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THE WIRE

November 2026

President's Letter

The October meeting had 32 members present. A presentation was given on the NFPA 70E Standard for Electrical Safety in the Workplace. For our November meeting, we will continue going over code questions which can be found on the website.

Speaking of the website, please check out the new design. Chuck Weining, the ECHL IT person, has come up with a very refreshing new design and layout. Check it out.

Please try to pay your membership dues of $60 at the first meeting you attend. Having an accurate count of paid members is crucial to the functioning of this organization.

The Department of Housing, Building, and Construction has transitioned to a new data base. Please do not be surprised if you have issues with your next license renewal. If you do experience any issues, please contact one of the Board members for assistance or call Housing, Building, and Construction at (502) 782-6700.

The Sponsorship Form is on the website. If you know of any company that may be interested in becoming a sponsor, please print off the form and give it out to any prospective sponsor. The cost for a company or organization to become a sponsor is $100. Our next general membership meeting is scheduled for Monday November 9, 2026 at the Elks Lodge located at 2824 Klondike Lane. The meeting starts at 7:00 pm with sign-ins beginning at 6:30 pm. Hope to see you there.

As Always Stay Safe and Work Safe

Steve Willinghurst

November 9, 2026 Code Program

Sign-in 6:30 P.M. - Program at 7:00 P.M.
ELKS LODGE # 8 - 2824 KLONDIKE LN

The code program for September will be Steve & Dennis continuing the presentation of the 47 Code Questions that were started earlier this year before the summer break. Answers and discussion will continue at the September meeting. The 47 Code Questions are available at echlky.com. on the Newsletter tab. The yearly dues ($60.00) will be due in September (or the first meeting you attend during the year). The membership form for renewal is attached to this newsletter.

Our General Membership meetings are held at the Elks Lodge located at 2824 Klondike Lane. The meeting starts at 7:00 pm with sign-ins beginning at 6:30 pm.

Stay Alert! Work Smart & Stay Informed!

News from Frankfort

As mentioned in a previous "Wire", the Department of Housing, Building, and Construction (DHBC) had an Advisory Committee on Tuesday June 30, 2026. The Commissioner, Max Fuller, reported that the 2026 NEC Task Force had recommended adopting the 2026 National Electrical Code with a few sections having delayed enforcement.
As a result of this recommendation, the DBHC has decided to move forward with the adoption process. This process will be in conjunction with the updating of the State Building Code. If there is no opposition, the best-case scenario is the 2026 NEC would go into effect in late 2027.

See you at the November meeting.

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November 2026 Code Questions

1) How many inches of separation is required for a 75 KVA Transformer installed indoors from a combustible material? Where would you find this in the 2023 NEC?

A) 18”
B) 6”
C) 12”
D) 9”
Section_____

2) What is the highest voltage permitted inside a building according to the 2023 NEC? Where would you find this in the 2023 NEC?

A) 13.8KV
B) 4.16KV
C) 23kv
D) 34.5KV
Section_____

3) Is Gas piping in a building or structure required to be bonded to the grounding electrode? Where would you find this in the 2023 NEC?

A) Yes
B) No
Section_____

4) Can a Panelboard be installed in a clothes closet? Where would you find this in the 2023 NEC?

A) Yes
B) No
Section_____

5) An unenclosed spray processes how many feet horizontally is considered Class1 Division 2? Where would you find this in the 2023 NEC?

A) 20’
B) 10’
C) 25’
D) 15’
Section_____

6) Can THHN conductor be installed as conductors to a hoist way door interlock wiring system? Where would you find this in the 2023 NEC?

A) Yes
B) No
Section_____

Code Corner

The *National Electrical Code* (NEC) governs most of the electrical installation in the United States. The code as stated in 90.1 ***is the protect persons and properties from hazards arising from the use of electricity.*** There are many lifesaving included in the ***NEC*** where people live, work and play that is why the GFCI requirements in Section 210.8 have been expanded in the 2023 ***NEC.***

GFCI protection was first introduced to the ***NEC*** in the 1968 Code cycle in Article 680 for swimming pools. There were about 1,000 fatalities annually where a person came into contact with electricity. Most of the homes in the United States are over 50 years old that would make about 43 million home lacking GFCI protection.

When they were first introduced there was some skepticism about the life saving capabilities of the GFCI devices. Since GFCI protection has been expanded beyond swimming pools there has been an 80 percent drop in home electrocutions and a 95 percent drop in consumer electrical powered products. The Consumer Product Safety commission estimates 47 percent of today electrocutions could be prevented with GFCI protection. The GFCI protection has been further expanded over the past 51 years; unfortunately these changes were a result of a fatality somewhere.

