2009 NC Administrative Code
107.3 Approval required. (090915 Item B-9)

107.3 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the code enforcement official. The code enforcement official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or shall notify the permit holder or an agent of the permit holder that the work fails to comply with the technical codes. The code enforcement official shall identify code violations and when requested shall identify the specific sections of the technical codes. Any work that does not comply shall be corrected and shall not be covered or concealed until authorized by the code enforcement official.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
Sections 202, 304.1, 305.1 Cooperative Innovative High School Program. (090609 Item B-3)

(Section 202. Add the following definition)
Cooperative Innovative High School Program. A program to supplement the required curriculum for high school students that may require attendance at a college, community college or university.

(Section 304.1. Add the following to the list of Business Group B occupancies)
Education occupancies for high school students participating in Cooperative Innovative High School Programs taught at colleges, community colleges or universities.

305.1 Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. Religious educational rooms and religious auditoriums, which are accessory to places of religious worship in accordance with Section 508.3.1 and have occupant loads of less than 100, shall be classified as A-3 occupancies. Education occupancies for high school students participating in Cooperative Innovative High School Programs taught at colleges, community colleges or universities shall be classified as Group B occupancies.

The effective date of this Rule is June 1, 2010.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
202 Definitions, 422 Temporary Overflow Shelters. (080610 Item B1)

202 Definitions.
Temporary overflow shelter. A shelter that provides temporary overflow accommodations from an approved homeless shelter in accordance with Section 422.

422.1 Temporary overflow shelters. Subject to approval of the Building and Fire Officials temporary overflow shelters shall be permitted in churches and other similar A-3 occupancies, and Group R fire protection systems may be omitted.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

Duplicate wording in the 2009 NC Fire Code
202 Definitions, 316 Temporary Overflow Shelters. (080610 Item B1)

202 Definitions.
Temporary overflow shelter. A shelter that provides temporary overflow accommodations from an approved homeless shelter in accordance with Section 422.

316.1 Temporary overflow shelters. Subject to approval of the Building and Fire Officials temporary overflow shelters shall be permitted in churches and other similar A-3 occupancies, and Group R fire protection systems may be omitted.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
704.15 Soffit in Group R. (071211 Item B3A)

704.15 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 either non-combustible soffit material, fire retardant treated soffit material, vinyl soffit installed over ¾ inch wood sheathing or 5/8 inch gypsum board, or aluminum soffit installed over ¾ inch wood sheathing or 5/8 inch gypsum board. Venting requirements shall apply to both soffit and underlayments and shall be per section 1203.2 of the NCSBC.

1405.13.2 Flame Spread. Vinyl Siding and vinyl soffit materials when used in Group R buildings shall have a Flame Spread Index of 25 or less as tested in accordance with ASTM E-84.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
TABLE 715.4 Fire Door and Fire Shutter Fire Protection Ratings. (101214 Item B-8)

TABLE 715.4 Fire Door and Fire Shutter Fire Protection Ratings

(add footnote "c" in Table, to "Type of Assembly, Fire partitions, corridor walls)

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

The delayed effective date of this Rule is September 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
1009.11 Stairway to roof. (090310 Item B-1)

1009.11 Stairway to roof. In buildings located four or more stories in height above grade plane, one stairway shall extend to the roof surface, unless the roof has a slope steeper than four units vertical in 12 units horizontal (33 percent slope). In buildings without an occupied roof, access to the roof from the top story shall be permitted to be by an alternating tread device or a ships ladder meeting the following, a pitch of 60 to 75 degrees, width of 30" to the outside of the handrails, tread depth of 5 3/16", riser height of 9 ½" to 12", 1 ¼" pipe handrail. The height between the top landing of the stair and the roof shall not exceed 20'-0".

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.
This amendment will also be printed in the Fire Code, Section 1009.12 for convenience.

2009 NC Building Code
1104.3.2 Press boxes. (080610 Item B4)

1104.3.2 Press boxes: ~~An accessible route shall not be required to a press box unless the press box is part of a privately owned facility of three or more stories in height and a minimum of one of those stories has an area of 3,000 gross square feet or more~~.

1104.3.2 Press boxes. Press boxes in assembly areas shall be on an accessible route.
Exceptions:
1. An accessible route shall not be required to press boxes in bleachers that have points of entry at only one level, provided that the aggregate area of all press boxes is 500 square feet (46 m2) maximum.
2. An accessible route shall not be required to free-standing press boxes that are elevated above grade 12 feet (3660 mm) minimum provided that the aggregate area of all press boxes is 500 square feet (46 m2) maximum.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
3103 Temporary Structures. (090915 Item B-1)

3103.1 General. The provisions of this section apply to structures erected for a period of less than 180 days. ~~Tents and other membrane structures erected for a period of less than 180 days shall comply with the International Fire Code.~~ Those erected for a longer period of time shall comply with ~~the~~ all applicable sections of ~~this~~ the Building Code.

Exception: Tents, canopies and membrane structures erected for a period of less than 180 days shall comply with Chapter 24 of the International Fire Code.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Building Code
3109.5 Entrapment avoidance. (080909 Item B9B)

3109.5 Entrapment avoidance. Suction outlets shall be designed ~~to produce circulation throughout the pool or spa. Single outlet systems, such as automatic vacuum cleaner systems, or other such multiple suction outlets whether isolated by valves or otherwise shall be protected against user entrapment~~ and installed in accordance with ANSI/APSP-7.

(Sections 3109.5.1 through 3109.5.4 deleted without substitution.)

(Add the following Standard to Chapter 35.)
ANSI/APSP-7-06 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins.

The effective date of this Rule is June 1, 2009.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fire Code
Section 202, Table 405.2 Cooperative Innovative High School Program. (090609 Item B-3)

(Section 202. Add the following definition)
Cooperative Innovative High School Program. A program to supplement the required curriculum for high school students that may require attendance at a college, community college or university.

(Section 202. Add the following to "Occupancy Classification, Business Group B")
Education occupancies for high school students participating in Cooperative Innovative High School Programs taught at colleges, community colleges or universities.

TABLE 405.2
FIRE AND EVACUATION DRILL
FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group B[c]	Annually	Employees
Group B[e]	Quarterly	All occupants
Group E	Monthly	All occupants
Group I	Quarterly on each shift	Employees
Group R-1	Quarterly on each shift	Employees
Group R-2d	Four annually	All occupants
Group R-4	Quarterly on each shift	Employees
High-rise buildings	Annually	Employees

a. The frequency shall be allowed to be modified in accordance with Section 408.3.2.
b. Fire and evacuation drills in residential care assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.
c. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
d. Applicable to Group R-2 college and university buildings in accordance with Section 408.3.
e. Cooperative Innovative High School Programs taught at colleges, community colleges or universities when required to have a fire alarm system in accordance with Section 907.2.2 or as required in accordance with Section 404.2.

The effective date of this Rule is June 1, 2010.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

Technical Change Response June 1, 2010.

2009 NC Fire/Building Code
903.2.1.2 Group A-2 sprinklerss. (080909 Item B14)

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:
1. The fire area exceeds 5,000 square feet (464.5 m2);
2. The fire area has an occupant load of ~~100~~ 300 or more, except 100 for nightclubs; or
3. The fire area is located on a floor other than the level of exit discharge.

SECTION 202 DEFINITIONS
NIGHTCLUB. See Section 902.1

SECTION 902 DEFINITIONS
NIGHTCLUB. An establishment meeting all of the following:
1. Has a posted capacity or occupant load that exceeds one occupant per 15 square feet net;
2. Provides live or recorded entertainment by performing artists; and
3. Serves alcoholic beverages.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fire/Building Code
903.2.7 Group R. (090310 Item B-4)

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

Exception: An automatic sprinkler system is not required in ~~Group R-3 and R-4 adult and child day care facilities~~ new adult and child care facilities in existing Groups R-3 and R-4 occupancies.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fire Code
3308.11 Retail display and sale. Fireworks. (090609 Item B-8)

3308.11 Retail display and sale. Fireworks ~~displayed for retail sale shall not be made readily accessible to the public~~ allowed by NC General Statute 14-414 shall be permitted to be sold, used or possessed without a permit. A minimum of one pressurized-water portable fire extinguisher complying with Section 906 shall be located not more than 15 feet (4572 mm) and not less than 10 feet (3048 mm) from the hazard. "No Smoking" signs complying with Section 310 shall be conspicuously posted in areas where fireworks are stored or displayed for retail sale.

The effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fire Code
Section 3301.2.4 Financial responsibility. (091208 Item B-7)

Section 3301.2.4 Financial responsibility. Before a permit is issued, as required by Section 3301.2, the applicant shall file with the jurisdiction a corporate surety bond in the principal sum of $~~100,000~~ 500,000 or a public liability insurance policy for the same amount.

