

1 **NOTICE OF RULE MAKING PROCEEDINGS AND PUBLIC HEARING**

2
3 **NORTH CAROLINA BUILDING CODE COUNCIL**

4
5 **Notice of Rule-making Proceedings** *is hereby given by NC Building Code Council in accordance with*
6 *G.S. 150B-21.5(d).*

7
8 **Citation to Existing Rule Affected by this Rule-Making:** *North Carolina Mechanical, Residential, and*
9 *Fire Code amendments.*

10
11 **Authority for Rule-making:** *G.S. 143-136; 143-138.*

12
13 **Reason for Proposed Action:** *To incorporate changes in the NC State Building Codes as a result of*
14 *rulemaking petitions filed with the NC Building Code Council and to incorporate changes proposed by the*
15 *Council.*

16
17 **Public Hearing:** *Tuesday, March 10, 2020, 9:00AM, Washington Civic Center, 110 Gladden*
18 *Street, Washington, NC 27889, Pamlico Ballroom. Comments on both the proposed rule and any*
19 *fiscal impact will be accepted.*

20
21 **Comment Procedures:** *Written comments may be sent to Cliff Isaac, Secretary, NC Building Code*
22 *Council, NC Department of Insurance, 1202 Mail Service Center, Raleigh, NC 27699-1202. Comments on*
23 *both the proposed rule and any fiscal impact will be accepted. Comment period expires on April 17, 2020.*

24
25 **Link to Agency Notice:**

26 [http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=BCC_-](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=BCC_-_Hearing_Notice&user=Building_Code_Council&sub=BCC_Meeting)
27 [_Hearing_Notice&user=Building_Code_Council&sub=BCC_Meeting](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=BCC_-_Hearing_Notice&user=Building_Code_Council&sub=BCC_Meeting)

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29 **Statement of Subject Matter:**

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32 **1. Request by Tommy Rowland representing Mecklenburg County Code Enforcement to amend the**
33 **2018 NC Mechanical Code, Table 403.3.1.1.**

34
35 **TABLE 403.3.1.1**

36 **MINIMUM VENTILATION RATES**

37

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY #/1000 FT ^{2 a}	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R _p CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R _a CFM/FT ^{2 a}	EXHAUST AIRFLOW RATE CFM/FT ^{2 a}
Private dwellings, single and multiple				
Garages, common for multiple units ^b	—	—	—	0.75
Garages below dwelling units ^j	—	—	—	100cfm per car
Kitchens ^b	—	—	—	25/100 ^f
Living areas ^c	Based upon number of bedrooms. First bedroom, 2; each additional bedroom, 1	0.35 ACH but not less than 15 cfm/person	—	—
Toilet rooms and bathrooms ^g	—	—	—	25/50 ^f

1 j. If the tenants of the dwelling have exclusive use of the garage below, no exhaust is required.

2 (The remainder of the table remains unchanged)

3

4 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
5 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
6 2021).

7 **Reason Given** – The purpose of this amendment is to reduce risk of dwelling occupants to the effects of
8 hazardous fumes.

9 **Fiscal Statement** – This rule is anticipated to increase the cost of commercial construction by \$100 to \$200
10 per garage unit but only where the specific situation described in the amendment applies. This rule is not
11 expected to either have a substantial economic impact or increase local and state funds. A fiscal note has
12 not been prepared.

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14

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

16

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

19 (The remainder of the section remains unchanged.)

20

21 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
22 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
23 2021).

1 **Reason Given** – The purpose of this amendment is to provide proven protection to the public against
2 possible electrical shock at inground swimming pools.

3 **Fiscal Statement** – This rule is anticipated to increase the cost of inground swimming pools by less than
4 \$400. This rule is not expected to either have a substantial economic impact or increase local and state
5 funds. A fiscal note has not been prepared.

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8 **3. Request by Leon Meyers representing BuildSense Inc. to amend the 2018 NC Energy Conservation**
9 **Code, Sections C401.2 and R401.2.**

10
11 **C401.2 Application**

12
13 Commercial buildings shall comply with one of the following:

- 14 1. The requirements of ANSI/ASHRAE/IESNA 90.1.
- 15 2. The requirements of Sections C402 through C405. In addition, commercial buildings shall comply with
16 Section C406 and tenant spaces shall comply with Section C406.1.1.
- 17 3. The requirements of Sections C402.5, C403.2, C404, C405.2, C405.3, C405.5, C405.6 and C407. The
18 building energy cost shall be equal to or less than 85 percent of the standard reference design building.
- 19 4. ~~North Carolina specific~~ COMcheck keyed to the 2018 IECC or ASHRAE 90.1—~~2013 2016 COMcheck~~
20 shall be permitted to demonstrate compliance with this code.

21
22 **R401.2 Compliance.**

23 Projects shall comply with one of the following:

- 24 1. Sections R401 through R404.
- 25 2. Section R405 and the provisions of Sections R401 through R404 labeled “Mandatory.”
- 26 3. An energy rating index (ERI) approach in Section R406.
- 27 4. ~~North Carolina specific~~ REScheck keyed to the 2018 IECC shall be permitted to demonstrate compliance
28 with this code. Envelope requirements may not be traded off against the use of high efficiency heating or
29 cooling equipment. No tradeoff calculations are needed for required termite inspection and treatment gaps.

