



THE WIRE

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MARCH 2024

The Presidents' Letter

Our February 2024 meeting was a very productive meeting. We had the election of board members. We had a very active discussion regarding the financial status of the ECHL. As I have mentioned in previous letters, our revenue is not keeping up with expenses. There were a lot of solid suggestions from members on ways to increase income. At the upcoming March 11th meeting, we will give a more detailed report on income and expenses. Following the report, we will open up the meeting for another general discussion.

The presentation for the March 11, 2024 meeting will be conducted by Summit Sales. They will be discussing fire alarm system solutions. We hope you can make the meeting.

On Saturday February 10, 2024 we conducted a six-hour continuing education class for contractor license renewals. The attendance was good. I was very impressed with the presentations that resulted in a lot of questions and discussion from our members. I would like to thank NECA for paying for the morning doughnuts and coffee along with the delicious lunch.

The 50/50 drawing was won by Ed Bornstein. He collected \$67. We had 42 members at the February meeting.

Our next general membership meeting is scheduled for Monday March 11th 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
ECHL President

MARCH 11, 2024 Code Program

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

Summit Sales will present our March 11, 2024 program on Fire Alarm Systems Solutions.

Bring a friend and enjoy the program.

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

See you Monday Evening, March 11, 2024, at 6:30 pm.

Work Smart: Stay Alert! & Stay Informed!

Mark you calendars - CEU Renewals!

Inform your co-workers, Friends and other electricians about our organization. Encourage them to join and attend our meetings.

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. You can obtain 1.5 CEU Hours toward your Master Electrician License. Attend 4 programs and you will have enough to renew your license.

Upcoming ECHL General Membership Meeting Dates

March 11, 2024

April 8, 2024

May 13, 2024

Summer Break (June, July & August)

Fall Programs

MARCH Code Questions

1. Can you have overload protection on a material handling magnet circuit? Where would you find this answer in the 2017 NEC?

YES NO

Section _____

2. There is a row of 8 foot fluorescents connected together and you want to tap inside one of the fixtures to feed a receptacle, are you allowed to do that per the NEC? Where would you find this answer in the 2017 NEC?

YES NO

Section _____

3. Branch circuits feeding fixed electrical space heating equipment in a non-dwelling unit can be rated over 50 amps? Where would you find this answer in the 2017 NEC?

YES NO

Section _____

4. Can Cable tray be installed I a Class 1 Division 1 location in a refinery? Where would you find this answer in the 2017 NEC?

YES NO

Section _____

5. What is the maximum percentage of short circuit protection for a motor using a Class CC fuse time delay fuse? Where would you find this answer in the 2017 NEC?

Section _____

6. Can you use aluminum for a grounding electrode? Where would you find this answer in the 2017 NEC?

YES NO

Section _____

Code Corner

Article 110

The title of Article 110 is **Requirements for Electrical Installation**, that title should tell you, this is a very important article of the *NEC* is rather important when installing any electrical wiring

Article 110 is often overlooked and is the **Requirements for Electrical Installations**, most probably only relate this article to Working Space but there is a lot more to this Article than just work space requirements. There were some changes that were made to this Article in the 2017 NEC that will have an impact on your Installation.

The Section that is really important when installing electrical equipment is **110.3(B) Installation and Use**. This Section requires all equipment shall be listed or labeled and used in accordance with any **“INSTRUCTIONS”** included in the listing or labeling. So what is this Section telling us and requiring you to do to keep this product listed? Who do you think writes these instructions the manufacture? No, it is the third party that has listed or labeled that writes these instructions. I know that we all read these instructions before installing the equipment, don't we! Once again HA, HA! If you do not follow this instruction for the installation you could possibly void the listing or labeling of this product.

One of the changes that was made is that has addressed Reconditioned, Refurbished or Remanufactured equipment. If you use any of this type of equipment in your installation you will be required to label that this equipment contains this type of equipment or parts. There are installation that may have equipment that is no longer be manufactured and you would need to use this equipment or have to totally change out the exist equipment which may very costly. Keep this in mind because the AHJ know that this equipment is no longer being produced and any change like this will raise a red flag.

NFPA 70E The **Safe Work Practices** document has once again influenced changes to NFPA 70 2017 NEC the Electrical Installation document. **110.16 Arc-Flash Hazard Warning**. Was added several Code cycle ago and has been expanded and changed every cycle since. 110.16(B) has required labeling on 1,200 amps or more other that dwelling units of the available fault current now will require you to include the Clearing Time of the overcurrent device, this is how long it take to open in a short circuit condition. This will require you to get this information

Continued on page 3

Top Three Code Violations Louisville Metro Inspections

MARCH 2024

These violations are costing you time and money.

1. NEC Article # 210.4(b) Disconnecting Means

Each multiwire branch circuit shall be provided with a means that will simultaneously disconnect all ungrounded conductors at the point where the branch circuit originates.

2. NEC Article # 210.71

Each meeting room of not more than 93 m² (1000 ft²) in other than dwelling units shall have outlets for non-locking type, 125-volt, 15- or 20- ampere receptacles. The outlets shall be installed in accordance with 210.71(B). Where a room or space is provided with moveable partition(s), each room size shall be determined with the partition in the position that results in the smallest size meeting room.

