



Ensuring Public Safety Since 1917

Issue 2052

# Connections

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## A Message From the Executive Director:



### Hello, everyone!

Remember to keep us informed of your most current email address as information is transmitted from this office from time to time via email. Presently when we send out email reminders approximately half of the emails come back as "undeliverable" so let us know if your email address changes.

We are in the middle of license renewal season so remember to get your continuing education hours and keep us informed of your most current mailing address. Last year when the license renewal notices were sent out, we got a lot of them back as "undeliverable" so let us know if your address changes.

To update you on the progress of the administrative rule changes: in recent meetings, the board approved proposed changes to move forward plus the required hearing was held to take testimony from the public. I want all to take notice of these meetings in the future as we encourage your attendance and input.

The most significant change was to repeal the current ND Laws, Rules and Wiring standards and to replace it with a reorganized version. The new version is set up to have articles specific to a single subject matter. The intent was to make the book more user-friendly. For instance, the section relating to electrical installations was fashioned to line up with the code articles in the NEC. An example is if you were questioning an article in 310 of the NEC and were asking if ND had a more

stringent rule to article 310, you would simply look up 310 in the ND Wiring Standards.

The new Laws and Rules booklet have met the requirements of the Attorney General's office and are presently at the Legislative Council for review.

I want to close with the following thought: Let's all look forward to have a safe, happy and prosperous 2017 and don't forget to be generous to those less fortunate than we are.

Be safe out there,  
James Schmidt

## Highlights of Changes to Administrative Rules

The following are major highlights of the changes to our Administrative Rules that went through public hearing on November 15, 2016, and were adopted at the December 14, 2016 Special Board Meeting. The Office of Attorney General approved of the changes on January 31, 2017, and they are currently being reviewed by Legislative Council. An effective date will be determined upon final review.

**Entire Title 24:** Repeals the existing provisions and creates a new title 24.1.

**Entire 24-02:** Adopts the NFPA 70 2017 edition National Electrical Code and NFPA 101 2015 edition Life Safety Code.

\* NFPA 101 2015 edition Life Safety Code moved to appendix under Means of Egress Condensed Guide and incorporates NFPA 101 current edition Life Safety Code.

\* Exception: 2017 edition, National Electrical Code, Article 210.11(C)(4): Requirements shall not include buildings 250 square feet or smaller.

\* Exception: 2017 edition, National Electrical Code, Article 422.16: The

use of not more than 6 feet of flexible appliance cord shall be permitted on permanently installed 120 volt 20 amp or less fuel fired furnaces in residential dwellings. The receptacle for this appliance shall be GFCI protected, or a single receptacle, with a lockable in-use cover, and the cord shall meet all requirements of NEC 422.16.

\* Exception: 2017 edition, National Electrical Code, Article 210.12(A): AFCI protection is not required for refrigeration appliances if a single receptacle on a dedicated circuit is installed.

**24-02-01-02(2):** Added language to warrant individuals are properly licensed or registered while performing electrical work for a contractor.

\* New Title 24.1: **24.1-03-01-06**. Supervision and responsibilities.

\* It is the responsibility of the master or class B electrician to ensure all employees who are or will be performing electrical work for that electrical contractor either be licensed electricians or registered apprentices with the board.

**24-02-01-05(1):** Revised text to keep current on latest version of the API manual.

\* New Title 24.1: **24.1-06-05-01**. (NEC 500) Hazardous locations.

**24-02-01-07(8) and Exception:** Removed text to conform to the National Electrical Code.

\* New Title 24.1: **24.1-06-02-10**. (NEC 210) Branch circuits.

**24-02-01-08(5)(a):** Revised text for correctness and to provide consistency with the text in paragraphs b. and c.

\* New Title 24.1: **24.1-06-02-30**. (NEC 230) Services.

\* A one hundred ampere main house panel shall be installed using ungrounded conductors sized for the proper ampacity. The panel shall contain provisions for a minimum of twenty full-sized branch circuit spaces.

**24-02-01-08:** Added language to conform with 24-02-01-03(6), a fire wall is needed to separate buildings for services.

