Agency Name: Building Codes Council - Labor, Licensing and Regulation

Statutory Authority: 6-8-20, 6-9-40, 6-9-63(E), and 40-1-70

Document Number: 4602

Proposed in State Register Volume and Issue: 39/10

House Committee: Regulations and Administrative Procedures Committee

Senate Committee: Labor, Commerce and Industry Committee

120 Day Review Expiration Date for Automatic Approval 05/20/2016

Final in State Register Volume and Issue: 40/6

Status: Final

Subject: 2015 Edition of International Codes and 2014 Edition of the National Electrical Code

History: 4602

By Date Action Description Jt. Res. No. Expiration Date

- 10/23/2015 Proposed Reg Published in SR

- 01/15/2016 Received by Lt. Gov & Speaker 05/14/2016

H 01/19/2016 Referred to Committee

S 01/19/2016 Referred to Committee

S 03/22/2016 Committee Requested Withdrawal

 120 Day Period Tolled

- 03/28/2016 Withdrawn and Resubmitted 05/20/2016

S 05/18/2016 Resolution Introduced to Approve 1321

- 05/20/2016 Approved by: Expiration Date

- 06/24/2016 Effective Date unless otherwise

 provided for in the Regulation

Document No. 4602

**DEPARTMENT OF LABOR, LICENSING AND REGULATION**

**BUILDING CODES COUNCIL**

CHAPTER 8

Statutory Authority: 1976 Code Sections 6-8-20, 6-9-40, 6-9-63(E), and 40‑1‑70

8-800. International Building Code.

8-804. IBC Section 1014.2. Egress through intervening spaces.

8-805. IBC Section Appendix H Signs.

8-900 International Fire Code.

8-910. IFC Section 2307.5.3 Vehicle impact protection.

8-911. IFC Section 2307.6 Private fueling of motor vehicles.

8-1002 IFGC Section 401.10 Third-party testing and certification.

8-1005. IFGC Section 412.7.3 Vehicle impact protection.

8-1006. IFGC Section 412.8 Private fueling of motor vehicles.

8-1100. National Electrical Code.

8-1101. NEC Article 210.12(B) Arc‑Fault Circuit‑Interrupter Protection.

8-1200. International Residential Code.

8-1202. IRC Figure R302.1 Exterior walls.

8-1203. IRC Section R302.2 Townhouses.

8-1204. IRC Section R302.5.1 Opening protection.

8-1205. IRC Section R303.4 Mechanical ventilation.

8-1206. IRC Figure R307.2 Minimum Fixture Clearances.

8-1207. IRC Section R311.7.5.1 Risers.

8-1208. IRC Section R312.1.1 Where required.

8-1209. IRC Section R312.2 Window fall protection.

8-1210. IRC Section R313.1 Townhouse Automatic Fire Sprinkler Systems.

8-1211. IRC Section R313.2. One and two‑family dwellings automatic fire sprinkler systems.

8-1212. IRC Section R317.1.1 Field treatment.

8-1213. IRC Section R404.1.9.2 Masonry piers supporting floor girders.

8-1214. IRC Section R502.11.4 Truss design drawings.

8-1215. IRC Section R703.8 Flashing.

8-1216. IRC Chapter 11 Energy Efficiency.

8-1217. IRC Section M1411.5 Insulation of refrigerant piping.

8-1218. IRC Section M1411.6 Locking access port caps.

8-1219. IRC Section M1502.3 Duct termination.

8-1220. IRC Section M1502.4.4 Duct length.

8-1221. IRC Section G2418.2 Design and Installation.

8-1222. IRC Section P2503.6 Shower Liner Test.

8-1223. IRC Section P2904.1 General.

8-1224. IRC Section E3901.12 HVAC outlet.

8-1225. IRC Section Appendix H Patio Covers.

**Synopsis:**

 The South Carolina Building Codes Council proposes to amend its regulations by adopting with modifications, the mandatory codes shown in 2015 Edition of the International Building Code; 2015 Edition of the International Residential Code; 2015 Edition of the International Fire Code; 2015 Edition of the International Fuel Gas Code; 2014 Edition of the National Electrical Code. Additionally, adopting without modification the 2015 Edition of the International Plumbing Code and 2015 Edition of the International Mechanical Code as published. Additionally, amending its regulations by adopting permissive codes as shown in 2015 Edition of the International Property Maintenance Code; 2015 Edition of the International Existing Building Code; 2015 Edition of the International Swimming Pool and Spa Code; and 2015 Edition of the International Performance Code for Buildings and Facilities.