Section 3302 DEFINITIONS

DISPLAY OPERATOR. An individual who exhibits, uses, handles, manufactures, or discharges pyrotechnics at a concert or public exhibition in this State and possesses a Display Operator's Permit issued by the Office of State Fire Marshal.

DISPLAY OPERATOR'S PERMIT. A permit issued by the Office of State Fire Marshal to an individual in accordance with North Carolina General Statutes, Chapter 58, Article 82A.

3308.2 Permit application. (*Add the following to the end of the section).* Prior to issuing any fireworks permits regulated by this code, the fire code official shall verify that permission has been granted to conduct a fireworks display by the board of county commissioners in accordance with NC G.S. 14-410.

3308.3 Approved fireworks displays. Approved displays shall include only the approved Division 1.1G, 1.3G, 1.4G and 1.4S fireworks. Approved Division 1.1G, 1.3G and 1.4G displays shall be handled by a display operator possessing a Display Operator's Permit issued by the Office of State Fire Marshal. Prior to granting approval to any fireworks display, the fire code official shall verify that the display operator and the display operator's assistants are properly permitted in accordance with the NC Fireworks Display Operator's rules regulated by the Office of State Fire Marshal.

The effective date of this Rule is September 1, 2010.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fire Code
3405.5.1 Corridor installations. (091208 Item B-5)

3405.5.1 Corridor installations. Where wall-mounted dispensers containing alcohol-based hand rubs are installed in *corridors*, they shall be in accordance with all of the following:
1. ~~Aerosol containers shall not be allowed in corridors.~~ Level 2 and Level 3 aerosol containers shall not be allowed in *corridors*.
2. The maximum capacity of each Class I or II liquids dispenser shall be 41 ounces (1.21 L) and the maximum capacity of each Level 1 aerosol dispenser shall be 18 ounces (0.51 kg).
3. The maximum quantity allowed in a *corridor* within a *control area* shall be 10 gallons (37.85 L) of Class I or II liquids or 1135 ounces (32.2 kg) of Level 1 aerosols, or a combination of Class I or II liquids and Level 1 aerosols not to exceed, in total, the equivalent of 10 gallons (37.85 L) or 1135 ounces (32.2 kg) such that the sum of the ratios of the liquid and aerosol quantities divided by the allowable quantity of liquids and aerosols, respectively, shall not exceed one.
4. The minimum *corridor* width shall be 72 inches (1829 mm).
5. Projections into a *corridor* shall be in accordance with Section 1003.3.3.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fuel Gas Code
310.2 CSST Bonding. (090310 Item B-2)

310.2 CSST Bonding. CSST Gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bonding jumper shall not be smaller than 6 AWG copper wire or equivalent.

The effective date of this Rule is December 1, 2009.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Fuel Gas Code
406.7 Purging of gas lines. (090915 Item B-6)

406.7 Purging. Purging of 2 ½ inch nominal pipe size or larger ~~piping~~ shall comply with Sections 406.7.1 through 406.7.4.

406.7.1 Removal from service. Where gas piping is to be opened for servicing, addition, or modification, the section to be worked on shall be turned off from the gas supply at the nearest convenient point, and the line pressure vented to the outdoors~~., or to ventilated areas of sufficient size to prevent accumulation of flammable mixtures.~~ The remaining gas in this section of pipe shall be displaced with an inert gas as required by Table 406.7.1.

Exception: If the line pressure cannot be vented to the outdoors; the building and all effected spaces shall be evacuated of personnel not involved with purging the gas lines, quantities of flammable gas shall not exceed 25% of the lower explosive limit *(1.0% fuel / air mixture for natural gas or 0.6% fuel / air mixture for LP gas)* as measured by a combustible gas detector, all ignition sources shall be eliminated, and adequate ventilation to prevent accumulation of flammable gases shall be provided.

TABLE 406.7.1
***SIZE AND* LENGTH OF PIPING REQUIRING PURGING WITH INERT GAS FOR SERVICING OR MODIFICATION**

NOMINAL PIPE SIZE (Inches)	LENGTH OF PIPING REQUIRING PURGING
$2^1/_2$	> 50 feet
3	> 30 feet
4	> 15 feet
6	> 10 feet
8 or larger	Any length

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

406.7.2 Placing in operation. Where piping full of air is placed in operation, the air in the piping shall be displaced with fuel gas, except where such piping is required by Table 406.7.2 to be purged with an inert gas prior to introduction of fuel gas. The air can be safely displaced with fuel gas provided that a moderately rapid and continuous flow of fuel gas is introduced at one end of the line and air is vented out at the other end. The fuel gas flow shall be continued without interruption until the vented gas is free of air. The point of discharge shall not be left unattended during purging. After purging, the vent shall then be closed. Where required by Table 406.7.2, the air in the piping shall first be displaced with an inert gas, and the inert gas shall then be displaced with fuel gas.

TABLE 406.7.2
***SIZE AND* LENGTH OF PIPING REQUIRING PURGING WITH INERT GAS BEFORE PLACING IN OPERATION**

NOMINAL PIPE SIZE (Inches)	LENGTH OF PIPING REQUIRING PURGING
3	> 30 feet
4	> 15 feet
6	> 10 feet
8 or larger	Any length

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

406.7.3 Discharge of purged gases. The open end of piping systems being purged shall not discharge into confined spaces or areas where ~~quantities of flammable gas can exceed 25% of the lower explosive limit as measured by a combustible gas detector.~~ there are sources of ignition unless precautions are taken to perform this operation in a safe manner. ~~by ventilation of the space, control of purging rate and elimination of hazardous conditions~~ All potential sources of ignition shall be identified and eliminated or controlled. Precautions shall be taken to maintain the concentration of the flammable gas below 25% of the lower explosive limits (*1.0% fuel / air mixture for natural gas or 0.6% fuel / air mixture for LP gas) such as adequate ventilation and control of purging rate.* ~~*and other measures as appropriate for the elimination of all hazardous conditions.*~~ *The point of discharge shall not be left unattended during purging.*

406.7.4 Placing appliances and equipment in operation. After the piping system has been placed in operation, all appliances and equipment shall be purged and then placed in operation, as necessary.

406.7.5 Personnel Training. Personnel performing purging operation shall be trained to the hazards associated with purging and shall not rely on odor when monitoring the concentration of combustible gas.

The effective date of this Rule is December 1, 2010.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Mechanical Code
504.2 Exhaust penetrations. (071211 Item B2)

504.2 Exhaust penetrations. Where a clothes dryer exhaust duct penetrates a wall or ceiling membrane, the annular space shall be sealed with noncombustible material, approved fire caulking, or a noncombustible dryer exhaust duct wall receptacle. Ducts that exhaust clothes dryers shall not penetrate or be located within any fireblocking, draftstopping or any wall, floor/ceiling or other assembly required by the International Building Code to be fire-resistance rated, unless such duct is constructed of galvanized steel or aluminum of the thickness specified in Section 603.4 and the fire-resistance rating is maintained in accordance with the International Building Code. Fire dampers, combination fire/smoke dampers and any similar devices that will obstruct the exhaust flow, shall be prohibited in clothes dryer exhaust ducts.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
301.3 Connections to the sanitary drainage system. (080311 Item B6)

301.3 Connections to the sanitary drainage system. All plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent the indirect waste systems required by Chapter 8. All drain, waste and vent piping associated with gray water or rain water recycling systems shall be installed in full compliance with this code.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
417.3 Shower waste outlet. (091208 Item B-3)

417.3 Shower waste outlet.
(no change to Section)
Exception: Retaining pre-existing 1 ½ inch in diameter waste outlets shall be permitted when removing an existing bathtub and installing in its place a shower.

(Table 709.1 shall be correspondingly amended to reduce the minimum size of trap for a shower from 2 inches to 1 ½ inches.)

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
608.8 Identification of nonpotable water. (090915 Item B-2)

608.8 Identification of nonpotable water. In ~~all~~ buildings where ~~two or more water distribution systems, one potable water and the other~~ nonpotable water systems are installed, ~~each system~~ the piping conveying the nonpotable water shall be identified either by color marking or metal tags in accordance with Sections 608.8.1 through 608.8.3. All nonpotable water outlets such as hose connections, open ended pipes, and faucets shall be identified at the point of use for each outlet with the words, "Nonpotable – not safe for drinking." The words shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inches in height and color in contrast with the background on which they are applied.

608.8.1 Information. Pipe identification shall include the contents of the piping system and an arrow indicating the direction of flow. Hazardous piping systems shall also contain information addressing the nature of the hazard. Pipe identification shall be repeated at maximum intervals of 25 feet (7620 mm) and at each point where the piping passes through a wall, floor or roof. Lettering shall be readily observable within the room or space where the piping is located.

608.8.2 Color. The color of the pipe identification shall be discernable and consistent throughout the building. See Table 608.8.2 for color identification. The color purple shall be used to identify reclaimed, rain and gray water distribution systems.

