

August 07, 2020

The Honorable Barbara J. Case
Administrative Law Judge
Office of Administrative Hearings
600 Robert Street North
P.O. Box 64620
Saint Paul, Minnesota 55164-0620

Re: In the Matter of the Proposed Rules of the Minnesota Board of Electricity Adopting and Incorporating the 2020 National Electrical Code for Use in Minnesota, *Minnesota Rules*, Chapter 1315; Revisor's ID Number R-4632; OAH Docket No. 82-9001-36673 (Minn. Rules Part 1400.2220 Exhibits for Proposed Rule Hearing and Record)

Dear Judge Case:

In anticipation of the August 19, 2020 Webex hearing in the above-referenced matter, the Minnesota Board of Electricity ("Board") hereby electronically submits the following rulemaking documents required to be placed into the underlying hearing record pursuant to Minnesota Rules, Part 1400.2220, subpart 1 A-K. In addition to electronically filing these documents with the Office of Administrative Hearings, the Board will also post and make available for public review these required documents on its Rulemaking Docket prior to the August 19, 2020 hearing. The Board will officially offer these e-filed exhibits and request that they be entered into the rulemaking record at the upcoming hearing.

Pursuant to Minnesota Rules, part 1400.2220, subpart 1, paragraphs A to K of this correspondence are keyed to items A to K of part 1400.2220. Each paragraph states whether the document is attached and, if the document is not attached, the reason that the document is not applicable:

- A. Request for Comments as published in the *State Register* on April 22, 2019 (attached);
- B. Petition for Rulemaking (not attached since no petition for rulemaking was received);
- C. Proposed Rule dated January 21, 2020, including the Revisor's approval (attached);
- D. Statement of Need and Reasonableness (attached);
- E. Certificate of e-mailing the Statement of Need and Reasonableness to the Legislative Reference Library (attached);
- F. The Dual Notice as mailed and published in the *State Register* on March 16, 2020 (attached);
 - F.1. The Notice of Rescheduled Hearing as mailed and published in the *State Register* on April 20, 2020 (attached);
 - F.2. The Notice of Revised Format of Hearing as mailed and published in the *State Register*, on July 13, 2020 (attached);

Equal Opportunity Employer

- G. Certificate of accuracy of the mailing list for the mailing of the Dual Notice to the rulemaking list (attached);
- G.1. Certificate of mailing the Dual Notice to the rulemaking list (attached);
- G.2. Certificate of accuracy of the electronic rulemaking e-mail list and of e-mailing the Dual Notice to the electronic rulemaking e-mail list (attached);
- G.3. Certificate of accuracy of the mailing list and of mailing the Notice of Rescheduled Hearing to the rulemaking list (attached);
- G.4. Certificate of accuracy of the electronic rulemaking e-mail list and of e-mailing the Notice of Rescheduled Hearing to the electronic rulemaking e-mail list (attached);
- G.5. Certificate of accuracy of the mailing list and of mailing the Notice of Revised Format of Hearing to the rulemaking list (attached);
- G.6. Certificate of accuracy of the electronic rulemaking e-mail list and of e-mailing the Notice of Revised Format of Hearing to the electronic rulemaking e-mail list (attached);
- H. Certificate of e-mailing the Dual Notice to Additional Notice Plan (attached);
- H.1. Certificate of e-mailing the Notice of Rescheduled Hearing to Additional Notice Plan (attached);
- H.2. Certificate of e-mailing the Notice of Revised Format of Hearing to Additional Notice Plan (attached);
- I. Timely comments and requests for hearing on the proposed rule received by the Board during the comment period (attached);
- J. Letter requesting authorization to omit the text of the proposed rule and order authorizing such omission (not attached since no such authorization or order were sought in this rulemaking);
- K. Certificate of sending the Dual Notice and the Statement of Need and Reasonableness to legislators and the legislative coordinating commission (attached);
- K.1. Certificate of sending the Notice of Rescheduled Hearing to legislators and the legislative coordinating commission (attached);
- K.2. Certificate of sending the Notice of Revised Format of Hearing to legislators and the legislative coordinating commission (attached);
- K.3. Certificate of e-mailing a Notice of Hearing to those who requested a hearing via e-mail (attached);
- K.4. Certificate of e-mailing a Notice of Revised Format of Hearing to those who requested a hearing via e-mail (attached);
- K.5. Letter to Minnesota Management and Budget dated January 14, 2020, and the Minnesota Management and Budget responsive memorandum dated January 27, 2020 (attached);
- K.6. Letter to the Commissioner of the Minnesota Department of Agriculture to comply with Minnesota Statutes, section 14.111, regarding farming operations (attached);
- K.7. Board of Electricity Meeting Minutes of the January 8, 2019 meeting Directing the Board Chair to Initiate Rulemaking Proceedings to begin adoption of the 2020 NEC (attached);
- K.8. Board of Electricity Meeting Minutes of the October 8, 2019 meeting affirming NEC Adoption Rules Subcommittee's recommendation to adopt the 2020 NEC without Minnesota specific amendments and providing the Board Chair with authorization to publish Notice of Intent to Adopt the 2020 NEC In Chapter 1315 without specific Minnesota amendments (attached);
- K.9. Certificate of Board of Electricity Authorizing Resolution (attached);
- K.10. Board of Electricity 2020 NEC Cost Analysis Spreadsheet (attached); and

K.11. National Association of Home Builders 2020 NEC Cost Report (attached).

Given the length and volume of the attached hearing exhibits, please note that an Index of Hearing Exhibits is also attached and that the Exhibits themselves are tabbed for ease of access.

Thank you for your attention to this matter. Please call me at (651) 284-5172 if you have any questions, comments or concerns.

Yours very truly,



Jeffrey F. Lebowski
Atty. Reg. # 0190020
General Counsel
Minnesota Board of Electricity
Minnesota Department of Labor and Industry

Index to Exhibits

Proposed Rules of the Minnesota Board of Electricity Adopting and Incorporating the 2020 National Electrical Code for Use in Minnesota, Minnesota Rules, Chapter 1315

OAH Docket No. 82-9001-36673

Revisor's ID Number R-04632

<i>Exhibit</i>	<i>Document Title</i>	<i>Bates Stamp Location</i>
A	Request for Comments as published in the State Register on April 22, 2019	000001
B	Statement of no Petition for Rulemaking	000008
C	Proposed Rule dated January 21, 2020, with the Revisor's certificate of approval	000009
D	Statement of Need and Reasonableness	000012
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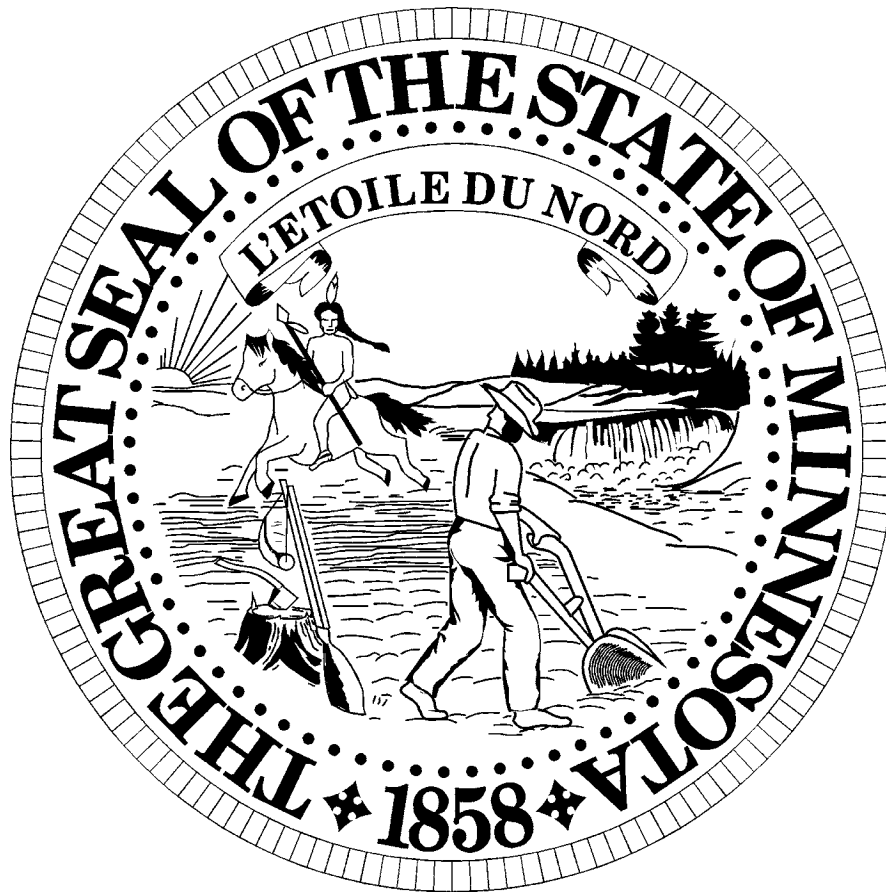
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K.5	Letter to Minnesota Management and Budget dated January 14, 2020, and the Minnesota Management and Budget responsive memorandum dated January 27, 2020	000265

K.6	Letter to the Commissioner of the Minnesota Department of Agriculture to comply with Minnesota Statutes, section 14.111, regarding farming operations	000268
K.7	Board of Electricity Meeting Minutes of the January 8, 2019 meeting Directing the Board Chair to Initiate Rulemaking Proceedings to begin adoption of the 2020 NEC	000273
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K.9	Certificate of Board of Electricity Authorizing Resolution	000292
K.10	Board of Electricity 2020 NEC Cost Analysis Spreadsheet	000294
K.11	National Association of Home Builders 2020 NEC Cost Report	000296

Exhibit A

Minnesota State Register

Published every Monday (Tuesday when Monday is a holiday)



**Proposed, Adopted, Emergency, Expedited, Withdrawn, Vetoed Rules;
Executive Orders; Appointments; Commissioners' Orders; Revenue Notices;
Official Notices; State Grants & Loans; State Contracts;
Non-State Public Bids, Contracts and Grants**

**Monday 22 April 2019
Volume 43, Number 43
Pages 1249 - 1270**

Minnesota State Register

Judicial Notice Shall Be Taken of Material Published in the *Minnesota State Register*

The *Minnesota State Register* is the official publication of the State of Minnesota's Executive Branch of government, published weekly to fulfill the legislative mandate set forth in *Minnesota Statutes*, Chapter 14, and *Minnesota Rules*, Chapter 1400. It contains:

- Proposed Rules
- Adopted Rules
- Exempt Rules
- Expedited Rules
- Withdrawn Rules
- Executive Orders of the Governor
- Appointments
- Proclamations
- Vetoed Rules
- Commissioners' Orders
- Revenue Notices
- Official Notices
- State Grants and Loans
- Contracts for Professional, Technical and Consulting Services
- Non-State Public Bids, Contracts and Grants

Printing Schedule and Submission Deadlines

Vol. 43 Issue Number	PUBLISH DATE (BOLDFACE shows altered publish date)	Deadline for: all Short Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical- Consulting Contracts, Non-State Bids and Public Contracts	Deadline for LONG, Complicated Rules (contact the editor to negotiate a deadline)
# 44	Monday 29 April	Noon Tuesday 23 April	Noon Thursday 18 April
# 45	Monday 6 May	Noon Tuesday 30 April	Noon Thursday 25 April
# 46	Monday 13 May	Noon Tuesday 7 May	Noon Thursday 2 May
# 47	Monday 20 May	Noon Tuesday 14 May	Noon Thursday 9 May

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State Capitol, Room 231, St. Paul, MN 55155
<https://www.senate.mn/>

Minnesota State Court System

Court Information Office (651) 296-6043
MN Judicial Center, Rm. 135,
25 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<http://www.mncourts.gov>

House Public Information Services

(651) 296-2146
State Office Building, Room 175
100 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
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Federal Register

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U.S. Government Printing Office – Fax: (202) 512-1262
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Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The State Register is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the State Register. Published every Monday, the State Register makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific Minnesota Rule chapter numbers. Every odd-numbered year the Minnesota Rules are published. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the State Register.

An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (Minnesota Statutes §§ 14.101). It does this by publishing a notice in the State Register at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as Proposed Rules, along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules, and withdrawn proposed rules, are also published in the State Register. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the State Register as Adopted Rules. These final adopted rules are not printed in their entirety, but only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the State Register, the issue the rule appeared in as proposed, and later as adopted.

The State Register features partial and cumulative listings of rules in this section on the following schedule: issues #1-26 inclusive (issue #26 cumulative for issues #1-26); issues #27-52 inclusive (issue #52, cumulative for issues #27-52 or #53 in some years). An annual subject matter index for rules was separately printed usually in August, but starting with Volume 19 now appears in the final issue of each volume. For copies or subscriptions to the State Register, contact Minnesota's Bookstore, 660 Olive Street (one block east of I-35E and one block north of University Ave), St. Paul, MN 55155, phone: (612) 297-3000, or toll-free 1-800-657-3757. TTY relay service phone number: (800) 627-3529.

Volume 43 - Minnesota Rules
(Rules Appearing in Vol. 43 Issues #1-26 are
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you submitted comments during the development of the rules and you want to ensure that the Administrative Law Judge reviews the comments, you should resubmit the comments after the rules are formally proposed.

Signed by Executive Director Dr. Anthony G. Kinkel
Board of School Administrators
April 6, 2019

Minnesota Board of Electricity REQUEST FOR COMMENTS for Possible Amendment to Rules Governing the Minnesota Electrical Code, *Minnesota Rules*, Chapter 1315

Subject of Rules. The Minnesota Board of Electricity (“Board”) requests comments on its possible amendment to rules governing the Minnesota Electrical Code. The Board is considering rule amendments that adopt the *2020 National Electrical Code*.

Persons Affected. The amendment to the rules would likely affect electrical contractors, master and journeymen electricians; electrical installers, maintenance electricians, electrical equipment suppliers; elevator contractors and constructors; power limited technicians; code enforcement authorities; employers of persons who perform electrical work; persons who wish to perform electrical work; engineers; residential and commercial building contractors; and building owners, in Minnesota.