\* New Title 24.1: **24.1-06-02-30**. (NEC 230) Services.

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## NDSEB Mission Statement:

Ensure safety and protect life, health, and property in the daily use of electricity.

\* For the purpose of separating services within one building, each portion of a building separated by one or more fire walls shall be considered a separate building as defined by current state or locally adopted building code.

**24-02-01-16.1(1)(a):** Removed text to eliminate confusion of commercial source definition and it being supplied by other than a commercial source.

\* New Title 24.1: **24.1-06-01-40.** Smoke/heat detectors, fire alarm systems and carbon monoxide alarm requirements for evacuation and life safety.

\* Revised Text: In new construction, all alarm systems shall receive their primary power from the building wiring and when primary power is interrupted shall receive power from a battery.

**24-02-01-16.1:** Added a paragraph for heat alarms in order to incorporate detection of a fire in a garage attached to a residence.

\* New Title 24.1: **24.1-06-01-40.**

\* Heat alarms. For new construction, an approved heat alarm shall be installed in the attached single tenant garage of a residence and interconnected with the smoke alarms within the residence.

**24-02-01-19(1):** Revised text with the intent to eliminate and/or lessen paper wiring certificates and clarify establishment of e-cert procedures.

\* New Title 24.1: **24.1-05-01-01.** Electrical certificates.

\* The board shall prescribe an e-cert form for a master or class B electrician licensed on or after the effective date of these rules.

**24-02-01-19(3):** Revised text with the intent to eliminate and/or lessen paper wiring certificates and clarify establishment of e-cert procedures.

\* New Title 24.1: **24.1-05-01-01.**

\* Electrical (paper) wiring certificates are available until August 31, 2020 or the effective date of the 2020 Laws, Rules & Wiring Standards.

**24-02-01-22(1):** Revised text so approval of all continuing education classes will now be required for the provider to submit its course application to the board.

\* New Title 24.1: **24.1-04-01-01.** Course requirements for license renewal.

\* Approval of the course curriculum is required by the board.

**24-02-01-22(1)(a):** Removed paragraph a. to eliminate confusion on who can submit a course application to be considered.

\* New Title 24.1: **24.1-04-01-02.** Course approvals.

**24-02-01-22(1)(b):** Revised text to renumber and allow the board time to review and process course applications.

\* New Title 24.1: **24.1-04-01-02.**

\* Requests for approval of courses, seminars, and instructors shall be made no later than thirty days prior to class instruction.

**24-02-01-22(1)(d):** Removed text as approval of all continuing education classes will now be required for the provider to submit its course application to the board.

\* New Title 24.1: **24.1-04-01-02.**

\* Revised Text: Continuing education programs held in other states may be considered for credit if the program meets the requirements of the board.

**24-02-01-22(1)(g):** Renumbered and revised text as date is not applicable due to different renewal dates.

\* New Title 24.1: **24.1-04-01-02.**

\* The provider of the presentation shall forward an attendance list to the board on a form supplied by the board within fifteen days following the presentation.

**24-02-01-22(1)(h):** Renumbered and added language to clarify validity of credits.

\* New Title 24.1: **24.1-04-01-02.**

\* Continuing education credits can be deposited with the board for a period up to two license renewal periods. Continuing education credits will not be given for attending the same continuing education class more than once in a code cycle (example: same sponsor, same title and same course approval number). ☺

## Safety Corner: AFCI Protection of Branch Circuit Extensions & Mods

In the 2014 NEC Article 210.12(B), it requires that AFCI protection be provided when branch-circuit wiring is modified, replaced, or extended so that existing wiring can be protected to the same level as new. NDSEB added an exception for the 2014 code cycle that does not require AFCI protection when the circuit extension is not more than six feet and does not include any additional outlets or devices. Please be aware of this requirement and the exception when doing service or remodel work in existing dwellings to be sure that you are installing AFCI protection where required by code. Remember, if you add a device or outlet to the circuit then you must