The 2023 ***NEC*** required protection 125 volt 15 and 20 ampere receptacles, 2023 ***NEC,*** 125 volt through 250 volt and the ampere has been raised to 50 amps. This would include Dryers and Ranges as well, will also be requiring the GFCI protection to air conditioning condenser and all kitchen outlet. Once again unfortunately the change on the GFCI protection for the condenser unit was because of a 12 year old boy being electrocuted. New section 210.8(F) requires single phase outdoor outlets branch circuits 150 volts to ground to be GFCI protected.

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FS single device box support

Does the code permit an FS box with a single receptacle to be supported only by a short length of rigid metal conduit?

Yes, Section 314.23(F) provides requirements for enclosures that contain devices supported by entering raceways. The general rule is that the enclosure cannot exceed 100 cubic inches in size and must have threaded entries or identified hubs. The box must then be supported by two or more conduits threaded wrench-tight into the box, with each conduit secured within 18 inches of the box. See Exception No.1 following 314.23(F), which permits a single -gang FS device box to be supported by a single RMC or IMC.

On-site optional standby power source labeling

An inspector required us to have a permanent label on the outdoor service disconnect for a home to note that there was a generator on-site. Is that a code requirement or just a local thing?

Where an optional standby power system is installed for one- and two-family dwellings, Section 702.7(A)(1) requires signage in the form of permanent placards, labels or directories at the disconnecting means required in sections 225.41 and 230.70(A)(2) to indicate there is an optional standby power source and the location of the disconnect or means to shut down the prime mover. The AHJ can approve another readily visible location for the required signage.

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Code Corner

(Continued from Page 2)

Here is a question for you, have you tested your GFI receptacle lately as is required by the listing party? How old is your GFCI receptacle? GFCI technology has advanced as well through the years and older GFCI receptacle may be producing power but not providing protection. The newer version of GFCI receptacles are designed when protection circuit fails it will not provide power. Now go and Test your GFCI receptacles while it is on your mind!

Submitted by Dennis Steier

LG&E NEWS

WHAT TO KNOW ABOUT EV PUBLIC CHARGERS



Whether you're commuting, running errands or taking a road trip, public charging stations can help keep you moving with confidence. That's why we have fulfilled our commitment to install 20 Level 2 public EV charging stations across our service area, making charging more convenient where people live, work and play. It's also helpful to understand the different types of EV charging.

While Level 1 and Level 2 charging are commonly used at home and public locations,

Level 3 charging, often called fast charging, is the quickest way to power up your vehicle while you're on the go.

Level One • 6–24 hours for a full charge. • Residential use only. • Uses a 120V outlet.

Level Two • 2–12 hours for a full charge. • Residential and commercial use. • Can use a 240V outlet (also known as a dryer outlet) or be hardwired by an electrician.

Level Three – Fast Chargers • 15–90 minutes for a full charge. • Not for home installation. Fast chargers are utilized in public commercial areas only.

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NEC Requirements for Receptacles

Do you understand the NEC installation requirements that make receptacles safe for users?



A “receptacle” is a contact device installed at an outlet for the connection of an attachment plug [Art. 100]. Article 406 contains the requirements for the rating, type, and installation of receptacles, cord connectors, attachment plugs, and flanged inlets (**Fig. 1**).

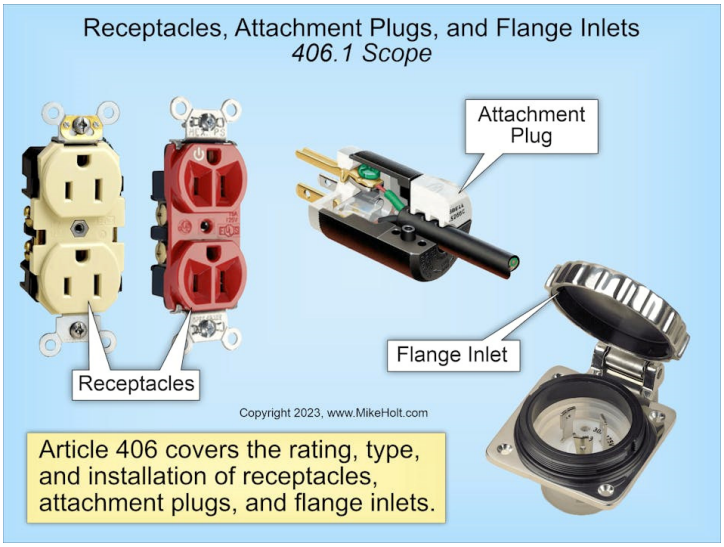


Fig. 1. Article 406 contains the requirements for the rating, type, and installation of receptacles, cord connectors, attachment plugs, and flanged inlets.