Statutory Authority. Minnesota Statutes, section 326B.32 establishes the Board of Electricity and the powers and duties of the Board, among other things. Specifically, Minnesota Statutes, section 326B.32, subdivision 2(a)(3) (2018), provides the power and authority for the Board to adopt the Minnesota Electrical Code, which must be the most current edition of the National Electrical Code (“NEC”), and any amendments thereto.

Public Comment. Interested persons or groups may submit comments or information on these possible rules in writing until further notice is published in the *State Register* that the Board intends to adopt or to withdraw the rules. The Board will not publish a notice of intent to adopt the rules until more than 60 days have elapsed from the date of this Request for Comments.

The National Electrical Code is adopted from time to time, generally every three years, by the National Fire Protection Association (“NFPA”). The NFPA is in the process of amending and adopting the final 2020 National Electrical Code/NFPA 70 and the Board intends to adopt it by reference, with any necessary amendments, as the Minnesota Electrical Code in Minnesota Rules, chapter 1315.

Interested persons or groups may view a free online draft of the 2020 National Electrical Code at the NFPA website. The website address is www.nfpa.org.

The link to all the proposals considered by the NFPA Electrical Code Committees and the actions taken with respect to those proposals, including the latest version of the proposed draft of the 2020 National Electrical Code/NFPA 70, can be found at: <https://www.nfpa.org/Codes-and-Standards/All-Codes-and-Standards/List-of-Codes-and-Standards>. To access the latest 2020 NEC draft, click on this link and select “NFPA 70®” from the list on the left-hand margin. Once the NFPA 70® page loads, select “Next Edition” and click on the most recent “Draft Report” version. You will then be asked to either sign-in or create a free profile for access to the copyrighted draft version. It is expected that these online resources will remain accessible during the comment period and updated as more current draft and final versions become available. For assistance with accessing the latest draft or final versions of the 2020 NEC/NFPA 70, please contact the Agency Contact Person listed below.

Rule Drafts. A draft of the rule adopting the 2020 NEC, including possible amendments, is being compiled. When the Board has approved a near-final draft version of the proposed rule, the draft and other information about the rulemaking will be posted on the Board of Electricity rulemaking docket at: <http://www.dli.mn.gov/about-department/boards-and-councils/board-electricity>.

Official Notices

Agency Contact Person. Written comments, questions, requests to receive a draft of the rules when it has been prepared, and requests for more information on these possible rules should be directed to: John Williamson at the Department of Labor and Industry, 443 Lafayette Road North, St. Paul, MN 55155, **Phone:** (651) 284-5823, or **Email:** john.williamson@state.mn.us, **fax:** (651) 284-5725.

Alternative Format. Upon request, this Request for Comments can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request, please contact the agency contact person at the address or telephone number listed above.

NOTE: Comments received in response to this notice will not necessarily be included in the formal rulemaking record submitted to the administrative law judge if and when a proceeding to adopt rules is started. The Board is required to submit to the judge only those written comments received in response to the rules after they are proposed. If you submitted comments during the development of the rules and you want to ensure that the Administrative Law Judge reviews the comments, you should resubmit the comments after the rules are formally proposed.

Dated: April 9, 2019

Daniel Westberg, Chair
Minnesota Board of Electricity

Department of Health Division of Health Regulation – Managed Care Systems Section Notice of Application for Essential Community Provider Status

NOTICE IS HEREBY GIVEN that an application for re-designation as an Essential Community Provider (ECP) has been submitted to the Commissioner of Health by Cook Area Health Services, Inc., dba Scenic Rivers Health Services. Clinical services are offered at 20 5th Street SE, Cook; 135 Pine Tree Drive, Bigfork; 410 Second St. NW, Big Falls; 810 Poplar Street, Floodwood; 12052 Main Street; 12052 Main Street, Northome; 415 N. 2nd Street, Tower; 415 N. 2nd Street, Suite # 2, Tower; 12 River Street, Cook; 601 Hwy 73, Floodwood; 303 Main Avenue, Bigfork.

An ECP is a health care provider that serves high-risk, special needs, and underserved individuals. In order to be designated as an ECP, a provider must demonstrate that it meets the requirements of *Minnesota Statutes* Section 62Q.19 and *Minnesota Rules* Chapter 4688. The public is allowed 30 days from the date of the publication of this notice to submit written comments on the application. The commissioner will approve or deny the application once the comment period and compliance review is complete.

For more information contact:

Anne Kukowski
Managed Care Systems Section
Division of Health Regulation
Minnesota Department of Health
P.O. Box 64882
St. Paul, MN 55164-0882
651-201-5173

Exhibit B

No petition for rulemaking is submitted because the Board of Electricity did not receive a petition for rulemaking.

Exhibit C

Office of the Revisor of Statutes

Administrative Rules



TITLE: Proposed Permanent Rules Updating the Minnesota Electrical Code

AGENCY: Board of Electricity

REVISOR ID: R-4632

MINNESOTA RULES: Chapter 1315

INCORPORATIONS BY REFERENCE:

Part 1315.0200: the 2020 edition of the National Electrical Code (NEC) as approved by the American National Standards Institute (ANSI/NFPA 70–2020), is published by the National Fire Protection Association, Inc., is not subject to frequent change, and is available in the office of the commissioner of labor and industry at the Minnesota Bookstore, 660 Olive Street, St. Paul, MN 55155; public libraries; major bookstores or other retail sources; or the National Fire Protection Association, Inc., One Batterymarch Park, Quincy, MA 02169–7471.

The attached rules are approved for
publication in the State Register

A handwritten signature in cursive script that reads "Sheree Speer".

Sheree Speer
Assistant Deputy Revisor

1.1 **Board of Electricity**
 1.2 **Proposed Permanent Rules Updating the Minnesota Electrical Code**

1.3 **1315.0200 SCOPE.**

1.4 *[For text of subpart 1, see Minnesota Rules]*

1.5 Subp. 1a. **Electrical code.** All new electrical wiring, apparatus, and equipment for
 1.6 electric light, heat, power, technology circuits and systems, and alarm and communication
 1.7 systems must comply with the regulations contained in the ~~2017~~ 2020 edition of the National
 1.8 Electrical Code (NEC) as approved by the American National Standards Institute
 1.9 (ANSI/NFPA ~~70-2017~~ 70-2020), Minnesota Statutes, section 326B.35, and the Minnesota
 1.10 State Building Code as adopted by the commissioner of labor and industry. The ~~2017~~ 2020
 1.11 edition of the National Electrical Code, developed and published by the National Fire
 1.12 Protection Association, Inc., is incorporated by reference and made part of the Minnesota
 1.13 State Building Code. The National Electrical Code is not subject to frequent change and is
 1.14 available in the office of the commissioner of labor and industry, from the Minnesota
 1.15 Bookstore, 660 Olive Street, Saint Paul, MN 55155, through public libraries, from major
 1.16 bookstores and other retail sources, or from National Fire Protection Association, Inc., One
 1.17 Batterymarch Park, Quincy, MA 02169-7471.

1.18 Subp. 2. [Repealed, 12 SR 102; 12 SR 151]

1.19 **EFFECTIVE DATE.** Minnesota Rules, part 1315.0200, is effective July 1, 2020, or five
 1.20 business days after publication of the notice of adoption in the State Register, whichever is
 1.21 later.

Exhibit D

Minnesota Board of Electricity

STATEMENT OF NEED AND REASONABLENESS

Proposed Amendment to Rules Governing the Minnesota Electrical Code, *Minnesota Rules*, chapter 1315, Revisor’s ID number R-04632.

INTRODUCTION AND BACKGROUND

The Minnesota Board of Electricity (“Board”) proposes to adopt amendments to the Minnesota Electrical Code, Minnesota Rules, chapter 1315. The Minnesota Electrical Code is part of the Minnesota State Building Code. *See* Minnesota Rules, part 1300.0050 (J) (2016).

Minnesota Statutes, Section 326B.32, subdivision 2 (a)(3) (2018), requires the Board to adopt the Minnesota Electrical Code, which must be the most current version of the National Electrical Code (“NEC”) and any Minnesota amendments thereto.

The proposed amendments to Minnesota Rules, chapter 1315 incorporate by reference the most current edition of the National Electrical Code. Specifically, the Board proposes to incorporate the 2020 NEC which was developed and published by the National Fire Protection Association, Inc. (“NFPA”) and approved by the American National Standards Institute (“ANSI”).¹

Minnesota Statutes, sections 326B.31 to 326B.399 are known as the “Minnesota Electrical Act.”² Minnesota Statutes, section 326B.35 of the Minnesota Electrical Act mandates that all electrical wiring, apparatus and equipment for electrical light, heat and power, technology circuits or systems comply with the rules of the department and the Board and be installed in conformity with accepted standards of construction for safety to life and property. The safety standards specifically identified are the most recently published edition of the NEC as adopted by NFPA and approved by ANSI and the National Electrical Safety Code as published by the Institute of Electrical and Electronics Engineers, Inc., and approved by the American National Standards Institute.

The changes to the NEC are made at national code hearings conducted by the NFPA. The NEC is written by those who use the code book and utilize ANSI processes to provide maximum input from those who use and are impacted by the code. Each suggested change is reviewed by a national code committee, discussed, and voted on. The accepted revisions are published as a first draft report by the committee. That draft is open to comments from the public. When the comment period is closed, a second draft is prepared but changes can still be made or removed at the annual membership meeting. If a proposal is unsuccessful at the meeting, an appeal can be made directly to the NFPA Standards Council. Board members and Department of Labor and Industry staff were actively involved in the national code development process and are well acquainted with the revisions in the 2020 edition of the NEC.

¹ The NEC is also known as “ANSI/NFPA 70” copyrighted in 2019 by the NFPA, One Batterymarch Park, Quincy, Massachusetts 02169-7471.

² *See* Minn. Stat. § 326B.399 (2018).

The 2020 edition of the NEC was prepared by the National Electrical Code Committee of the NFPA and acted on by their membership at their annual meeting held June 17-20, 2019, in San Antonio, Texas. The NFPA Standards Council subsequently reviewed the edition and issued the same on August 05, 2019, with an effective date of August 25, 2019. The official 2020 NEC code book was made available to the public in August of 2019 and has been available online and free-of-charge at the NFPA website since its issuance.

Links to NFPA documents and reports which contain the final version of the 2020 edition of the NEC and all the proposed changes made thereto in accordance with the committee's rule development process may be viewed at: <http://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70>.

Training is already available and underway for individuals and groups that will be most affected by the changes to the National Electrical Code. Continuing education on the National Electrical Code is required for the renewal of all personal electrical licenses and registrations:

- The Construction Codes and Licensing Division of the Department of Labor and Industry (“CCLD”) has held and will continue to hold multiple training sessions on the changes to the 2020 NEC for municipal building officials, statewide electrical inspectors, electrical contractors, and licensed electricians.
- The National Electrical Contractors Association (“NECA”) in Minnesota with over 160 trade members has held and will continue to hold training sessions on the changes in the 2020 NEC for electrical contractors, journeyworkers, and apprentices.
- The International Brotherhood of Electrical Workers (“IBEW”) with over 6500 electrician members through their Journeyworkers and Apprentice Training Committees has held and will continue to hold training sessions on the changes to the 2020 NEC.
- The Minnesota Electrical Association (“MEA”), which includes almost 700 electrical contractors has held and will continue to hold training sessions on the changes to the 2020 NEC for electrical contractors and licensed electricians.

At the direction of the Board, the Department of Labor and Industry (“Department”) began this rulemaking process by publishing a Request for Comments in the *State Register* on Monday, April 22, 2019 (43 SR 1261). The Department provides all legal and administrative support to the Board, including for rulemaking.³ An advisory rule committee was established and used in this rulemaking at the direction of the Board Chair. The rules subcommittee met to review and discuss changes made in the 2020 edition of the NEC on September 12, 2019, and again on October 08, 2019. The subcommittee provided a final recommendation to the Board at a public meeting on October 08, 2019, to adopt the 2020 NEC without any Minnesota Amendments. The Board voted unanimously at its October 08, 2019 meeting to adopt the rule subcommittee's recommendation, including a designated effective date of July 01, 2020.

ALTERNATIVE FORMAT

Upon request, this Statement of Need and Reasonableness can be made available in an alternative format, such as large print, Braille, or cassette tape. To make a request, contact

³ See Minn. Stat. § 326B.32, subd. 2(c) (2018).

Amanda Spuckler, at the Department of Labor and Industry, Construction Codes and Licensing Division, 443 Lafayette Road North, Saint Paul, MN 55155-4342, or by telephone 651-284-5361, fax 651-284-5725 or email to: dli.rules@state.mn.us.

STATUTORY AUTHORITY

The Board's statutory authority to adopt the NEC is set forth in Minnesota Statutes, section 326B.32, subdivision 2 (a)(3) (2018):

Subd. 2. **Powers; duties; administrative support.** (a) The board shall have the power to:

(1) elect its chair, vice-chair, and secretary;

(2) adopt bylaws that specify the duties of its officers, the meeting dates of the board, and containing other provisions as may be useful and necessary for the efficient conduct of the business of the board;

(3) *adopt the Minnesota Electrical Code, which must be the most current edition of the National Electrical Code and any amendments thereto.* The board shall adopt the most current edition of the National Electrical Code and any amendments thereto pursuant to chapter 14 and as provided in subdivision 6, paragraphs (b) and (c)...

Id. (emphasis added).

This rulemaking is an amendment of existing rules so Minnesota Statutes, section 14.125 (2018), does not apply. The proposed rule does affect farming operations, so separate notice and a copy of the proposed rule were provided to the Minnesota Commissioner of Agriculture on January 07, 2020, as required by Minnesota Statutes, section 14.111 (2018).⁴

Under these statutes, the Board has the necessary statutory authority to adopt the proposed rule.