 A Notice of Drafting was published in the *State Register* on August 28, 2015.

**Instructions:**

 Replace the regulations as shown below. All other sections remain unchanged.

**Text:**

CHAPTER 8

BUILDING CODES COUNCIL

ARTICLE 8

INTERNATIONAL BUILDING CODE

8-800. International Building Code.

NOTE‑This article is based upon the International Building Code, 2015 Edition, in accordance with the statutory amendments to acts governing the Building Codes Council, except for the modifications referenced below.

This code is identical to the 2015 Edition of the International Building Code except for the following modifications:

8-804. IBC Section 903.2.9 Group S-1.

 An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

 1. A Group S-1 fire area exceeds 12,000 square feet (1115 m2).

 2. A Group S-1 fire area is located more than three stories above grade plane.

 3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2).

 4. A Group S-1 fire area used for the storage of commercial motor vehicles where the fire area exceeds 5,000 square feet (464 m2).

 5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses where the fire area exceeds 2,500 square feet (232 m2).

8-805. IBC Section 1009.4 Elevators.

 In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. Standby power shall be provided in accordance with Chapter 27 and Section 3003. The elevator shall be accessed from an area of refuge complying with Section 1009.6. Elevators shall also comply with 3008 Occupant Evacuation Elevators.

 Exceptions:

 1. Areas of refuge are not required at the elevator in open parking garages.

 2. Areas of refuge are not required in buildings and facilities equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

 3. Areas of refuge are not required at elevators not required to be located in a shaft in accordance with Section 712.

 4. Areas of refuge are not required at elevators serving smoke-protected assembly seating areas complying with Section 1029.6.2.

 5. Areas of refuge are not required for elevators accessed from a refuge area in conjunction with a horizontal exit.

8-806. IBC Section 1014.2. Egress through intervening spaces.

 Means of egress shall consist of continuous and unobstructed paths of travel to the exterior of a building. Means of egress shall not be permitted through kitchens, closets, restrooms and similar areas nor through adjacent tenant spaces.

 Exception: Means of egress shall be permitted through a kitchen area serving adjoining rooms constituting part of the same dwelling unit or guest room.

 When unusually hazardous conditions exist, the building official may require additional means of egress to assure the safety of the occupants.

8-807. IBC Section Appendix H Signs.

 Adopt Appendix H.

ARTICLE 9

INTERNATIONAL FIRE CODE

8-900. International Fire Code.

NOTE‑This article is based upon the International Fire Code, 2015 Edition, in accordance with the statutory amendments to acts governing the Building Codes Council, except for the modifications referenced below.

This code is identical to the 2015 Edition of the International Fire Code except for the following modifications:

8-910. IFC Section 2307.6.4 Vehicle impact protection.

 Exception: An alternative method may be used that meets the intent of this section with the approval of the AHJ.

8-911. IFC Section 2308.4 Private fueling of motor vehicles.

 Self‑service LP‑gas dispensing systems, including key, code and card lock dispensing systems, shall not be open to the public. In addition to the requirements of Sections 2305 and 2306.7, self‑service LP‑gas dispensing systems shall be in accordance with the following:

 1. The system shall be provided with an emergency shutoff switch located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from dispensers.

 2. The owner of the LP‑gas motor fuel‑dispensing facility shall provide for the safe operation of the system and the training of users.

ARTICLE 10

INTERNATIONAL FUEL GAS CODE

8-1000. International Fuel Gas Code.

NOTE‑This article is based upon the International Fuel Gas Code, 2015 Edition, in accordance with the statutory amendments to acts governing the Building Codes Council, except for the modifications referenced below.

This code is identical to the 2015 Edition of the International Fuel Gas Code except for the following modifications:

8-1005. IFGC Section 412.8.3 Vehicle impact protection.

 Exception: An alternative method may be used that meets the intent of this section with the approval of the AHJ.

8-1006. IFGC Section 412.9 Private fueling of motor vehicles.

 Self‑service LP‑gas dispensing systems, including key, code and card lock dispensing systems, shall not be open to the public. In addition to the requirements of the International Fire Code, self‑service LP‑gas dispensing systems shall be provided with an emergency shutoff switch located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, dispensers and the owner of the dispensing facility shall ensure the safe operation of the system and the training of users.

