**NC State Building Codes Amendments - Effective 1/1/2019**

(adopted September 2017 through June 2018)

(Note: some amendments may indicate earlier effective dates)

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The following pages represent a summary of the Building Code Council adopted amendments that have been approved by the Rules Review Commission.

2018 NC Building, Energy Conservation, Existing Building, Fire, Fuel Gas, Mechanical, Plumbing, Residential Codes (based on the 2015 International Codes) effective 1/1/2019

2017 NC Electrical Code (based on the 2017 NEC) effective 6/12/2018

These amendments revise, delete or add to the adopted NC Code.
2012 NC Building Code
1301.1.1 Criteria. (170613 Item B-3)

1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code*.

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

The effective date of this Rule is March 1, 2018.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
101.2 Scope. This code applies to residential and commercial buildings. **Exception:** Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2012 North Carolina Building Code. This exclusion shall apply to the entire building area.

The effective date of this Rule is March 1, 2018. The Statutory authority for Rule-making is G. S. 143-136; 143-138.
101.12 Energy conservation. (170613 Item B-5)

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

The effective date of this Rule is March 1, 2018.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
2017 (and 2014) NC Electrical Code
680.21(C)(2) Motors GFCI Protection. (170613 Item B-16)

680.21(C)(2) Motors GFCI Protection

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

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

The delayed effective date of this Rule is April 1, 2018 for the 2014 edition. The delayed effective date of this Rule is June 12, 2018 for the 2017 edition. The Statutory authority for Rule-making is G. S. 143-136; 143-138.
101.2 Scope. The provisions of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exceptions: If any of the following apply the building or structure is exempt from the provisions of this code:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress, and their accessory structures not more than three stories above grade plane in height, shall comply with the International Residential Code.

2. Farm buildings located outside of the building rules jurisdiction of any municipality.

Exception: All buildings used for sleeping purposes shall conform to the provisions of the technical codes.

2. Farm buildings not used for:
   a. Sleeping purposes; or
   b. Storage of hazardous materials in excess of those listed in Tables 307.1(1) and 307.1(2) within the building rules jurisdiction of any municipality.

3. The design construction, location, installation or operation of equipment for storing, handling and transporting liquefied petroleum gases for fuel purposes up to the outlet of the first stage pressure regulator, anhydrous ammonia or other liquid fertilizer.

4. The design construction, location, installation or operation of equipment or facilities of a public utility, as defined in N.C.G.S. 62-3, or electric or telephone membership corporation, including without limitation poles, towers and other structures supporting electric or communication lines from the distribution network up to the meter location.

   Note: All buildings owned and operated by a public utility or an electric or telephone membership corporation shall meet the provisions of this code.

5. The storage and handling of substances governed by the Hazardous Chemicals Right to Know Act in N.C.G.S. Chapter 95, Article 18.

SECTION 202 DEFINITIONS

FARM BUILDING. Any building not used for sleeping purposes that is not accessed by the general public and is used primarily for a farm purpose. Farm purposes includes structures or buildings for equipment, storage and processing of agricultural products or commodities such as: crops, fruits, vegetables, ornamental or flowering plants, dairy, timber, livestock, poultry and all other such forms of agricultural products by the specific farm on which the structure or building is located. Farm purposes do not include structures or buildings for uses such as education facilities, research facilities, or aircraft hangers.
1107.6.2.2.1 Type A units.
In Group R-2 occupancies containing 11 or more than 15 dwelling units or sleeping units, at least 5 percent but not less than one of the units shall be a Type A unit. For a site with more than 100 units, at least 2 percent of the number of units exceeding 100 shall be Type A units. All Group R-2 units on a site shall be considered to determine the total number of units and the required number of Type A units. Type A units shall be dispersed among the various classes of units. Bedrooms in monasteries and convents shall be counted as sleeping units for the purpose of determining the number of units. Where the sleeping units are grouped into suites, only one sleeping unit in each suite shall count towards the number of required Type A unit.

Exceptions:
1. The number of Type A units is permitted to be reduced in accordance with Section 1107.7.
2. Existing structures on a site shall not contribute to the total number of units on a site.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: The remainder is part of the 2018 Code adoption package.)
(Note: Also “more than 15” correlation with 2018 Existing Building Code adoption package, 806.1.8.)
1301.1.1 Criteria. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code*.

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

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
C101.2 Scope.
This code applies to commercial buildings and the buildings’ sites and associated systems and equipment.

Exceptions:
1. Energy expended in support of process energy applications does not invoke energy conservation code requirements or building thermal envelope requirements unless otherwise required in specific sections of this code.
2. Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2018 North Carolina Building Code. This exclusion shall apply to the entire building area.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
R403.3.3 Duct leakage (Perspective) and duct testing (Mandatory). Duct testing and duct leakage shall be verified by compliance with either Section 403.3.3.1 or 403.3.3.2. Duct testing shall be performed and reported by the permit holder, a NC licensed general contractor, a NC licensed HVAC contractor, a NC licensed Home Inspector, a registered design professional, a certified BPI Envelope Professional or a certified HERS rater. A single point depressurization, not temperature corrected, test is sufficient to comply with this provision, provided that the duct testing fan assembly(s) has been certified by the manufacturer to be capable of conducting tests in accordance with ASTM E1554-07.

