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www.ndseb.com

A Message From the Executive Director:

Hello, everyone!

Spring is around us and license renewal is almost completed!

The following three administrative rule changes went into effect January 1, 2018 (Errata sheet available at www.ndseb.com).

24.1-03-01-05: Clarifies the intent of apprentice electrician training as defined by NDCC 43-09-11(2) (b) (1) and is not the result of a statutory change.

24.1-05-01-01(2): Modifies minimum job cost amount to conform to NDCC 43-09-05, which took effect August 1, 2017, which is a result of a statutory change by the ND Legislative Assembly.

24.1-05-01-02(4): Updates fee schedule to conform to NDCC 43-09-05, which took effect August 1, 2017, which is a result of a statutory change by the ND Legislative Assembly.

In February, I attended the ND State College of Science Electrical Advisory Committee meeting. The committee is made up of various parties interested in the electrical industry. Towards the end of the meeting five electrical students visited with the committee about the experience at NDSCS and what, if any, improvements could be made. Later in the first day the employers were allotted a 10 minute slot where they had a chance to talk to all the electrical students.

The second day consisted of a campus wide job fair where employers had booths set up in the campus auditorium showing what they had to offer employees. I had a chance to talk to all the electrical students letting them know what is going on with the Electrical Board. Later, I got to visit with most of the companies at the job fair interested in hiring either summer co-op or full time electrical students. I was encouraged to see the demand that there is for electricians and how these students have many employment opportunities out there for them to grab.

I did the math on how many individuals the companies were looking for and the result is 60 plus students at NDSCS was not nearly enough to fill employer needs. Also, an individual had mentioned the average age of electricians is 54 so these students are in high demand. If you know of a high school student interested in being an electrician, send them to see Ivan Maas! I also want to complement Ivan and his staff for the fine job they do of educating the 60 plus students enrolled in the electrical program. It's a great program and the students do get a well -rounded education in the electrical field.

Have a great North Dakota summer 2018!! Be safe out there,

James Schmidt

NORTH DAKOTA STATE ELECTRICAL BOARD SINCE 1917
Ensuring Public Safety Since 1917

Connections

Issue 257
April 2018

Board to Hold Open Forum Meeting May 22, 2018

For The Power Limited Technician License (PLT License)

The North Dakota State Electrical Board distributed a survey seeking comments for a power limited technician (PLT) license, similar to what other states may have.

The Board would like to hear public comments at a Special Board Meeting to be held at the **Courtyard by Marriot, 3319 North 14th Street, Bismarck, ND.**

The meeting will be held on May 22, 2018 at 2:00 p.m. as an open forum. This will help decide if the Board should keep moving forward with a PLT license.

Please attend if you are able or send letters with your comments.

If you have not done so, please complete the survey which you can download from our website at www.ndseb.com, under Forms or e-mail us at electric@nd.gov . Ø

Safety Issues: Access To/Around Electrical Equipment

In our last newsletter, we discussed the requirements for working space at electrical equipment rated 1000 volts nominal or less to permit ready and safe operation of the equipment, and to provide adequate space for persons involved in servicing, maintaining, or adjusting equipment while it is energized.

In this article we will address the requirements for access to and from the electrical equipment and providing clear space around the equipment for future expansion.

110.26(C) breaks down the requirements for entrance to and egress from the working space, with the general requirement found in 110.26(C)(1) that at least one entrance of sufficient size shall be provided to give access and egress from the electrical equipment.

110.26(C)(2) expands this requirement when you have equipment rated 1200 amperes or more and over 6 feet wide that contains overcurrent devices, switching devices, or control devices. In these cases you must have an entrance at least 24 inches wide and 6.5 feet high at each end of the working space. It is important to understand that the equipment rating is what this requirement is based on, not the size of installed overcurrent devices in the equipment. There are conditions in 110.26(C)(2)(a) & (b) that may permit only a single entrance, but you must make sure that the conditions required to allow this are met.

110.26(C)(3) requires that where equipment rated 800 amps or more is installed and it contains overcurrent devices, switching devices, or control devices, when there is a personnel door or doors installed within 25 feet of the working space for entry or egress of the space, the door or doors must have listed panic hardware and open in the direction of egress. The intent of this is to provide for worker safety by providing a direct avenue of escape in the event of an arc flash incident without having to grab and turn knobs or handles.