ARTICLE 11

NATIONAL ELECTRICAL CODE

8-1100. National Electrical Code.

NOTE‑This article is based upon the National Electrical Code, 2014 Edition, in accordance with the statutory amendments to acts governing the Building Codes Council, except for the modifications referenced below.

This code is identical to the 2014 Edition of the National Electrical Code except for the following modifications:

8-1101. NEC Article 90.2(B)(5) Scope.

 b. Are located in legally established easements, rights-of-way, or by other agreements either designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations, or

8-1102. NEC Article 210.12(B) Arc‑Fault Circuit‑Interrupter Protection.

 (c) A circuit serving no outlets within the bedroom except the smoke detector shall not be protected by an arc‑fault protector.

ARTICLE 12

INTERNATIONAL RESIDENTIAL CODE

8-1200. International Residential Code.

2012 International Residential Code Modification Summary

(Statutory Authority: 1976 Code Section 6‑9‑40)

NOTE‑This article is based upon the International Residential Code, 2015 Edition, in accordance with the statutory amendments to acts governing the Building Codes Council, except for the modifications referenced below.

This code is identical to the 2015 Edition of the International Residential Code except for the following modifications:

8-1202. IRC Figure R301.2.1.1 Regions Where Wind Design Is Required.

 Buildings shall be assigned a wind design category in accordance with figure R301.2(4)(B) until probabilistic hazard maps, funded by the S.C. General Assembly, can be presented by the author, Dr. Timothy Mayes, and the findings reviewed, addressed and, if justified, adopted as a modification by the S.C. Building Codes Council.

8-1203. IRC Section R301.2.2.1 Determination of Seismic Design Category.

 Buildings shall be assigned a seismic design category in accordance with R301.2(2) until probabilistic hazard maps, funded by the S.C. General Assembly, can be presented by the author, Dr. Timothy Mayes, and the findings reviewed, addressed and, if justified, adopted as a modification by the S.C. Building Codes Council.

8-1204. IRC Figure R302.1 Exterior walls.

 Exception 6. a. The minimum fire separation distance for improvement constructed on a lot shown on: [ i ] a recorded bonded or final subdivision plat, or [ ii ] a sketch plan, site plan, plan of phased development or preliminary plat approved by the local governing authority which was recorded or approved prior to the implementation of IRC 2012 which shows or describes lesser setbacks than the fire separation distances provided in Table R302.1(1) shall be equal to the lesser setbacks, but in no event less than 3 feet.

 b. The minimum fire separation distance for improvements constructed on a lot where the local governing authority has prior to the implementation of IRC 2012: [ i ] accepted exactions or issued conditions, [ ii ] granted a special exception, [ iii ] entered into a development agreement, [ iv ] approved a variance, [ v ] approved a planned development district, or [ vi ] otherwise approved a specific development plan which contemplated or provided for setbacks less than the fire separation distances provided in Table R302.1(1) shall be equal to the lesser setback, but in no event less than 3 feet.

8-1205. IRC Section R302.5.1 Opening protection.

 Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick, or 20‑minute fire‑rated doors.

8-1206. Section R.302.13 Fire Protection of Floors.

Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a 1/2**-**inch (12.7 mm) gypsum wallboard membrane, 5/8**-**inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.

 Exceptions:

 1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA 13D, or other approved equivalent sprinkler system.

 2. Floor assemblies located directly over a crawl space.

 3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:

 3.1. The aggregate area of the unprotected portions does not exceed 80 square feet (7.4 m2) per story.

 3.2. Fireblocking in accordance with Section R302.11.1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.

 4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2**-**inch by 10**-**inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

8-1207. IRC Section R303.4 Mechanical ventilation.

 The Building Codes Council does not adopt IRC Section R303.4.

8-1208. IRC Figure R307.1 Minimum Fixture Clearances.



8-1209. IRC Section R311.7.5.1 Risers.

 The maximum riser height shall be 73/4 inches (196 mm). The maximum riser height for masonry stairs shall be 8 inches (203 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted provided that the opening between treads does not permit the passage of a 4‑inch‑diameter (102 mm) sphere.

 Exception: The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

8-1210. IRC Section R312.1.1 Where required.