provide AFCI protection by one of the two methods allowed in NEC 210.12(B) (1) or (2), regardless of the length the circuit is extended. The two methods permitted for providing the protection are: (1) to install a combination type AFCI at the origin of the branch circuit, or (2) to install a listed outlet branch-circuit type AFCI at the first receptacle outlet of the existing branch circuit. Also remember this requirement when doing a service change as well, if the panel needs to be moved and the branch circuits need to be extended to reach the new panel location, then AFCI protection will be required if more than six feet of new conductor needs to be

added between the enclosures. These requirements were put into the 2011 NEC as a method to help provide more protection of older wiring systems in dwelling units, which could be more susceptible to fire hazards, and the exception was added in 2014 to clarify the length that the conductors could be extended without requiring the protection. As we move toward adoption of the 2017 NEC, these requirements do not change for dwelling units, but the numbering changed to 210.12(D) and also expanded to include protection for dormitory units as well. ☺

## News & Notes from NDSEB

**ND Chapter IAEI** meeting was held in Mandan on Oct 20-21, 2016. This meeting is for anyone that is involved or interested in the electrical industry from instructors, electricians, and engineers, to anyone that would like a great education on electrical installations and safety.

Some of the electrical industries top professionals were here from NFPA, NEMA, Steel Tube, Eaton Bussman, UL and Intertek. Topics included 2017 NEC Analysis of Changes as well as arc energy, SCCR changes, and field evaluations. Twelve (12) CEU hours were credited for ND and MN, so it is not only very informational, but you cover your CEU requirements as well. I encourage you to talk to your local inspector about the convention as it is well worth your time and money.

With North Dakota in the process of adopting the 2017 NEC, you might find it very beneficial to order a 2017 Analysis of Changes book. You can find it online at Amazon or NFPA or several other vendors for about \$75.00.

This book goes through each code change and explains what the changes are in each article. We are in the process of going through some of these changes and making sure as inspectors, we all have the same interpretation of these changes and new codes.

This winter was kind enough to bring North Dakota some nice cold temperatures, leaving many homeowners no option but to install heating upgrades. Upgrading a heating system is not always as easy as just installing a furnace and hooking it up. Be sure to watch the KW size of any new plenum heaters or baseboard heaters that are added, and make sure to verify the service size is adequate. ND Standards 24-02-01-08(5)(d) requires service and feeder calculations for electric heating loads to be sized 125% of the full load rating. There is no exception for load shed devices.

Along with heating systems, standby generators are also a hot item this

year as well. Please watch your sizing of your generator and installation requirements of NEC 445 and NEC 702. There may be a big problem if you have electric heat and an automatic transfer switch with your generator. Make sure you have your load shed devices in place or a manual transfer switch. NEC 702.7 has some labeling requirements you might want to take a look at before you go do your next installation.

Hope you all have a safe and busy 2017, and remember to turn in those certificates before any new work commences.

NDSEB had two inspectors retire in January, 2017. We did make some changes to inspection districts, so please go online to [www.ndseb.com](http://www.ndseb.com) "Inspections", and "Inspection Districts" to look at the new District Map and see if there is a new inspector in your area.

Best of luck and happy retirement to Al Schrader and Jerry Brackin. ☺

## Disconnecting: Happy Retirement to Al and Jerry!

As of February 1<sup>st</sup>, two NDSEB inspectors retired: Frederick (Al) Schrader and Jerry Brackin.

In 1998, Al started as a temporary inspector and finished his career in 2017 as the District 9 Inspector based out of Minot.

In 2013, Jerry started off as our Training/Safety Director and eventually moved into District 14 based out of the Wahpeton area. Jerry had been an instructor at a state college for years prior to coming on board with the NDSEB.

Both of these individuals brought vast knowledge and

experience to this office while employed here, which will be sorely missed.

They both were highly respected individuals and we hate to see them retire, but at some point we all must move on.

The Board and its employees want to express our sincere thanks and best wishes in the future to both of them! Thanks Al and Jerry!!

The NDSEB doesn't have present plans to replace Al and Jerry, so check out our website to review the new redistricted map identifying inspection districts with contact information. ☺



Al Schrader (left) and Jerry Brackin (right) enjoy the personalized walkers that NDSEB staff made them in honor of their retirement.