

2011 NC Electrical Code

230.2 (B) Special Occupancies. (140909 Item B-1)

230.2 (B) Special Occupancies. By special permission, additional services shall be permitted for ~~either~~ any of the following:

- (1) Multiple-occupancy buildings where there is no available space for service equipment accessible to all occupants.
 - (2) A single building or other structure sufficiently large to make two or more services necessary.
- Buildings or other structures large enough to allow each service location to be separated by at least 50 feet (50.240 m), meet the criteria for "sufficiently large."

The delayed effective date of this Rule is January 1, 2016.

The Statutory authority for Rule-making is G. S. 143-136; 143-138.

2012 NC Fire Code

310.9 Hookah or water pipe use. (140909 Item B-5)

310.9 Hookah or water pipe use. The use of hookahs or similar devices within buildings shall comply with all of the following:

1. An *approved* ventilation system is required.

1.1 The room or building shall comply with the *North Carolina Mechanical Code* Section 403.3 for a smoking lounge.

1.2 Carbon monoxide accumulation shall be controlled in accordance with the *North Carolina Mechanical Code* Section 502.

2. Coals shall be transported from the preparation area in an *approved* noncombustible container.

3. Hookah pipes shall be located and positioned in such a manner as to prevent overturning.

4. Disposal, use, or handling of ashes and coals shall comply with Sections 305.1 and 305.2.

The delayed effective date of this Rule is January 1, 2016.

The Statutory authority for Rule-making is G. S. 143-136; 143-138.

605.11 Solar photovoltaic power systems. Solar photovoltaic power systems shall be installed in accordance with Sections 605.11.1 through 605.11.2, the *International Building Code* and NFPA 70.

605.11.1 Access and pathways. Roof access, pathways, and spacing requirements shall be provided in accordance with Sections 605.11.1.1 through 605.11.1.3.3.

Exceptions:

1. Detached, non-habitable Group U structures including, but not limited to, parking shade structures, carports, solar trellises, and similar structures.
2. Roof access, pathways, and spacing requirements need not be provided where the fire chief has determined that rooftop operations shall not be employed.

605.11.1.1 Roof access points. Roof access points shall be located in areas that do not require the placement of ground ladders over openings such as windows or doors, and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

605.11.1.2 Solar photovoltaic systems for Group R-3 buildings. Solar photovoltaic systems for Group R-3 buildings shall comply with Sections 605.11.1.2.1 through 605.11.1.2.5.

Exception: These requirements shall not apply to one and two family dwelling and townhomes.

605.11.1.2.1 Size of solar photovoltaic array. Each photovoltaic array shall be limited to 150 feet (45 720 mm) by 150 feet (45 720 mm). Multiple arrays shall be separated by a 3-foot-wide (914 mm) clear access pathway.

605.11.1.2.2 Hip roof layouts. Panels and modules installed on Group R-3 buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels and modules are located. The access pathway shall be at a location on the building capable of supporting the fire fighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.1.2.3 Single-ridge roofs. Panels and modules installed on Group R-3 buildings with a single ridge shall be located in a manner that provides two, 3-foot-wide (914 mm) access pathways from the eave to the ridge on each roof slope where panels and modules are located.

Exception: This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.1.2.4 Roofs with hips and valleys. Panels and modules installed on Group R-3 buildings with roof hips and valleys shall not be located closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.1.2.5 Allowance for smoke ventilation operations. Panels and modules installed on Group R-3 buildings shall be located not less than 3 feet (914 mm) from the ridge in order to allow for fire department smoke ventilation operations.

Exception: Panels and modules shall be permitted to be located up to the roof ridge where an alternative ventilation method approved by the fire chief has been provided or where the fire chief has determined vertical ventilation techniques shall not be employed.

605.11.1.3 Other than Group R-3 buildings. Access to systems for buildings, other than those containing Group R-3 occupancies, shall be provided in accordance with Sections 605.11.1.3.1 through 605.11.1.3.3.
Exception: Where it is determined by the fire code official that the roof configuration is similar to that of a Group R-3 occupancy, the residential access and ventilation requirements in Sections 605.11.1.2.1 through 605.11.1.2.5 shall be permitted to be used.

605.11.1.3.1 Access. There shall be a minimum 6 foot-wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either axis of the building is 250 feet (76 200 mm) or less, the clear perimeter around the edges of the roof shall be permitted to be reduced to a minimum 4 foot wide (1290 mm).

605.11.1.3.2 Pathways. The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. The pathway shall be over areas capable of supporting fire fighters accessing the roof.
2. The centerline axis pathways shall be provided in both axes of the roof. Centerline axis pathways shall run where the roof structure is capable of supporting fire fighters accessing the roof.
3. Pathways shall be a straight line not less than 4 feet (1290 mm) clear to roof standpipes or ventilation hatches.
4. Pathways shall provide not less than 4 feet (1290 mm) clear around roof access hatch with not less than one singular pathway not less than 4 feet (1290 mm) clear to a parapet or roof edge.

605.11.1.3.3 Smoke ventilation. The solar installation shall be designed to meet the following requirements:

1. Arrays shall not be greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.
2. Smoke ventilation options between array sections shall be one of the following:
 - 2.1 A pathway 8 feet (2438 mm) or greater in width.
 - 2.2 A 4-foot (1290 mm) or greater in width pathway and bordering roof skylights or gravity-operated dropout smoke and heat vents on not less than one side.
 - 2.3 A 4-foot (1290 mm) or greater in width pathway and bordering all sides of non-gravity-operated dropout smoke and heat vents.
 - 2.4 A 4-foot (1290 mm) or greater in width pathway and bordering 4-foot by 8-foot (1290 mm by 2438 mm) “venting cutouts” every 20 feet (6096 mm) on alternating sides of the pathway.

605.11.2 Ground-mounted photovoltaic arrays. Ground-mounted photovoltaic arrays shall comply with Section 605.11 and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.

The delayed effective date of this Rule is January 1, 2016.

The Statutory authority for Rule-making is G. S. 143-136; 143-138.

[Note: This Rule will also be printed in the 2012 NC Building Code, Section 605.11 Solar photovoltaic power systems.]