Table 608.8.2 Identification Color – Deleted.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
Sections 702.1, 702.4, 1102.2, 1102.7 Plastic pipe in high rise buildings. (090915 Item B-3)

702.1 Above-ground sanitary drainage and vent pipe. Above-ground soil, waste and vent pipe shall conform to one of the standards listed in Table 702.1.

Exception: Plastic pipe shall not be used for drain, waste and vents in buildings in which the top occupied floor exceeds 75 feet in height.

702.4 Fittings. Pipe fittings shall be approved for installation with the piping material installed and shall conform to the respective pipe standards or one of the standards listed in Table 702.4.

Exception: Plastic pipe shall not be used for drain, waste and vents in buildings in which the top occupied floor exceeds 75 feet in height.

1102.2 Inside storm drainage conductors. Inside storm drainage conductors installed above ground shall conform to one of the standards listed in Table 702.1.

Exception: Plastic pipe shall not be used for storm drainage conductors in buildings in which the top occupied floor exceeds 75 feet in height.

1102.7 Fittings. Pipe fittings shall be approved for installation with the piping material installed, and shall conform to the respective pipe standards or one of the standards listed in Table 1102.7. The fittings shall not have ledges, shoulders or reductions capable of retarding or obstructing flow in the piping. Threaded drainage pipe fittings shall be of the recessed drainage type.

Exception: Plastic pipe shall not be used for storm drainage conductors in buildings in which the top occupied floor exceeds 75 feet in height.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
901.2.1 Venting required. (081209 Item B2)

901.2.1 Venting required. Every trap and trapped fixture shall be vented in accordance with one of the venting methods specified in this chapter. All fixtures discharging downstream from a water closet shall be individually vented except as provided in Section 911.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
1105.1 Strainers. (080311 Item B4)

1105.1 Strainers. Roof drains shall have strainers extending not less that ~~**4**~~ 3 inches (~~102mm~~ 76mm) above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, of not less than one and one-half times the area of the conductor or leader to which the drain is connected.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
Appendix C Subsurface Landscape Irrigation Systems. (081209 Item B3)

Delete:
SECTION C103
SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS

Delete:
FIGURE 1
GRAY WATER RECYCLING SYSTEM FOR SUBSURFACE LANDSCAPE IRRIGATION

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Plumbing Code
Appendix C-1 Rain Water Recycling Systems. (080311 Item B6)

APPENDIX C1
RAIN WATER RECYCLING SYSTEMS

Note: Section 301.3 of this code requires all plumbing fixtures that receive water or waste to discharge to the sanitary drainage system of the structure. In order to allow for the utilization of a rain water system, Section 301.3 should be revised to read as follows:

301.3 Connections to drainage system. All plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8.

SECTION C1-101
GENERAL

C1-101.1 Scope. The provisions of this appendix shall govern the materials, design, construction and installation of rain water systems for flushing of water closets and urinals.

C1-101.2 Definition. The following term shall have the meaning shown herein.

GRAY WATER. Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays.

RAIN WATER. Water collected from the roof of a building or other catchment surface during a rainfall event and stored in a reservoir for non-potable use.

C1-101.3 Permits. Permits shall be required in accordance with Section 106.

C1-101.4 Installation. In addition to the provisions of Section C1-101, systems for flushing of water closets and urinals shall comply with Section C1-102. Except as provided for in Appendix C1, all systems shall comply with the provisions of the *International Plumbing Code.*

C1-101.5 Materials. Above-ground drain, waste and vent piping for rain water systems shall conform to one of the standards listed in Table 702.1. Rain water underground building drainage and vent pipe shall conform to one of the standards listed in Table 702.2.

C1-101.6 Tests. Drain, waste and vent piping for rain water systems shall be tested in accordance with Section 312.

C1-101.7 Inspections. Rain water systems shall be inspected in accordance with Section 107.

C1-101.8 Potable water connections. Only connections in accordance with Section C1-102.3 shall be made between rain water recycling system and a potable water system.

C1-101.9 Rain water connections. Rain water recycling systems shall receive only the water discharge from the roof of buildings or other catchments.

C1-101.10 Collection reservoir. Rain water shall be collected in an approved reservoir constructed of durable, nonabsorbent and corrosion-resistant materials. Access openings shall be provided to allow inspection and cleaning of the reservoir interior.

C1-101.11 Filtration. Rain water entering the reservoir shall pass through an approved filter strainer, be disinfected and colored blue or green.

C1-101.12 Overflow. The collection reservoir shall be equipped with an overflow pipe having the same or larger diameter as the influent pipe for the rain water. The overflow pipe shall discharge to the storm drainage system or to day light.

S E C T I O N C 1 - 1 0 2
SYSTEMS FOR FLUSHING WATER CLOSETS AND URINALS

C1-102.1 Collection reservoir. The holding capacity of the reservoir is not limited.

C1-102.2 Makeup water. An alternate water supply shall be provided as a source of makeup water for the rain water system. An alternate water supply shall be protected against backflow in accordance with Section 608. The alternate water source may be a potable water system or an irrigation well.

C1-102.3 Materials. Distribution piping shall conform to one of the standards listed in Table 605.4. This does not apply to the irrigation portion of the system.

C1-102.4 Identification. Distribution piping (not including irrigation piping) and reservoirs shall be identified as containing nonpotable water. Piping identification shall be in accordance with Section 608.8.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
202 Definitions. (100309 Item B-4)

ATTIC STORAGE. A floored area, regardless of size, within an attic space that is served by an attic access.

Exception: A floor walkway not less than 24 inches wide or greater than 48 inches wide that serves as an access for the service of utilities or equipment, and a level service space not less than 30 inches deep or greater than 48 inches deep and not less than 30 inches wide or greater than 48 inches wide at the front or service side of the appliance, shall not be considered as attic storage. Such floored area shall be labeled at the attic access opening, "NOT FOR STORAGE". The lettering shall be a minimum of 2 inches in height.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R202 Sunroom Addition. (080909 Item B1)

R202 SUNROOM ADDITION. A one-story structure ~~attached~~ added to an existing dwelling with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R302.4 Soffit flame spread. (071211 Item B3B)

R302.4 Flame Spread. Vinyl Siding and vinyl soffit materials when used in townhouse construction shall have a Flame Spread Index of 25 or less as tested in accordance with ASTM E-84.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R311.2.2 Under stair protection. (080909 Item B2)

R311.2.2 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with ½-inch (13 mm) gypsum board.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R311.5.8 Special stairways. (080909 Item B3)

R311.5.8 Special stairways. Spiral stairways, ~~and~~ bulkhead enclosure stairways and bowed tread stairways shall comply with all requirements of section R311.5 except as specified below.

(no changes to Sections R311.5.8.1 and R311.5.8.2)

R311.5.8.3 Bowed tread stairways. Bowed tread stairways are permitted provided they are uniform in bowed tread depth along entire width of tread with not more than 3/8" variance from greatest to smallest tread in the stairway flight. At no point shall the tread be less than a minimum of 9 inches with a nosing as listed in section R311.5.3.2 and R311.5.3.3 respectfully.

R311.5.8.3.1 Standard stairway application. The bottom 3 treads in a standard straight run stairway application as listed under section R311.5.3.2 are permitted to bow provided at no point along the width of the tread they are less than 9" as measured under section R311.5.3.2 and each bowed tread is uniformed with other bowed treads with no more than 3/8" variance from greatest to least. Nosing is required as listed in section R311.5.3.

R311.5.8.3.2 Bowed tread circular stairways. Bowed treads in a circular stairway are permitted provided they are uniformed as per winder treads as listed in section R311.5.3.2 measured at a point 12" from the side where the treads are narrower. At this walk line bowed treads must be uniformed with other circular stairway treads with the greatest tread not to exceed the smallest by more than 3/8". Nosing is required as listed in section R311.5.3.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R311.6.1 Maximum ramp slope. (090915 Item B-10)

R311.6.1 Maximum slope. Ramps shall have a maximum slope of one unit vertical in ~~eight units horizontal (12.5 percent slope)~~ twelve units horizontal (8.3-percent slope).

Exception: Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5-percent slope).

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R313 Carbon Monoxide Alarms. (090609 Item B-11)

SECTION R313
CARBON MONOXIDE ALARMS

R313.1.1 Carbon monoxide alarms. In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.

R313.1.2 Where required-existing dwellings. In existing dwellings, where interior alterations, repairs, fuel-fired appliance replacements, or additions requiring a permit occurs, or where one or more sleeping rooms are added or created, carbon monoxide alarms shall be provided in accordance with Section 313.1.1.

R313.1.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

(subsequent sections will be renumbered)

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R313.1 Carbon monoxide alarms. (110308 Item B-6a)

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

R313.1.2 Where required-existing dwellings. For ~~In~~ existing dwellings, where interior alterations, repairs, ~~fuel-fired appliance replacements,~~ or additions requiring a building permit occur~~s~~, or where one or more sleeping rooms are added or created, or where fuel-fired appliances or fireplaces are added or replaced, carbon monoxide alarms shall be provided in accordance with Section 313.1.1.