30
31 **Required Cost Benefit Analysis**

32 Costs of this proposal:

33 This proposal on its own has no direct cost associated to it, as it simply clarifies incorrect language in our
34 current code. However, in making the needed correction through this proposal, the NC Building Code
35 Council must select one of two available IECC versions to “key” the compatible REScheck and COMcheck
36 software programs to. The choices are the 2015 IECC, which is the minimum available and therefore on
37 has no additional cost, and the 2018 IECC, which has only three minor energy efficiency increases for

1 showerhead flow rates and lighting controls in the commercial code and only lowered vertical fenestration
2 U-factors in the residential code.

3 So, one of the two must be chosen when making this correction: the 2015 IECC which is the minimum, or
4 the 2018 IECC, which while there is a slight additional cost compared to the 2015 IECC, is the most recent
5 code standard supported by the U.S. Department of Energy's REScheck and COMcheck software
6 programs.

7 Benefits of this proposal:

8 Implementing this code change will protect those building and operating new homes or buildings from
9 incurring added costs by ensuring that architects, builders, contractors, code officials and others do not
10 initiate projects using an assumed North Carolina-specific REScheck or COMcheck on their projects,
11 which again, is not available in our base 2018 NC Energy Conservation Code. Pursuing an incorrect
12 version of REScheck or COMcheck could cost thousands of dollars for residential projects and tens of
13 thousands of dollars and possibly more for commercial projects through re-work in design, installation,
14 verification, equipment, inspections and much more. Code officials and general contractors alike would
15 experience costly re-work in those situations.

16 Regarding which code standard to "key" or reference to:

17 Keying to the 2015 IECC is not an added cost in of itself. In order to offer a pathway for REScheck or
18 COMcheck, either the 2015 IECC or the 2018 IECC must be selected. Selecting the 2015 IECC is simply
19 selecting the minimum code standard available to reference, and therefore, without any lower option
20 available, there is no added cost.

21 Keying to the 2018 IECC *would* incur a small additional cost per project compared to the 2015 IECC due to
22 just three minor added requirements for energy efficiency in the 2018 IECC. They include:

23 * For commercial code: DOE and industry reports indicate that there is very little difference in the energy
24 efficiency standards for the commercial 2018 IECC versus the 2015. The only notable changes include
25 improved showerhead flow rates to WaterSense levels and more detailed lighting control requirements.
26 Estimates suggest these costs range from 2 to 5% in additional cost for those direct energy efficiency
27 measures, not the cost of a complete commercial building project.

28 * For residential code: DOE and industry reports indicate that there is even less difference in energy
29 efficiency standards for the residential 2018 IECC versus the 2015. The only notable change is a lowering
30 of vertical fenestration U-factors in CZ 3 and 4 from 0.35 to 0.32 and CZ 5-8 from 0.32 to 0.30. Estimates
31 suggest this cost ranges from 0.6% - 1.1% in additional cost for the windows alone, not the cost of a
32 complete commercial building project.

33 In summary, the code change proposal in of itself is simply a correction with no added cost. If the Building
34 Code Council selects the 2015 IECC, they are selecting the code reference with no additional cost at all, as
35 it is the minimum requirement. If the Council selects the 2018 IECC, there will be very minimal added
36 costs to the residential and commercial codes in just three energy efficiency measures combined, but the

1 measures will result in beneficial energy savings and we believe the REScheck and COMcheck software
2 programs will be supported by the DOE through at least 2024.

3
4 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
5 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
6 2021).

7 **Reason Given** – The purpose of this amendment is to replace software references associated with the 2012
8 NC Energy Conservation Code with software references that comply with more current codes.

9 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase
10 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
11 funds. A fiscal note has not been prepared.

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14 **4. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC**
15 **Residential Building Code, Section R102.5 Appendices.**

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17 **R102.5 Appendices.** Provisions in the appendices shall not apply unless specifically referenced in the code
18 text adopting ordinance.

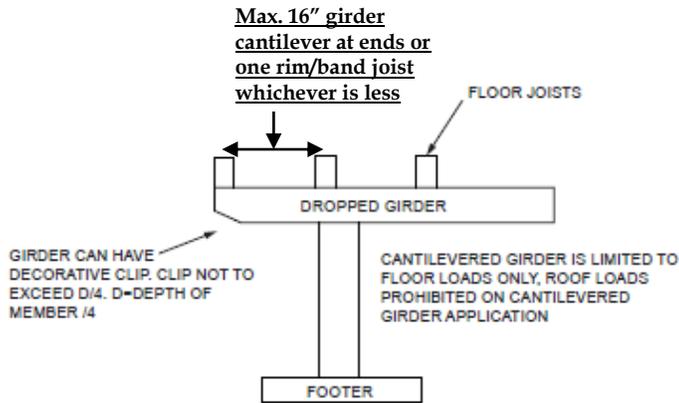
19
20 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
21 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
22 2021).

