

ND State Electrical Board
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Find us at
www.ndseb.com

A Message From the Executive Director:



Hello, everyone!

I hope everyone enjoyed the warm summer!

The education committee reviewed and

approved applications for related training providers. See our website under "Apprentice Education" to review that list, and contractors - make sure your apprentices have either a 2-year college degree in electrical or are attending approved related training apprentice classes throughout their apprenticeship. If you have any questions about education, feel free to give me a call.

We started in June the first of our NDSEB CEU classes with a residential emphasis, and starting in November commercial emphasis classes. Let us know through the class comment cards how you think the classes are working out.

The Board hired Jon Saylor to fill the newly-created position of Information/Inspection Compliance Administrator.

Jon will be working with district inspectors on achieving timely inspections and evaluating district wiring certificate numbers, as well as helping to promote the electrical industry in ND. Welcome aboard Jon!!!

We've also been promoting the electrical industry by attending various career fairs and presenting at the Market Place for Kids events across the state. Ashley and Scott reported several high school age students showed interest in becoming an electrician.

I want to thank the electricians that sent in the "Non-GFCI Protected Equipment Notification" forms. The forms were very helpful in determining which breakers, mini splits and A/C units w/variable speed were the cause of nuisance tripping of GFCI breakers. We forwarded that information to NEMA who was directly involved with manufacturers to deal with the problems. As discussed in this newsletter, NFPA TIA 1593 passed, so GFCI requirements for mini splits & other HVAC employing

compressor speed control will not become effective until January 1, 2023. In other words, the requirement is exempt until then and you do not need to continue sending in the "Non-GFCI Protected Equipment Notification" forms to our office.

Be sure to read the exemptions and rule changes in this newsletter and if you have more ideas on areas we can improve. We encourage your input on electrical happenings in ND. If you have questions or comments please send an email or give me a call as I'd like to visit with you!

Check out our website often for new information: www.ndseb.com

Email at: electric@nd.gov or

Mail to: ND State Electrical Board
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Bismarck, ND 58507-7335

I wish you enough,
- James Schmidt



Ensuring Public Safety Since 1917

Connections

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Licensure Requirements for Installing HVAC Controls

Laws & Rules regarding the "control thereof": The following summary is meant to clarify the licensure requirements to install HVAC controls. We've listed the N.D. Laws and Rules, and then summarized it at the end of the article.

NDCC 43-09-16 License not required. The following persons are not required to be licensed by and are not subject to regulation by the board under this chapter:

6. An individual who is installing a power limited system that is installed within a residential dwelling or is installed with a factory connector or cord powered by an existing electrical receptacle.

NDCC 43-09-01. Definitions. In this chapter, unless the context or subject matter otherwise requires:

7. "Nonelectrical system" means a system as defined by the articles contained in chapter 8 and other articles which contains class II or class III circuits and systems as defined by the national electrical code, as adopted by the board. Although the board may expand this definition, the board may not narrow this definition. The term does not include a circuit or system that is installed:

- Within an area of special occupancies, as defined under articles 500 through 517 of the national electrical code.
- For heat, light, or power.
- For the control of heat, light, or power, unless the circuit or system employs digital communication.

8. "Power limited electrician" means an individual who has the necessary qualifications, training, experience, and technical knowledge to plan, layout, and supervise the installation and repair of a power limited system.

9. "Power limited system" means a system as defined by the articles contained in chapter 8 and other articles which contains class II or class III circuits and systems as defined by the national electrical code, as adopted by the board. Although the board may expand this definition, the term does not include a nonelectrical system.

Admin Rule 24.1-02-01-02. General statement of policy and interpretative rules.

1. Purpose and scope. The purpose of these standards is the practical safeguarding of persons and of buildings and building contents from electrical hazards arising from the use or control of electricity for light, heat, power, and control thereof, fire detection systems, and power limited systems. It covers the electrical and power limited installations and associated equipment necessary for its safe operation.

Summary:

- HVAC persons can do their own thermostats in residential dwelling without a license.
- All locations of Class II & III circuits of NEC articles 500 – 517 requires minimum of PLE licensure.
- Areas other than residential – Class II and Class III circuits that control heat, light or power require a minimum of PLE licensure, unless the circuit employs digital communication.

Inside This Issue . . .

