



THE WIRE

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OCTOBER\ 2024

The Presidents' Letter

Our September meeting was very well attended with 50 people present. I would like to thank Pfeiffer Sales for their sponsored presentation on some of the significant changes in the 2023 National Electrical Code. There were a lot of questions and discussion especially regarding Section 230.67 surge suppression. Congratulations to John Pyontek on winning \$62 from the 50/50 drawing.

In addition to Pfeiffer Sales' presentation, I gave an update on the 2023 code adoption. A letter went out from the Department of Housing, Building, and Construction dated September 4, 2024 stating that unless the administrative regulations are delayed or found deficient, mandatory enforcement of the 2023 NEC will begin January 1, 2025.

The letter also stated that NEC Sections 210.52(C), 230.67, and 314.27(C) are not mandatory until July 15, 2026. In addition, the requirement for GFCI protection for personnel for receptacles over 125-volt listed in the 2023 NEC Section 210.8(A) and the requirement for GFCI protection listed in 210.8(D) (8), (9), (10), and (11) is not mandatory until UL Standards 943 and 101 are revised. **Make sure you check with your respective electrical inspector before you do any installation covered by these sections!**

At the beginning of July 2024, any license renewals for contractor, master, or electrician licenses will be for two years. With your next renewal in two years, you will pay a fee for two years and will be required to have 12 hours of continuing education for each license that is being renewed. Call the department at (502) 573-2002 with any questions.

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.

Marilyn has begun to mail out invoices for membership dues. We ask that all members pay their invoice

Continued on page 3

OCTOBER 14, 2024 Code Program

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

The program for October will be directed by Steve Willinghurst on Code updates. Steve will go over the portion of Code that is being delayed and will be a review/compare the Code updates from 2017 to present.

Feel free to participate by asking questions and voicing your concerns.

Bring a friend and enjoy the program.

Dennis Steier will also go over the Code Questions in the October 2024 Wire.

See you Monday Evening, October 14, 2024, at 6:30pm.

Stay Alert! Work Smart & Stay Informed!

Dues Renewal - Cost Went up

It was brought to our attention that when ECHL Invoices went out in the September Wire, some of the invoices were incorrectly stating the amount of the dues at \$40.

We addressed the membership about our financial issues at a meeting earlier in the year. All members present voted to raise the dues to \$60.

For some reason when I printed out the invoices some of them didn't pick up the change and I neglected to check every invoice mailed. Some of the invoices reflected the amount of \$40, which is not correct. I do apologize for this mistake. When paying your dues, we will need to collect \$60.

If you mailed in \$40, you will receive an additional invoice for \$20, to bring your dues current,. Again We apologize for the mistake.

Thank you for your understanding.

OCTOBER Code Questions

1. There is a change to 2017 NEC that requires you to torque the termination to manufactures instructions. If you don't have this information is there anything in the 2017 NEC that could possibly help you find the required torque value?

Yes (Annex I) No

2. How high would you be required to mount a receptacle that is in a room designed for Handicap access? Where would you find this information in 2017 NEC?

A) 24" C) 15"
B) 12" D) 30"

Section Informational Annex J

3. Can you use a NEMA 1 enclosure in an environment with falling dirt? Where would you find this in the 2014 NEC?

Yes No

Section Table_110.28

4. If you are making a tap in an enclosure in a Class 2 Division 1 environment can you use an unmarked Dust Tight enclosure? Where would you find this answer in the 2017 NEC?

Yes No

Section 502.10 (A) (3)

5. Can an attached ladder entering a vault be made out of unpainted steel? Where would you find this answer in the 2014 NEC?

Yes No

Section 110.79

6. Can you use a standard LB's with a cover in a Class 1 Division 2 application. Where would you find this answer in the 2017 NEC?

Yes No

Section 502.10 (B) Would also require a gasket for enclosed and gasketed raceway

Code Corner

Article 230 Services

If everything goes as planned we will be adopting the **2023 NEC** in January of 2025, totally skipping the **2020 NEC** and being on the **2017 NEC** we are not familiar with changes since we never had to address the 2020 NEC changes. There was a major new section added to Article 230, Section 230.85 **External Emergency Disconnect(s) for Dwelling Units**. This section is new and requires an emergency disconnect at a readily accessible outdoor location for one and two family dwellings.

When this section was added in the 2020 edition of the **NEC** and it was less than a quarter of a page and has had additions to the section in the **2023 NEC** and now covers over half a page of the **2023 NEC**. There were some changes the will definitely effect new services and change outs as well. This section was added for first responders to allow them to disconnect the power in cases of emergency.

The requirements in the 2017 NEC required that the service disconnect was required to be installed at a readily accessible location and located outside the building or inside nearest the point of entrance.

Section 230.85 (A) (1) Location: *The disconnecting means shall be installed in a readily accessible outdoor location on or within sight of the dwelling unit.*

Like **110.9 Interrupting Rating:** which requires you to install devices or equipment shall have an interrupting rating equal to or greater than the available fault current at the line terminals of the equipment. **230.85 (A) (2) Rating:** requires that it also meets the requirements of 110.9 and that would possibly have to have you check with the utility provider for the available fault current at the service.

There was another section added, **230.85 (C) Replacements:** *Where service equipment is replaced, all of the requirements of this section shall apply.* There is an exception when you are replacing the meter or service conductors or related raceways or fittings, but if you are changing out the panel this section will apply.

This is one of many changes that I will be highlighting throughout the year; hopefully these articles will be useful to you and your companies as well.

Submitted by Dennis Steier

Top Three Code Violations Louisville Metro Inspections

OCTOBER 2024

These violations are costing you time and money.