23 **Reason Given** – The purpose of this amendment is to clarify the applicability of appendices in the
24 document.

25 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase
26 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
27 funds. A fiscal note has not been prepared.

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1 **5. Request by David Smith, representing the Residential Ad-hoc Committee to amend the 2018 NC**
2 **Residential Building Code, Appendix M.**



For SI: 1 inch = 25.4 mm.

FIGURE AM105.1(4)
CANTILIEVERED DROPPED GIRDER

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6
7 **SECTION AM105**

8 **GIRDER SUPPORT AND SPAN**

9 **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).

16
17 **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 x 0.128 inch) nails minimum at 16 inches (406 mm) on center along each edge. Girders shall be permitted to cantilever at each end up to one fourth of the actual beam span. Splines of multispan beams shall be located at interior post locations.

22
23 **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).

24
25
26 **SECTION AM106**

1 **JOIST SPANS AND CANTILEVERS**

2 **AM106.1 Joist spans for ~~uncovered porches and decks~~ and cantilevers.** Joists spans shall be based upon
3 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
4 exterior decks may be cantilevered per Table R502.3.3(1). ~~Maximum allowable spans for wood deck joists,~~
5 ~~as shown in Figure AM106.1, shall be in accordance with Table AM106.1. Deck joists shall be permitted to~~
6 ~~cantilever not greater than one fourth of the actual, adjacent joist span.~~

7

8 **AM106.1.1 Lateral restraint at supports.** ~~Joist ends and bearing locations shall be provided~~
9 ~~with lateral restraint to prevent rotation. Where lateral restraint is provided by joist hangers or blocking~~
10 ~~between joists, their depth shall equal not less than 60 percent of the joist depth. Where lateral restraint is~~
11 ~~provided by rim joists, they shall be secured to the end of each joist with not less than (3) 10d (3 inch ×~~
12 ~~0.128 inch) nails or (3) No. 10 × 3 inch (76 mm) long wood screws.~~

13

14 **AM106.2 Roofed porches and decks.** Joists spans shall be in accordance with Table R502.3.1(2) with 40-
15 pounds per square foot live load and 10 pounds per square foot dead load. Cantilevered floor joists shall
16 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	6-5	5-8	4-2	3-10	3-6	3-1	2-9
	3 × 8 or 2 – 2 × 8	6-11	5-11	4-4	4-10	4-6	4-1	3-8
	3 × 10 or 2 – 2 × 10	8-4	7-5	6-9	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.

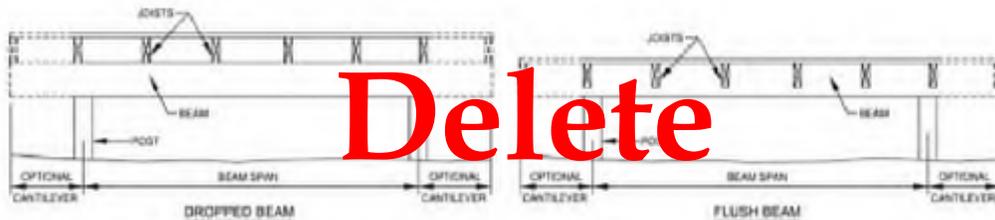


FIGURE AM105.2
TYPICAL DECK GIRDER SPANS

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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 x 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 x 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 x 10	16-2	14-0	11-5	14-6	14-0	11-5
	2 x 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 x 6	9-6	8-6	7-2	6-3	6-3	6-3
	2 x 8	12-6	11-1	9-5	9-5	9-5	9-1
	2 x 10	15-8	13-7	11-1	13-7	13-7	11-1
	2 x 12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, western cedars, ponderosa pine ^e , red pine ^e	2 x 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 x 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 x 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 x 12	17-5	15-1	12-4	16-5	15-1	12-4

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.

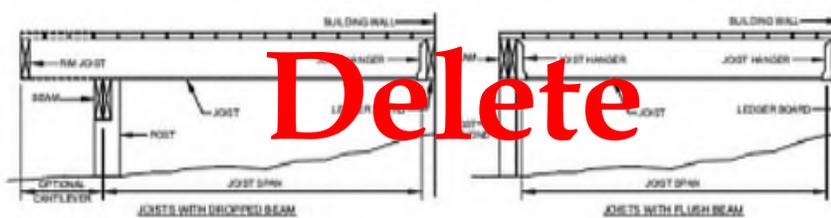


FIGURE AM106.1
TYPICAL DECK JOIST SPANS

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**TABLE R602.7(3)
GIRDER AND HEADER SPANS* 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 x 6	7-6	5-8	7-2	4-8	4-1	4-0	6-4	4-9
2-2 x 8	10-1	7-7	8-3	6-2	7-1	5-4	8-5	6-4
2-2 x 10	12-4	9-4	10-1	7-7	8-9	6-7	10-4	7-9
2-2 x 12	14-4	10-10	11-8	8-10	10-1	7-8	11-11	9-0

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.