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- Greetings From Jon Saylor and News & Notes from NDSEB
- A Word from the Director of Inspections
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- Insert: A Word from our Training & Compliance Administrator, NDSEB History, Scholarships, CEU Class Schedule and NDSEB Service Awards

Did you hear about the electrician that got shocked but didn't die?

It was no big deal, he said - it didn't even phase him.



Greetings from Jon Saylor

Greetings Everyone,

I am very excited to join the professional team at the NDSEB! Some of you may know me and some of you may not, so I will tell you a little bit about myself.

I was born and raised in Bismarck, ND, and coincidentally, three blocks away from the NDSEB office! I am married to my beautiful wife Kelly, and we have three children—Riley (6), Jackson (8) and Jaden (14).

I began in the trade pulling wire when I was 14 years old and have been in the industry ever since. I completed my apprenticeship working for my father's contracting business and received my Master license in April of 2011.

After a short stint of contracting for myself, I was hired by the City of Bismarck as an Electrical Inspector in 2013. Then in 2018, I was promoted to Commercial Plans Examiner. This position required extensive knowledge of the International Building Codes. I currently possess nine certificates from the ICC which include Commercial Mechanical Inspector, Commercial Building Inspector, Residential Building Inspector, Building Inspector, Accessibility Plans Examiner, Building Plans Examiner, Electrical Inspector, Residential and Commercial Electrical Inspector.

One of my many tasks will include quality assurance audit inspections. What does this mean for you? I will randomly be selecting certified correction reports to conduct an audit, so please make sure these are not being falsified in any way. If time is a factor, please contact your inspector to inquire about a possible extension on your correction(s). Communication is key in this business.

I look forward to meeting and working with everyone and please do not hesitate to call with any questions.

Stay safe out there.

Respectfully,
Jon Saylor

News & Notes from NDSEB

ND CHAPTER IAEI MEETING

Rescheduled to February 3-4, 2022. We had encountered a problem with having our North Dakota Chapter IAEI meeting in October as it falls right in the middle of the NFPA's second revision meetings for the 2023 NEC. Since they overlap, we only had two presenters say they would be able to come to our meeting in October, so it was decided to move the meeting to February 3 & 4, 2022.

APPRENTICES!!

We're still getting apprentice registration renewals, so when you do not renew your apprentice registration by the end of each January, your hours worked when you are not renewed, are lost, and do not count towards your required apprenticeship working hours. Also, apprentices make sure you are doing electrical work during your apprenticeship!! Mowing grass, spraying foam insulation, automotive work or washing windows does not count towards your electrical work experience. Contracting Master needs to remember that too!!

APPRENTICE EDUCATION

We have updated our website to include information regarding Apprentice Education. This tab includes information regarding education requirements for apprentices along with a list of board-approved apprenticeship related training programs and colleges. For more information, please visit our website at www.ndseb.com.

APPRENTICE REGISTRATION ONLINE RENEWALS

Apprentice electricians must renew their registration every year. Your apprentice registration will expire on January 31, 2022 (unless you originally register after November 1, 2021). Did you know you can renew your apprentice registration as early as November 1, 2021?

A postcard reminder will be mailed out to all registered apprentices the first week of December 2021. Renewals must be submitted electronically through the Board's website at www.ndseb.com.

NOTE - ND LAWS RULES AND WIRING STANDARDS CODE - EXEMPTION OF RULES & INTERPRETATION!

Exemption 24.1-06-03-01(7)(e). Metal raceway or metal clad cable (MC) requirements in dormitories designed to house more than sixteen people no longer applies. This administrative rule exempted as the result of board action at the January 2021 Board meeting.

EFFECTIVE IMMEDIATELY: NDSEB will allow standard breakers to be used when connecting all mini splits and a/c units that contain DC invertors until January 1, 2023. Thank you to all who have emailed in the Non-GFCI Protected Equipment Notification form.

To summarize and effective 9/15/21, TIA 20-13 (logged as #1593) passed. North Dakota is no longer requiring the exemption form to be filed with our office or GFCI protection on mini splits and a/c units that have speed control. See wording of the TIA 1593 below:

NFPA 70 National Electrical Code 2020 Edition - Reference: 210.8(F) TIA 20-13 (SC 21-8-29 / TIA Log #1593)

Pursuant to Section 5 of the NFPA Regulations Governing the Development of NFPA Standards, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 70®, National Electrical Code®, 2020 edition. The TIA was processed by the National Electrical Code Panel 2, and the NEC Correlating Committee, and was issued by the Standards Council on August 26, 2021, with an effective date of September 15, 2021.