REGULATORY ANALYSIS

Minnesota Statutes, section 14.131, sets out eight factors for a regulatory analysis that must be included in the SONAR. Paragraphs (1) through (8) below quote these factors and then give the agency's response.

⁴ A copy of the Board's §14.111 Notice to the Commissioner of Agriculture, dated January 7, 2020, is attached hereto as Exhibit # 1.

“(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule”

Those who will be affected by the proposed rule, who will bear the costs of the proposed rule, and who will benefit from the proposed rule include: Building owners; equipment suppliers; contractors; and code enforcement authorities. Although provisions in the NEC have greater impact on electrical contractors, they also impact technology system contactors and general contractors.

“(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues”

Because the Board only adopts the NEC and does not administer it, the Board will not incur any costs associated with the adoption of the 2020 NEC. The Department provides administrative support to the Board and administers and enforces rules adopted by the Board.

Costs to the Department include the costs of purchasing code books for state employees who address electrical code questions as well as the cost of revising license examinations to reflect the updated code. Adoption of an updated version of the NEC will not affect state revenues because the Department currently enforces the existing Minnesota Electrical Code using electrical licensing and permit fees set by statute that go into a dedicated fund to cover administrative and enforcement costs.⁵

“(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule”

The Board has determined that there are no less costly or intrusive methods for achieving the purpose of the proposed rule. The NEC is recognized throughout the United States and many other countries as the prevailing model electrical code. Incorporating the 2020 NEC by reference is the least costly method for adopting a national model code and is in accordance with Minnesota Statutes, section 326B.32, subdivision 2 (a)(3) (2018) which directs that adoption. Historically, the state of Minnesota has adopted the NEC by reference without any state amendments. The Board of Electricity is proposing adoption of the 2020 NEC without amendment in this rulemaking, consistent with past code adoptions. Unlike other building codes that may need to be amended at the local level due to specific conditions such as earthquakes, snow loads, wind loads, prevalence of hurricanes, extreme temperatures and so on, the NEC is universally applicable in all jurisdictions.

“(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule”

No other methods were considered for achieving the purpose of the proposed rule. The purpose of the rule is to establish the Minnesota Electrical Code consistent with statutory requirements. The NEC is the only electrical code that is accepted and in use throughout the

⁵ See Minn. Stat. §326B.04, *et. seq.* (2018).

United States. Most importantly, the Board is required by the Legislature to adopt the “most current edition of the National Electrical Code” in accordance with Minnesota Statutes, section 326B.32, subdivision 2 (a)(3) (2018).

“(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals”

The probable costs of complying with the proposed rule are generally anticipated to be minimal because there is already a current electrical code in place in Minnesota that has adopted the 2017 version of the NEC. The differences between the 2017 NEC and the 2020 NEC are not anticipated to result in a significant change in costs for any stakeholders. Any change in costs for any given project will vary from project to project because the type of work being done, the size of the project, and the condition of any existing electrical work may affect any cost differential between complying with the existing electrical code and the 2020 NEC. Revisions, updates and clarifications reflected in the 2020 NEC can result in lower costs in some instances or higher costs in others. Of course, costs for any particular project may also remain the same under either the 2017 NEC or the 2020 NEC. Therefore, revisions, updates and clarifications reflected in the 2020 NEC may result in lower costs in some instances or higher costs in others.

Nevertheless, the Board has identified five notable changes in the 2020 NEC related to dwellings which may result in increased costs for some new building projects: 1) expanded ground-fault circuit-interrupter (“GFCI”) requirements for basement areas and 240-volt receptacle outlets such as electric ranges and electric dryers (*See* 2020 NEC, Article 210, section 210.8 (A)); 2) expanded GFCI requirements for 240-volt outdoor circuits such as air-conditioning equipment (*See Id.*, at section 210.8 (F)); 3) additional receptacle outlets required for kitchen islands and kitchen peninsulas (*See Id.*, at section 210.52 (C)); 4) surge-protective devices required for service panelboards (*See* 2020 NEC, Article 230, section 230.67); and 5) outdoor emergency disconnects required for first responders’ emergency access (*See Id.*, at section 230.85). Importantly, the additional costs associated with these changes are generally limited to material costs and are not expected to exceed more than \$600 per new building project or new home in the event that all five changes are applicable to the same.⁶

The Board has also identified another notable change in the 2020 NEC related to agricultural buildings which will result in decreased costs for some farm and agricultural building owners. Specifically, the 2020 NEC was revised to eliminate existing GFCI protection requirements for receptacles rated above 125-volt, single phase, 20-ampere in areas of agricultural buildings that are included within the scope of Article 547, such as areas of equipotential plane, dirt

⁶ The cost estimates discussed above were arrived at by the Board’s review of the 2020 NEC adoption process at the national level, including a report entitled “Estimated Costs of the 2014, 2017, and 2020 NEC Code Changes for Single-Family and Multifamily Buildings” that was prepared by Home Innovation Research Labs for the National Association of Home Builders (“NAHB”) and that can be found [here](#), and surveys of various Minnesota licensed electrical contractors and Department staff. Neither labor nor material cost estimates varied significantly from contractor to contractor or between department staff members, all of who emphasized that the reported values were merely estimates and that those estimates could vary depending on factors such as the type of work being done, the size of the project, the condition of any existing electrical work, and other factors. For example, a new home may be built with all gas appliances and contain no kitchen islands or peninsulas; because no expanded GFCI requirements for 240-volt receptacles or kitchen islands/peninsulas are necessary for this structure under the 2020 NEC, the cost increase for materials and labor would be less than the estimated \$600 increase mentioned above.

confinement areas, wet and damp locations, and the outdoors (*See* 2020 NEC, Article 547, section 547.5(G)). This revision is expected to result in cost savings for both material and labor expenses.

Finally, affected parties include contractors, inspection departments and designers, who will need to purchase copies of the 2020 NEC. Training curriculum will also need to be updated to incorporate any new or changed provisions in the code. However, it should be noted that continuing education is a requirement for all licensed electricians in Minnesota, so training is necessary regardless of which code version is adopted. Finally, training providers will incur minimal expenses including purchasing of the 2020 NEC code book and updating their existing training materials.

“(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals”

If the new edition of the NEC is not adopted, the state of Minnesota would continue to rely on the 2017 NEC. This would cause the industry in Minnesota to use an electrical code that does not incorporate all the latest methods and technologies, which is the purpose of updating the national model codes. Minnesota would therefore fall behind in electrical standards to the detriment of all stakeholders. Failure to adopt the proposed rule would also have a negative effect on electrical licensing reciprocity with other states. Minnesota has electrical licensing reciprocity agreements with Alaska, Arkansas, Colorado, Iowa, Montana, Nebraska, North Dakota, South Dakota and Wyoming, all of which are in the process of reviewing and adopting the 2020 NEC as well. Finally, failure to adopt the proposed rule could be considered a statutory violation since Minnesota Statutes, section 326B.32, subdivision 2(a)(3) (2018), requires the incorporation of the most recently published edition of the NEC into Minnesota’s electrical code.

“(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference”

There are no applicable federal regulations that address electrical code issues in the construction of non-federally owned buildings.

“(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule”

There are no applicable federal regulations that address electrical code issues in the construction of non-federally owned buildings, so there is no federal impact or cumulative effect. There are no other state regulations related to the specific purpose of this rule.

PERFORMANCE-BASED RULES

Minnesota Statutes, section 326B.106 provides authority to adopt a state building code that conforms, insofar as practicable, to national model codes. It also requires that the code be “adopted in terms of desired results instead of the means for achieving those results, avoiding wherever possible the incorporation of specifications of particular methods or materials.” The 2020 edition of the NEC implements performance-based standards to the extent practicable.

ADDITIONAL NOTICE

This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in a February 24, 2020 Order on Review of Additional Notice Plan and Dual Notice by Administrative Law Judge Barbara Case.

Our notice plan includes giving all notices required by statute. The Board will mail or email the proposed rule and Dual Notice to everyone who has registered to be on the Department of Labor and Industry's rulemaking mailing lists for electrical rules under Minnesota Statutes, section 14.14, subdivision 1a. The Board will email the proposed rule and Dual Notice to parties who have signed up to receive information about the Board's activities.

In addition to the rulemaking mail and email lists, the Board will email the Dual Notice and proposed rule to trade and other associations involved in electrical and building construction. Those associations are as follows:

- a. Associated Builders and Contractors
- b. Associated General Contractors of Minnesota
- c. Association of Minnesota Counties
- d. Builders Association of Minnesota ("BAM")
- e. Housing First Minnesota
- f. Building Owners and Managers Association ("BOMA") – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis)
- g. Communication, Control, Alarm, Remote, Signaling Association ("CCARSA")
- h. Contract Electrical Inspector Association of Minnesota ("CEIAMN")
- i. IBEW Minnesota State Council
- j. League of Minnesota Cities
- k. Local chapters of the Association of Minnesota Building Officials ("AMBO") (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest)
- l. Local chapters of the International Brotherhood of Electrical Workers ("IBEW" Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999)
- m. Minnesota chapter of the International Association of Electrical Inspectors ("IAEI")
- n. Minnesota Electrical Association ("MEA")
- o. Minnesota Electronic Security and Technology Association
- p. Minnesota Farm Bureau
- q. Minnesota Farmers Union
- r. Minnesota Mechanical Contractors Association
- s. Minnesota Municipal Utilities Association
- t. Minnesota Nursery & Landscape Association
- u. Minnesota Rural Electric Association (MREA)
- v. Minnesota Solar Energy Industries Association (MnSEIA)
- w. Minnesota State Fire Chiefs Association
- x. Minnesota Utility Contractors Association
- y. National Electrical Contractors Association ("NECA") – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports)
- z. Sustainable Farming Association of Minnesota

Additionally, the Board will publish the proposed rules, the Statement of Need and Reasonableness, and the Dual Notice on the Board's rulemaking docket on the Department of Labor and Industry's website. The Board will also give notice to the Legislature in accordance with Minnesota Statutes, section 14.116. Finally, the proposed rules will be published in the *State Register*.

CONSULTATION WITH MMB ON LOCAL GOVERNMENT IMPACT

As required by Minnesota Statutes, section 14.131, the Board has consulted with the Commissioner of Management and Budget ("MMB"). The Board did this by sending to the Commissioner of MMB copies of the documents sent to the Governor's Office for review and approval by the Governor's Office prior to the Board's publishing the Dual Notice. Copies were sent on January 14, 2020. The documents included: the Governor's Office Proposed Rule and SONAR Form; draft rules; and near-final SONAR. MMB Executive Budget Officer Kwesi Pasley reviewed the matter and responded by correspondence dated January 27, 2020, wherein he concluded that: "The Department's findings regarding the fiscal impact of this proposal to local governments are sound and agreed to."⁷

DETERMINATION ABOUT RULES REQUIRING LOCAL IMPLEMENTATION

Pursuant to Minn. Stat. § 14.128, the Board has determined that a local government will not be required to adopt or amend an ordinance or other regulation to comply with these proposed rules. The Minnesota Electrical Code is part of the Minnesota State Building Code. *See* Minnesota Rules, part 1300.0050 (J) (2016). The State Building Code is the standard that applies statewide. Minnesota Statutes, section 326B.121, subdivision 1, mandates compliance with the State Building Code whether or not a local government adopts or amends an ordinance. As a result, an ordinance or other regulation is not required for compliance. If a city wishes that its ordinances accurately reflect legal requirements in a situation in which the Code has superseded the ordinances, then the city may want to amend or update its ordinances.

COST OF COMPLYING FOR SMALL BUSINESS OR CITY

Agency Determination of Cost

As required by Minnesota Statutes, section 14.127, the Board has considered whether the cost of complying with the proposed rules in the first year after the rules take effect will exceed \$25,000 for any small business or small city.⁸ In development of this rule and at its January 14, 2020 board meeting, the Board discussed compliance costs and determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city. Some small cities or small businesses in the industry might purchase new code books, but the cost would be approximately a few hundred dollars, depending on how many books were purchased. The difference between complying with the current electrical code, the 2017 NEC, and the proposed rule, the 2020 NEC, is not

⁷ A complete copy of EBO Pasley's January 27, 2020 correspondence is attached hereto as Exhibit #2.

⁸ A small business is defined as any one business that has less than 50 full-time employees. A small city is defined as any one statutory or home rule charter city that has less than ten full-time employees. *See* Minn. Stat. § 14.127 (2018).

anticipated to cost more than \$25,000. Some small businesses in the industry might also spend several hundred dollars on training, but this training is otherwise required in statute and Minnesota Rules, chapter 3800, for licensees. Based on discussion contributions from business owners and board members who work for or with small cities or businesses, the Board determined that no small business or small city will spend \$25,000 in the first year after the rules take effect to comply with the proposed rule.

Costs to small cities that have adopted a local electrical inspection ordinance include the costs of purchasing code books for city employees who work with electrical code inspections. The 2020 edition of the NEC is available from a wide range of outlets at a cost of \$110. An analysis of changes between code versions is also available for approximately \$79. Municipal electrical inspectors are required to be licensed. Conditions of license renewal include 16 hours of continuing education every two years for every license renewal. Although there will be a cost to train to the new code, the training is already required as a condition of licensure. Therefore, the proposed rule does not add any additional costs for training of municipal staff.

LIST OF WITNESSES

If these rules go to a public hearing, the Board anticipates having the following witnesses testify in support of the need for and reasonableness of the rules:

1. Mr. Tim McClintock, NEMA Midwest Field Representative and Regional Code specialist, will testify about the technical merit and development of the electrical code, if necessary;
2. Mr. John Williamson, Supervisor of Electrical Inspections, Construction Codes and Licensing Division, Minnesota Department of Labor and Industry, will testify about the impact of the 2020 NEC on the state electrical inspection program, if necessary; and
3. Mr. Daniel Westberg, Chairperson, Minnesota Board of Electricity, will testify about the Board's interest and actions taken to adopt the 2020 National Electrical Code, if necessary.