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Motion/Second/Approved – The request was granted. The proposed effective date of this rule is September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

Reason Given – The purpose of this amendment is to simplify the method for determining joist spans and cantilevers for exterior decks.

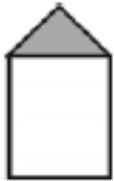
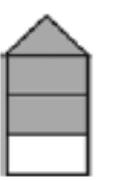
Fiscal Statement – This rule is anticipated to provide equivalent compliance with no net decrease/increase in cost. This rule is not expected to either have a substantial economic impact or increase local and state funds. A fiscal note has not been prepared.

6. Request by David Smith, representing the Residential Ad-hoc Committee to amend the 2018 Residential Code, Table R602.10.3.

Withdrawn by proponent.

7. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 Residential Code, Tables R602.3(5) & R602.7.5.

1 **TABLE R602.3(5)**
 2 **SIZE, HEIGHT AND SPACING OF WOOD STUDS^{a,d}**
 3

STUD SIZE (inches)	BEARING WALLS					NONBEARING WALLS	
	Laterally unsupported stud height ^a (feet)	Maximum spacing when supporting a roof-ceiling assembly or a habitable attic assembly, only (inches)	Maximum spacing when supporting one floor, plus a roof-ceiling assembly or a habitable attic assembly (inches)	Maximum spacing when supporting two floors, plus a roof-ceiling assembly or a habitable attic assembly (inches)	Maximum spacing when supporting one floor height ^a (inches)	Laterally unsupported stud height ^a (feet)	Maximum spacing (inches)
							
2 × 3 ^b	—	—	—	—	—	10	16
2 × 4	10	24 ^c	16 ^c	e d	24	14	24
3 × 4	10	24	24	16	24	14	24
2 × 5	10	24	24	—	24	16	24
2 × 6	10	24	24	16	24	20	24

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5 For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

6 a. Listed heights are distances between points of lateral support placed perpendicular to the plane of the
 7 wall. Bearing walls shall be sheathed on not less than one side or bridging shall be installed not greater than
 8 4 feet apart measured vertically from either end of the stud. Increases in unsupported height are permitted
 9 where in compliance with Exception 2 of Section R602.3.1 or designed in accordance with accepted
 10 engineering practice.

11 b. Shall not be used in exterior walls.

1 c. A habitable attic assembly supported by 2 × 4 studs is limited to a roof span of 32 feet. Where the roof
2 span exceeds 32 feet, the wall studs shall be increased to 2 × 6 or the studs shall be designed in accordance
3 with accepted engineering practice.

4 ~~d. One half of the studs interrupted by a wall opening shall be placed immediately outside the jack studs
5 on each side of the opening as king studs to resist wind loads. King studs shall extend full height from sole
6 plate to top plate of the wall.~~

7 e d. 2 x 4 studs at 12 inches maximum spacing are permitted in accordance with Table R4505(b).

8

9 **TABLE R602.7.5**

10 **MINIMUM NUMBER OF FULL HEIGHT KING STUDS AT EACH END OF HEADERS IN**
11 **EXTERIOR WALLS**

12

HEADER SPAN (feet)	MAXIMUM STUD SPACING (inches) [per Table R602.3(5)]	
	16	24
≤ 3'	1	1
4'	2	1
8'	3	2
12'	5	3
16'	6	4

13

<u>HEADER SPAN (feet)</u>	<u>MINIMUM NUMBER OF FULL HEIGHT STUDS (King)</u>
<u>Up to 3'</u>	<u>1</u>
<u>>3' to 6'</u>	<u>2</u>
<u>>6' to 9'</u>	<u>3</u>
<u>>9' to 12'</u>	<u>4</u>
<u>>12' to 15'</u>	<u>5</u>

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16 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
17 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
18 2021).

19 **Reason Given** – The purpose of this amendment is to simplify the method for determining king studs.

1 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
2 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
3 fiscal note has not been prepared.

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6 **8. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC**
7 **Residential Code, Section R302.1.1 Soffit Protection.**

8
9 Withdrawn by proponent.
10
11

12 **9. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC**
13 **Residential Code, Section R311.2 Egress door.**

14
15 **R311.2 Egress door.** Not less than one exterior egress door shall be provided for each *dwelling* unit. The
16 egress door shall be side-hinged, and shall provide a clear width of not less than 32 inches (813 mm) where
17 measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The clear
18 height of the door opening shall be not less than 78 inches (1981 mm) in height measured from the top of
19 the threshold to the bottom of the stop. Other exterior doors shall not be required to comply with these
20 minimum dimensions. ~~Egress doors shall be readily openable from inside the dwelling.~~ All interior egress
21 doors and a minimum of one exterior egress door shall be readily openable from the side from which egress
22 is to be made without the use of a key or special knowledge or effort.
23

24 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
25 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
26 2021).

27 **Reason Given** – The purpose of this amendment is to allow dead bolt locks on exterior doors other than the
28 required egress door.

