Question of the Month – You are installing a feeder from a remote service to a house. The calculated load for the house is 140 amperes and the length of the 4/0 aluminum conductors is 260 feet one-way. What is the percentage voltage drop for the 200-amp 120/240 volt feeder conductors? See answer on Page 2.

All Electrician Exams are Now Based on 2017 Codes
All exams given after June 30, 2018 will be based on the 2017 NEC, WAC, and RCW even if you are re-taking an exam or portion of an exam that was previously failed using a previous version. For more information about the exams, you can refer to WAC 296-46B-960 or visit the Electrical Exam Information page of our website.

Big Changes Coming for Trainees and Contractors – Apprenticeship Legislation Passed
Substitute Senate Bill 6126 passed by the legislature effects those training to become 01 general journey level electricians and those who employ them.

- Effective July 1, 2023, to be eligible for the (01) general journey level electrician examination, applicants must have completed a recognized (01) electrical apprenticeship program approved by the Washington State Apprenticeship Training Council (WSATC) or out-of-state equivalent. This requirement does not apply to those approved for an (01) examination before July 1, 2023 or to specialty electrician examination candidates.
- After June 30, 2023, unless working in a specialty, trainees must be registered apprentices or be enrolled in a two-year program in the electrical construction trade. Apprenticeship programs may credit properly documented electrical experience on record with the department such as, 4000-hour electrical specialty certification, military experience or completion of a two-year training school program.

Apprenticeship Roles
Apprentice—a person registered in an approved Washington State Apprenticeship and Training Council (WSATC) program or out-of-state equivalent. Apprentices must be employed by training agents.

Training Agent—as a training agent, contractors register with an existing apprenticeship program already training (01) general journey level electrician apprentices. The apprentice will continue working for you, receiving on-the-job training (OJT) while the existing apprenticeship program will provide tracking of OJT hours and the related classroom/lab training. This saves you the time and expense of creating your own program, and provides you the flexibility for getting started almost immediately.

Sponsor—creator of an apprenticeship program approved by the Washington State Apprenticeship and Training Council (WSATC) and registered with L&I.

Recognized (01) General Journey Level Electrician Apprenticeship Programs
- Construction Industry Training Council of Washington (CITC).
- Area 1 Inside Electrical JATC.
- Puget Sound Electrical Joint Apprenticeship and Training Committee.
- IBEW 48 NECA-IBEW Electrical JATC.
- Inland Empire Electrical Training Trust.
- Southwest Washington Electrical Joint Apprenticeship and Training Committee.
- LU 112 - NECA Electrical Apprenticeship Committee.
- Northwest Washington Electrical Industry Joint Apprenticeship and Training Committee.

Safety Tip of the Month
♬ School’s out for summer ♫
Pay attention! Put the phone down and be alert for children, pedestrians, skateboarders, and cyclists. Summer brings many new safety concerns for drivers and pedestrians.
Want to Sponsor An Apprenticeship Program?

All sponsors for (01) general journey level electrician apprenticeship programs must adhere to Minimum Guideline Standards previously approved by the WSTAC. Follow this link to the Inside Electrician (01) Minimum Guideline Standards Template:
https://www.lni.wa.gov/TradesLicensing/Apprenticeship/files/eforms/ApprenticeshipStandardsTemplateApp0005.docx

Registered apprenticeship programs start with the formation of an apprenticeship committee made up of industry members—both employers and employees.

For more information, contact a Labor & Industries Apprenticeship Consultant. Apprenticeship consultants are located all across the state. They will help you identify which type of apprenticeship model best suits your company and then provide one-on-one consulting and on-site assistance to get your program up and running. Contact information for Apprenticeship Consultants can be found at the following link:
http://www.lni.wa.gov/TradesLicensing/Apprenticeship/About/AppCoordinators/default.asp

Trainees Must Submit Affidavits of Experience Within 180 Days of Certificate Expiration

Please share this important message with all electrical trainees. To receive credit for experience worked in the electrical construction trade, trainees must submit an affidavit of experience in a timely manner. Be aware of your certificate expiration date. To continue working, you are required to renew your training certificate before the expiration date. You must submit affidavits of experience from your employer(s) for the previous two years within 180 days of the expiration date of your certificate, unless you are registered in a department-approved apprenticeship program. Upon request, employers are required to provide the previous period’s affidavit of experience to the trainee within 20 days of request in accordance with WAC 296-46B-942(12). There are two affidavit forms depending on the type of experience. They are available at these links:

- Affidavit of Experience for 75% Supervision Specialties (for journey-level and 4000-hour specialty experience)
- Affidavit of Experience for 100% Supervision Specialties (for 2000-hour sub-specialty experience)

When you renew, you must also have completed 48 hours of basic classroom instruction during the previous certificate period, or your certificate will be inactive until the training is completed.

2020 NEC First Draft Report Published – Public Comment Period Now Open

For a glimpse of what the next National Electrical Code (NEC) may be like, you may now view the First Draft of the 2020 NEC. The National Fire Protection Association (NFPA) published the First Draft on June 25, 2018. This opens the public comment period, which will close on August 30, 2018. You may view the First Draft Report and submit a public comment for consideration by the code-making panels by visiting the NFPA 70 Next Edition page of NFPA’s website. When you select First Draft Report or Submit a Public Comment, you will be taken to a page where you can sign in. If you haven’t already, you will need to set up a user name and password. It is free and allows you to submit public inputs and comments, and you can view any of NFPA’s codes and standards. The code-making panels will consider all public comments, and a Second Draft Report will be posted in April 2019. The 2020 NEC will be published in August 2019 and will probably be adopted in Washington beginning July 1, 2020.

Ugly Picture: If viewing this document online, click on the picture to open a larger image. A property owner requested inspection on this new service (left pic), and was told by the inspector he could not install open service conductors within a wall. Sadly, the pic on the right shows the intended solution using water pipe discovered upon re-inspection. It appears this service could use a main bonding jumper as well.

Answer to Question of the Month: 3 percent. See the October 2017 newsletter article explaining voltage drop calculations. Voltage drop = \((2 \times K \times I \times L) ÷ \text{wire circular mils}\). \((2 \times 21.2 \times 140 \times 260) ÷ 211,600 = 7.29\) volts. \(7.29 ÷ 240 = .03\)