RULE-BY-RULE ANALYSIS

1315.0200 SCOPE

Subpart 1a. **Electrical Code.**

This subpart incorporates by reference the 2020 National Electrical Code for all new electrical wiring, apparatus, and equipment for electric light, heat, power, technology circuits and systems, and alarm communications systems. All references to the 2017 NEC are replaced with references to the 2020 NEC. This change is both necessary and reasonable because Minnesota Statutes, section 326B.32, subdivision 2(a)(3) (2018), requires that the most current edition of the NEC be adopted. The NEC is updated and reprinted every three years.

The proposed effective date was added to the rule to set a specific effective date and that date is earlier than the 270-day effective date delay provided for by Minnesota Statutes, section 326B.13, subdivision 8 (2018), which states as follows:

A rule to adopt or amend the State Building Code is effective 270 days after publication of the rule's notice of adoption in the State Register. The rule may provide for a later effective date. *The rule may provide for an earlier effective date if the commissioner or board proposing the rule finds that an earlier effective date is necessary to protect public health and safety after considering, among other things, the need for time for training of individuals to comply with and enforce the rule.* The commissioner must publish an electronic version of the entire adopted rule chapter on the department's Web site within ten days of receipt from the revisor of statutes. The commissioner shall clearly indicate the effective date of the rule on the department's Web site.

Id. (emphasis added). The effective date of July 01, 2020, was selected by the Board at its October 08, 2019 board meeting after consideration of the following information that was presented:

- (1) The latest edition of the National Electrical Code has routinely been adopted in Minnesota and made effective July 1st of the code edition year. The electrical industry in this state strongly supports and is anticipating another July 1st effective date for the revised NEC and is already in the process of updating and implementing necessary business changes, protocol, and practices;
- (2) Industry and enforcement training on the 2020 NEC have already been developed and are scheduled in anticipation of a July 01, 2020 effective date. Training for the 2020 NEC began in the 2019 fall and winter training programs and continues today; and
- (3) A July 1st effective date would lessen confusion in the industry, expedite installations and increase public and workplace health and safety. A July 1st effective date will also promote uniformity among and between states with Minnesota licensing reciprocity and will result in a freer flow of commerce and employees across state lines.

Based on these considerations, the Board has determined that an effective date of July 01, 2020, or five days after the Notice of Adoption is published in the *State Register*, whichever is later, is the most effective way of meeting industry expectations and protecting public health and safety.

CONCLUSION

Based on the foregoing, the proposed rules are both needed and reasonable.

March 09, 2020

Date



Daniel Westberg, Chair
Minnesota Board of Electricity



Minnesota Board of Electricity
c/o Minnesota Department of Labor & Industry
443 Lafayette Road North
St Paul, MN 55155-4344
dli.cclboards@state.mn.us

January 07, 2020

Commissioner Thom Petersen
Minnesota Department of Agriculture
625 Robert Street North
Saint Paul, MN 55155-2538

Re: §14.111 Rulemaking Notice/Adoption of the 2020 National Electrical Code

Dear Commissioner Petersen,

Pursuant to Minn. Stat. §14.111 (2018), please accept this correspondence as official notice of the fact that the Minnesota Board of Electricity is in the process of adopting the 2020 National Electrical Code ("NEC") for use in this state as part of Minnesota Rules, Chapter 1315, the Minnesota Electrical Code. You are being provided this notice because the Board has determined that adoption of the 2020 NEC as incorporated by the Minnesota Electrical Code will affect farming operations in the State of Minnesota.

Specifically, Article 547, §547.5(G) of the 2020 NEC was revised by the National Fire Protection Association ("NFPA") to eliminate Ground Fault Circuit Interrupter ("GFCI") protection for receptacles rated above 125-volt, single phase, 20-ampere (*240-volt and 3-phase receptacles*) at agricultural buildings. A revision in the 2017 NEC resulted in the expansion of GFCI protection for non-dwelling unit receptacles to include all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less, and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less. This change had unforeseen and wide-ranging consequences to other sections of the NEC, in particular to code sections addressing agricultural buildings, which resulted in frequent unintended and unwanted tripping of GFCI protective devices in those buildings. The additional 2017 NEC GFCI protection requirements of above 125-volt, single phase, 15- and 20-ampere applications have also created unintentional financial hardship for farm and agricultural building owners. Therefore, §547.5(G) of the 2020 NEC was revised to eliminate GFCI protection requirements for agricultural building receptacles rated above 125-volt, single phase, 20-ampere (*240-volt and 3-phase receptacles*).

Thank you for your attention to this matter. If you have any questions or concerns

Exhibit 1

MINNESOTA BOARD OF ELECTRICITY

relative to the change in the 2020 NEC described above, please feel free to contact me directly at (651) 284-5172 or jeffrey.f.lebowski@state.mn.us.

Sincerely,



Jeffrey F. Lebowski
General Counsel
Minnesota Board of Electricity
Minnesota Department of Labor & Industry

CC: Daniel Westberg, Chair
Minnesota Board of Electricity



Office Memorandum

Date: January 27, 2020

To: Jeffrey F. Lebowski, General Counsel,
Department of Labor and Industry

From: Kwesi Pasley, Executive Budget Officer,
Minnesota Management and Budget

Subject: M.S. 14.131 – Review of Proposed Amendment to the Minnesota Electrical Code, Minnesota Rules,
Chapter 1315, Revisor’s ID Number R-04632

Background

The Department of Labor and Industry (DLI) is proposing amendments to the rules relating to the Minnesota Electrical Code, in Minnesota Rules, Chapter 1315. Pursuant to M.S. 14.131, the Commissioner of Minnesota Management and Budget has been asked to help evaluate the fiscal impacts and benefits these changes may have on local units of government.

As identified in the Statement of Need and Reasonableness (SONAR), pursuant to M.S. 326B.106, the Commissioner of the Department of Labor and Industry (DLI) must review model building codes every six years for potential adoption, with amendments, for use in Minnesota beginning with the 2018 editions of the model codes. DLI is proposing to adopt and incorporate the 2020 version of the National Electrical Code, without any Minnesota specific amendments.

Evaluation

On behalf of the Commissioner of Minnesota Management and Budget, I have reviewed the proposed changes and the draft of the SONAR to explore the potential fiscal impact these changes may have on local governments.

The adoption of the 2020 version of the National Electrical Code is not anticipated to have a substantial cost to local units of government. Local governments may incur costs associated with purchasing new code books (\$110 per person maximum) and any educational expenses (\$170 per person maximum) necessary for the training of enforcement officials.

The Department’s findings regarding the fiscal impact of this proposal to local governments are sound and agreed to.

cc: Ahna Minge, Executive Budget Coordinator, Minnesota Management and Budget

Exhibit 2


Exhibit E

Minnesota Board of Electricity

**CERTIFICATE OF MAILING THE STATEMENT OF NEED AND
REASONABLENESS TO THE LEGISLATIVE REFERENCE LIBRARY**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on March 12, 2020 when the Dual Notice was mailed, I submitted an electronic copy of the Statement of Need and Reasonableness to the Legislative Reference Library via email to sonars@lrl.leg.mn. I mailed this copy to comply with Minnesota Statutes, sections 14.131 and 14.23. A copy of the cover letter is attached to this Certificate.



Amanda Spuckler
Rules Specialist

March 12, 2020

Legislative Reference Library
sonars@lrl.leg.mn

Re: In the Matter of the Proposed Rules of the Minnesota Board of Electricity Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632

Dear Librarian:

The Board of Electricity ("Board") intends to adopt amendments to rules governing the adoption of the National Electrical Code, Minnesota Rules, part 1315.0200. The Board plans to publish a Dual Notice in the March 16, 2020, *State Register*.

The Department has prepared a Statement of Need and Reasonableness. As required by Minnesota Statutes, sections 14.131 and 14.23, the Department is sending the Library an electronic copy of the Statement of Need and Reasonableness at the same time we are mailing our Dual Notice.

If you have questions, please email me at amanda.spuckler@state.mn.us or call me at (651) 284-5361.

Very truly yours,



Amanda Spuckler
Rules Specialist

Email: amanda.spuckler@state.mn.us

Phone: (651) 284-5361

Attachment: Statement of Need and Reasonableness

Spuckler, Amanda (DLI)

From: Spuckler, Amanda (DLI)
Sent: Thursday, March 12, 2020 8:32 AM
To: sonars@lrl.leg.mn
Cc: Lebowski, Jeffrey F (DLI)
Subject: Minnesota Board of Electricity: SONAR for proposed amendments to Part 1315.0200
Attachments: letter to legislative reference library.pdf; SONAR_2020_NEC_Final_03-09-20.pdf

Please see the attached letter and Statement of Need and Reasonableness.

Thank you.

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



Exhibit F

Minnesota Board of Electricity

DUAL NOTICE: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received; Revisor's ID Number R-04632

Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200

Introduction. The Minnesota Board of Electricity (“Board”) intends to adopt rules without a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28. If, however, 25 or more persons submit a written request for a hearing on the rules by 4:30 p.m. on April 15, 2020, the Board will hold a public hearing in the Minnesota Room, Department of Labor and Industry, 443 Lafayette Road N., St. Paul, Minnesota 55155. **An Administrative Law Judge will conduct the hearing** starting at 9:00 a.m. on Monday, May 4, 2020, and continuing until the hearing is completed. To find out whether the Board will adopt the rules without a hearing or if it will hold the hearing, you should contact the agency contact person after April 15, 2020, and before May 4, 2020.

Agency Contact Person. Submit any comments or questions on the rules or written requests for a public hearing to the agency contact person. The agency contact person is Amanda Spuckler at the Minnesota Department of Labor and Industry, 443 Lafayette Rd. N., St. Paul, Minnesota 55155, telephone (651) 284-5006, and email: dli.rules@state.mn.us.

Subject of Rules and Statutory Authority. The proposed rules amend part 1315.0200 to incorporate by reference the 2020 edition of the National Electrical Code (“NEC”), without Minnesota amendments, as approved by the American National Standards Institute (“ANSI”) and published by the National Fire Protection Association (“NFPA”). Notable changes to the 2020 NEC relate to expanded Ground-Fault Circuit-Interrupter (“GFCI”) protection for dwellings, service panelboard surge protection, and outdoor emergency disconnects required for first responder access. The 2020 NEC was also revised to address and correct the unintended consequences of expanded GFCI requirements for certain agricultural building areas as adopted by the 2017 NEC. The statutory authority to adopt the rules is *Minnesota Statutes*, section 326B.32, subdivision 2, clause (a), subitem (3) (2018). A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed.

Comments. You have until 4:30 p.m. on Wednesday, April 15, 2020, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change that you desire. Any comments that you have about the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that the Board hold a hearing on the rules. You must make your request for a public hearing in writing, which the agency contact person must receive by 4:30 p.m. on Wednesday, April 15, 2020. You must include your name and address in your written request. In addition, you must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the Board cannot count it when determining whether it must hold a public hearing. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a valid written request for a hearing, the Board will hold a public hearing unless enough persons withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the Board must give written notice of this to all persons who requested a hearing, explain the actions the Board took to affect the withdrawal, and ask for written comments on this action. If a public hearing is required, the Board will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Modifications. The Board might modify the proposed rules, either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted to the agency or presented at the hearing. The adopted rules may not be substantially different than these proposed rules unless the Board follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Board encourages you to participate in the rulemaking process.

Cancellation of Hearing. The Board will cancel the hearing scheduled for May 4, 2020, if the agency does not receive requests for a hearing from 25 or more persons. If you requested a public hearing, the Board will notify you before the scheduled hearing whether the hearing will be held. You may also call the agency contact person listed above at (651) 284-5006 after April 15, 2020, to find out whether the hearing will be held. On the scheduled day, you may check for whether the hearing will be held by calling (651) 284-5006 or going on-line at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

Notice of Hearing. If 25 or more persons submit valid written requests for a public hearing on the rules, the Board will hold a hearing following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The Board will hold the hearing on the date and at the time and place listed above. The hearing will continue until all interested persons have been heard. Administrative Law Judge Barbara Case is assigned to conduct the hearing. Judge Case's legal assistant, Michelle Hendrickson, may be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, telephone (651) 361-7896, fax (651) 539-0310, and email: michelle.l.hendrikson@state.mn.us.

Hearing Procedure. If the Board holds a hearing, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case at the address or facsimile number listed in the Notice of Hearing section above

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

Statement of Need and Reasonableness. The statement of need and reasonableness summarizes the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person. Or, you may access a free copy on the agency's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the Minnesota Campaign Finance Board. Questions about this requirement may be directed to that Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (651) 539-1180 or 1-800-657-3889, and at: <https://cfb.mn.gov/>.

Adoption Procedure if No Hearing. If no hearing is required, the Board may adopt the rules after the end of the comment period. The Board will submit the rules and supporting documents to the Office of Administrative Hearings for a legal review. You may ask to be notified of the date the rules are submitted to that office. If you want to receive notice of this, to receive a copy of the adopted rules, or to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure after a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date that the Administrative Law Judge's report will become available and you can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date that the Board adopts the rules and files the same with the Secretary of State by requesting this at the hearing or by writing to the agency contact person stated above.

Order. I hereby order that the rulemaking hearing be held at the date, time, and location listed above.

March 09, 2020

A handwritten signature in black ink that reads "Daniel Westberg". The signature is written in a cursive style with a long horizontal stroke at the end.