Exception: Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, or the installation of a fuel-fire appliance that cannot introduce carbon monoxide to the interior of the dwelling, are exempt from the requirements of this section.

R313.1.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions. Battery powered, plug-in, or hard-wired alarms are acceptable for use.

The delayed effective date of this Rule is January 1, 2015.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R313.2 Smoke Alarm Location. (101214 Item B-5)

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

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

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

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R404.1 Concrete and Masonry Foundation Walls. (090915 Item B-4)

Section R404.1 Concrete and Masonry Foundation Walls. Concrete and masonry foundation walls shall be selected and constructed in accordance with the provisions of Section R404 or in accordance with ACI 318, ACI 332, NCMA TR68-A or ACI *530/ASCE 5/TMS* 402 or other approved structural standards. When ACI 318, ACI 332 or ACI *530/ASCE 5/TMS* 402 or the provisions of Section R404 are used to design concrete or masonry foundation walls, project drawings, typical details and specifications are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the jurisdiction having authority.

(Delete the second paragraph without substitution)

~~Foundation walls that meet all of the following shall be considered laterally supported:~~

~~1. Full basement floor shall be 3.5 inches (89mm) thick concrete slab poured tight against the bottom of the foundation wall.~~

~~2. Deleted.~~

~~3. Bolt spacing for the sill plate shall be no greater than 36 inches (914mm).~~

~~4. Deleted.~~

~~5. Where foundation walls support unbalanced load on opposite sides of the building, such as a daylight basement, the building aspect ratio, L/W, shall not exceed the value specified in Table R404.1(3). For such foundation walls, the rim board shall be attached to the sill with a 20 gage metal angle clip at 24" on center, with five 8d nails per leg, or an approved connector supplying 230 pounds per linear foot (3.336kN/m) capacity.~~

(Also Delete Table R404.1(3) referenced above)

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R404.5 Retaining walls. (080909 Item B5)

R404.5 Retaining walls. ~~Retaining walls that are not laterally supported at the top and that retain in excess of 24 inches (610 mm) of unbalanced fill shall be designed to ensure stability against overturning, sliding, excessive foundation pressure and water uplift. Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning.~~ Deleted.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
406.1 Concrete and masonry foundation dampproofing. (080909 Item B6)

406.1 Concrete and masonry foundation dampproofing.
Foundation walls where the outside grade is higher than the inside grade shall be dampproofed from the top of the footing to the finished grade. ~~Masonry walls shall have not less than 3/8 inch (9.5 mm) portland cement parging applied to the exterior of the wall.~~ The foundation walls shall be dampproofed with a bituminous coating, 3 pounds per square yard (1.63 kg/m²) of acrylic modified cement, or 1/8-inch (3.2 mm) coat of surface-bonding mortar complying with ASTM C 887 or any material permitted for waterproofing in Section R406.2. Concrete walls shall be dampproofed by applying any one of the above listed dampproofing materials or any one of the waterproofing materials listed in Section R406.2 to the exterior of the wall.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R703.11.2, R703.11.3 Soffit, Flame Spread. (100914 Item B-3)

R703.11.2 Soffit. In One-and Two-Family Dwelling construction using vinyl or aluminum as a soffit material, the soffit material shall be securely attached to framing members and use an underlayment material of either fire retardant treated wood, 23/32 inch wood sheathing or 5/8 inch gypsum board. Venting requirements apply to both soffit and underlayment and shall be per section R806 of the North Carolina Residential Code. Where the property line is 10 feet or more from the building face, the provisions of this code section do not apply.

R703.11.3 Flame Spread. Vinyl siding and vinyl soffit materials when used in One-and Two-Family Dwelling construction shall have a Flame Spread Index of 25 or less as tested in accordance with ASTM E-84.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R802.3.1 Ceiling joist rafter connections. (091208 Item B-6)

R802.3.1 Ceiling joist rafter connections. Ceiling joists and rafters shall be nailed to each other in accordance with Table R802.5.1(9), and the rafter shall be nailed to the top wall plate in accordance with Table R602.3(1). Ceiling joists shall be continuous or securely joined in accordance with Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to the rafters.

Where ceiling joists are not connected to the rafters at the top wall plate, joists connected higher in the attic shall be installed as rafter ties, or rafter shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be a minimum of 2-inch by 4-inch (51 mm by 102 mm) (nominal), installed in accordance with the connection requirements in Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceiling joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or girder designed in accordance with accepted engineering practice.

Rafter ties shall be spaced not more than 4 feet (1219 mm) on center.

Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space in accordance with Table R602.3(1).

A 1-inch by 6-inch or 2-inch by 4-inch (25 mm by 153 mm or 51 mm by 102 mm) collar tie shall be nailed in the upper third of the roof to every third pair of rafters not to exceed 4-feet (1219 mm) on centers. Collar ties shall be connected to the rafters as specified in Table R602.3(1) for rafter ties.

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
R802.3.1 Basic design wind velocities for mountain regions. (100309 Item B-3)

FIGURE R301.2(4) - BASIC DESIGN WIND VELOCITIES FOR MOUNTAIN REGIONS

FIRST FLOOR FINISH ~~CONTROLLING~~ ELEVATION IN FEET[~~1,2,3,4,5~~]	**DESIGN WIND (MPH)**
Less than 2,700 ~~or less~~	90
2,700 to less than 3,000 feet	100
3,000 to less than 3,500 feet	110
3,500 to less than 4,500 feet	120
4,500 feet or greater ~~and above~~	130

For SI: 1 foot = 304.8, 1 mile per hour = 0.44 m/s.

~~1. Wind velocities are to apply to all mountain tops, crests, knobs, or peaks as named on the USGS Quadrangle maps.~~

~~2. Effect of the 130 mph wind is to extend downward from crest for 200 feet or to the controlling elevation for 120 mph wind, whichever is the lesser.~~

~~3. Effect of the 120 mph wind is to extend downward from crest for 100 feet or to the controlling elevation for 110 mph wind, whichever is the lesser.~~

~~4. Effect of the 110 mph wind is to extend downward from crest for 70 feet or to the controlling elevation for 100 mph wind, whichever is the lesser.~~

~~5. Effect of the 100 mph wind is to extend downward from crest for 50 feet or to the controlling elevation for 90 mph wind, whichever is the lesser.~~

FIGURE R301.2(4)—continued BASIC DESIGN WIND SPEEDS FOR 50-YEAR MEAN RECURRENCE INTERVAL – Delete the Mountain Peak Diagram

The delayed effective date of this Rule is January 1, 2012.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
N1102.2.10 Thermally isolated sunroom addition insulation. (080909 Item B7)

N1102.2.10 Thermally isolated sunroom <u>addition</u> insulation. The minimum ceiling insulation *R*-values shall be R-19 in zones 1 through 4 and R-24 in zones 5 through 8. The minimum wall *R*-value shall be R-13 in all zones. New wall(s) separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
N1102.3.5 Thermally isolated sunroom addition *U*-factor. (080610 Item B8)

N1102.3.5 Thermally isolated sunroom addition *U*-factor. For zones 4 through 8 the maximum fenestration *U*-factor shall be 0.50 and the maximum skylight *U*-factor shall be 0.75. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements. Conditioned sunroom additions shall maintain thermal isolation; shall not be used as kitchens or sleeping rooms; and shall be served by a separate heating or cooling system, or be thermostatically controlled as a separate zone of the existing system.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
4404.4, 4406.3, 4408.4 Wood structural panel anchorage. (071211 Item B1)

4404.4 Exterior Concrete Slab-on-grade Footings. Vertical reinforcement shall be installed at intervals not to exceed Table 4404.1.1 and shall terminate in a double sole plate.

Exception: Vertical reinforcement (anchorage) shall be installed at intervals not to exceed Table 4401.1a. where the bars terminate in a single sole plate. Approved strap anchors or wood structural panels shall be installed to provide a continuous load-path from the single sole plate to the wall.

4406.3 Gable endwalls. Gable endwalls in the 110, 120, and 130 mph (48 m/s, 53 m/s, 57 m/s) wind zones shall either be supported by lateral bracing at the ceiling or have continuous studs from the floor to the roof. 2 x 4 studs at 16 inches (406 mm) on center are limited to 10 feet (3048) in length between supports. Nonbearing 2 x 6 SPF No.2 studs at 16 inches (406 mm) on center with 3/8 inch wood structural panel sheathing are limited to unsupported lengths of 18 feet (5486) in 110 mph (48 m/s), 16 feet (4877) in 120 mph (53 m/s) and 14 feet (4267 mm) in 130 mph (57 m/s) wind zones. Wood structural panel sheathing shall extend 12 inches (305 mm) beyond horizontal construction joints except where the horizontal joint occurs over minimum 1 inch (25 mm) thick OSB or plywood rimboard with a minimum 1-1/2 inch (38 mm) overlap.

