

Article 100

Definitions

Objective

After reviewing the changes to Article 100, you should have a better understanding of how to apply the meanings for the following *Code* definitions:

- Authority Having Jurisdiction
- Grounding Electrode Conductor
- Ground-Fault Circuit Interrupter
- Listed
- Luminaire
- Qualified Person
- Structure

The following definitions have been added or changed for the 2002 *NEC*.

Authority Having Jurisdiction

A new definition with a Fine Print Note (FPN) was added to provide a standard definition among all NFPA documents, thereby providing consistency with documents used for enforcement.

Authority Having Jurisdiction (AHJ). The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

FPN: The Authority Having Jurisdiction may be a federal, state, local government, or individual such as a fire chief, fire marshal, chief of a fire prevention bureau, labor department or health department, building official or electrical inspector, or *others having statutory authority*. In some circumstances, the property owner or his/ her agent assumes the role, and at government installations, the commanding officer or departmental official may be the AHJ

Intent: The term “Authority Having Jurisdiction (AHJ)” was used over 40 times in the 1999 *NEC*, yet there was no definition as to its meaning. Typically, the AHJ is the local electrical inspector who has been given statutory authority by a city, county, or state ordinance. In the absence of a federal, state or local AHJ, the operator of the facility, by default will assume that role, whether they realize it or not. Ultimately the owner/operator or his/her agent such as an architect or engineer of the facility is the AHJ.

AUTHOR’S COMMENT: Many feel that the AHJ should have a strong background in the electrical field such as electrical engineering or an electrical contractor’s license and in some states this is a legal requirement. See 80.27 for Inspectors’ Qualifications.

Grounding Electrode Conductor

The definition for “Grounding Electrode Conductors” was revised to read:

Grounding Electrode Conductor. The conductor that connects the grounding electrode to the grounded (neutral) conductor at service equipment [250.24(A)], source of a separately derived system [250.30(A)(2)], or to the equipment grounding conductor at each building or structure disconnect that is supplied by a feeder [250.32(E)].

Intent: The term for the conductor that terminates to the grounding electrode for a separate building and structure was changed from “Grounding Conductor” in Section 250-32(e) of the 1999 *NEC*, to “Grounding Electrode Conductor” in 250.32(E) in the 2002 *NEC*. The change in the definition was necessary to coordinate with the changes in Article 250. (Figure 100–1)

AUTHOR’S COMMENT: The grounding electrode conductor is sized in accordance with 250.66, whereas equipment grounding conductors are sized in accordance with 250.122.

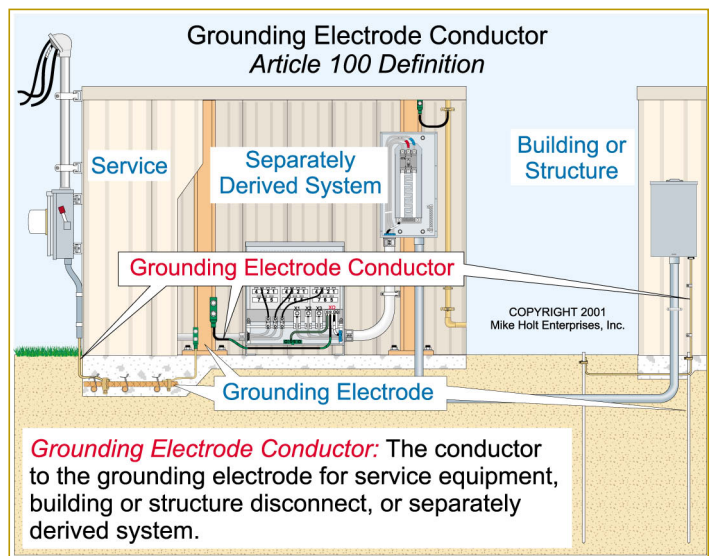


Figure 100–1

Chapter 1. General Requirements

Practice Questions

Article 100 – Definitions

The answers to the following questions are based on the actual text of the 2002 *NEC* and Mike Holt's *Illustrated Changes to the NEC, 2002 Edition*. Answers to questions identified with an (*) are contained in the text, or summary portion of this workbook and not the *NEC*.