Daniel Westberg, Chair
Minnesota Board of Electricity

Minnesota State Register

Published every Monday (Tuesday when Monday is a holiday)



**Proposed, Adopted, Emergency, Expedited, Withdrawn, Vetoed Rules;
Executive Orders; Appointments; Commissioners' Orders; Revenue Notices;
Official Notices; State Grants & Loans; State Contracts; Non-State Public Bids,
Contracts and Grants**

**Monday 16 March 2020
Volume 44, Number 38
Pages 1017 - 1042**

Minnesota State Register

Judicial Notice Shall Be Taken of Material Published in the Minnesota State Register

The Minnesota State Register is the official publication of the State of Minnesota's Executive Branch of government, published weekly to fulfill the legislative mandate set forth in Minnesota Statutes, Chapter 14, and Minnesota Rules, Chapter 1400. It contains:

- Proposed Rules
- Adopted Rules
- Exempt Rules
- Expedited Rules
- Withdrawn Rules
- Executive Orders of the Governor
- Appointments
- Proclamations
- Vetoed Rules
- Commissioners' Orders
- Revenue Notices
- Official Notices
- State Grants and Loans
- Contracts for Professional, Technical and Consulting Services
- Non-State Public Bids, Contracts and Grants

Printing Schedule and Submission Deadlines

Vol. 44 Issue Number	Publish Date	Deadline for: all Short Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical- Consulting Contracts, Non-State Bids and Public Contracts	Deadline for LONG, Complicated Rules (contact the editor to negotiate a deadline)
#39	Monday 23 March	Noon Tuesday 17 March	Noon Thursday 12 March
#40	Monday 30 March	Noon Tuesday 24 March	Noon Thursday 19 March
#41	Monday 6 April	Noon Tuesday 31 March	Noon Thursday 26 March
#42	Monday 13 April	Noon Tuesday 7 April	Noon Thursday 2 April

PUBLISHING NOTICES: We need to receive your submission ELECTRONICALLY in Microsoft WORD format. Submit ONE COPY of your notice via e-mail to: sean.plemmons@state.mn.us. State agency submissions must include a "State Register Printing Order" form, and, with contracts, a "Contract Certification" form. Non-State Agencies should submit ELECTRONICALLY in Microsoft WORD, with a letter on your letterhead stationery requesting publication and date to be published. Costs are \$13.50 per tenth of a page (columns are seven inches wide). One typewritten, double-spaced page = 6/10s of a page in the State Register, or \$81. About 1.5 pages typed, double-spaced, on 8-1/2"x11" paper = one typeset page in the State Register. Contact editor with questions (651) 201-3204, or e-mail: sean.plemmons@state.mn.us.

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- Single issues are available for a limited time: Minnesota State Register \$5.00.
- "Affidavit of Publication" includes a notarized "Affidavit" and a copy of the issue: \$15.00.
- Research Services - will look up, photocopy, and fax or send copies from past issues at \$1.00 per page.

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Minnesota Legislative Information

Senate Public Information Office
(651) 296-0504
State Capitol, Room 231, St. Paul, MN 55155
<https://www.senate.mn/>

Minnesota State Court System
Court Information Office (651) 296-6043
MN Judicial Center, Rm. 135,
25 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<http://www.mncourts.gov>

House Public Information Services
(651) 296-2146
State Office Building, Room 175
100 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<https://www.house.leg.state.mn.us/hinfo/hinfo.asp>

Federal Register
Office of the Federal Register (202) 512-1530; or (888) 293-6498
U.S. Government Printing Office – Fax: (202) 512-1262
<https://www.federalregister.gov/>

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Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The State Register is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the State Register. Published every Monday, the State Register makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific Minnesota Rule chapter numbers. Every odd-numbered year the Minnesota Rules are published. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the State Register.

An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (Minnesota Statutes §§ 14.101). It does this by publishing a notice in the State Register at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as Proposed Rules, along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules, and withdrawn proposed rules, are also published in the State Register. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the State Register as Adopted Rules. These final adopted rules are not printed in their entirety, but only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the State Register, the issue the rule appeared in as proposed, and later as adopted.

The State Register features partial and cumulative listings of rules in this section on the following schedule: issues #1-26 inclusive (issue #26 cumulative for issues #1-26); issues #27-52 inclusive (issue #52, cumulative for issues #27-52 or #53 in some years). A subject matter index is updated weekly and is available upon request from the editor. For copies or subscriptions to the State Register, contact Minnesota's Bookstore, 660 Olive Street (one block east of I-35E and one block north of University Ave), St. Paul, MN 55155, phone: (612) 297-3000, or toll-free 1-800-657-3757. TTY relay service phone number: (800) 627-3529.

Volume 44 - Minnesota Rules

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Proposed Rules

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Rules to be Adopted After a Hearing. After receiving comments and deciding to hold a public hearing on the rule, an agency drafts its rule. It then publishes its rules with a notice of hearing. All persons wishing to make a statement must register at the hearing. Anyone who wishes to submit written comments may do so at the hearing, or within five working days of the close of the hearing. Administrative law judges may, during the hearing, extend the period for receiving comments up to 20 calendar days. For five business days after the submission period the agency and interested persons may respond to any new information submitted during the written submission period and the record then is closed. The administrative law judge prepares a report within 30 days, stating findings of fact, conclusions and recommendations. After receiving the report, the agency decides whether to adopt, withdraw or modify the proposed rule based on consideration of the comments made during the rule hearing procedure and the report of the administrative law judge. The agency must wait five days after receiving the report before taking any action.

Rules to be Adopted Without a Hearing. Pursuant to *Minnesota Statutes* § 14.22, an agency may propose to adopt, amend, suspend or repeal rules without first holding a public hearing. An agency must first solicit **Comments on Planned Rules or Comments on Planned Rule Amendments** from the public. The agency then publishes a notice of intent to adopt rules without a public hearing, together with the proposed rules, in the *State Register*. If, during the 30-day comment period, 25 or more persons submit to the agency a written request for a hearing of the proposed rules, the agency must proceed under the provisions of §§ 14.1414.20, which state that if an agency decides to hold a public hearing, it must publish a notice of intent in the *State Register*.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated “all new material.” **Adopted Rules** - Underlining indicates additions to proposed rule language. ~~Strikeout~~ indicates deletions from proposed rule language.

Board of Electricity

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Proposed Rules

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Subject of Rules and Statutory Authority. The proposed rules amend part 1315.0200 to incorporate by reference the 2020 edition of the National Electrical Code (“NEC”), without Minnesota amendments, as approved by the American National Standards Institute (“ANSI”) and published by the National Fire Protection Association (“NFPA”). Notable changes to the 2020 NEC relate to expanded Ground-Fault Circuit-Interrupter (“GFCI”) protection for dwellings, service panelboard surge protection, and outdoor emergency disconnects required for first responder access. The 2020 NEC was also revised to address and correct the unintended consequences of expanded GFCI requirements for certain agricultural building areas as adopted by the 2017 NEC. The statutory authority to adopt the rules is *Minnesota Statutes*, section 326B.32, subdivision 2, clause (a), subitem (3) (2018). A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed.

Comments. You have until 4:30 p.m. on Wednesday, April 15, 2020, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change that you desire. Any comments that you have about the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that the Board hold a hearing on the rules. You must make your request for a public hearing in writing, which the agency contact person must receive by 4:30 p.m. on Wednesday, April 15, 2020. You must include your name and address in your written request. In addition, you must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the Board cannot count it when determining whether it must hold a public hearing. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a valid written request for a hearing, the Board will hold a public hearing unless enough persons withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the Board must give written notice of this to all persons who requested a hearing, explain the actions the Board took to affect the withdrawal, and ask for written comments on this action. If a public hearing is required, the Board will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Modifications. The Board might modify the proposed rules, either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted to the agency or presented at the hearing. The adopted rules may not be substantially different than these proposed rules unless the Board follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Board encourages you to participate in the rulemaking process.

Cancellation of Hearing. The Board will cancel the hearing scheduled for May 4, 2020, if the agency does not receive requests for a hearing from 25 or more persons. If you requested a public hearing, the Board will notify you before the scheduled hearing whether the hearing will be held. You may also call the agency contact person listed above at (651) 284-5006 after April 15, 2020, to find out whether the hearing will be held. On the scheduled day, you may check for whether the hearing will be held by calling (651) 284-5006 or going on-line at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

Notice of Hearing. If 25 or more persons submit valid written requests for a public hearing on the rules, the Board will hold a hearing following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The Board will hold the hearing on the date and at the time and place listed above. The hearing will continue until all interested

Proposed Rules

persons have been heard. Administrative Law Judge Barbara Case is assigned to conduct the hearing. Judge Case's legal assistant, Michelle Hendrickson, may be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, telephone (651) 361-7896, fax (651) 539-0310, and email: michelle.l.hendrikson@state.mn.us.

Hearing Procedure. If the Board holds a hearing, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case at the address or facsimile number listed in the Notice of Hearing section above.

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

Statement of Need and Reasonableness. The statement of need and reasonableness summarizes the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person. Or, you may access a free copy on the agency's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the Minnesota Campaign Finance Board. Questions about this requirement may be directed to that Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (651) 539-1180 or 1-800-657-3889, and at: <https://cfb.mn.gov/>.

Adoption Procedure if No Hearing. If no hearing is required, the Board may adopt the rules after the end of the comment period. The Board will submit the rules and supporting documents to the Office of Administrative Hearings for a legal review. You may ask to be notified of the date the rules are submitted to that office. If you want to receive notice of this, to receive a copy of the adopted rules, or to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure after a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date that the Administrative Law Judge's report will become available and you can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date that the Board adopts the rules and files the same with the Secretary of State by requesting this at the hearing or by writing to the agency contact person stated above.

Order. I hereby order that the rulemaking hearing be held at the date, time, and location listed above.

March 09, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit F.1

OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

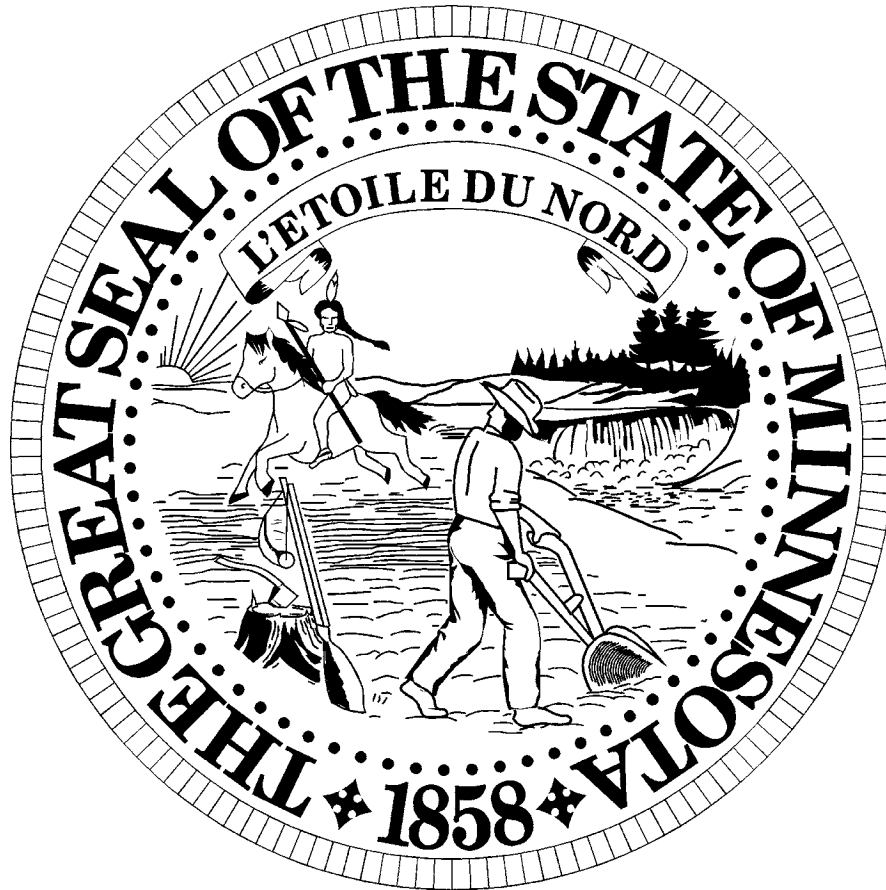
Notice is hereby given that the May 04, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Dual Notice of Hearing as described in the March 16, 2020 *State Register* (44 SR 1025), is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will take place starting at 9:00 a.m. on Wednesday, August 19, 2020, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155. For complete information concerning participation at the rescheduled public hearing, please view the Dual Notice of Hearing referenced above or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Minnesota State Register

Published every Monday (Tuesday when Monday is a holiday)



**Proposed, Adopted, Emergency, Expedited, Withdrawn, Vetoed Rules;
Executive Orders; Appointments; Commissioners' Orders; Revenue Notices;
Official Notices; State Grants & Loans; State Contracts; Non-State Public Bids,
Contracts and Grants**

**Monday 20 April 2020
Volume 44, Number 43
Pages 1191 - 1216**

Minnesota State Register

Judicial Notice Shall Be Taken of Material Published in the Minnesota State Register

The Minnesota State Register is the official publication of the State of Minnesota's Executive Branch of government, published weekly to fulfill the legislative mandate set forth in Minnesota Statutes, Chapter 14, and Minnesota Rules, Chapter 1400. It contains:

- Proposed Rules
- Adopted Rules
- Exempt Rules
- Expedited Rules
- Withdrawn Rules
- Executive Orders of the Governor
- Appointments
- Proclamations
- Vetoed Rules
- Commissioners' Orders
- Revenue Notices
- Official Notices
- State Grants and Loans
- Contracts for Professional, Technical and Consulting Services
- Non-State Public Bids, Contracts and Grants

Printing Schedule and Submission Deadlines

Vol. 44 Issue Number	Publish Date	Deadline for: all Short Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical- Consulting Contracts, Non-State Bids and Public Contracts	Deadline for LONG, Complicated Rules (contact the editor to negotiate a deadline)
#44	Monday 27 April	Noon Tuesday 21 April	Noon Thursday 16 April
#45	Monday 4 May	Noon Tuesday 28 April	Noon Thursday 23 April
#46	Monday 11 May	Noon Tuesday 5 May	Noon Thursday 30 April
#47	Monday 18 May	Noon Tuesday 12 May	Noon Thursday 7 May

PUBLISHING NOTICES: We need to receive your submission ELECTRONICALLY in Microsoft WORD format. Submit ONE COPY of your notice via e-mail to: sean.plemmons@state.mn.us. State agency submissions must include a "State Register Printing Order" form, and, with contracts, a "Contract Certification" form. Non-State Agencies should submit ELECTRONICALLY in Microsoft WORD, with a letter on your letterhead stationery requesting publication and date to be published. Costs are \$13.50 per tenth of a page (columns are seven inches wide). One typewritten, double-spaced page = 6/10s of a page in the State Register, or \$81. About 1.5 pages typed, double-spaced, on 8-1/2"x11" paper = one typeset page in the State Register. Contact editor with questions (651) 201-3204, or e-mail: sean.plemmons@state.mn.us.