4408.4 Anchorage using wood structural panels. Wood structural panel sheathing may be used to resist both lateral load and uplift simultaneously. Panels shall be installed as follows:
1. Panels may be installed with face grain parallel or perpendicular to studs.
2. Panels shall be 3/8 inch (9 mm) minimum thickness.
3. Nail spacing shall be 8d at 6 inches (152 mm) on center along vertical edges of panel and 12 inches (305 mm) at intermediate vertical framing.
4. Horizontal nail spacing at double row of 8d staggered at 3 inches (76 mm) on center.
5. Panel shall extend 12 inches (305 mm) beyond horizontal construction joints and shall overlap girders their full depth except where the horizontal joint occurs over minimum 1 inch (25 mm) thick OSB or plywood rimboard with a minimum 1-1/2 inch (38 mm) overlap.
6. Panel attachment to framing shall be as illustrated in Figure 4408.4.
7. Blocking shall be required at all joints if sheathing is used to resist uplift.

The effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G.S. 143-136; 143-138.

2009 NC Residential Code
AG106 Entrapment avoidance. (080909 Item B9A)

AG106.1 General. Suction outlets shall be designed ~~to produce circulation throughout the pool or spa. Single outlet systems, such as automatic vacuum cleaner systems, or multiple suction outlets, whether isolated by valves or otherwise, shall be protected against user entrapment~~ and installed in accordance with ANSI/APSP-7.

(Sections AG106.2 through AG106.5 deleted without substitution.)

(Add the following Standard to Section AG 108.)
ANSI/APSP-7-06 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins

(Update the following Standards in Section AG 108.)
ASME/ANSI A112.19.17-07 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs

ANSI/ASME A112.19.8~~M 1987~~ 2007 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs and Whirlpool Bathing Appliances

ANSI/~~NSPI~~ APSP-~~4 99~~ 07 Standard for Above-ground/On-ground Residential Swimming Pools

ANSI/NSPI-5~~ 99~~ 03 Standard for Residential In-ground Swimming Pools

The effective date of this Rule is June 1, 2009.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2009 NC Residential Code
Appendix M, Wood Decks. (080610 Item B7)

Appendix M Wood Decks.
This is a complete revision on Appendix M Wood Decks. Delete the existing Appendix and replace with the following pages.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

Appendix M

Wood Decks

(Entire section is a NC amended appendix)

Section AM101
General

AM101.1 General. A deck is an exposed exterior wood floor structure which may be attached to the structure or freestanding. Roofed porches (open or screened-in) may be constructed using these provisions.

AM101.2 Deck design. Computer deck design programs may be accepted by the Code Enforcement Official.

Section AM102
Footers

AM102.1 Footers. Support post shall be supported by a minimum footing per Figure AM102 and Table AM102.1 Minimum footing depth shall be 12" below finished grade per R403.1.4. Tributary area is calculated per Figure AM102.1.

Section AM103
Flashing

AM103.1 Flashing. When attached to a structure, the structure to which attached shall have a treated wood band for the length of the deck, or corrosion-resistant flashing shall be used to prevent moisture from coming in contact with the untreated framing of the structure. Aluminum flashing shall not be used in conjunction with deck construction. The deck band and the structure band shall be constructed in contact with each other except on brick veneer structures and where plywood sheathing is required and properly flashed. Siding shall not be installed between the structure and the deck band. If attached to a brick structure, neither the flashing nor a treated band for brick structure is required. In addition, the treated deck band shall be constructed in contact with the brick veneer. Flashing shall be installed per Figure AM103.

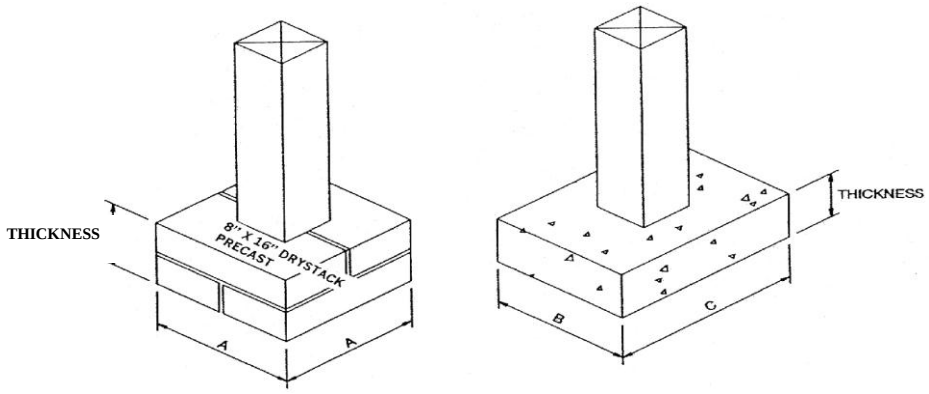


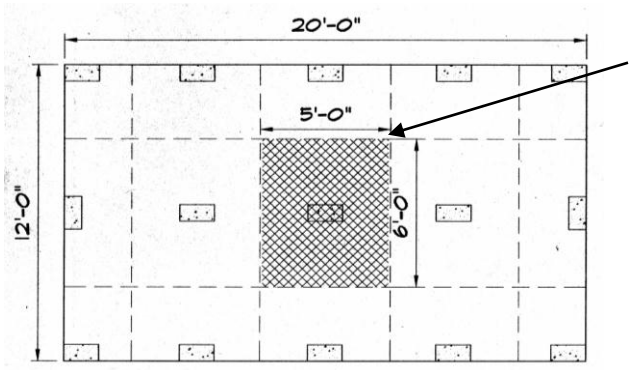
Figure AM102

Table AM102.1

Footing table [a, b, c]

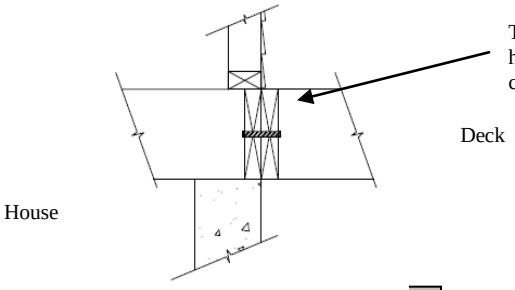
Size (inches)		Tributary Area	Thickness (inches)	
A x A	**B x C**	**(Sq. Ft.)**	**Precast**	**Cast-in-place**
8 x 16	8 x 16	36	4"	6"
12 x 12	12 x 12	40	4"	6"
16 x 16	16 x 16	70	8"	8"
----	16 x 24	100	--	8"
	24 x 24	150	--	8"

a. Footing values are based on single floor and roof loads
b. Support post must rest in center 1/3 of footer
c. Top of footer shall be level for full bearing support of post

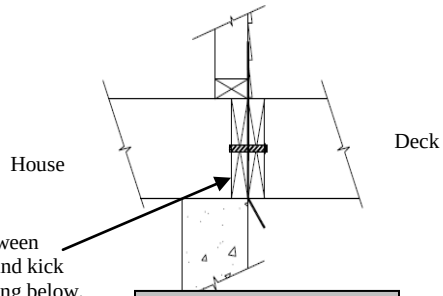


Tributary area of shaded section on free standing deck shown is 5'x6'=30 sq. ft. Code will require a minimum footer of 8"x 16" per Table AM102.1

Figure AM102.1



No flashing- treated



Flashing between

Figure AM10

Section AM104
Deck attachment

AM104.1 Deck Attachment. When a deck is supported at the structure by attaching the deck to the structure, the following attachment schedules shall apply for attaching the deck band to the structure.

AM104.1.1 All Structures Except Brick veneer Structures:

Fasteners	8' Max Joist Span [a]	16' Max Joist Span [a]
5/8" Hot Dipped Galv. Bolts with nut and washer [b]	1 @ 3'-6" o.c.	**1 @ 1'-8" o.c.**
and	**and**	**and**
12d Common Hot Dipped Galv. Nails [c]	2 @ 8" o.c.	3 @ 6" o.c.

a. Attachment interpolation between 8'&16' joists span are allowed
b. Minimum edge distance for bolts is 2 ½ inches
c. Nails must penetrate the supporting structure band a minimum of 1 ½ inches

AM104.1.2 Brick Veneer Structures

Fasteners	8' Max Joist Span [a]	16' Max joist Span [a]
5/8" Hot Dipped Galv. Bolts with Nut and Washer [b]	1@ 2'-4" o.c.	1@ 1'-4"o.c.

a. Attachment interpolation between 8'&16' is allowed
b. Minimum edge distance for bolts is 2 ½ inches

AM104.1.3 Masonry Ledge Support

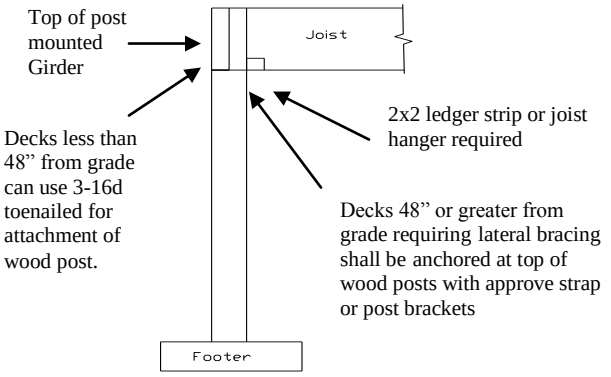
If the deck band is supported by a minimum of ½ inch masonry ledge along the foundation wall, 5/8 inch hot dipped galvanized bolts with washers spaced at 48 inches o.c. may be used for support.