Receptacles:

- Must be listed and marked with the manufacturer’s name or identification, voltage rating, and ampere rating [Sec. 406.3(A)].
- Rated 20A or less and connected to aluminum conductors must be marked CO/ALR [Sec. 406.3(C)].
- Rated 15A and 20A with terminals not marked CO/ALR can be used with copper and copper-clad aluminum conductors [Sec. 406.3(D)].
- With terminals marked CO/ALR can be used with aluminum, copper, and copper-clad aluminum conductors.
- Of the isolated ground type must be identified by an orange triangle on the face of the receptacle [Sec. 406.3(E)]. Their grounding terminals must connect to an insulated equipment grounding conductor per Sec. 250.146(D).
- Rated 15A and 20A, 125V and nonlocking-type that are automatically controlled to remove power for energy management or building automation must be permanently marked with the word “controlled” [Sec. 406.3(F)].

Exception: The controlled receptacle marking is not required for wall switch-controlled receptacles used for lighting in a dwelling as permitted by Sec. 210.70(A)(1) Exception No. 2.

General installation Requirements

Receptacles installed on 15A and 20A branch circuits must be of the grounding type, except as permitted for 2-wire receptacle replacements in Sec. 406.4(D)(2). The receptacle grounding terminal must be connected to the circuit equipment grounding conductor per Sec. 250.146 [406.4(C)]. The cord connectors grounding terminal must be connected to the circuit equipment grounding conductor.

Note 1: For acceptable types of equipment grounding conductors, see Sec. 250.118(A).

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Note 2: See Sec. 250.130 for extensions of existing branch circuits. The grounding terminal of receptacles must be connected to an equipment grounding conductor per Sec. 250.146 [Sec. 406.11].

Receptacles that are replaced must comply with the eight requirements of Sec. 406.4 (D)(1) through (8). For example, if an EGC exists in an outlet box, replacement receptacles must be of the grounding type and the receptacle grounding terminal must connect to the circuit equipment grounding conductor per Sec. 406.11.

If there's no equipment grounding conductor in the outlet box, replacement receptacles can be any of the three types listed in Sec. 406.4(D)(2)(a) through (c). You can use a non-grounding receptacle, GFCI, or grounding type receptacle protected by a GFCI. An equipment grounding conductor is not required from the GFCI-protected grounding-type receptacle to any receptacle outlets downstream.

You can provide protection by a GFCI circuit breaker, GFCI receptacle, or downstream from a feed-through type GFCI receptacle.

When you replace existing receptacles in locations where:

- GFCI protection is required, the replacements must be GFCI protected [Sec. 406.4 (D)(3)]. Exception: Where the outlet box size will not permit installing a GFCI receptacle, a GFCI-protected grounding-type receptacle marked "GFCI Protected" and "No Equipment Ground" per Sec. 406.4(D) is permitted [Sec. 406(D)(3)].
- AFCI protection is required, the replacement receptacle(s) must be one of those listed in Sec. 406.4(D)(4). For example, a listed AFCI receptacle [Sec. 406(D)(4]. Tamper resistance is required, the replacement receptacle(s) must be listed tamper resistant, except if a non-grounding receptacle is replaced with another non-grounding receptacle or a receptacle connected to aluminum conductors is replaced with a CO/ALR receptacle [Sec. 406(D)(5)].
- Weather resistance is required, replacement receptacles must be weather resistant per Sec. 406.9(A) and (B) [Sec. 406(D)(6)].
- Automatically controlled receptacles must be replaced with an equivalently controlled receptacle. If automatic control of the receptacle is no longer required, the replacement receptacle must not be marked per Sec. 406.3(F) [Sec. 406(D)(7)].

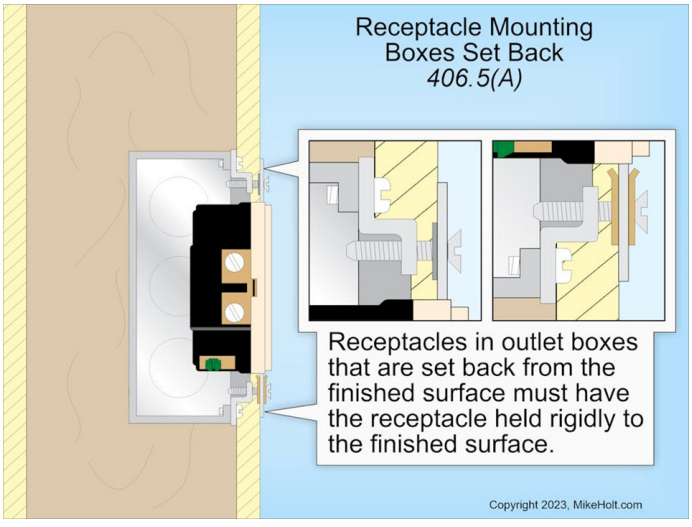
Receptacles must be provided with GFPE where replacements are made at receptacle outlets that are required to be GFPE protected (e.g., Sec. 555.35(B)(1)) [Sec. 406(E)(8)].