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Minnesota Legislative Information

Senate Public Information Office

(651) 296-0504
State Capitol, Room 231, St. Paul, MN 55155
<https://www.senate.mn/>

Minnesota State Court System

Court Information Office (651) 296-6043
MN Judicial Center, Rm. 135,
25 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<http://www.mncourts.gov>

House Public Information Services

(651) 296-2146
State Office Building, Room 175
100 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<https://www.house.leg.state.mn.us/hinfo/hinfo.asp>

Federal Register

Office of the Federal Register (202) 512-1530; or (888) 293-6498
U.S. Government Printing Office – Fax: (202) 512-1262
<https://www.federalregister.gov/>

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Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The State Register is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the State Register. Published every Monday, the State Register makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific Minnesota Rule chapter numbers. Every odd-numbered year the Minnesota Rules are published. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the State Register.

An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (Minnesota Statutes §§ 14.101). It does this by publishing a notice in the State Register at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as Proposed Rules, along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules, and withdrawn proposed rules, are also published in the State Register. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the State Register as Adopted Rules. These final adopted rules are not printed in their entirety, but only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the State Register, the issue the rule appeared in as proposed, and later as adopted.

The State Register features partial and cumulative listings of rules in this section on the following schedule: issues #1-26 inclusive (issue #26 cumulative for issues #1-26); issues #27-52 inclusive (issue #52, cumulative for issues #27-52 or #53 in some years). A subject matter index is updated weekly and is available upon request from the editor. For copies or subscriptions to the State Register, contact Minnesota's Bookstore, 660 Olive Street (one block east of I-35E and one block north of University Ave), St. Paul, MN 55155, phone: (612) 297-3000, or toll-free 1-800-657-3757. TTY relay service phone number: (800) 627-3529.

Volume 44 - Minnesota Rules
(Rules Appearing in Vol. 44 Issues #1-26 are
in Vol. 44, #26 - Monday 23 December 2019)
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Signed on April 17, 2020.

Tim Walz
Governor

Filed According to Law:

Steve Simon
Secretary of State

Approved by the Executive Council on April 17, 2020:

Alice Roberts-Davis
Secretary, Executive Council

Official Notices

Pursuant to *Minnesota Statutes* §§ 14.101, an agency must first solicit comments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

The *State Register* also publishes other official notices of state agencies and non-state agencies, including notices of meetings and matters of public interest.

Minnesota Board of Electricity

Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the May 04, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Dual Notice of Hearing as described in the March 16, 2020 *State Register* (44 SR 1025), is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers.

The rescheduled public hearing will take place starting at 9:00 a.m. on Wednesday, August 19, 2020, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155. For complete information concerning participation at the rescheduled public hearing, please view the Dual Notice of Hearing referenced above or visit the Board's website at:

<http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit F.2

OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Notice of Rescheduled Hearing as described in the April 20, 2020 *State Register* (44 SR 1204), is being revised to a Webex format due to concerns over public group meetings during the current COVID-19 health pandemic. Pursuant to *Minnesota Statutes*, section 13D.021, subdivision 1 (2019), the Board Chair has determined that this meeting will be conducted remotely because it is not practical or prudent for an in-person meeting due to the current pandemic.

Hearing Procedure. You and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to view the presentation by joining the hearing by internet, mobile device or phone as follows:

To view the presentation and join the hearing by internet, navigate on your computer to: <https://tinyurl.com/y9d39rt6> or <https://minnesota.webex.com> and enter:

- Meeting Number: 146 735 1484
- Meeting Password: nxJ9pQ7N2hW

To join from a mobile device:

[+1-415-655-0003](tel:+14156550003), [146 735 1484###](tel:+14156550003) United States Toll
[1-855-282-6330](tel:+18552826330), [146 735 1484###](tel:+18552826330) United States Toll Free

To join by phone:

+1-415-655-0003 United States Toll
1-855-282-6330 United States Toll Free

To join from a video system or application:

Dial 1467351484@minnesota.webex.com

You can also dial 173.243.2.68 and enter your meeting number.

You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when

the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case. Judge Case can be reached by contacting legal assistant Michelle Hendrickson at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, St. Paul, MN 55164-0620, telephone (651) 361-7896, fax (651) 539-0130, and email Michelle.L.Hendrickson@state.mn.us.

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

For more information concerning this rulemaking and participation at the revised public hearing, please view the initial Dual Notice of Hearing as published in the March 16, 2020 edition of the *State Register* (44 SR 1025) or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

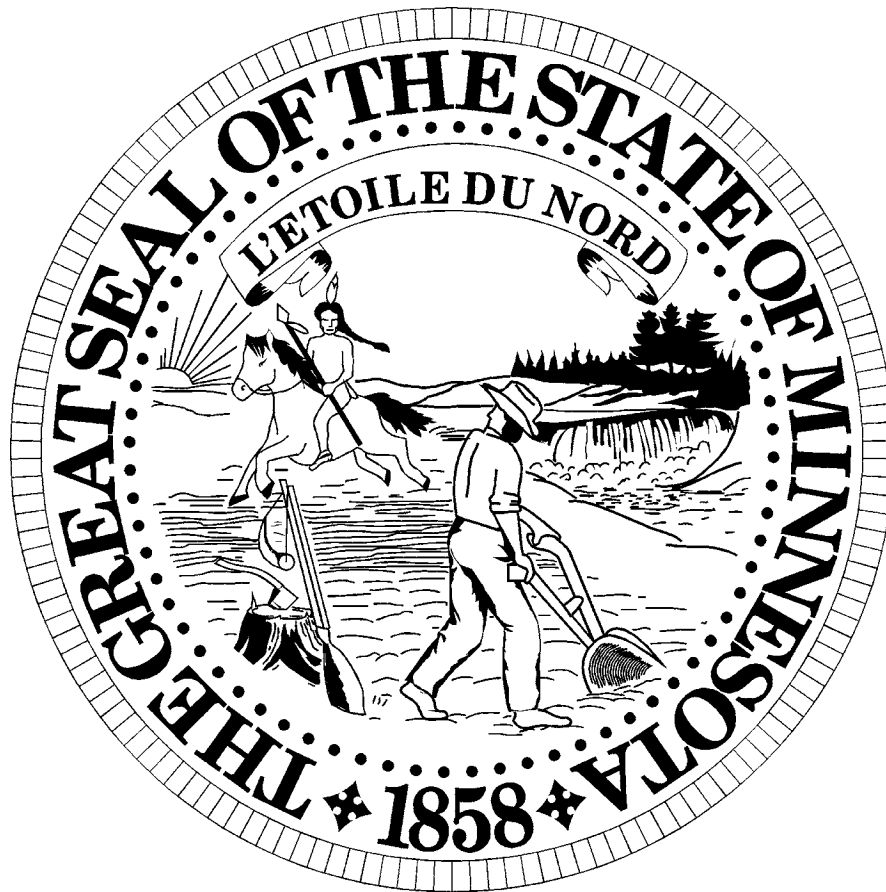


July 06, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Minnesota State Register

Published every Monday (Tuesday when Monday is a holiday)



**Proposed, Adopted, Emergency, Expedited, Withdrawn, Vetoed Rules;
Executive Orders; Appointments; Commissioners' Orders; Revenue Notices;
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**Monday 13 July 2020
Volume 45, Number 2
Pages 53 - 64**

Minnesota State Register

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- Contracts for Professional, Technical and Consulting Services
- Non-State Public Bids, Contracts and Grants

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#3	Monday 20 July	Noon Tuesday 14 July	Noon Thursday 9 July
#4	Monday 27 July	Noon Tuesday 21 July	Noon Thursday 16 July
#5	Monday 3 August	Noon Tuesday 28 July	Noon Thursday 23 July
#6	Monday 10 August	Noon Tuesday 4 August	Noon Thursday 30 July

PUBLISHING NOTICES: We need to receive your submission ELECTRONICALLY in Microsoft WORD format. Submit ONE COPY of your notice via e-mail to: sean.plemmons@state.mn.us. State agency submissions must include a "State Register Printing Order" form, and, with contracts, a "Contract Certification" form. Non-State Agencies should submit ELECTRONICALLY in Microsoft WORD, with a letter on your letterhead stationery requesting publication and date to be published. Costs are \$13.50 per tenth of a page (columns are seven inches wide). One typewritten, double-spaced page = 6/10s of a page in the State Register, or \$81. About 1.5 pages typed, double-spaced, on 8-1/2"x11" paper = one typeset page in the State Register. Contact editor with questions (651) 201-3204, or e-mail: sean.plemmons@state.mn.us.

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(651) 296-0504
State Capitol, Room 231, St. Paul, MN 55155
<https://www.senate.mn/>

Minnesota State Court System

Court Information Office (651) 296-6043
MN Judicial Center, Rm. 135,
25 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<http://www.mncourts.gov>

House Public Information Services

(651) 296-2146
State Office Building, Room 175
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Federal Register

Office of the Federal Register (202) 512-1530; or (888) 293-6498
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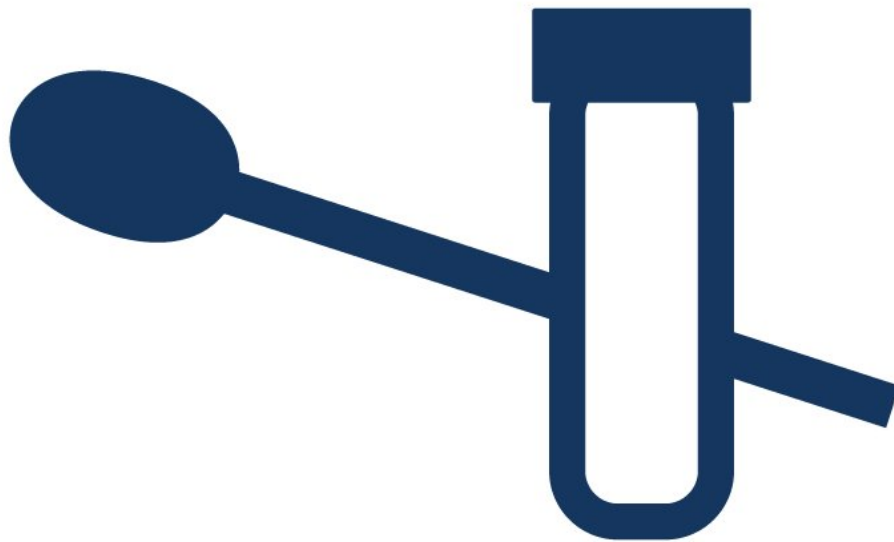
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Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The State Register is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the State Register. Published every Monday, the State Register makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific Minnesota Rule chapter numbers. Every odd-numbered year the Minnesota Rules are published. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the State Register.

An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (Minnesota Statutes §§ 14.101). It does this by publishing a notice in the State Register at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as Proposed Rules, along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules, and withdrawn proposed rules, are also published in the State Register. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the State Register as Adopted Rules. These final adopted rules are not printed in their entirety, but only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the State Register, the issue the rule appeared in as proposed, and later as adopted.

The State Register features partial and cumulative listings of rules in this section on the following schedule: issues #1-26 inclusive (issue #26 cumulative for issues #1-26); issues #27-52 inclusive (issue #52, cumulative for issues #27-52 or #53 in some years). A subject matter index is updated weekly and is available upon request from the editor. For copies or subscriptions to the State Register, contact Minnesota's Bookstore, 660 Olive Street (one block east of I-35E and one block north of University Ave), St. Paul, MN 55155, phone: (612) 297-3000, or toll-free 1-800-657-3757. TTY relay service phone number: (800) 627-3529.

Volume 45 - Minnesota Rules **(Rules Appearing in Vol. 44 Issues #27-53 are** **in Vol. 44, #53 - Monday 29 June 2020)** **Volume 45, #2**

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Pursuant to *Minnesota Statutes* §§ 14.101, an agency must first solicit comments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

The *State Register* also publishes other official notices of state agencies and non-state agencies, including notices of meetings and matters of public interest.

Governor's Council for an Age-Friendly Minnesota Notice of Public Hearing and Comment Period for the Recommendations developed by the Governor's Council for an Age-Friendly MN

The Governor's Council for an Age-Friendly Minnesota requests your comments on the recommendations developed by the Council for submission to the Governor.

The Council is seeking a public feedback through July 31st, 2020. A public hearing and comment period announcement appeared in the July 13, 2020 Minnesota State Register, Volume 45, Number 2. Please see the attached Notice of Public Hearing for details about the public hearing and how to submit comments.

Please consider submitting comments about what works well and what should be revised in the draft recommendations proposed by the Age-Friendly Council using the attached template that is available at <https://mn.gov/dhs/age-friendly-mn/contact/>. Please forward this message, including the Notice of Public Hearing and the Public Comment Form, to others who may be interested.

The Age-Friendly Council appreciates your interest and involvement in this statewide effort that impacts all Minnesotans. Thank you for your time and consideration.

Board of Electricity Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Notice of Rescheduled Hearing as described in the April 20, 2020 *State Register* (44 SR 1204), is being revised to a Webex format due to concerns over public group meetings during the current COVID-19 health pandemic. Pursuant to *Minnesota Statutes*, section 13D.021, subdivision 1 (2019), the Board Chair has determined that this meeting will be conducted remotely because it is not practical or prudent for an in-person meeting due to the current pandemic.