AM104.1.4 Other means of support

Joist hangers or other means of attachment may be connected to house band and shall be properly flashed

Section AM105

AM105.1 Girder Support & Span. Girders shall bear directly on support post with post attached at top to prevent lateral displacement or be connected to the side of posts with two 5/8 inch hot dipped galvanized bolts with nut and washer. Girder spans are per Table R502.5 (1&2). Girder support may be installed per Figure AM105 for top mount; Figure AM105.1 for side mount and Figure AM105.2 for split girder detail. Girders may also be cantilevered off ends of support post no more than 1 joist spacing or 16" whichever is greater per Figure AM105.3.



Top mount/flush

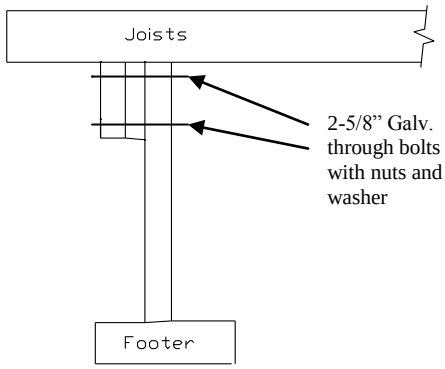
Figure AM105

Section AM106

M106.1 Joist Spans & Cantilevers. Joists spans shall be based upon Table R502.3.1(2) with 40 lbs per sq. ft. live load and 10 lbs per sq. ft. dead load. Floor joists for exterior decks may be cantilevered per Table R502.3.3 (1).

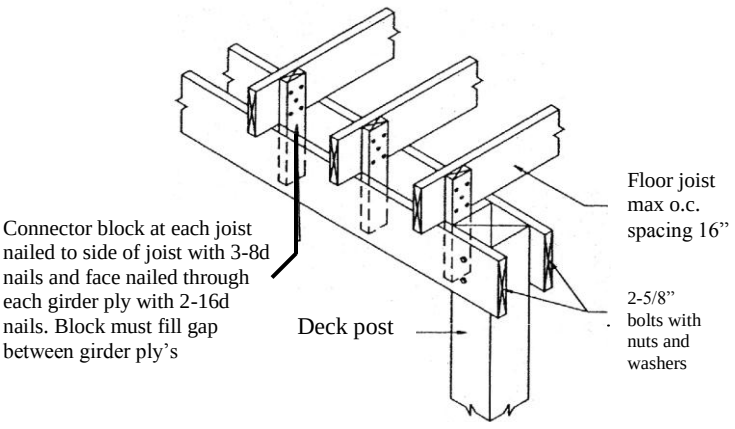
Spacing	2x6	2x8	2x10	2x12
12"	10-9	14-2	18-0	21-9
16"	9-9	12-10	16-1	18-10
19.2"	9-2	12-1	14-8	17-2
24"	8-6	11-0	13-1	15-5

Partial reprint of Table R502.3.1(2) , #2 SYP only joist spans



Side mount dropped girder

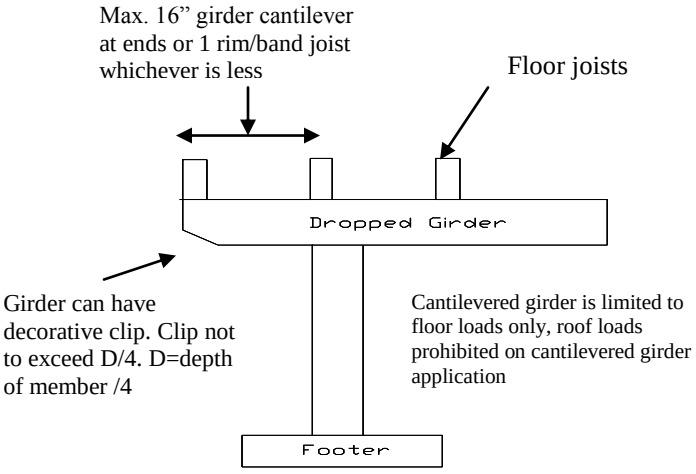
Figure AM105.1



Split girder limited to floor loads only and cantilever girder ends allowed per AM105.3

Split girder detail

Figure AM105.2



Cantilevered dropped girder detail

Figure AM105.3

Section AM107

AM107.1 Floor Decking. Floor decking shall be No. 2 grade treated Southern Pine or equivalent. The minimum floor decking thickness shall be as follows:

Joist Spacing	Decking (nominal)
12" o.c.	1" S4S
16" o.c.	1" T&G
19.2 o.c.	1-1/4" S4S
24"-36" o.c.	2" S4S

Section AM108

AM108.1 Post height. Maximum height of Deck support posts as follows:

Post size [a]	Max. Post Height [b,c]
4x4	8'-0"
6x6	20'-0"

a.This table is based on No. 2 Southern Pine posts.
b.From top of footing to bottom of girder
c.Decks with post heights exceeding these requirements shall be designed by a registered design professional

Section AM109

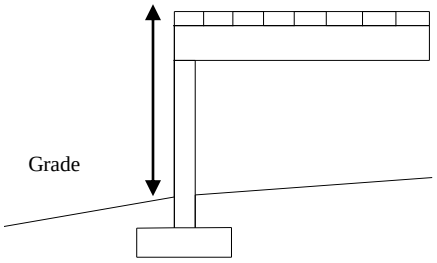
AM109.1 Deck bracing. Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability.

AM109.1.1. When the deck floor height is less than 4'-0" above finished grade per Figure AM109 and the deck is attached to the structure in accordance with Section AM104, lateral bracing is not required.

AM109.1.2. 4x4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder with one 5/8 inch hot dipped galvanized bolt with nut and washer at both ends of the brace per Figure AM109.1

AM109.1.3. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2 and the following:

Post size	Max. Tributary Area	Max. Post Height	Embedment Depth	Concrete Diameter
4x4	48 SF	4'-0"	2'-6"	1'-0"
6x6	120 SF	6'-0"	3'-6"	1'-8"



Less than 4' (decking to grade) and attached to structure no bracing required

Figure AM109

Freestanding decks requiring bracing shall be installed in both directions off each post

Decks attached to structure require diagonal bracing only at outside girder line parallel with structure

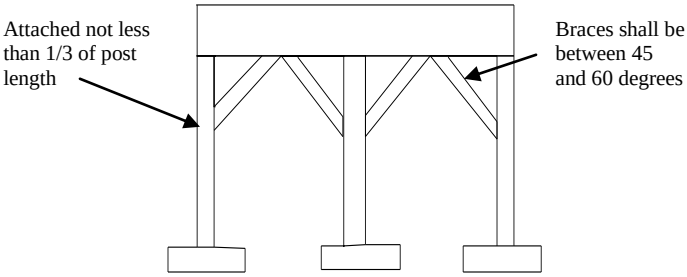


Figure AM109.1

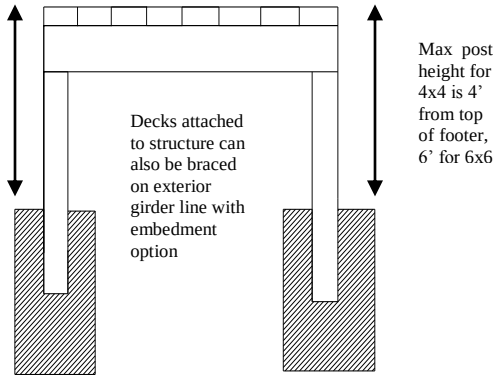


Figure AM109.2

AM109.1.4 2x6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2x6's shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt with nut and washer at each end of each bracing member per Figure AM109.3.

AM109.1.5 For embedment of piles in Coastal Regions, see Chapter 45.

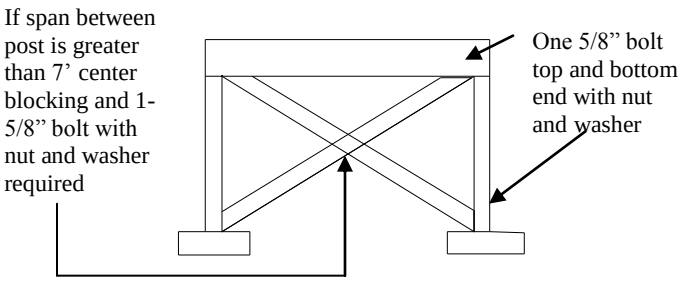


Figure AM109.3

Section AM110

AM110.1 Stairs shall be constructed per Figure AM110. Stringer spans shall be no greater than 7' span between supports. Spacing between stringers shall be based upon decking material used per AM107.1. Each Stringer shall have minimum 3 ½" between step cut and back of stringer. ~~All stringers supported at top on~~ Suspended headers that support stringers at the top shall be attached with 3/8" Galv bolts with nuts and washers.