 Guards shall be located along open-sided walking surfaces of all decks, porches, balconies, stairs, ramps and landings that are located more than 30 inches measured vertically to the floor or grade below and at any point where a downward slope exceeds 3V:12H within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

8-1212. IRC Section R313 Automatic Fire Sprinkler Systems.

 R313.1 Townhouse automatic fire sprinkler systems.An automatic residential fire sprinkler system shall not be required to be installed in *townhouses* when constructed in accordance with R302.2.

 Exception:An automatic residential fire sprinkler system shall not be required where *additions* or *alterations* are made to existing *townhouses* that do not have an automatic residential fire sprinkler system installed.

 R313.1.1 Design and installation. Automatic residential fire sprinkler systems when installed for *townhouses* shall be designed and installed in accordance with Section P2904 or NFPA 13D.

 R313.2 One- and two-family dwellings automatic fire systems.An automatic residential fire sprinkler system shall not be required to be installed in one- and two-family *dwellings*.

 Exception**:** An automatic residential fire sprinkler system shall not be required for *additions* or *alterations* to existing buildings that are not already provided with an automatic residential sprinkler system.

 R313.2.1 Design and installation.Automatic residential fire sprinkler systems when installed shall be designed and installed in accordance with Section P2904 or NFPA 13D.

8-1213. IRC Section R317.1.1 Field treatment.

 Field‑cut ends, notches and drilled holes of preservative‑treated wood shall be treated in the field in accordance with AWPA M4 or in accordance with the preservative‑treated wood product manufacturer’s recommendations.

8-1214. IRC Section R319.1 Address ID.

 Buildings shall be provided with *approved* address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) in height with a stroke width of not less than 0.5 inch (12.7 mm). Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

8-1215. IRC Section R326.1 Swimming Pools, Spas, and hot tubs.

 Entire section deleted without substitution.

8-1216. IRC Section R404.1.9.2 Masonry piers supporting floor girders.

 Masonry piers supporting wood beams and girders sized in accordance with Tables R602.7(1) and R602.7(2) shall be permitted in accordance with this section. Piers supporting girders for interior bearing walls shall be filled solidly with grout or type M or S mortar and shall have a minimum nominal dimension of 8 inches (203 mm) and a maximum height not exceeding 10 times the nominal thickness from the top of footing to bottom of sill plate or girder. Piers supporting beams and girders for exterior bearing walls shall be filled solidly with grout or type M or S mortar; shall contain a minimum of one #4 (13 mm) dowel mid-depth; and shall have a minimum nominal dimension of 8 inches (203 mm) and a maximum height of 4 times the nominal thickness from top of footing to bottom of sill plate or girder unless it can be shown by accepted engineering practice that there is sufficient foundation wall along the foundation line to resist the imposed lateral loads, in which case the maximum height shall not exceed 10 times the nominal thickness. Girders and sill plates shall be anchored to the pier or footing in accordance with Section R403.1.6 or Figure R404.1.5(1). Floor girder bearing shall be in accordance with Section R502.6.

8-1217. IRC Section R408.4 Access.

Access shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches (457 mm by 610 mm). Openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm by 610 mm). Where any portion of the through-wall access is below *grade*, an areaway not less than 16 inches by 24 inches (407 mm by 610 mm) shall be provided. The bottom of the areaway shall be below the threshold of the access opening. See Section M1305.1.4 for access requirements where mechanical *equipment* located under floors.

8-1218. IRC Section R502.11.4 Truss design.

 Truss design drawings. Truss design drawings, prepared in compliance with Section R502.11.1, shall be provided to the building official at the time of inspection. Truss design drawings shall be provided with the shipment of trusses delivered to the job site. Truss design drawings shall include at a minimum the information specified as follows:

8-1219. IRC Section R506.2.3 Vapor Retarder.

 A 6-mil (0.006 inch; 152 μm) polyethylene or *approved* vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.

 Exception:The vapor retarder is not required for the following:

 1. Utility buildings and other unheated *accessory structures*.

 2. For unheated storage rooms having an area of less than 70 square feet (6.5 m2) and carports.

 3. Driveways, walks, patios and other flatwork not likely to be enclosed and heated at a later date.

 4. Where *approved* by the *building official*, based on local site conditions.

8-1220. IRC Section R606.7 Piers.