NEC 210.8 GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL

(F) Outdoor Outlets. Revise 210.8(F) to read as follows: 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. ... (F) Outdoor Outlets. All outdoor outlets for dwellings, other than those covered in 210.8 (A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. This requirement shall become effective on

January 1, 2023 for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.

Informational Note: Power conversion equipment is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.

RELATED TRAINING PROVIDER/ SPONSORS:

You must be Board approved to conduct "related training" classes for apprentice electricians. We are sending out applications for you to complete and return to the Board's office. Each related training sponsor/

provider must be approved before commencing related training classes this fall. If you did not receive an application, contact us or visit our website under Apprentice Education.

ELECTRICAL WIRING CERTIFICATE AUDIT

The N.D. State Electrical Board will be conducting an audit of electrical wiring certificates in start-up status and issued over a year ago (prior to 9/30/20). If applicable, a letter will be mailed to you in October 2021, along with a report of those certificates.

In order to keep our files current, we are asking that you provide a status of each certificate. If you can please review your wiring certificates in advance, and if the jobs are completed, please submit your final paperwork and proper inspection fee. ☺

A Word from the Dir. of Inspections

Fall is upon us which means harvest time and all the last-minute projects are going to scramble to get started before the SNOW flies . . . and that means services and GFCI's on bin sites and temp panels.

When you are working on bin sites, remember the old CROWS FOOT receptacles are not allowed and all your outdoor auger and welder receptacles, etc. shall be GFCI. **NEC 210.8 (B)(4):** *All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less.*

You will also want to remember to look at Table 250.122 before you pull wire for sizing of your EGC based on your over-current device. If you have multiple motors on your bin and you are working on sizing your service, I suggest you call your local inspector so you are both on the same page when it comes time for your final inspection and remember labeling required. **NEC 110.24:** *Service equipment at other than dwelling units shall be legibly marked in the field with the available fault current. The field marking(s) shall include the date the fault current calculation was performed and be of sufficient durability to withstand the environment.*

Please make sure the electrical equipment you are installing is rated for the available fault current - this can be an expensive correction. NEC 210.8(B)(4) also pertains to outdoor receptacles for temp services, but you also have to remember to look at NEC 230.71, which no longer allows you to have six service disconnects in one enclosure so you will need a main breaker or separate enclosures for each main. Last but not least, look at NEC 590 - this article explains what wiring methods are allowed, all the different requirements for GFCI protection in 590.6 that includes temp receptacles, existing receptacles or installed as permanent wiring and also portable generators.

We all want to go home at the end of each workday and one of the many ways to make that happen is to ensure safe electrical installations and by following the NEC and ND Wiring Standards.

Stay safe and have a great fall.

Doug Grinde

Making A Connection: District 1 Inspector Josh Wilson

An inspector with the NDSEB for almost 16 years, Josh Wilson graduated from West Fargo High School and also attended NDSCS. He previously worked at Moorhead Electric and has been the District 1 Inspector since 2005.

Josh and his wife Jackie have two children - a daughter Samantha (18) and a son named Race (15).

What is your favorite part of your job? *Interacting with the guys in the field.*

Do you have a favorite memory or experience while working for the NDSEB? *I remember my first day being trained in by Rich Wolfe and we were coming across horrible self-wires and a couple of bad installations and I remember thinking to myself, "What in the hell did I get myself into?!" And Rich Wolfe told me not to worry, it gets better.*

Did you or do you have a mentor or a person that inspired you? *The journeymen at Moorhead Electric who taught me as an apprentice.*

Do you have any advice for new electricians just starting out in this industry? *Pay attention to your journeymen, learn as much as you can,*

and don't just be an installer - think about what you are doing and why.

What are your hobbies? *I enjoy going to the lake, jetskiing, grilling out, and watching my son play football, basketball, and baseball.*

If you couldn't do your current job, what would you want to do instead? *I would love to be the most recent winner of the lottery.*

What would be your dream vacation? *Going to the Superbowl and the Minnesota Vikings win . . . you said "dream" vacation, right?*

What do you like on your pizza? *Everything, except mushrooms.*

What's your favorite TV show? *Family night is now watching The Masked Singer.*

The best movie of all time is . . . ? *Full Metal Jacket* ☺



FULL METAL JACKET