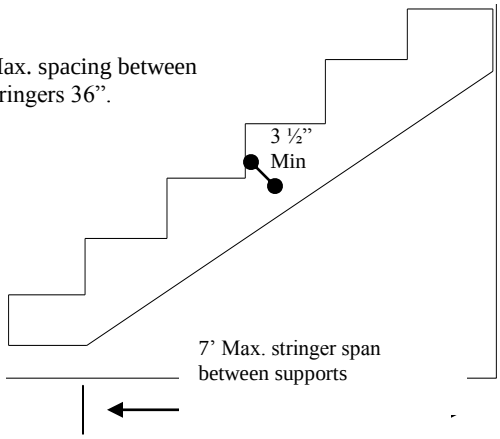


Figure AM110

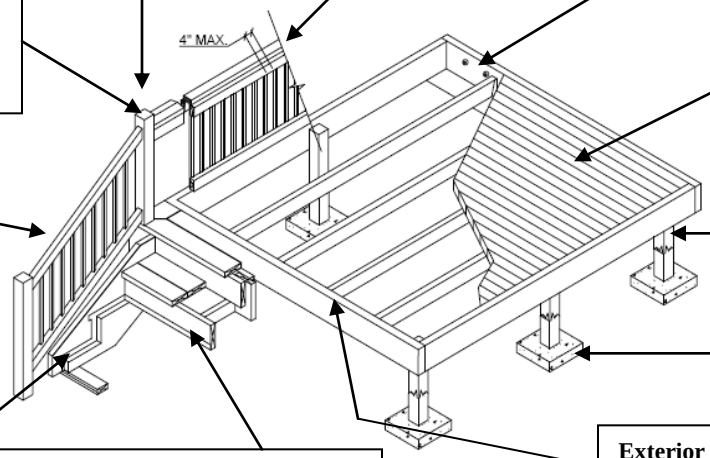
Section AM111

AM111.1 Handrails, Guards and General. Deck handrails, guards and general construction shall be per Figure AM111.

Guards at a Minimum 36" required per R312.1 with 30" drop and opening limits per R312.2 (4" on vertical pickets, 6" on horizontal and ornamental guard rails), top rail and post to support 200lbs with infill to meet 50lbs per Table R301.5 and footnotes.

Attachment to structure based upon all cladding types but brick veneer per AM104.1.1, Brick veneer per AM104.1.2, Masonry ledge per AM104.1.3 or other per AM104.1.4.

Rail posts cannot exceed 8' o.c. spacing and shall be attached with 2-3/8" Galv bolts with nut & washer to outer bands.



Decking per AM107 for #2 SYP and attached with 2-8d galv nails at each joist or approved screws. Other materials per mfg installation based upon joists o.c. spacing. Alternate material attached per mfg installation instructions.

Stair handrail/Guard. Height between 30"-38" per R311.5.6 & R312.1. Openings on side of stairs requiring guards shall not allow a sphere 4 3/8" to pass per R312.2 exception #2.

Deck post per AM108

Footers per Table AM102.1. Minimum base of footers 12" below grade.

Stairs treads and risers per R311.5.3.1 (8 ¼" Max riser) & R311.5.3.2 (9" minimum tread depth). Stairways min 36" width per R311.5.1 (rail projections allowed).

Riser openings. Stairs with a 30" or more vertical rise must have solid risers or opening restricted to prevent a 4" sphere from passing per R311.5.3.3.

Exterior Girder Clear Spans

Deck Width	Nominal Lumber Size 2x6	2x8	2x10	2x12
20' (2ply)	3-11	5-0	6-1	7-1
20' (3ply)	----	6-3	7-7	8-10
20' (4ply)	----	----	8-9	10-2

*Partial reproduction of Table R502.5(1) at 30 ground snow load and roof ceiling and 1 clear span floor. Deck width is 20' or less measured in the direction of joists span. Splices in plys must break over bearing supports.

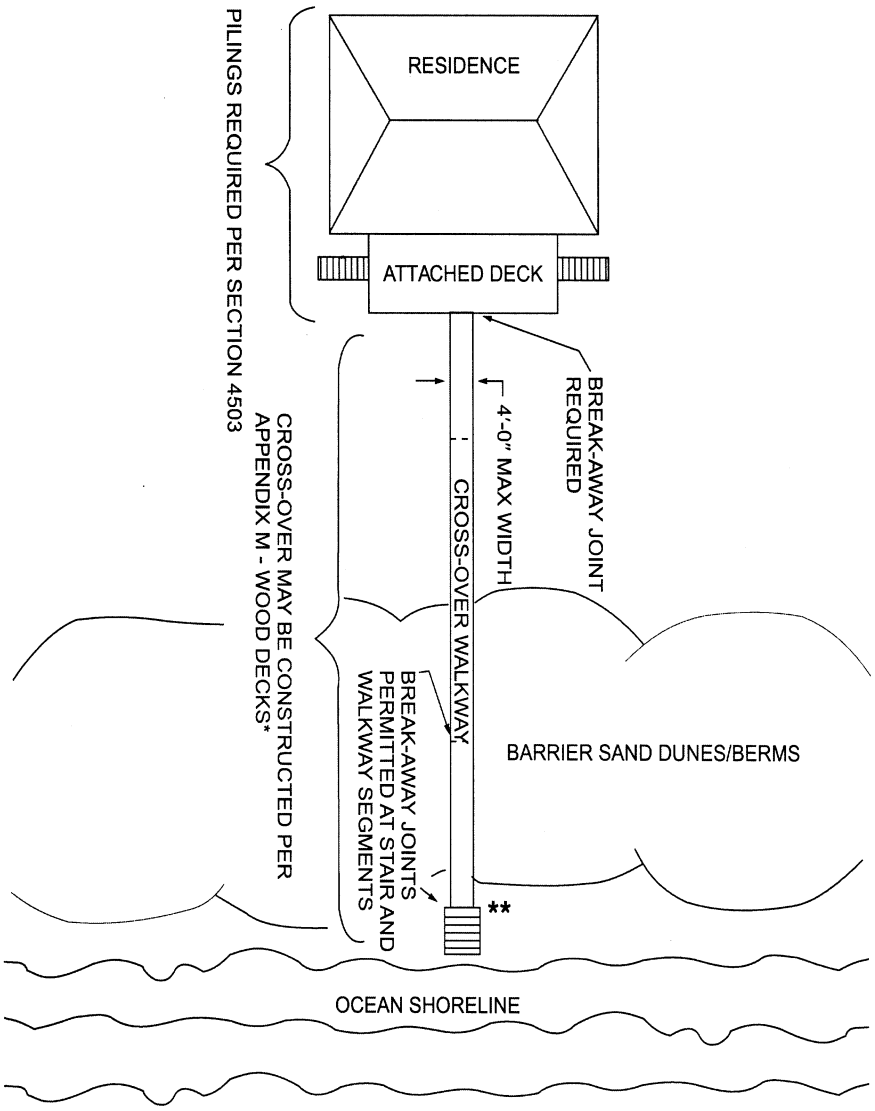
Lateral Bracing per AM 109. AM109.1.1 height required; AM109.1.2 knee bracing; AM109.1.3 freestanding embedment; AM109.1.4 diagonal bracing; AM109.1.5 Coastal embedment.

Floor joist cantilevers allowed per Table R502.3.3(1)

Figure AM111

Figure AM112

WALKWAYS OVER DUNES OR BERMS IN OCEAN HAZARD AREAS



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

* Posts for walkways over dunes or berms shall be embedded a minimum depth of 4' - 0" and post heights shall be limited to 5'-0" above grade for 4 × 4 and 10' - 0" above grade for 6 × 6. Walkways or portions of walkways over 4' 0" in width, shall comply with the requirements of Chapters 44 and 45. Maximum walkway surface height is 30" above grade without guard rails.

** Walkway stair runs can be greater than 12' without a landing.

Change reference to Chapters 45 and 46.