29 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
30 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
31 fiscal note has not been prepared.
32
33

34 **10. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC**
35 **Residential Code, Section R311.7.5.3 Nosings and Section R312 Guards and Window Fall Protection.**
36

1 **R311.7.5.3 Nosings.** The radius of curvature at the nosing shall be not greater than 9/16 inch (14 mm). A
2 nosing projection not less than 3/4 inch (19 mm) and not more than 1 1/4 inches (32 mm) shall be provided
3 on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing
4 projection by more than 3/8 inch (9.5 mm) between two stories, including the nosing at the level of floors
5 and landings. Beveling of nosings shall not exceed 1/2 inch (12.7 mm).

6
7 **Exceptions:**

- 8 1. A nosing projection is not required where the tread depth is not less than 11 inches (279 mm).
9 ~~2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or~~
10 ~~less.~~

11
12 **R312.1.2 Height.** Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or
13 landings, shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent
14 walking surface or the line connecting the leading edges of the treads. Open risers are permitted, provided
15 that the opening between treads does not permit the passage of a 4-inch diameter (102 mm) sphere.

16
17 **Exceptions:**

- 18 1. *Guards* on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured
19 vertically from a line connecting the leading edges of the treads.
20 2. Where the top of the *guard* serves as a handrail on the open sides of stairs, the top of the *guard* shall be
21 not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line
22 connecting the leading edges of the treads.
23 3. Open risers that prevent the passage of a 4-inch (102 mm) diameter sphere.

24
25 **R312.1.3 Opening limitations.** Required *guards* shall not have openings from the walking surface to the
26 required *guard* height that allow passage of a sphere 4 inches (102 mm) in diameter.

27
28 **Exceptions:**

- 29 1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a *guard*,
30 shall not allow passage of a sphere 6 inches (153 mm) in diameter.
31 2. *Guards* on the open side of stairs shall not have openings that allow passage of a sphere 4 3/8 inches
32 (111 mm) in diameter.
33 3. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or
34 less.

35

1 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
2 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
3 2021).

4 **Reason Given** – The purpose of this amendment is to clarify when open risers are allowed.

5 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase
6 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
7 funds. A fiscal note has not been prepared.

8
9
10 **11. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC**
11 **Residential Code, Section R703.8.2.1 Support by steel angle.**

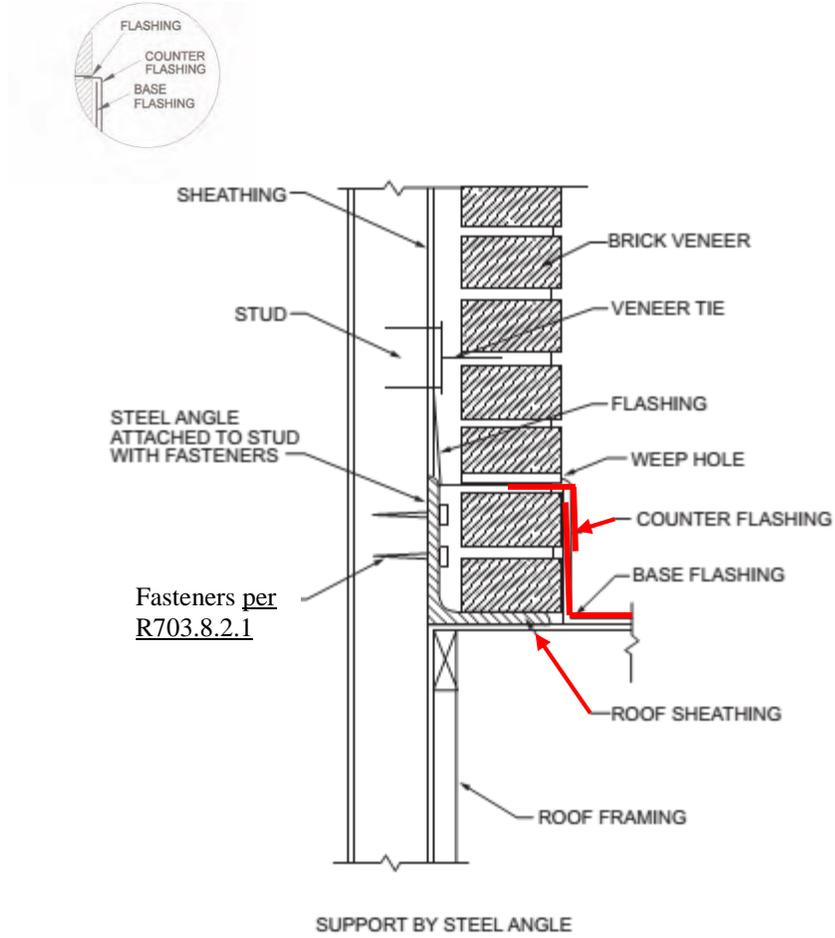
12
13 **R703.8.2.1 Support by steel angle.**