1. **NEC Article # 517.13(A) Wiring Methods**

All branch circuits serving patient care *spaces* shall be provided with an effective ground-fault current path by installation in a metal raceway system or a cable having a metallic armor or sheath assembly. The metal raceway system, metallic cable armor, or sheath assembly shall itself qualify as an equipment grounding conductor in accordance with [250.118](#).

2. **NEC Article # 550.32(F) Mounting Height**

Outdoor mobile home disconnecting means shall be installed so the bottom of the enclosure containing the disconnecting means is not less than 600 mm (2 ft.) above finished grade or working platform. The disconnecting means shall be installed so that the center of the grip of the operating handle, when in the highest position is not more than 2.0 m (6 ft. 7 in.) above the finished grade or working platform.

3. **NEC Article # 550.32(A) Mobile Home Service Equipment**

The mobile home service equipment shall be located adjacent to the mobile home and not mounted in or on the mobile home. The service equipment shall be located in sight from and not more than 9.0 m (30 ft.) from the exterior wall of the mobile home it serves. The service equipment shall be permitted to be located elsewhere on the premises, if disconnecting means suitable for use as service equipment is located within sight from and not more than 9.0 m (30 ft.) from the exterior wall of the mobile home it serves and is rated not less than required for service equipment in accordance with [550.32 \(C\)](#). Grounding at the disconnecting means shall be in accordance with [250.32](#).

You lose money when you are turned down on a project. It also cost you time, when you have to return to the job site to make the necessary changes to correct the violation, that too, cost you money. Time is money.

We hope this will help save you time and money on inspection fees by reviewing the articles and making sure you have not violated the code before calling for the initial inspection.

Submitted by Arnold Hornback

Presidents' Letter Cont'd

in a timely manner. This will greatly help with the financial status of our organization.

As mentioned, our next general membership meeting is scheduled for Monday October 14, 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

2023 Code was adopted

ECHL will be selling 2023 Code Books. Denise has secured a discount for ECHL (see pricing listed below). If you would, call Denise at 491-5010, place your order and pay for the book. We will have it for you at the next meeting, October 14, 2024. We will have a few at the meeting for sale, but you will need to write a check payable to CED for the cost. They have a limited amount of code books available and this price is only while supplies last. If they have to re-order more books, the cost will more than likely go up.

Regular 2023 Code Book \$117.00 (includes tax)
Hardback 2023 Code Book \$265.00 (includes tax)

You can only use a credit card if you call Denise at CED and pay in advance, and we will have the book at the meeting. If you want a book at the meeting, you will need to make a check payable to CED.

LG&E NEWS

Return of Overhead Temp. Service

As you all remember, COVID brought many challenges related to transformer supply. As a result, one of the services that LG&E had to unfortunately curtail was the installation of overhead transformers for the purpose of temporary service. I am happy to relay that LG&E has returned to offering that service. As of recently, LG&E will provide overhead transformers when requested for temporary service. As always, please reach out to the respective locator if temporary service is needed.

Submitted by Joel McCauley
Team Leader Electric Design Svcs
LG&E and KU Energy LLC

Catered Meal - December Meeting

IBEW is sponsoring a catered dinner for our paid members at our December 9th meeting. You need to put your name in the pot and sign-up that you will attend so we can obtain a head count. Marilyn and Denise will have the form at the registration table. You need to come a bit early to sign in and fix your plate before the meeting begins. We will provide more details at the November meeting. Enjoy!

NEC: Air-Conditioning and Refrigerating Equipment — Part 1

The motors for this equipment are hermetically sealed.

Mark Lamendola

Art. 440, Part I provides the NEC general requirements for air-conditioning and refrigerating equipment. This article has an unusual aspect to it, compared to other NEC articles — it's essentially a supplement to Art. 430 (motors). It covers a special type of motor, namely ones that are hermetically sealed. They are hermetically sealed because they are immersed in the refrigerant the motor-compressor system is pumping.

So, you won't find all the hermetic motor requirements in Art. 440. Because they are motors, they are covered by Art. 430, more or less. You apply Art. 430, except as amended by Art. 440.

Always look at the nameplate before installing; it will provide information such as the following [440.4]:

- Manufacturer's name, trademark, or symbol.
- Identifying designation.
- Phase, voltage, and frequency.

The motor nameplate should also show the rated-load current (in amperes). If it does not, then look at the nameplate of the equipment in which the motor compressor is used. You will need this value to de-

NEC: Air-Conditioning Cont'd

termine the rating of the disconnecting means, branch-circuit conductors, controller, branch-circuit short circuit and ground-fault protection, and the separate motor overload protection [440.6(A)].

You will find other useful information on these nameplates. It's a good idea to photograph them and attach the images to the work report. The manufacturer also must mark the motor controllers with information [440.5]; the requirements echo those of 440.4.

To size the conductors, use Table 310.16 through 19, or calculate per 310.14 as applicable [440.6].

What if you have more than one motor in the system? Do you use the highest-rated motor rule, as in Art. 430? Yes, use the hermetic motor with the highest rated-load current [440.7]. But how do you identify the largest motor that isn't hermetic? Use the full-load current corresponding to the motor horsepower rating selected from Table 430.248, 430.249, or 430.250.

Many HVAC units are installed on a roof. All such units must have an equipment grounding conductor of the wire type in outdoor portions of metallic raceway systems that use compression fittings [440.9]. If the building has a lightning protection system, these units must also be bonded to it to prevent flashovers.

There's a condition under which you cannot install motor controllers or industrial control panels of multimotor and combination-load equipment. The condition is the available fault current exceeds that equipment's short-circuit current rating per 440.4(B).

Source: Internet Search—Article by C&M November 2022.