-1
	2 × 12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, western cedars, ponderosa pine[e], red pine[e]	2 × 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 × 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 × 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 × 12	17-5	15-1	12-4	16-5	15-1	12-4

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For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

a. No. 2 grade with wet service factor.

b. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360.

c. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 180 at cantilever with a 220-pound point load applied to end.

d. Includes incising factor.

e. Northern species with no incising factor.

f. Cantilevered spans not exceeding the nominal depth of the joist are permitted.

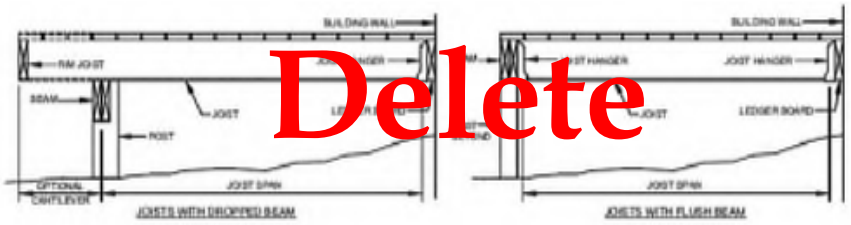

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FIGURE AM106.1
TYPICAL DECK JOIST SPANS

TABLE R602.7(3)
GIRDER AND HEADER SPANS[a] FOR OPEN PORCHES
(Maximum span for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir[b])

SIZE	SUPPORTING ROOF						SUPPORTING FLOOR	
	GROUND SNOW LOAD (psf)							
	30		50		70			
	DEPTH OF PORCH[c] (feet)							
	8	14	8	14	8	14	8	14
2-2 × 6	7-6	5-8	[illegible]	[illegible]	[illegible]	4-0	6-4	4-9
2-2 × 8	10-1	7-7	[illegible]	[illegible]	7-1	5-4	8-5	6-4
2-2 × 10	12-4	9-4	10-1	7-7	8-9	6-7	10-4	7-9
2-2 × 12	14-4	10-10	11-8	8-10	10-1	7-8	11-11	9-0

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For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

a. Spans are given in feet and inches.

b. Tabulated values assume #2 grade lumber, wet service and incising for refractory species. Use 30 psf ground snow load for cases in which ground snow load is less than 30 psf and the roof live load is equal to or less than 20 psf.

c. Porch depth is measured horizontally from building face to centerline of the header. For depths between those shown, spans are permitted to be interpolated.

Part E – Reports

- **Ad-Hoc Committee Reports**
- **Standing Committee Reports**
- **Staff Reports**
- **Chairman's Report**
- **Public Comments**

Part F – Appeals:

The Cory Albright and 24/7/365, Inc. Appeal is scheduled for Wednesday, October 28, 2020. The appeal will take place in the Albemarle Building, 325 North Salisbury Street, Raleigh, NC 27603, 2nd Floor Training Room 240.

Sincerely,

Cliff Isaac, Secretary
NC Building Code Council