14 A minimum 6-inch by 4-inch by 5/16-inch (152 mm by 102 mm by 8 mm) steel angle, with the long leg
15 placed vertically, shall be anchored to double 2-inch by 4-inch (51 mm by 102 mm) wood studs at a
16 maximum on-center spacing of 16 inches (406 mm). Anchorage of the steel angle at every double stud
17 spacing shall be a minimum of not less than two 7/16-inch diameter (11 mm) by 4-inch (102 mm) lag
18 screws for wood construction at every double stud or shall be a minimum of two 7/16-inch diameter (11.1
19 mm) by 4 inches (102 mm) lag screws into solid double blocking with each pair of lag screws spaced at
20 horizontal intervals not to exceed 16 inches (406 mm). The steel angle shall have a minimum clearance to
21 underlying construction of 1/16 inch (1.6 mm). ~~Not less than~~ A minimum of two-thirds the width of the
22 masonry veneer thickness shall bear on the steel angle. Flashing and weep holes shall be located in the
23 masonry veneer in accordance with Figure R703.8.2.1. The maximum height of masonry veneer above the
24 steel angle support shall be 12 feet 8 inches (3861 mm). The airspace separating the masonry veneer from
25 the wood backing shall be in accordance with Sections R703.8.4 and R703.8.4.2. The method of support
26 for the masonry veneer on ~~wood construction-steel angle~~ shall be constructed in accordance with Figure
27 R703.8.2.1.

28
29 The maximum slope of the roof construction without stops shall be 7:12. Roof construction with slopes
30 greater than 7:12 but not more than 12:12 shall have stops of a minimum 3-inch by 3-inch by 1/4-inch (76
31 mm by 76 mm by 6.4 mm) steel plate welded to the angle at 24 inches (610 mm) on center along the angle
32 or as approved by the building official.

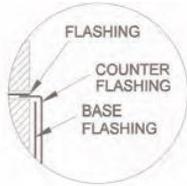
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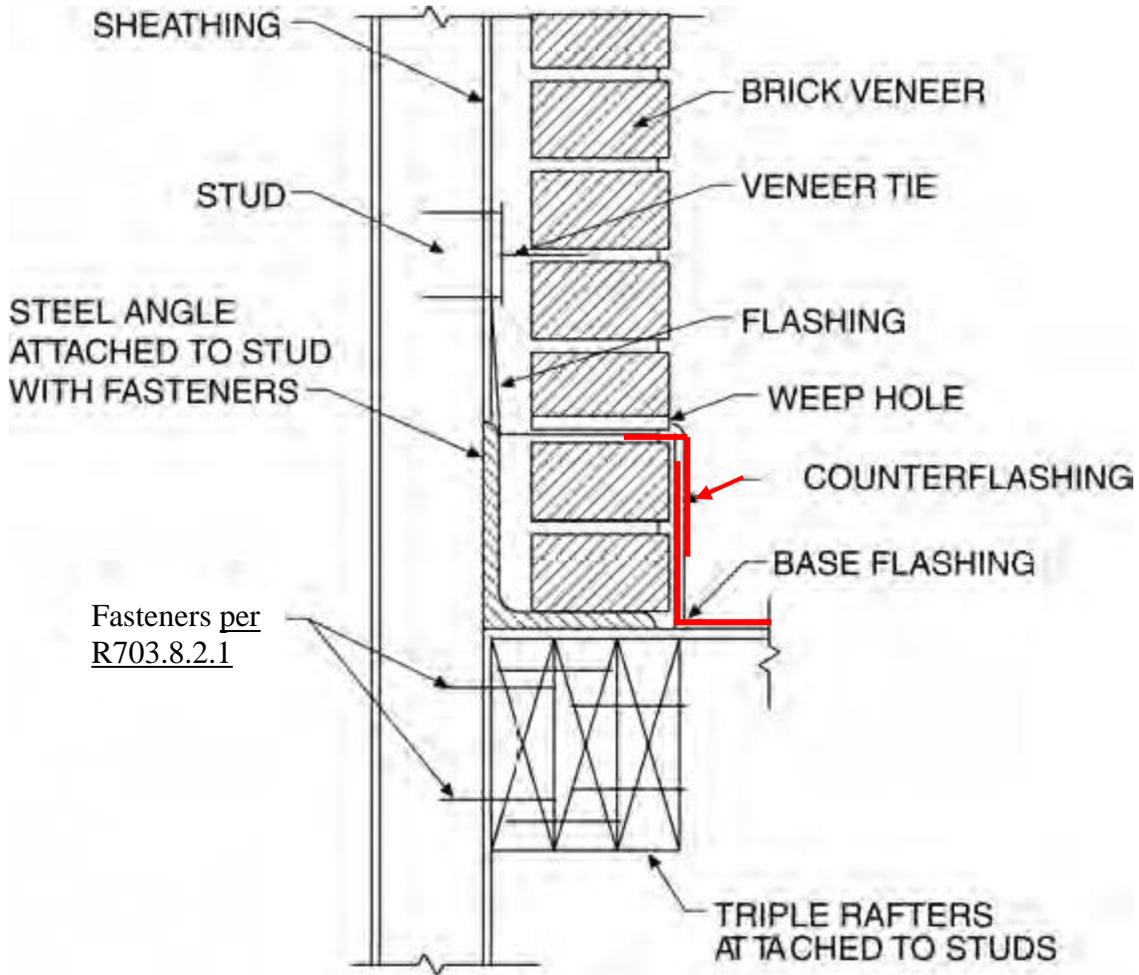