The unsupported height of masonry piers shall not exceed 10 times their least dimension. Where structural clay tile or hollow concrete masonry units are used for isolated piers to support beams and girders, the cellular spaces shall be filled solidly with grout or Type M or S mortar, except that unfilled hollow piers shall be permitted to be used if their unsupported height is not more than four times their least dimension. Where hollow masonry units are solidly filled with grout or Type M or S mortar, the allowable compressive stress shall be permitted to be increased as provided in Table R606.9.

8-1221. IRC Section R703.4 Flashing.

 R703.4 Flashing. Flashing shall be provided in accordance with this section and shall be installed at all of the following locations:

 1. Exterior window and door openings.

 2. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.

 3. Under and at the ends of masonry, wood or metal copings and sills.

 4. Continuously above all projecting wood trim.

 5. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood frame construction.

 6. At wall and roof intersections.

 7. At built‑in gutters.

 R703.4.1 Flashing Materials. Approved flashing materials shall be corrosion‑resistant. Self adhered membranes used as flashing shall comply with AAMA 711. Pan flashing shall comply with Section R703.4.2. Installation of flashing materials shall be in accordance with Section R703.8.3.

 R703.4.2 Pan Flashing. Pan flashing installed at the sill of exterior window and door openings shall comply with this section. Pan flashing shall be corrosion‑resistant and shall be permitted to be pre‑manufactured, fabricated, formed or applied at the job site. Self‑adhered membranes complying with AAMA 711 shall be permitted to be used as pan flashing. Pan flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish or to the water‑restive barrier for subsequent drainage.

 R703.4.3 Flashing Installation. Flashing installation shall be in accordance with this section and the flashing manufacturer’s installation instructions. Flashing shall be applied shingle fashion in a manner to prevent entry of water into the wall cavity or penetration of the water to the building structural framing components. Flashing shall extend to the surface of the exterior wall finish.

 R703.4.3.1 Flashing Installation at Exterior Windows and Doors. Flashing at exterior windows and doors shall be applied shingle fashion and shall extend to the surface of the exterior wall finish or to the water resistive‑barrier for drainage. Installation of flashing materials shall be in accordance with one or more of the following methods:

 1. The fenestration manufacturer’s installation and flashing instructions.

 2. The flashing manufacturer’s installation instructions.

 3. Flashing details or other methods approved by the building official.

 4. As detailed by a registered design professional.

8-1222. IRC Section R802.10.1 Wood Truss Design.

 Truss design drawings, prepared in conformance to Section R502.11.1 shall be provided to the building official at the time of their inspection. Truss design drawings shall be provided with the shipment of trusses delivered to the job site. Truss design drawings shall include, at a minimum, the following information:

8-1223. IRC Section R905.2.8.5 Drip Edge.

 A drip edge shall be provided at eaves and rake edges of asphalt shingle roofs where required by the manufacturer.

8-1224. IRC Section M1411.6 Insulation of refrigerant piping.

 Piping and fittings for refrigerant vapor (suction) lines shall be insulated with insulation have a thermal resistivity of at least R 2.5 hr. ft 2 F/Btu and having external surface permeance not exceeding 0.05 perm [2.87 ng/(s m2 Pa)] when tested in accordance with ASTM E 96.

8-1225. IRC Chapter 11 Energy Efficiency.

 The Building Codes Council does not adopt IRC Chapter 11.

8-1226. IRC Section M1411.8 Locking access port caps.

 The Building Codes Council does not adopt IRC Section M1411.8.

8-1227. IRC Section M1502.3 Duct termination.

 Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer’s installation instructions. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination.

8-1228. IRC Section M1502.4.5 Duct length.

 The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet (10668 mm) from the dryer location to the wall or roof termination.

8-1229. IRC Section M1503.4 Makeup air required.

 Exhaust hood systems capable of exhausting more than 400 cubic feet per minute (0.19m3/s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the exhaust air rate more than 400 cubic feet per minute. Such makeup air systems shall be equipped with not less than one damper. Each damper shall be a gravity damper or an electrically operated damper that automatically opens when the exhaust system operates. Dampers shall be accessible for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced.

8-1230. IRC Section M1601.4.1 Joints, seams and connections.

Longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC *Duct Construction Standards—Metal and Flexible* and NAIMA *Fibrous Glass Duct Construction Standards*. Joints, longitudinal and transverse seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic- plus-embedded-fabric systems, liquid sealants or tapes.