Physical protection of floor receptacles must allow floor-cleaning equipment to be operated without damaging the receptacles [Sec. 406(G)(1)]. All 125V, single-phase, 15A and 20A floor receptacles in food courts and passenger transportation facilities waiting spaces must be GFCI protected [Sec. 406(G)(2)].

Receptacle mounting

Outlet boxes for receptacles must be securely fastened per Sec. 314.23 [Sec. 406.5]. Receptacles mounted in boxes that are:

- Set back from the finished surface must be installed so the receptacle yoke is held rigidly to the surface [Sec. 406.5(A)] (**Fig. 2**).
- Flush with the finished surface must have the receptacle yoke held rigidly to the outlet box [Sec. 406.5(B)].



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Fig. 2. Set back from the finished surface must be installed so the receptacle yoke is held rigidly to the surface.

Receptacles must be flush with (or project from) the faceplates [Sec. 406.5(D)]. Don't install receptacles in a face-up position in:

- Or on countertop surfaces or work surfaces unless listed for countertop surface or work surface applications [Sec. 406.5(G)(1)].
- The area below a sink [Sec. 406.5(G)(2)]. Don't install them in enclosures with other switches or receptacles if the voltage between the devices exceeds 300V, unless the devices are separated by barriers identified for the purpose [Sec. 406.5(J)].

Damp or wet Locations

Receptacles in a damp location must be installed in an enclosure that is "weatherproof" when an attachment plug is not inserted (damp location rated) or the attachment plug is inserted when the cover is closed (wet location rated) [Sec. 406.9(A)].

15A and 20A receptacles installed in a wet location must be within an enclosure that is weatherproof when an attachment plug is inserted using an outlet box hood identified as "extra duty" [Sec. 406.9(B)].

Hinged covers of outlet box hoods must be able to open at least 90° (or fully open if the cover is not designed to open 90° from the closed to open position) after installation.

Nonlocking-type 15A and 20A receptacles in a wet location must be listed as weather-resistant (WR) type (**Fig. 3**).

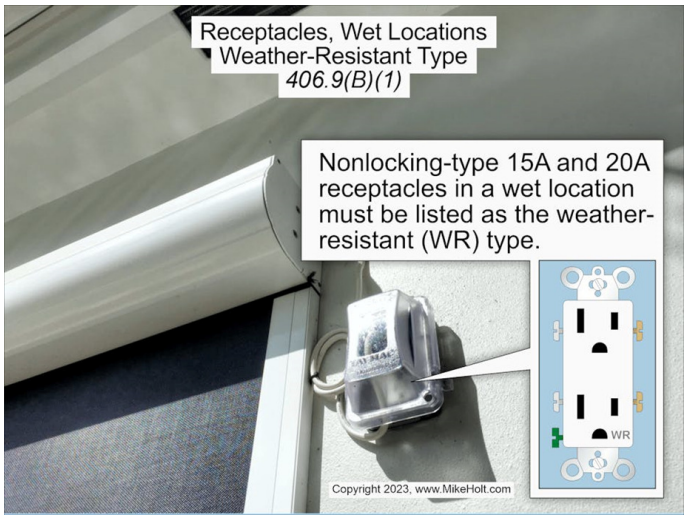


Fig. 3. Section 406.9(B)(1) requires nonlocking-type 15A and 20A receptacles in a wet location to be listed as weather-resistant (WR) type.

Receptacles rated 30A or more installed in a wet location must be listed as the weather-resistant (WR) type and comply with Sec. 406.9(B)(2)(a) or (b).

a. Unattended while in use. It must be in an enclosure that is weatherproof when an attachment plug is inserted.

b. Attended while in use. It can use an enclosure that is weatherproof when the cover is closed.

Receptacles are not permitted inside a bathtub or shower or within 3 ft horizontally from any outside edge of a bathtub or shower stall. This includes the space measured vertically from the floor to 8 ft vertically above the top of the bathtub rim or shower stall threshold [Sec. 406.9(C)].

Exception No. 1: Receptacles for hydromassage bathtubs installed per Sec. 680.73 can be installed in the prohibited receptacle zone.