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FIGURE R703.8.2.1
EXTERIOR MASONRY VENEER SUPPORT BY STEEL ANGLES



1



SUPPORT BY ROOF MEMBERS

2

3

4

FIGURE R703.8.2.2

5

EXTERIOR MASONRY VENEER SUPPORT BY ROOF MEMBER

6

7

Motion/Second/Approved – The request was granted. The proposed effective date of this rule is

8

September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,

9

2021).

10

Reason Given – The purpose of this amendment is to clarify requirements by reverting to language used in

11

the 2012 code edition.

1 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease/increase
2 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
3 funds. A fiscal note has not been prepared.

4
5
6 **12. Request by David Smith representing the Residential Ad-hoc Committee to amend the 2018 NC
7 Residential Code, Section R311.7.4 Walkline and R311.7.5.2.1 Winder Treads.**

8
9 **R311.7.4** Walkline. ~~Deleted~~ The walkline across winder treads shall be concentric to the curved direction
10 of travel through the turn and located 12 inches (305 mm) from the side where the winders are narrower.
11 The 12 inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the
12 walking surface of the winder. If winders are adjacent within the flight, the point of the widest clear stair
13 width of the adjacent winders shall be used.

14
15 **R311.7.5.2.1** Winder treads. Winder treads shall have a minimum tread depth of ~~not less than~~ 9 inches
16 (229 mm) measured ~~between the vertical planes of the foremost projection of adjacent treads at the~~
17 ~~intersection with the walkline~~ as above a point 12 inches (305 mm) from the side where the treads are
18 narrower. Winder treads shall have a minimum tread depth of ~~not less than~~ 4 inches (102 mm) at any point
19 ~~within the clear width of the stair~~. Within any flight of stairs, the ~~largest~~ greatest winder tread depth at the
20 12 inch (305 mm) walkline shall not exceed the smallest ~~winder tread~~ by more than 3/8 inch (9.5 mm).

21
22 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
23 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
24 2021).

25 **Reason Given** – The purpose of this amendment is to describe “walkline” and to clarify the construction of
26 winder treads by reverting to code language used in the 2012 code edition.

27 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease/increase
28 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
29 funds. A fiscal note has not been prepared.

30
31
32 **13. Request from Keith Rogers representing the Building Code Council Plumbing Standing
33 Committee to amend the 2018 NC Building Code, Section 2902.6.**

34
35 **[P] 2902.6 Small occupancies.** Drinking fountains shall not be required for an occupant load of ~~45~~ 30 or
36 fewer.

37

1 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
2 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
3 2021).

4 **Reason Given** – The purpose of this amendment is to meet a legislative request.

5 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
6 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
7 fiscal note has not been prepared.

8
9
10 **14. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
11 **Committee to amend the 2018 NC Plumbing Code, Section 410.2.**

12
13 **410.2 Small occupancies.** ~~Deleted.~~ Drinking fountains shall not be required for an occupant load of 30 or
14 fewer.

15
16 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
17 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
18 2021).

19 **Reason Given** – The purpose of this amendment is to meet a legislative request.

20 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
21 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
22 fiscal note has not been prepared.

23
24
25 **15. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
26 **Committee to amend the 2018 NC Building Code, Section 2902.2, Exception 2.**

27
28 2. Separate facilities shall not be required in business occupancies with a total occupant load, including
29 both employees and customers, of 30 or fewer. Separate facilities shall not be required in all other
30 structures or tenant spaces with a total occupant load, including employees and customers, of 25 or fewer.

31
32 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
33 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
34 2021).

35 **Reason Given** – The purpose of this amendment is to meet a legislative request.

1 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
2 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
3 fiscal note has not been prepared.

4
5
6 **16. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
7 **Committee to amend the 2018 NC Plumbing Code, Section 403.2, Exception 2.**

8
9 2. Separate facilities shall not be required in business occupancies with a total occupant load, including
10 both employees and customers, of 30 or fewer. Separate facilities shall not be required in all other
11 structures or tenant spaces with a total occupant load, including employees and customers, of 25 or fewer.

12
13 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
14 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
15 2021).

16 **Reason Given** – The purpose of this amendment is to meet a legislative request.

17 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
18 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
19 fiscal note has not been prepared.

20
21
22 **17. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
23 **Committee to amend the 2018 NC Building Code, Footnotes to Table 2902.1.**

24
25 **o.** For business and mercantile occupancies with an occupant load of ~~25~~ 30 or fewer, service sinks shall not
26 be required.

27
28 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
29 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
30 2021).

31 **Reason Given** – The purpose of this amendment is to meet a legislative request.