The duct leakage information, including duct leakage test selected and result, tester name, date and contact information, shall be included on the certificate described in Section 401.3.

For the Test Criteria, the report shall be produced in the following manner: perform the HVAC system air leakage test and record the CFM25. Calculate the total square feet of Conditioned Floor Area (CFA) served by that system. Multiply CFM25 by 100, divide the result by the CFA and record the result. If the result is less than or equal to 5 CFM25/100SF for the “Total duct leakage” test or less than or equal to 4CFM25/100SF for the “Duct leakage to the outside” test, then the HVAC system air tightness is acceptable. Appendix 3C contains optional sample worksheets for duct testing for the permit holder’s use only.

Exceptions to testing requirements:

1. Duct systems or portions thereof inside the building thermal envelope shall not be required to be leak tested.
2. Installation of a partial system as part of replacement, renovation or addition does not require a duct leakage test.
3. Duct systems (complete) serving areas of 750 sq. ft. or less shall not need to be required to be leak tested.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: Also printed in the 2018 NC Residential Code N1103.3.3.)
(Note: The remainder is part of the 2018 Code adoption package.)
SECTION R406
ENERGY RATING INDEX COMPLIANCE ALTERNATIVE

R406.1 Scope. This section establishes criteria for compliance using an Energy Rating Index (ERI) analysis.

R406.2 Mandatory requirements.
Compliance with this section requires that the mandatory provisions identified in Sections R401.2 R401 through R404 labeled as “mandatory” and Section R403.5.3 be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or 402.1.3 of the 2009 International Energy Conservation Code 2012 NC 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 licensed design professional or certified HERS rater is required to perform the analysis if required by North Carolina licensure laws.

Exception: Supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-6. 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.

R406.5 Verification by approved agency.
Verification of compliance with Section R406 shall be performed by the licensed design professional or certified HERS rater and the compliance documentation shall be provided to the code official. The code official shall inspect according to the requirements of Section R406.6.2 completed by an approved third party.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: All other strikethroughs/underlines are part of the 2018 Code adoption package.)
(Note: certified HERS rater = RESNET Certified Home Energy Rater)
2018 NC Existing Building Code
101.12 Energy conservation. (170613 Item B-7)

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

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
CHAPTER 1 CHANGES

102.13 Exception to applicability.
The provisions of this code shall not apply to the following:

1. Occupancy of one- and two-family dwellings.

2. Farm buildings located outside the building rules jurisdiction of any municipality.
   Exception: All buildings used for sleeping purposes shall conform to the provisions of the technical codes.

2. Farm buildings not used for:
   a. Sleeping purposes, or
   b. Storage of hazardous materials in excess of those listed in Tables 5003.1(1) and 5003.1(2) within the building rules jurisdiction of any municipality.

3. The design, construction, location, installation or operation of equipment for storing, handling, and transporting liquefied petroleum gases for fuel purposes up to the first stage regulator, liquefied natural gases, and anhydrous ammonia or other liquid fertilizers.

4. The design, construction, location, installation or operation of equipment or facilities of a public utility, as defined in N.C.G.S 62-3, or an electric or telephone membership corporation, including without limitation poles, towers and other structures supporting electric or communication lines from the distribution network up to the meter location.
   Exception: All buildings owned and operated by a public utility or an electric or telephone membership corporation shall meet the provisions of the code.


6. Open burning pursuant to N.C.G.S. 106 - 940 through 106 - 950 under the jurisdiction of the North Carolina Department of Agriculture and Consumer Services.

CHAPTER 2 CHANGES

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

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: The remainder is part of the 2018 Code adoption package.)
901.1 Scope. The provisions of this chapter shall specify where fire protection systems are required and shall apply to the design, installation, inspection, operation, testing and maintenance of all fire protection systems.

901.1 Scope. The provisions of the International Building Code shall specify where fire protection systems are required. The provisions of the International Fire Code shall determine the design, installation, inspection, operation, testing and maintenance of all fire protection systems.

The effective date of this Rule for the 2012 NC Fire Prevention Code is December 1, 2017. The delayed effective date of this Rule for the 2018 NC Fire Prevention Code is January 1, 2019. The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: Also printed in 2012 and 2018 Building Code, Section 901.1.)
2018 NC Fire Prevention Code

903.4.1 Monitoring. (161213 Item B-12)

**903.4.1 Monitoring.** Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station, where approved by the fire code official, shall be an audible signal at a constantly attended location.

**Exceptions:**
1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.
3. A group R-2 building sprinklered in accordance with NFPA 13R where sprinklers are provided for porches, balconies, corridors and stairs that are open and attached and installed supervised in accordance with Section 903.4. At a minimum an approved audible alarm device shall be provided on every sprinklered R-2 building in accordance with Section 903.4.2 of the North Carolina Fire Code. No on site supervision is required at a constantly attended location.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: Also correlation with 2018 Building Code adoption package, 903.4.1.)
CHAPTER 1 CHANGES

105.6.45 Temporary membrane structures and tents (mandatory permit). An operational permit is required to operate an air-supported temporary membrane structure, or a temporary stage canopy having an area in excess of 400 square feet (37 m²), or a tent having an area in excess of 400 800 square feet (37 74 m²).

