

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Manufactured and Mobile Homes

Code: 2020 Electrical Code
Section: Article 550

Date: November 15, 2024

Question 1:

What sections of Article 550 are not enforced by the local electrical inspector in North Carolina?

Answer 1:

All of Part II of Article 550.

In electrical, manufactured and mobile homes are viewed similar in nature as listed and labeled equipment. When connecting listed and labeled equipment to an electrical system, the label certifies the engineered design of the equipment is complete for approval without further evaluation. Thus, the electrical inspection ceases at the point where the electrical system connects to the listed equipment in accordance with the instructions from the listing and manufacturer. See section 110.3.

In North Carolina, the NC Manufactured Building Division of the NC Department of Insurance, Office of State Fire Marshal is the exclusive agency that enforces the regulations for manufactured and mobile home fabricators. Through the Manufactured Building Division, a Federal version (24 CFR Part 3280) of Part II of Article 550 is enforced at the time of fabrication. Therefore, Part II of Article 550 is replaced by the metal HUD label located on the outside of the home.

Question 2:

When remodeling a manufactured or mobile home, is the addition, modification, repair, or replacement to a component of the factory's electrical design subjected to any provisions in Part II of Article 550.

Answer 2:

It depends. Similar to listed and labeled equipment, there are two options.

1. The addition, modification, repair, or replacement to the electrical system is performed in accordance with the regulations that govern dwelling electrical installations within the State Electrical Code. This option will require inspections before concealment by the electrical inspector equivalent to a remodel of a single-family dwelling. (Most common option for mobile and manufactured homes)

2. The addition, modification, repair, or replacement to the electrical system is performed in accordance with the original listings design by the manufacturer. This option will require the original manufacturer of the home to recertify the structure's listing and label which will be submitted to the electrical inspector as an approved design. (Uncommon option for mobile and manufactured homes)

Question 3:

Are Part I and III of Article 550 enforced by the local electrical inspector in North Carolina? If so, are there any modifications by any other agencies?

Answer 3:

Yes to both questions.

Parts I or III of Article 550 are concerned with the external environment and electrical system that will connect to the listed and labeled home. Neither Parts I or III of Article 550 have sections that regulate the construction and design of the listed and labeled home itself. Therefore, Parts I or III of Article 550 are regulated by the State Electrical Code and enforced by the local electrical inspector.

The definitions for a "Manufactured Home" and "Mobile Home" in section 550.2 shall include the following standard with each definition:

Manufactured Homes are built to the HUD Federal construction standards (24 CFR Part 3280) and easily distinguished by the metal HUD label located on the outside of the home.

Mobile Homes were built prior to June 1976 when the HUD construction standards went into effect. Mobile homes do not have the HUD label.

Question 4:

Can the service equipment be installed by attachment to the exterior of either a manufactured or mobile home?

Answer 4:

Section 550.32(B) allows the service equipment to be installed on a manufactured home if seven conditions are met. However, the manufacturer (by the listing and instructions provided) can prohibit attaching equipment in general to the exterior which would supersede section 550.32(B). See section 110.3(B).

Care should be taken to insure that the local electrical utility's regulations are not violated. This interpretation is for Code compliance only and does not prevail over any regulation from an electrical utility.

Section 550.32(A) prohibits the service equipment from being installed on a mobile home.

Question 5:

Can the metering equipment be located on the exterior of a manufactured home in accordance with section 550.32(B) where the service-entrance conductors enter the home and utilize the interior main breaker supplied by the factory as the service disconnect?

Answer 5:

It depends.

Assuming the manufacturer (by the listing and instructions provided) does not prohibit this method, the interior main panel including the main breaker will be subjected to all the provisions of Article 230 because the factory panel is then part of the “service equipment”. See Article 100 for the definition of “Service Equipment”.

The service-entrance conductors are also subjected to the provisions of the electrical code. Section 230.70(A)(1) will require the interior main breaker to be located at the nearest point of entrance of the service-entrance conductors. The distance the service-entrance conductors are allowed to enter the home’s envelope to the service disconnect (main breaker) is clarified in the interpretation named “230.70(A)(1) - Length of Service-Entrance Conductors”.

The point of entrance of the service-entrance conductors where run underneath the home depends on the exterior lower covering. If the manufactured home has a permanent foundation covering such as brick, block, concrete, wood, or similar, then the point of entrance of the service-entrance conductors is where such conductors penetrate the covering. If the manufactured home no underneath covering or has a thin metal skirt (commonly referred to as underpinning), then the point of entrance of the service-entrance conductors is where such conductors penetrate the subflooring of the home.