2009 NC Residential Code
R403.1 General. Appendix Q Footing Continuity (080311 Item B5)

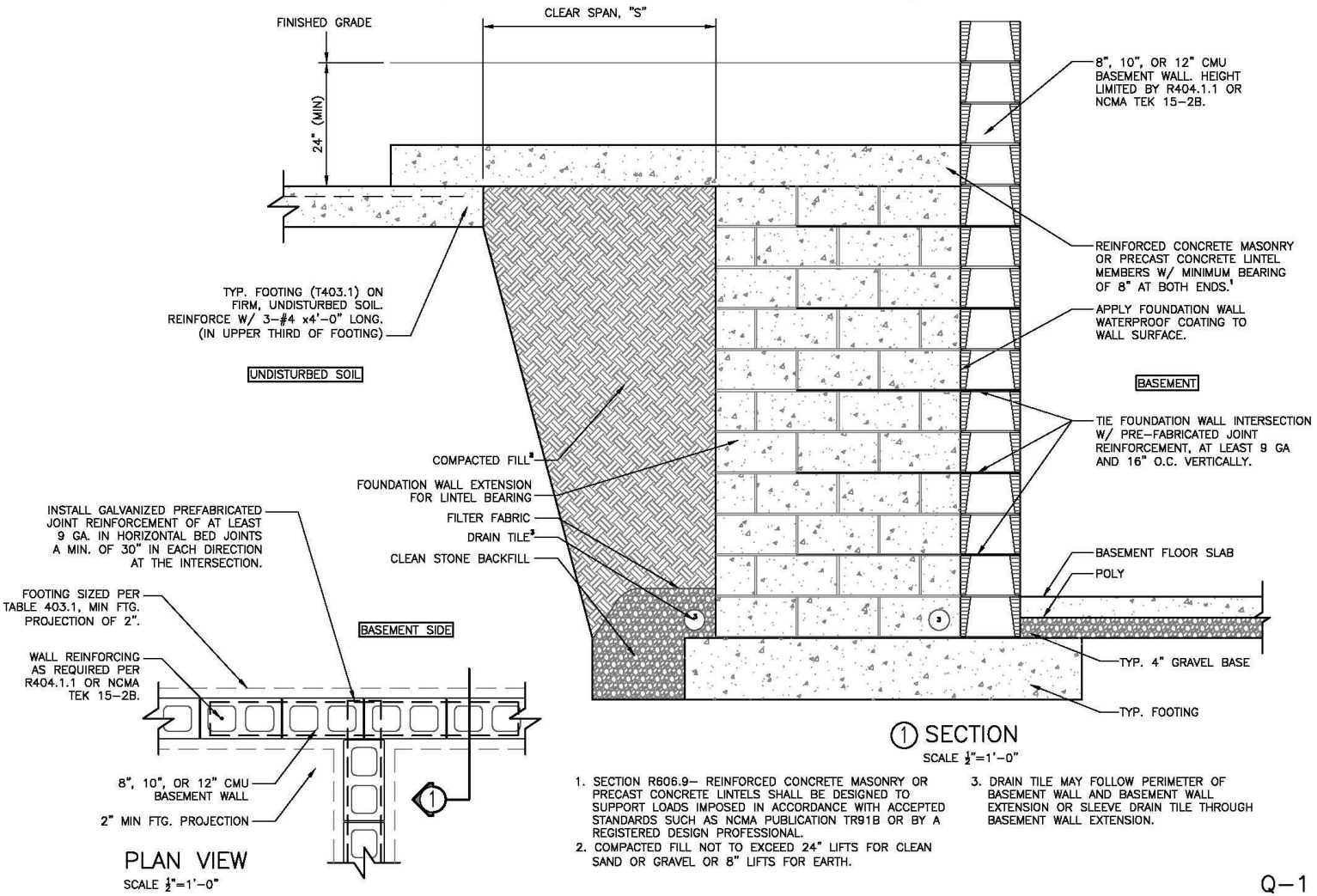
R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, wood foundations, or other approved structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill.
Discontinuous footings shall be permitted to be constructed in accordance with ACI 332-04 for Concrete foundation walls and Appendix Q for Masonry foundation walls.

The Appendix Q details are attached.

The delayed effective date of this Rule is January 1, 2011.
The Statutory authority for Rule-making is G. S. 143-136; 143-138.

APP. Q–DISCONTINUOUS FOOTING DETAIL FOR GARAGE OR PORCH WALLS

FOUNDATION WALL EXTENSION DETAIL



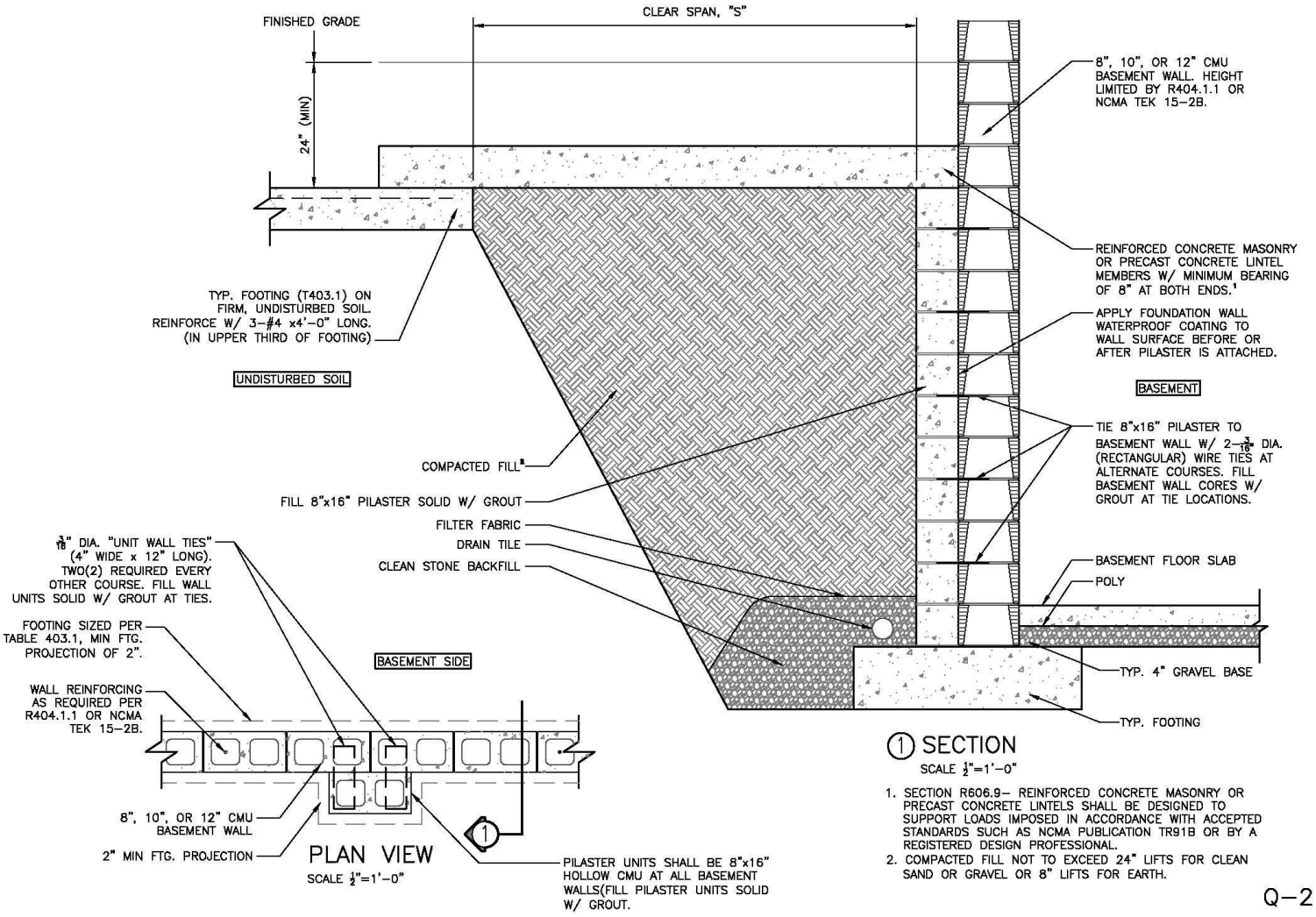
PLAN VIEW
SCALE $\frac{1}{2}$"=1'–0"

① SECTION
SCALE $\frac{1}{2}$"=1'–0"

1. SECTION R606.9– REINFORCED CONCRETE MASONRY OR PRECAST CONCRETE LINTELS SHALL BE DESIGNED TO SUPPORT LOADS IMPOSED IN ACCORDANCE WITH ACCEPTED STANDARDS SUCH AS NCMA PUBLICATION TR91B OR BY A REGISTERED DESIGN PROFESSIONAL.
2. COMPACTED FILL NOT TO EXCEED 24" LIFTS FOR CLEAN SAND OR GRAVEL OR 8" LIFTS FOR EARTH.
3. DRAIN TILE MAY FOLLOW PERIMETER OF BASEMENT WALL AND BASEMENT WALL EXTENSION OR SLEEVE DRAIN TILE THROUGH BASEMENT WALL EXTENSION.

APP. Q–DISCONTINUOUS FOOTING DETAIL FOR GARAGE OR PORCH WALLS

PILASTER DETAIL



1 SECTION

SCALE 1/2"=1'–0"

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