110.26(D) requires that illumination be provided for all working spaces around service equipment, switchboards, or switchgear, panelboards, or motor control centers installed indoors. There must be a method to manually control the lighting for this space, and a dedicated lighting outlet shall not be required if the equipment is illuminated by an adjacent light source.

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110.26(E) directs us to install switchboards, switchgear, panelboards, and motor control centers in dedicated spaces and to be protected from damage.

110.26(E)(1) relates to indoor equipment, which shall be located as described in 110.26(E)(1)(a) through (E)(1)(d).

(a) states that there shall be dedicated space equal to the width and depth of the equipment from the floor to a height of 6 feet above the electrical equipment or the structural ceiling, whichever is lower. Nothing that is not part of the electrical installation should be located in this space, but an exception permits a suspended ceiling with removable panels to be located in this space.

(b) allows equipment not part of the electrical installation to be located above the dedicated space, but it must be provided with protection to prevent any damage to the electrical system from leaks, breaks, or condensation.

(c) permits sprinkler protection for the space as long as any piping complies with the requirements of this section.

(d) makes it clear that a suspended or dropped ceiling that adds no strength to the building structure is not a structural ceiling.

110.26(E)(2) has the requirements for outdoor installations.

(a) was reorganized for the 2017 NEC into a list format to make it easier to understand, the requirements themselves did not change. Outdoor electrical equipment must be installed in identified enclosures, protected from accidental contact by unauthorized personnel or vehicular traffic, and protected from accidental spillage or leakage.

(b) tells us that the working clearance space requirements of 110.26(A) shall be applied to outdoor installations as well.

(c) requires dedicated equipment space be provided for outdoor equipment equal to the width and depth of the equipment extending from grade to a height of 6 feet above the equipment, there shall be no equipment foreign to the electrical installation installed in this space.

110.26(F) allows that electrical equipment rooms or enclosures controlled by a lock are considered accessible to qualified persons.

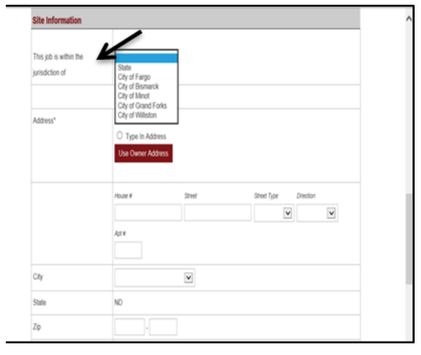
Be sure to review the code requirements for working space in the NEC when planning and laying out your installations to be sure that all of the requirements are being met.

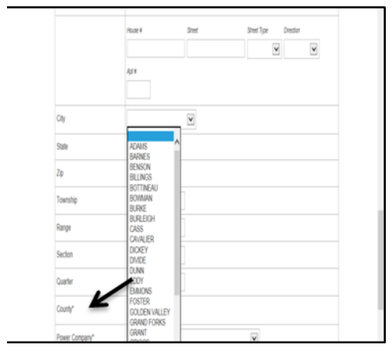
Things are often easier to change early in the project, but can be costly at later dates. Coordination with other trades to keep non-electrical systems out of dedicated spaces, verifying door swings and hardware provisions must be a part of the planning process, just like scheduling manpower and material deliveries are. Ø

Choosing The Right Jurisdiction & County On The e-Cert (Electronic Wiring Certificate) System

When issuing a new e-Cert (electronic wiring certificate), we rely on you choosing the right jurisdiction AND county based on location of job. This is crucial to determine which district the certificate needs to go in, and so that the inspector assigned to that district is aware of the job going on.

For your reference, a District Map is available that shows North Dakota counties and the appropriate information for each respective inspector that covers each of those counties at https://www.ndseb.com/inspections/inspection-districts.





If the work is NOT being done in the:

- City of Bismarck
- City of Grand Forks
- City of Minot
- City of Fargo

Then, you need to pick the STATE jurisdiction. Our system will then assign the certificate to the appropriate district inspector based on the "COUNTY" of where the work is being done. See examples of screen shots above.

Example: Job Site Address is:

7500 University Drive, Bismarck, ND.

This job site is "outside of City of Bismarck jurisdiction", so it would be in "State" jurisdiction and county of "Burleigh". Ø

Spring is right around the corner, and that means trenching and digging will be starting soon so remember to take a look at NEC 300.5 - this will help determine your depth requirements, as well as any other requirements for underground installations.