Authority Having Jurisdiction (AHJ)

1. Where no statutory requirement exists, the AHJ could be a property owner or his/her agent, such as an architect or engineer.
(a) True (b) False

Grounding Electrode Conductor

- *2. The grounding electrode conductor is sized in accordance with Table _____.
(a) 250.66 (b) 250.122 (c) 310.16 (d) Any of these

Ground-Fault Circuit Interrupter

3. A Class A GFCI protection device is designed to de-energize the circuit when the ground-fault current is approximately _____ mA.
(a) 4 mA (b) 5 mA (c) 6 mA (d) All of these

Luminaire

4. The term “luminaire” replaces the terms “fixture” and “lighting fixture” throughout the 2002 *NEC*.
(a) True (b) False

Qualified Person

5. A qualified person is one who has received safety training on the hazards involved with electrical systems. This person is not required to have the skill and knowledge related to the construction and operation of the electrical equipment and its installation.
(a) True (b) False

Structure

6. A structure is that which is built or constructed.
(a) True (b) False

Chapter 3 – Wiring Methods/Materials

ARTICLE 300 – WIRING METHODS

Article 300 contains the general requirements for all wiring methods included in the *NEC*.

ARTICLE 310 – CONDUCTORS FOR GENERAL WIRING

This Article contains the general requirements for conductors, such as insulation markings, ampacity ratings, and use. Article 310 does not apply to conductors that are part of cable assemblies, flexible cords, fixture wires, or conductors that are an integral part of equipment [90.6, 300.1(B)].

ARTICLE 314 (370) – OUTLET, DEVICE, PULL AND JUNCTION BOXES, CONDUIT BODIES, FITTINGS AND MANHOLES

Article 314 contains installation requirements for outlet boxes, pull and junction boxes, conduit bodies and manholes.

ARTICLE 320 (333) – ARMORED CABLE (AC)

Armored cable (BX®) is an assembly of insulated conductors, 14 AWG through 1 AWG, that are individually wrapped within waxed paper. The conductors are contained within a flexible metal (steel or aluminum) sheath that interlocks at the edges. Armored cable has an outside appearance like flexible metal conduit.

ARTICLE 330 (334) – METAL-CLAD CABLE (MC)

Metal-clad cable encloses one or more insulated conductors in a metal sheath of either corrugated or smooth copper, or aluminum tubing, or spiral interlocked steel or aluminum. The physical characteristics of MC cable make it a versatile wiring method. It can be used in almost any location and for almost any application. The most common type of MC cable is interlocking type, which has an appearance similar to armored cable or flexible metal conduit.

ARTICLE 334 (336) – NONMETALLIC-SHEATHED CABLE (NM)

Nonmetallic-sheathed cable is a wiring method enclosing 2 or 3 insulated conductors, 14 AWG through 2 AWG, within a nonmetallic outer cover. Because this cable is nonmetallic, it contains a separate equipment grounding conductor. Nonmetallic-sheathed cable is a common wiring method used for residential and commercial branch circuits. It is called Romex® by most electricians.

ARTICLE 338 – SERVICE-ENTRANCE CABLE (SE and USE)

Service-entrance cable can be a single conductor or multiconductor assembly with an overall covering. This cable is used primarily for services not over 600V, but can also be used for feeders and branch circuits.

ARTICLE 342 (345) – INTERMEDIATE METAL CONDUIT (IMC)

Intermediate metal conduit is a circular metal raceway with an outside diameter the same as rigid metal conduit. The wall thickness of IMC is thinner than RMC; therefore, it has a greater interior cross-sectional area. IMC is lighter and less expensive than RMC and it can be used in all of the same locations as RMC. IMC also uses a different steel alloy, which results in it being more rigid than RMC, even though the walls are thinner.

ARTICLE 344 (346) – RIGID METAL CONDUIT (RMC)

Rigid metal conduit (RMC) is a circular metal raceway with an outside diameter the same as IMC. The wall thickness of RMC is thicker than IMC; therefore, it has a smaller interior cross-sectional area. RMC is heavier and more expensive than IMC and it can be used in any location.