32 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
33 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
34 fiscal note has not been prepared.

35
36

1 **18. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
2 **Committee to amend the NC Plumbing Code footnotes to Table 403.1.**

3
4 o. For business and mercantile occupancies with an occupant load ~~25~~ 30 or fewer, service sinks shall not be
5 required.

6
7 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
8 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
9 2021).

10 **Reason Given** – The purpose of this amendment is to meet a legislative request.

11 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
12 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
13 fiscal note has not been prepared.

14
15
16 **19. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
17 **Committee to amend the 2018 NC Building Code, Table 2902.1.**

18

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (Urinals SEE SECTION 419.2 OF THE IPC)
2	Business	B	(no changes to this section)	1 per 25 <u>30</u> for the first 50 <u>30</u> and 1 per 50 for the remainder exceeding 50 <u>30</u>

19 (The remainder of the table is unchanged.)

20
21 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
22 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
23 2021).

24 **Reason Given** – The purpose of this amendment is to meet a legislative request.

25 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
26 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
27 fiscal note has not been prepared.

28
29
30 **20. Request from Keith Rogers representing the Building Code Council Mechanical Standing**
31 **Committee to amend the 2018 NC Plumbing Code, Table 403.1.**

32

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (Urinals SEE SECTION 419.2 OF THE IPC)
2	Business	B	(no changes to this section)	1 per 25 <u>30</u> for the first 50 <u>30</u> and 1 per 50 for the remainder exceeding 50 <u>30</u>

1 (The remainder of the table is unchanged.)

2

3 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is
4 September 1, 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1,
5 2021).

6 **Reason Given** – The purpose of this amendment is to meet a legislative request.

7 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with a net decrease in cost.
8 This rule is not expected to either have a substantial economic impact or increase local and state funds. A
9 fiscal note has not been prepared.

10

11

12 **21. Request by Tim Henshaw representing the N.C. Fire Code Revision Committee to amend the**
13 **2018 NC Fire Code, Section 1031.**

14

15 **Section 1031.10 Fire Escape Stairways.**

16 All fire escape *stairways* and *ladders* shall be kept clear and unobstructed at all times and shall be
17 maintained in good working order. All fire escape *stairways* that need to be replaced or repaired shall
18 comply with the requirements of the *International Existing Building Code*.

19 **Section 1031.10.1 Examination.**

20 Fire escape *stairways*, balconies, and *ladders* shall be examined for structural adequacy and safety in
21 accordance with Section 1031.10 by a *registered design professional* every 5 years, or as required by the
22 fire code official.

23 **Section 1031.10.2 Examination Report.**

24 Records of inspections, testing and maintenance shall be maintained in accordance with Section 107.3.

25 **Section 1031.10.3 Marking.**

26 The open space under fire escape *stairways* or *ladders* shall not be used for any purpose. *Approved* signs
27 or other *approved* markings that include the words FIRE ESCAPE – KEEP CLEAR shall be provided to
28 prohibit the obstruction thereof.

29

30 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is June 1,
31 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

32 **Reason Given** – The purpose of this amendment is to provide provisions for maintenance of fire escapes.

1 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase
2 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
3 funds. A fiscal note has not been prepared.

4
5 **22 Request by Tim Henshaw representing the N.C. Fire Code Revision Committee to amend the**
6 **2018 Existing Building Code, Sections 405 and 805.3.1.2.**

7
8 **Section 405.6 Marking.**

9 The open space under fire escape stairways shall not be used for any purpose. Approved signs or other
10 approved markings that include the words FIRE ESCAPE – KEEP CLEAR shall be provided to prohibit
11 the obstruction thereof.

12
13 **Section 805.3.1.2.4 Marking.**

14 The open space under fire escape stairways shall not be used for any purpose. Approved signs or other
15 approved markings that include the words FIRE ESCAPE – KEEP CLEAR shall be provided to prohibit
16 the obstruction thereof.

17
18 **Motion/Second/Approved** – The request was granted. The proposed effective date of this rule is June 1,
19 2020 (earliest through RRC), unless the BCC assigns a delayed effective date (January 1, 2021).

20 **Reason Given** – The purpose of this amendment is to provide provisions for maintenance of fire escapes.

21 **Fiscal Statement** – This rule is anticipated to provide equivalent compliance with no net decrease/increase
22 in cost. This rule is not expected to either have a substantial economic impact or increase local and state
23 funds. A fiscal note has not been prepared.

24
25 **NOTICE:**

26 **Appeals and Interpretations** *of the North Carolina State Building Codes are published online at the*
27 *following link.*

28 [http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Interpretations&user=C](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Interpretations&user=Code_Enforcement_Resources)
29 [ode_Enforcement_Resources](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Interpretations&user=Code_Enforcement_Resources)

30
31
32 **NOTICE:**

33 **Objections and Legislative Review** *requests may be made to the NC Office of Administrative Hearings in*
34 *accordance with G.S. 150B-21.3(b2) after Rules are adopted by the Building Code Council.*

35 <http://www.ncoah.com/rules/>
36
37