3. NEC Article # 210.62 Show Windows.

At least one 125-volt, single-phase, 15- or 20- ampere-rated receptacle outlet shall be installed with in 450 mm (18 in.) of the top of a show window for each 3.7 linear m (12 linear ft.) or major fraction thereof of show window area measured horizontally at its maximum width,.

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
Assistant Chief Electrical Inspector
Louisville Metro Dept. of Codes and Regulations*

Code Corner Cont'd

form the manufacture or learn to read the curves that are available on their website or literature.

There is another NFPA document **NFPA 70B Electrical Equipment Maintenance** that has influenced both NPFA 70 and NFPA 70E. Both of these documents refer you to NFPA 70B regarding maintenance of electrical equipment, It states a well maintained electrical system greatly reduces the likelihood of an Arc Flash incident

So, Article 1110 has important information when you are performing any type of electrical work, so keep that in mind.

.Submitted by Dennis Steier

LG&E NEWS

Underground Turn Downs

This specifically focuses on underground electric. There currently is an increase in turn downs for underground services. As a reminder, crews will turn down any service that does not meet the correct criteria. The overwhelming issue is not enough cable left over to make the proper connections.

The customer service cable must be installed within 18" of the transformer (secondary side), splice box or pedestal **AND** have a **minimum** of 6 feet of cable left above ground in order to make connections. The utility will not excavate beyond the required 18". It's cheaper to provide a little more wire than lose time and money fixing a problem with a simple solution.

Additionally, please check the cable for any damage. If the cable is visibly damaged, it will need to be repaired before it can be connected.

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

Putting PPE First

According to an [Electrical Safety Foundation International \(ESFI\) analysis of 2019 U.S. Bureau of Labor Statistics data](#), 126 workers experienced fatalities due to electrical-related work, while 2,220 workers experienced nonfatal electrical injuries involving days away from work. Since one of our priorities at *EC&M* is providing editorial content that keeps our readers on top of the latest safety trends and practices, we've compiled this free e-book with the latest information on how personal protective equipment (PPE) can help reduce the number of injuries and deaths on the job site through safe/effective usage.

This selection includes an article by Hugh Hoagland, independent consultant and safety/arc flash expert, on how to improve electrical safety compliance by up to 40% by pairing proper PPE usage with electrical safety programs. But what does proper PPE usage look like? To answer that question, this e-book covers a wide range of PPE topics, including which gloves meet ASTM F3258 standards, smart PPE, a look back at PPE of the past compared to today's technology, and the most common PPE mistakes.

When addressing PPE, arc flash is a topic that cannot be ignored due to its high risk of injury and fatality. Arc flash PPE can be a life-saving tool for those working around these high-energy blasts, so don't miss the articles on what requirements to expect from arc flash clothing labels and a reminder why electrical workers should never share arc flash PPE.

In addition, Tommy Northcott, one of our most popular contributors, provides an inside look at eight common misconceptions about arc flash that are prevalent in the industry.

The National Fire Protection Association (NFPA) estimates that five to 10 arc flash incidents occur daily, and more than 2,000 people are treated in burn centers with arc-flash injuries annually, [according to its 2015 report](#), so understanding these fallacies and how to confront them can help protect workers' lives.

I know this free e-book will provide a valuable reminder of how to protect workers from arc flash and other hazards through the practical, effective use of PPE.

— *Ellie Coggins, Senior Associate Editor*

Source: Dec. 16, 2022 - From the *EC&M* e-books library: *Why the proper personal protective equipment is paramount for electrical professionals.*

Getting ready for storm season

In early spring, remove your generator from storage; drain the gasoline from the tank and dispose of it properly. Inspect the fuel line for cracks and replace if necessary. Refill the tank with fresh gasoline and run the generator. Add some appliances, e.g., a trouble light, hair dryer, etc., to make sure the generator is operating properly.

After the generator has warmed up (about 15 minutes of running), turn off the fuel valve and run the fuel line dry. After the engine stalls, turn off the run switch, change the oil, add fuel stabilizer to the gasoline, drain the carburetor float bowl (and sediment bowl, if installed) and put the generator back in storage. While you are testing the generator, inspect your extension cords to make sure they're in good condition. Replace any cord that has damage.

If you had any trouble with the generator during this test, take it to a repair shop so that it can be put in good running order before the hurricane rush.

Getting started

- Never refuel a hot generator or one that is running; hot engine parts or exhaust can ignite gasoline.
- Turn off all connected appliances before starting your generator.
- Turn connected appliances on one at a time, never exceeding the generator's rated wattage.

Get the most from your generator

- Save gas by using appliances only as needed. If no appliances are running, shut the generator off.
- If you're just running a few lights, using other sources may cost less than running the generator.
- Don't leave a running generator unattended; turn it off at night and when away from home.

Tip: Refrigerators may only need to run a few hours a day to preserve food. Using a refrigerator thermometer, aim to maintain 40 degrees in the refrigerator compartment and 0 degrees in the freezer.

Source: Internet search- prepare for storms