Hearing Procedure. You and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to view the presentation by joining the hearing by internet, mobile device or phone as follows:

To view the presentation and join the hearing by internet, navigate on your computer to:

Board of Electricity Rules Hearing or <https://minnesota.webex.com> and enter:

Meeting Number: 146 735 1484

Meeting Password: nxJ9pQ7N2hW

Official Notices

To join from a mobile device:

+1-415-655-0003, 146 735 1484## United States Toll
1-855-282-6330, 146 735 1484## United States Toll Free

To join by phone:

+1-415-655-0003 United States Toll
1-855-282-6330 United States Toll Free

To join from a video system or application:

Dial **1467351484@minnesota.webex.com**
You can also dial 173.243.2.68 and enter your meeting number.

You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case. Judge Case can be reached by contacting legal assistant Michelle Hendrickson at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, St. Paul, MN 55164-0620, telephone (651) 361-7896, fax (651) 539-0130, and email Michelle.L.Hendrickson@state.mn.us.

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

For more information concerning this rulemaking and participation at the revised public hearing, please view the initial Dual Notice of Hearing as published in the March 16, 2020 edition of the *State Register* (44 SR 1025) or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

July 06, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Department of Natural Resources Division of Lands and Minerals Notice of Proposed Boundary Line Agreement

NOTICE IS HEREBY GIVEN that the Minnesota Department of Natural Resources, Division of Lands and Minerals, proposes to enter into a boundary line agreement, under the authority of *Minnesota Statutes* section 84.0273, to correct boundary line issues affecting the ownership interests of the State and an adjacent landowner, the Estate of Dean Maser. The agreement involves land located in the Government Lots Eight (8) and Nine (9), Section Three (3),

Exhibit G

Minnesota Board of Electricity

CERTIFICATE OF ACCURACY OF THE MAILING LIST

Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632

I certify that the list of persons and associations who have requested that their names be placed on the Department of Labor and Industry rulemaking mailing list for the electrical rulemaking under Minnesota Statutes, section 14.14, subdivision 1a, is accurate, complete, and current as of March 12, 2020. A copy of the mailing list is attached to this Certificate.



Sonya Herr
Legal Support Staff Supervisor

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St. Paul, MN 55103

Bradley Dvorak
11450 Galtier Drive
Burnsville, MN 55337

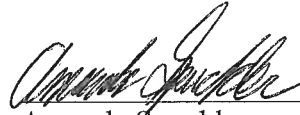
Exhibit G.1

Minnesota Board of Electricity

CERTIFICATE OF MAILING THE DUAL NOTICE TO THE RULEMAKING MAILING LIST

Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632

I certify that on March 12, 2020, at least 33 days before the end of the comment period, at St. Paul, Ramsey County, Minnesota, I mailed the Dual Notice by depositing a copy in the State of Minnesota's central mail system for United States mail with postage prepaid to all persons and associations on the rulemaking mailing list for electrical rulemaking established by Minnesota Statutes, section 14.14, subdivision 1a. Copies of the Notice are attached to this Certificate.



Amanda Spuckler
Rules Specialist

Minnesota Board of Electricity

DUAL NOTICE: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received; Revisor's ID Number R-04632

Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200

Introduction. The Minnesota Board of Electricity (“Board”) intends to adopt rules without a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28. If, however, 25 or more persons submit a written request for a hearing on the rules by 4:30 p.m. on April 15, 2020, the Board will hold a public hearing in the Minnesota Room, Department of Labor and Industry, 443 Lafayette Road N., St. Paul, Minnesota 55155. **An Administrative Law Judge will conduct the hearing** starting at 9:00 a.m. on Monday, May 4, 2020, and continuing until the hearing is completed. To find out whether the Board will adopt the rules without a hearing or if it will hold the hearing, you should contact the agency contact person after April 15, 2020, and before May 4, 2020.

Agency Contact Person. Submit any comments or questions on the rules or written requests for a public hearing to the agency contact person. The agency contact person is Amanda Spuckler at the Minnesota Department of Labor and Industry, 443 Lafayette Rd. N., St. Paul, Minnesota 55155, telephone (651) 284-5006, and email: dli.rules@state.mn.us.

Subject of Rules and Statutory Authority. The proposed rules amend part 1315.0200 to incorporate by reference the 2020 edition of the National Electrical Code (“NEC”), without Minnesota amendments, as approved by the American National Standards Institute (“ANSI”) and published by the National Fire Protection Association (“NFPA”). Notable changes to the 2020 NEC relate to expanded Ground-Fault Circuit-Interrupter (“GFCI”) protection for dwellings, service panelboard surge protection, and outdoor emergency disconnects required for first responder access. The 2020 NEC was also revised to address and correct the unintended consequences of expanded GFCI requirements for certain agricultural building areas as adopted by the 2017 NEC. The statutory authority to adopt the rules is *Minnesota Statutes*, section 326B.32, subdivision 2, clause (a), subitem (3) (2018). A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed.

Comments. You have until 4:30 p.m. on Wednesday, April 15, 2020, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change that you desire. Any comments that you have about the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that the Board hold a hearing on the rules. You must make your request for a public hearing in writing, which the agency contact person must receive by 4:30 p.m. on Wednesday, April 15, 2020. You must include your name and address in your written request. In addition, you must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the Board cannot count it when determining whether it must hold a public hearing. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a valid written request for a hearing, the Board will hold a public hearing unless enough persons withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the Board must give written notice of this to all persons who requested a hearing, explain the actions the Board took to affect the withdrawal, and ask for written comments on this action. If a public hearing is required, the Board will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Modifications. The Board might modify the proposed rules, either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted to the agency or presented at the hearing. The adopted rules may not be substantially different than these proposed rules unless the Board follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Board encourages you to participate in the rulemaking process.

Cancellation of Hearing. The Board will cancel the hearing scheduled for May 4, 2020, if the agency does not receive requests for a hearing from 25 or more persons. If you requested a public hearing, the Board will notify you before the scheduled hearing whether the hearing will be held. You may also call the agency contact person listed above at (651) 284-5006 after April 15, 2020, to find out whether the hearing will be held. On the scheduled day, you may check for whether the hearing will be held by calling (651) 284-5006 or going on-line at:

<http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

Notice of Hearing. If 25 or more persons submit valid written requests for a public hearing on the rules, the Board will hold a hearing following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The Board will hold the hearing on the date and at the time and place listed above. The hearing will continue until all interested persons have been heard. Administrative Law Judge Barbara Case is assigned to conduct the hearing. Judge Case's legal assistant, Michelle Hendrickson, may be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, telephone (651) 361-7896, fax (651) 539-0310, and email: michelle.l.hendrikson@state.mn.us.

Hearing Procedure. If the Board holds a hearing, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case at the address or facsimile number listed in the Notice of Hearing section above

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

Statement of Need and Reasonableness. The statement of need and reasonableness summarizes the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person. Or, you may access a free copy on the agency's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the Minnesota Campaign Finance Board. Questions about this requirement may be directed to that Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (651) 539-1180 or 1-800-657-3889, and at: <https://cfb.mn.gov/>.

Adoption Procedure if No Hearing. If no hearing is required, the Board may adopt the rules after the end of the comment period. The Board will submit the rules and supporting documents to the Office of Administrative Hearings for a legal review. You may ask to be notified of the date the rules are submitted to that office. If you want to receive notice of this, to receive a copy of the adopted rules, or to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure after a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date that the Administrative Law Judge's report will become available and you can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date that the Board adopts the rules and files the same with the Secretary of State by requesting this at the hearing or by writing to the agency contact person stated above.

Order. I hereby order that the rulemaking hearing be held at the date, time, and location listed above.

March 09, 2020

A handwritten signature in black ink that reads "Daniel Westberg". The signature is written in a cursive style with a long horizontal flourish extending from the end of the name.

Daniel Westberg, Chair
Minnesota Board of Electricity

1.1 **Board of Electricity**1.2 **Proposed Permanent Rules Updating the Minnesota Electrical Code**1.3 **1315.0200 SCOPE.**1.4 *[For text of subpart 1, see Minnesota Rules]*

1.5 Subp. 1a. **Electrical code.** All new electrical wiring, apparatus, and equipment for
1.6 electric light, heat, power, technology circuits and systems, and alarm and communication
1.7 systems must comply with the regulations contained in the ~~2017~~ 2020 edition of the National
1.8 Electrical Code (NEC) as approved by the American National Standards Institute
1.9 (ANSI/NFPA ~~70-2017~~ 70-2020), Minnesota Statutes, section 326B.35, and the Minnesota
1.10 State Building Code as adopted by the commissioner of labor and industry. The ~~2017~~ 2020
1.11 edition of the National Electrical Code, developed and published by the National Fire
1.12 Protection Association, Inc., is incorporated by reference and made part of the Minnesota
1.13 State Building Code. The National Electrical Code is not subject to frequent change and is
1.14 available in the office of the commissioner of labor and industry, from the Minnesota
1.15 Bookstore, 660 Olive Street, Saint Paul, MN 55155, through public libraries, from major
1.16 bookstores and other retail sources, or from National Fire Protection Association, Inc., One
1.17 Batterymarch Park, Quincy, MA 02169-7471.

1.18 Subp. 2. [Repealed, 12 SR 102; 12 SR 151]

1.19 **EFFECTIVE DATE.** Minnesota Rules, part 1315.0200, is effective July 1, 2020, or five
1.20 business days after publication of the notice of adoption in the State Register, whichever is
1.21 later.

Exhibit G.2

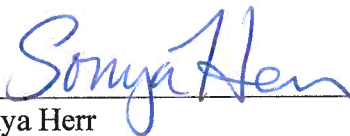
Minnesota Board of Electricity

**CERTIFICATE OF ACCURACY OF THE E-MAILING LIST AND OF E-MAILING
THE DUAL NOTICE TO THE RULEMAKING E-MAILING LIST**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that the list of persons and associations who have requested that their names be placed on the Department of Labor and Industry rulemaking e-mailing list for electrical rulemaking under Minnesota Statutes, section 14.14, subdivision 1a, is accurate, complete, and current as of March 16, 2020. A copy of the mailing list is attached to this Certificate.

I further certify that on March 16, 2020, at least 30 days before the end of the comment period, at St. Paul, Ramsey County, Minnesota, I e-mailed the links to Dual Notice to all persons and associations on the rulemaking e-mailing list for the electrical rulemaking established by Minnesota Statutes, section 14.14, subdivision 1a. A copy of the e-mail, the Notice, and the e-mailing list are attached to this Certificate.



Sonya Herr
Legal Support Staff Supervisor

Spuckler, Amanda (DLI)

From: Minnesota Department of Labor and Industry <MNDLI@public.govdelivery.com>
Sent: Monday, March 16, 2020 8:41 AM
To: Spuckler, Amanda (DLI)
Subject: Minnesota Board of Electricity Rulemaking Notice



Adoption of the 2020 National Electrical Code

Minnesota Rules, Part 1315.0200

You are receiving this email because you have registered to receive electronic rulemaking notices pertaining to electrical.

The Minnesota Board of Electricity intends to adopt permanent rules governing the adoption of the 2020 edition of the National Electrical Code, Minnesota Rules, part 1315.0200.

The following document related to this rulemaking will be published in the March 16, 2020, edition of the *State Register*:

- Dual Notice: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received.

The Dual Notice provides details about the hearing and cancellation of the hearing.

The Dual Notice, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are available in the rulemaking docket.

The comment period for this rulemaking ends at **4:30 p.m. on Wednesday, April 15, 2020**.

Questions?

Contact us at dli.rules@state.mn.us.

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Minnesota Board of Electricity

DUAL NOTICE: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received; Revisor's ID Number R-04632

Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200

Introduction. The Minnesota Board of Electricity ("Board") intends to adopt rules without a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28. If, however, 25 or more persons submit a written request for a hearing on the rules by 4:30 p.m. on April 15, 2020, the Board will hold a public hearing in the Minnesota Room, Department of Labor and Industry, 443 Lafayette Road N., St. Paul, Minnesota 55155. **An Administrative Law Judge will conduct the hearing** starting at 9:00 a.m. on Monday, May 4, 2020, and continuing until the hearing is completed. To find out whether the Board will adopt the rules without a hearing or if it will hold the hearing, you should contact the agency contact person after April 15, 2020, and before May 4, 2020.

Agency Contact Person. Submit any comments or questions on the rules or written requests for a public hearing to the agency contact person. The agency contact person is Amanda Spuckler at the Minnesota Department of Labor and Industry, 443 Lafayette Rd. N., St. Paul, Minnesota 55155, telephone (651) 284-5006, and email: dli.rules@state.mn.us.

Subject of Rules and Statutory Authority. The proposed rules amend part 1315.0200 to incorporate by reference the 2020 edition of the National Electrical Code ("NEC"), without Minnesota amendments, as approved by the American National Standards Institute ("ANSI") and published by the National Fire Protection Association ("NFPA"). Notable changes to the 2020 NEC relate to expanded Ground-Fault Circuit-Interrupter ("GFCI") protection for dwellings, service panelboard surge protection, and outdoor emergency disconnects required for first responder access. The 2020 NEC was also revised to address and correct the unintended consequences of expanded GFCI requirements for certain agricultural building areas as adopted by the 2017 NEC. The statutory authority to adopt the rules is *Minnesota Statutes*, section 326B.32, subdivision 2, clause (a), subitem (3) (2018). A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed.

Comments. You have until 4:30 p.m. on Wednesday, April 15, 2020, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change that you desire. Any comments that you have about the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that the Board hold a hearing on the rules. You must make your request for a public hearing in writing, which the agency contact person must receive by 4:30 p.m. on Wednesday, April 15, 2020. You must include your name and address in your written request. In addition, you must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the Board cannot count it when determining whether it must hold a public hearing. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a valid written request for a hearing, the Board will hold a public hearing unless enough persons withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the Board must give written notice of this to all persons who requested a hearing, explain the actions the Board took to affect the withdrawal, and ask for written comments on this action. If a public hearing is required, the Board will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Modifications. The Board might modify the proposed rules, either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted to the agency or presented at the hearing. The adopted rules may not be substantially different than these proposed rules unless the Board follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Board encourages you to participate in the rulemaking process.