Exceptions:
1. Tents used exclusively for recreational camping purposes.
2. Tents open on all sides, which comply with all of the following:
   2.1. Individual tents having a maximum size of 200 1800 square feet (66 167 m²).
   2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 1800 square feet (66 167 m²) total.
   2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.
3. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

105.7.18 Temporary membrane structures and tents. A construction permit is required to erect an air-supported temporary membrane structure, or a temporary stage canopy having an area in excess of 400 square feet (37 m²), or a tent having an area in excess of 400 800 square feet (37 74 m²).

Exceptions:
1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.
3. Tents open on all sides, which comply with all of the following:
   3.1. Individual tents having a maximum size of 200 1800 square feet (66 167 m²).
   3.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 1800 square feet (66 167 m²) total.
   3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

CHAPTER 31 CHANGES

3103.2 Approval required. Tents and membrane structures having an area in excess of 400 square feet (37 m²) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

3103.2.1 Membrane Structures. Membrane structures having an area in excess of 400 square feet (37 m²)

3103.2.2 Tents. Tents having an area in excess of 800 square feet (74 m²).

Exceptions:
1. Tents used exclusively for recreational camping purposes.
2. Tents open on all sides without sidewalls, drops or other physical obstructions on 75 percent or more of the perimeter that comply with all of the following:
   2.1. Individual tents having a maximum size of 200 1800 square feet (66 167 m²).
   2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 200 1800 square feet (66 167 m²) total.
   2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.
3. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

3103.5 Use period. A temporary tent, air-supported, air-inflated or tensioned membrane structures shall not be erected for a period of more than 180 consecutive days within a 12-month period on a single premises.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: The remainder is part of the 2018 Code adoption package.)
3406.1 Required access.
New tire storage yards shall be provided with fire apparatus access roads in accordance with Section 503 and Section 3406.2. Existing tire storage yards shall be provided with fire apparatus access roads where required in Chapter 11 Section 3406.1.1.

3406.1.1 Existing tire storage yards. Existing tire storage yards in excess of 150,000 cubic feet shall be provided with fire apparatus access roads in accordance with Section 3406.1.1.1 and 3406.1.1.2.

3406.1.1.1 Access to piles. Access roadways shall be within 150 feet (45 720 mm) of any point in the storage yard where storage piles are located not less than 20 feet (6096 mm) from any other storage pile.

3406.1.1.2 Location within piles. Fire apparatus access roads shall be located within all pile clearances identified in Section 3405.4 and within all fire breaks required in Section 3405.5.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
SECTION 202 GENERAL DEFINITIONS

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

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
605.3 Water service pipe. Water service pipe shall conform to NSF 61 and shall conform to one of the standards listed in Table 605.3. Water service pipe or tubing, installed underground and outside of the structure, shall have a working pressure rating of not less than 160 psi (1100 kPa) at 73.4°F (23°C). Where the water pressure exceeds 160 psi (1100 kPa), piping material shall have a working pressure rating not less than the highest available pressure. Water service piping materials not third-party certified for water distribution shall terminate 5 feet (1524 mm) outside the building at or before the full-open valve located at the entrance to the structure. Ductile iron water service piping shall be cement mortar lined in accordance with AWWA C104.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
SECTION R202 DEFINITIONS
FARM BUILDING. Any building not used for sleeping purposes that is not accessed by the general public and is used primarily for a farm purpose. Farm purposes includes structures or buildings for equipment, storage and processing of agricultural products or commodities such as: crops, fruits, vegetables, ornamental or flowering plants, dairy, timber, livestock, poultry and all other such forms of agricultural products by the specific farm on which the structure or building is located. Farm purposes do not include structures or buildings for uses such as education facilities, research facilities, or aircraft hangers.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
SECTION N1106
ENERGY RATING INDEX COMPLIANCE ALTERNATIVE

N1106.1 Scope. This section establishes criteria for compliance using an Energy Rating Index (ERI)
analysis.

N1106.2 Mandatory requirements.
Compliance with this section requires that the mandatory provisions identified in Sections N1101.2 N1101 through N1104 labeled as “mandatory” and Section N1103.5.3 be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 1102.1.1 or 1102.1.3 of the 2009 International Energy Conservation Code 2012 NC 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 licensed design professional or certified HERS rater is required to perform the analysis if required by North Carolina licensure laws.

Exception: Supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-6. 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.

N1106.5 Verification by approved agency.
Verification of compliance with Section N1106 shall be performed by the licensed design professional or certified HERS rater and the compliance documentation shall be provided to the code official. The code official shall inspect according to the requirements of Section N1106.6.2 completed by an approved third party.

The delayed effective date of this Rule is January 1, 2019.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

(Note: All other strikethroughs/underlines are part of the 2018 Code adoption package.)
(Note: certified HERS rater = RESNET Certified Home Energy Rater)