

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Length of Service-Entrance Conductors

Code: 2017 Electrical Code
Section: 230.70(A)(1)

Date: June 12, 2018

Question:

What is the maximum allowed distance the service-entrance conductors may enter a building or structure?

Answer:

Section 230.70(A)(1) states that “[t]he service disconnecting means shall be installed at a readily accessible location either outside of a building or structure or inside nearest the point of entrance of the service conductors.” The electrical code does not define a distance for the service conductors once such conductors enter a building or structure.

The language of section 230.70(A)(1) has been virtually unchanged over the last several decades. What is commonly known as the “Barringer Rule” or “Five Foot Rule” has been the standard for evaluation of service-entrance conductors inside a building or structure in North Carolina for many decades. The Rule remains as the State’s position for proper evaluation in determining the maximum allowed distance service-entrance conductors may enter a building or structure.

The current version of the “Barringer Rule” or “Five Foot Rule” is as follows:

Service-entrance conductors shall be considered to be in compliance with the requirements of 230.70(A)(1) when routed from their point of entrance into a building or structure to the point of attachment to the service disconnect enclosure under all of the following criteria:

1. in the most direct route or at right angles;
2. horizontally not more than twice the nominal width of the service disconnect enclosure; and
3. vertically not more than twice the nominal height of the service disconnect enclosure or five (5) feet, whichever is greater.

Service entrance conductors in excess of these specified limits will not be allowed unless specifically authorized by special permission from the electrical inspector having jurisdiction to accommodate adverse site conditions which would not reasonably allow installation within this criteria.