 Tapes and mastics used to seal fibrous glass ductwork shall be *listed* and *labeled* in accordance with UL 181A and shall be marked “181A-P” for pressure-sensitive tape, “181 A-M” for mastic or “181 A-H” for heat-sensitive tape. Tapes and mastics used to seal metallic and flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked “181 B-FX” for pressure-sensitive tape or “181 BM” for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch (25 mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint. Closure systems used to seal all ductwork shall be installed in accordance with the manufacturers’ instructions.

 Exceptions:

 1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.

 2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.

 3. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints.

8-1231. IRC Section G2418.2 Design and Installation.

 Piping shall be supported with pipe hooks, pipe straps, bands, brackets, hangers, or building structural components suitable for the size of piping, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration.

8-1232. IRC Section P2503.6 Shower Liner Test.

 Where shower floors and receptors are made water tight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. Shower liner shall be tested to the lesser of the depth of threshold or 2” and shall be operated at normal pressure for a test period of not less than 15 minutes, and there shall be no evidence of leakage.

8-1233. IRC Section P2603.5 Freezing.

 In localities having a winter design temperature of 32°F (0°C) or lower as shown in Table R301.2(1) of this code, a water pipe shall not be installed outside of a building, in exterior walls, in *attics* or crawl spaces, or in any other place subjected to freezing temperature unless adequate provision is made to protect it from freezing by insulation or heat or both. Water service pipe shall be installed not less than 12 inches (305 mm) deep and not less than 6 inches (152 mm) below the frost line.

8-1234. IRC Section P2903.10 Hose Bibb.

 This section is deleted without substitution.

8-1235. IRC Section P2904.1 General.

 The design and installation of residential fire sprinkler systems shall be in accordance with NFPA 13D or Section P2904 which shall be considered equivalent to NFPA 13D. Partial residential sprinkler systems shall be permitted to be installed only in buildings not required to be equipped with a residential sprinkler system. Section P2904 shall apply to stand‑alone and multipurpose wet‑pipe sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall provide domestic water to both fire sprinklers and plumbing fixtures. A stand‑alone sprinkler system shall be separate and independent from the water distribution system. A backflow preventer shall not be required to separate a stand‑alone sprinkler system from the water distribution system. Any individual offering to contract for the design, installation, testing, and/or maintenance of a residential multipurpose fire sprinkler systems, as referred in Section P2904, must be certified and licensed through the South Carolina Contractors Licensing Board.

8-1236. IRC Section E3802.4 In unfinished basements and crawl spaces.

 Where type NM or SE cable is run at angles with joists in unfinished basements, cable assemblies containing two or more conductors of sizes 6 AWG and larger and assemblies containing three or more conductors of sizes 8 AWG and larger shall not require additional protection where attached directly to the bottom of the joists. Smaller cables shall be run either through bored holes in joists or on running boards. Type NM or SE cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or shall be protected in accordance with Table E3802.1. Conduit or tubing shall be provided with a suitable insulating bushing or adapter at the point where the cable enters the raceway. The sheath of the Type NM or SE cable shall extend through the conduit or tubing and into the outlet or device box not less than 1/4 inch (6.4 mm). The cable shall be secured within 12 inches (305 mm) of the point where the cable enters the conduit or tubing. Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment grounding conductor complying with Section E3908.13. [334.15(C)]

8-1237. IRC Section Appendix H Patio Covers.

 The Building Codes Council does adopt IRC Section Appendix H.

8-1238. Appendix J Existing Buildings.

 The Building Codes Council does adopt IRC Section Appendix J.

**Fiscal Impact Statement:**

 There will be no cost incurred by the State or any of its political subdivisions for these regulations.

**Statement of Rationale:**

 The updated regulations will amend regulations by adopting with modifications, the mandatory codes shown in 2015 Edition of the International Building Code; 2015 Edition of the International Residential Code; 2015 Edition of the International Fire Code; 2015 Edition of the International Fuel Gas Code; 2014 Edition of the National Electrical Code. Additionally, adopting without modification the 2015 Edition of the International Plumbing Code and 2015 Edition of the International Mechanical Code as published. Additionally, amending its regulations by adopting permissive codes as shown in 2015 Edition of the International Property Maintenance Code; 2015 Edition of the International Existing Building Code; 2015 Edition of the International Swimming Pool and Spa Code; and 2015 Edition of the International Performance Code for Buildings and Facilities.