Exception No. 2: In dwelling unit bathrooms with less than the required zone, the bathroom sink receptacle, required by Sec. 210.52(D), can be located on the farthest wall opposite the bathtub rim or shower stall threshold.

Exception No. 4: In dwelling unit bathrooms, a single receptacle for an electronic toilet or electronic bidet seat is permitted in the prohibited receptacle zone if the receptacle is not in the space between the toilet and the bathtub or shower.

Tamper-resistant receptacles

Nonlocking-type 15A and 20A, 125V and 250V receptacles must be tamper resistant, if installed in any of the areas listed in Sec. 406.12 (1) through (10):

1. Dwelling units, boathouses, mobile homes, and manufactured homes, including their attached or detached garages and accessory buildings, and common areas of multifamily dwellings.

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2. Hotel and motel guest rooms and guest suites, and their common areas.
3. Childcare facilities.
4. Preschools and education facilities.
5. Clinics, medical and dental offices, outpatient facilities, and spaces of nursing homes and limited care facilities used exclusively as patient sleeping rooms. Also within the associated business offices accessible to the general public, lobbies and waiting spaces.
6. Places of awaiting transportation, gymnasiums, skating rinks, fitness centers, and auditoriums
7. Dormitory units.
8. Residential care/assisted living facilities, social and substance abuse rehabilitation facilities, and group homes.
9. Foster care facilities, nursing homes, and psychiatric hospitals.
10. Areas and common areas of agricultural buildings accessible to the public.

Exception to (1) through (10): Receptacles in the following locations do not have to be tamper resistant:

1. Receptacles more than 51/2 ft above the floor.
2. Receptacles that are part of a luminaire or appliance.
3. A receptacle within dedicated space for an appliance that in normal use is not easily moved.
4. Nongrounding receptacles installed as permitted in Sec. 406.4(D)(2)(a).

Avoiding violations

Receptacles exist so that people can plug power cords into them. This fact is the basis for nearly every requirement in Art. 406. If, for example, the box is not firmly attached, the person pushing the plug into the receptacle is going to move the receptacle. If a nonweatherproof receptacle is used in a wet location, the simple act of approaching it to plug something in could result in lethal shock. If you think of the user, the requirements in Art. 406 will be fairly easy to recall and correctly apply.

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Existing home runs

A medical office is moving into an existing commercial building. There will be exam rooms and patient care spaces. I understand the need for healthcare facility wiring in accordance with 517.13, but I would like to know if I can reuse existing MC home runs, as the panelboard is quite a distance from the space being used. Is that permitted?

No, see 517.13, which addresses “branch circuits” supplying patient care spaces. As defined in Article 100, a branch circuit is the circuit conductors between the final overcurrent device protecting the circuit and the outlet(s). New home runs will be required and must be installed in accordance with 517.13.

AFCI required?

We are converting a portion of a detached garage on a residential property into a party room. It will be heated, but there is no kitchen or bathroom, etc. Section 210.12 does include recreation rooms. Is AFCI protection required?

No, AFCI protection is not required. Section 210.12(B) is called “Dwelling Units,” and the building/structure you described is not a dwelling unit. It does not contain complete and independent living facilities for one or more people, including permanent provisions for living, sleeping, cooking and sanitation. If the garage were attached to the dwelling, it would be part of the dwelling unit, and Section 210.12(B), list item (10) would require AFCI protection. It is important to note that 210.8(B) list item (10) applies, as the garage is not part of a dwelling unit and requires all 125V through 250V receptacles, 50A or less, be GFCI protected.

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What's Wrong Here?



Receptacles rated 15A or 20A, 125V or 250V installed in wet locations shall have a weatherproof enclosure, whether or not any attachment plug cap is inserted. Outlet box hoods, sometimes called "bubble covers," installed for this purpose shall be listed and identified as extra-duty. Other listed products, enclosures, or assemblies that provide a weatherproof enclosure but do not utilize an outlet box hood are also permitted and are not required to be identified as extra duty. 15A and 20A, 125V and 250V nonlocking-type receptacles shall be listed and identified as weather-resistant (WR) type. This type of receptacle cover is only weatherproof when closed and does not satisfy the requirements of Sec. 406.9(B)(1).

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Organization: IEC ☐ ABC ☐ IBEW ☐ NECA ☐ N/A ☐ Other: _____

Member Type:
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Electrician ☐ Utility ☐ Maintenance ☐ Other ☐

Please check all that apply.

License Number: EE: _____ ME _____ CE _____

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Place of Employment

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Employer Phone | Employer Email Address

I agree to abide by the Constitution, By-Laws and Rules of the Clearing House

_____
Signature

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