Remember to get those wiring certificates submitted BEFORE you start the work. If you are trenching to install a drain tile pump or irrigation pivot, or anything similar, and you notice the equipment installer has done some of the electrical work, please contact your inspector and let him know. Also, make sure that is noted on your certificate so we do not end up writing you corrections for something you did not install.

Correction reports are not something we enjoy sending out, and I am sure there is no one that likes to receive them, but when you do receive a correction report, remember that most of these corrections are required to be corrected within 30 days. Then you must certify the report and submit to NDSEB before it goes past due. Make sure the corrections are completed before you submit the paperwork, and if you need more time, call your inspector and request an extension. Please do not submit your correction reports if the corrections are not complete!

With spring arriving brings the potential for flooding. Make sure all equipment including breakers, receptacles, fixtures, panel boards, etc. that are submerged shall be reconditioned by the original manufacturer or an approved representative or replaced. Wiring may have to be replaced depending on the type of wire and its listed application. Splices shall comply with NEC 110.14. If in doubt, follow North Dakota Wiring Standards 24.1-06-01-20, as well as 2017 NEC, or call your inspector for verification.

— Doug Grinde, Director of Inspections
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Making A Connection:

District 10 Inspector Kendrick Kjorsvik

Originally from Lakota, ND, Kendrick Kjorsvik has worked at the NDSEB since January of 2013 and is currently the District #10 electrical inspector covering Bottineau and McKenzie counties. He previously worked with his father and at Wheeler Contracting as an apprentice and then spent 20 years working for Bergstrom Electric, where he got experience with most aspects of the electrical trade.

Married to Lisa, Kendrick has five children and six grandchildren.

What projects are you currently working on? *Watford City Hospital, Oasis Gas Plant Expansion, several compressor stations and various well sites, a church rebuild in Bottineau (roof caught fire), and various residential and commercial installations.*

What is your favorite part of your job? *Seeing a wide variety of projects and meeting and working with the electricians on site, educating and solving issues.*

The best thing about North Dakota is . . . ? *Wide open spaces, and my fishing spots in the Devils Lake area.*

What are your hobbies? *Kids usually play a part in most of these hobbies. Hunting birds, predators, and big game, fishing, riding motorcycle, planting a garden every year, play dart leagues.*

What would be your dream vacation? *Take a month or two. Get on my motorcycle and ride around the country. Stop in the small towns and meet the people, possibly get some hunting or fishing in depending upon the season and area.*

What's your favorite TV show? *Not one favorite show. I have favorite channels: Fox News, History Channel, Discovery Channels, USA, SYFY, TNT.*

Who's your favorite superhero? *Dead Pool / Wolverine, because they are definitely NOT politically correct.* Ø

News & Notes

- **Contractor Sponsored Apprentice Education:** (576 Hours of Related Training) Reminder that when you are creating classes for your apprentices that the class needs to have 144 classroom hours per year totaling 576 hours over four year time frame.
- **New Fillable Forms**: We're excited to announce all forms can now be typed vs. handwritten. Visit www.ndseb.com to utilize and complete the all new fillable forms.
- **Verification of Individuals Working Under Supervision of Contracting Master / Class B Electrician:** Contracting Master and Class B electricians are acknowledging during each year's renewal process that they have verified that any individual working under their supervision doing electrical work in North Dakota maintains a current registration or license and has renewed for the next renewal period. They also attest that any future individuals hired and working under their supervision will also maintain a current registration or license.

We would like to reiterate that this is imperative to assure that all individuals are properly licensed or registered. It will also assure that the apprentices working under your supervision do not lose any hours towards applying to take the Journeyman exam.

Verification of an active/current registration or license can be found on our website: https://www.ndseb.com/search-1/lookup-a-licensedregistered-electrician/. If their information does not appear, they are not currently registered or licensed.

Errata Sheets for Laws, Rules and Wiring Standards of North Dakota (Effective July 1, 2017): As a result of an Administrative Rule making process approved by Legislative Council on January 5, 2018, please download the errata sheet at https://www.ndseb.com/laws-rules/ and replace those sections in your booklet previously provided. Ø