Cancellation of Hearing. The Board will cancel the hearing scheduled for May 4, 2020, if the agency does not receive requests for a hearing from 25 or more persons. If you requested a public hearing, the Board will notify you before the scheduled hearing whether the hearing will be held. You may also call the agency contact person listed above at (651) 284-5006 after April 15, 2020, to find out whether the hearing will be held. On the scheduled day, you may check for whether the hearing will be held by calling (651) 284-5006 or going on-line at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

Notice of Hearing. If 25 or more persons submit valid written requests for a public hearing on the rules, the Board will hold a hearing following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The Board will hold the hearing on the date and at the time and place listed above. The hearing will continue until all interested persons have been heard. Administrative Law Judge Barbara Case is assigned to conduct the hearing. Judge Case's legal assistant, Michelle Hendrickson, may be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, telephone (651) 361-7896, fax (651) 539-0310, and email: michelle.l.hendrikson@state.mn.us.

Hearing Procedure. If the Board holds a hearing, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case at the address or facsimile number listed in the Notice of Hearing section above

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

Statement of Need and Reasonableness. The statement of need and reasonableness summarizes the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person. Or, you may access a free copy on the agency's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the Minnesota Campaign Finance Board. Questions about this requirement may be directed to that Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (651) 539-1180 or 1-800-657-3889, and at: <https://cfb.mn.gov/>.

Adoption Procedure if No Hearing. If no hearing is required, the Board may adopt the rules after the end of the comment period. The Board will submit the rules and supporting documents to the Office of Administrative Hearings for a legal review. You may ask to be notified of the date the rules are submitted to that office. If you want to receive notice of this, to receive a copy of the adopted rules, or to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure after a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date that the Administrative Law Judge's report will become available and you can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date that the Board adopts the rules and files the same with the Secretary of State by requesting this at the hearing or by writing to the agency contact person stated above.

Order. I hereby order that the rulemaking hearing be held at the date, time, and location listed above.

March 09, 2020

A handwritten signature in black ink that reads "Daniel Westberg". The signature is written in a cursive style with a long horizontal flourish extending from the end of the name.

Daniel Westberg, Chair
Minnesota Board of Electricity

1.1 **Board of Electricity**1.2 **Proposed Permanent Rules Updating the Minnesota Electrical Code**1.3 **1315.0200 SCOPE.**1.4 *[For text of subpart 1, see Minnesota Rules]*

1.5 Subp. 1a. **Electrical code.** All new electrical wiring, apparatus, and equipment for
1.6 electric light, heat, power, technology circuits and systems, and alarm and communication
1.7 systems must comply with the regulations contained in the ~~2017~~ 2020 edition of the National
1.8 Electrical Code (NEC) as approved by the American National Standards Institute
1.9 (ANSI/NFPA ~~70-2017~~ 70-2020), Minnesota Statutes, section 326B.35, and the Minnesota
1.10 State Building Code as adopted by the commissioner of labor and industry. The ~~2017~~ 2020
1.11 edition of the National Electrical Code, developed and published by the National Fire
1.12 Protection Association, Inc., is incorporated by reference and made part of the Minnesota
1.13 State Building Code. The National Electrical Code is not subject to frequent change and is
1.14 available in the office of the commissioner of labor and industry, from the Minnesota
1.15 Bookstore, 660 Olive Street, Saint Paul, MN 55155, through public libraries, from major
1.16 bookstores and other retail sources, or from National Fire Protection Association, Inc., One
1.17 Batterymarch Park, Quincy, MA 02169-7471.

1.18 Subp. 2. [Repealed, 12 SR 102; 12 SR 151]

1.19 **EFFECTIVE DATE.** Minnesota Rules, part 1315.0200, is effective July 1, 2020, or five
1.20 business days after publication of the notice of adoption in the State Register, whichever is
1.21 later.

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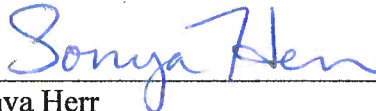
Exhibit G.3

Minnesota Board of Electricity

**CERTIFICATE OF ACCURACY OF THE MAILING LIST AND MAILING THE
NOTICE OF RESCHEDULED HEARING TO THE RULEMAKING MAILING LIST**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on April 16, 2020, at least 33 days before the hearing date, at St. Paul, Ramsey County, Minnesota, I mailed the Notice of Rescheduled Hearing by depositing a copy in the State of Minnesota's central mail system for United States mail with postage prepaid to all persons and associations on the rulemaking mailing list for electrical rulemaking established by Minnesota Statutes, section 14.14, subdivision 1a. Copies of the Notice are attached to this Certificate.



Sonya Herr
Legal Support Staff Supervisor

OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the May 04, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Dual Notice of Hearing as described in the March 16, 2020 *State Register* (44 SR 1025), is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will take place starting at 9:00 a.m. on Wednesday, August 19, 2020, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155. For complete information concerning participation at the rescheduled public hearing, please view the Dual Notice of Hearing referenced above or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

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Senator Justin D. Eichorn
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Minnesota Senate Bldg, Room 3213
St. Paul, MN 55155

Exhibit G.4

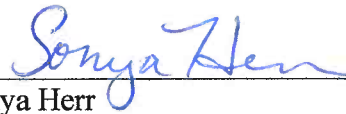
Minnesota Board of Electricity

**CERTIFICATE OF ACCURACY OF THE E-MAILING LIST AND OF E-MAILING
THE NOTICE OF RESCHEDULED HEARING TO THE RULEMAKING E-MAILING
LIST**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that the list of persons and associations who have requested that their names be placed on the Department of Labor and Industry rulemaking e-mailing list for electrical rulemaking under Minnesota Statutes, section 14.14, subdivision 1a, is accurate, complete, and current as of April 20, 2020. A copy of the mailing list is attached to this Certificate.

I further certify that on April 20, 2020, at least 30 days before the end of the comment period, at St. Paul, Ramsey County, Minnesota, I e-mailed the links to Notice of Rescheduled Hearing to all persons and associations on the rulemaking e-mailing list for the electrical rulemaking established by Minnesota Statutes, section 14.14, subdivision 1a. A copy of the e-mail, the Notice, and the e-mailing list are attached to this Certificate.



Sonya Herr
Legal Support Staff Supervisor

From: [Minnesota Department of Labor and Industry](#)
To: [Spuckler, Amanda \(DLI\)](#)
Subject: Minnesota Board of Electricity Notice of Rescheduled Hearing
Date: Monday, April 20, 2020 9:19:09 AM

Notice of Rescheduled Hearing

Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

You are receiving this email because you have registered to receive electronic rulemaking notices pertaining to electrical.

The May 4, 2020, rules hearing governing the adoption of the 2020 National Electrical Code, Minnesota Rules, part 1315.0200, has been rescheduled to **9 a.m. on Wednesday, Aug. 19, 2020**, at the Minnesota Department of Labor and Industry.

The following document related to this rulemaking will be published in the April 20, 2020, edition of the *State Register*:

- Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

The Notice of Rescheduled Hearing provides details about the hearing.

The Notice of Rescheduled Hearing, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are [available in the rulemaking docket](#).

Questions?

Contact us at dli.rules@state.mn.us.

Update your subscriptions, modify your password or email address or stop subscriptions at any time on your [Subscriber Preferences Page](#). You will need to use your email address to log in. If you have questions or problems with the subscription service, visit subscriberhelp.govdelivery.com.

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This email was sent to amanda.spuckler@state.mn.us using GovDelivery Communications Cloud on behalf of: Minnesota Department of Labor and Industry · 443 Lafayette Road N. · Saint Paul, MN 55155



OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the May 04, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Dual Notice of Hearing as described in the March 16, 2020 *State Register* (44 SR 1025), is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will take place starting at 9:00 a.m. on Wednesday, August 19, 2020, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155. For complete information concerning participation at the rescheduled public hearing, please view the Dual Notice of Hearing referenced above or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

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Exhibit G.5

Minnesota Board of Electricity

**CERTIFICATE OF ACCURACY OF THE MAILING LIST AND MAILING THE
NOTICE OF REVISED FORMAT OF HEARING TO THE RULEMAKING MAILING
LIST**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on July 9, 2020, at least 33 days before the hearing date, at St. Paul, Ramsey County, Minnesota, I mailed the Notice of Revised Format of Hearing by depositing a copy in the State of Minnesota's central mail system for United States mail with postage prepaid to all persons and associations on the rulemaking mailing list for electrical rulemaking established by Minnesota Statutes, section 14.14, subdivision 1a. Copies of the Notice are attached to this Certificate.



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Legal Support Staff Supervisor

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Bradley Dvorak
11450 Galtier Drive
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Senator Justin D. Eichorn
95 University Avenue W.
Minnesota Senate Bldg, Room 3213
St. Paul, MN 55155

OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Notice of Rescheduled Hearing as described in the April 20, 2020 *State Register* (44 SR 1204), is being revised to a Webex format due to concerns over public group meetings during the current COVID-19 health pandemic. Pursuant to *Minnesota Statutes*, section 13D.021, subdivision 1 (2019), the Board Chair has determined that this meeting will be conducted remotely because it is not practical or prudent for an in-person meeting due to the current pandemic.

Hearing Procedure. You and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to view the presentation by joining the hearing by internet, mobile device or phone as follows:

To view the presentation and join the hearing by internet, navigate on your computer to: <https://tinyurl.com/y9d39rt6> or <https://minnesota.webex.com> and enter:

- Meeting Number: 146 735 1484
- Meeting Password: nxJ9pQ7N2hW

To join from a mobile device:

[+1-415-655-0003](tel:+14156550003), [146 735 1484###](tel:+14156550003) United States Toll
[1-855-282-6330](tel:+18552826330), [146 735 1484###](tel:+18552826330) United States Toll Free

To join by phone:

+1-415-655-0003 United States Toll
1-855-282-6330 United States Toll Free

To join from a video system or application:

Dial 1467351484@minnesota.webex.com

You can also dial 173.243.2.68 and enter your meeting number.

You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when

the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case. Judge Case can be reached by contacting legal assistant Michelle Hendrickson at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, St. Paul, MN 55164-0620, telephone (651) 361-7896, fax (651) 539-0130, and email Michelle.L.Hendrickson@state.mn.us.

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

For more information concerning this rulemaking and participation at the revised public hearing, please view the initial Dual Notice of Hearing as published in the March 16, 2020 edition of the *State Register* (44 SR 1025) or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.



July 06, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit G.6

Minnesota Board of Electricity

**CERTIFICATE OF ACCURACY OF THE E-MAILING LIST AND OF E-MAILING
THE NOTICE OF REVISED FORMAT OF HEARING TO THE RULEMAKING E-
MAILING LIST**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that the list of persons and associations who have requested that their names be placed on the Department of Labor and Industry rulemaking e-mailing list for electrical rulemaking under Minnesota Statutes, section 14.14, subdivision 1a, is accurate, complete, and current as of July 13, 2020. A copy of the mailing list is attached to this Certificate.

I further certify that on July 13, 2020, at least 30 days before the end of the comment period, at St. Paul, Ramsey County, Minnesota, I e-mailed the links to Notice of Revised Format of Hearing to all persons and associations on the rulemaking e-mailing list for the electrical rulemaking established by Minnesota Statutes, section 14.14, subdivision 1a. A copy of the e-mail, the Notice, and the e-mailing list are attached to this Certificate.



Sonya Herr
Legal Support Staff Supervisor

From: [Minnesota Department of Labor and Industry](#)
To: [Spuckler, Amanda \(DLI\)](#)
Subject: Notice of Revised Format of Hearing
Date: Monday, July 13, 2020 9:04:42 AM

minnesota department of labor and industry



Notice of Revised Format of Hearing

Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

You are receiving this email because you have registered to receive electronic rulemaking notices pertaining to electrical.

The Aug. 19, 2020, rules hearing about the proposed amendment to rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, will be conducted as a WebEx due to the COVID-19 health pandemic. The following document related to this rulemaking will be published in the July 13, 2020, edition of the *State Register*:

- Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

The Notice of Revised Format of Hearing provides details about the hearing.

The Notice of Revised Format of Hearing, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are [available in the rulemaking docket](#).

Questions?

Contact us at dli.rules@state.mn.us.

Update your subscriptions, modify your password or email address or stop subscriptions at any time on your [Subscriber Preferences Page](#). You will need to use your email address to log in. If you have questions or problems with the subscription service, visit subscriberhelp.govdelivery.com.

This service is provided to you at no charge by [Minnesota Department of Labor and Industry](#).

This email was sent to amanda.spuckler@state.mn.us using GovDelivery Communications Cloud on behalf of: Minnesota Department of Labor and Industry · 443 Lafayette Road N. · Saint Paul, MN 55155



OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

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- Meeting Number: 146 735 1484
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You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when

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All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

For more information concerning this rulemaking and participation at the revised public hearing, please view the initial Dual Notice of Hearing as published in the March 16, 2020 edition of the *State Register* (44 SR 1025) or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.



July 06, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

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Exhibit H

Minnesota Board of Electricity

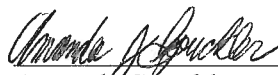
CERTIFICATE OF GIVING ADDITIONAL NOTICE UNDER THE ADDITIONAL NOTICE PLAN

Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632

I certify that on March 16, 2020 at St. Paul, Ramsey County, Minnesota, I e-mailed a link to the Dual Notice the following entities listed in the chapter 1315 Additional Notice Plan:

- a. Associated Builders and Contractors
- b. Associated General Contractors of Minnesota
- c. Association of Minnesota Counties
- d. Builders Association of Minnesota ("BAM")
- e. Housing First Minnesota
- f. Building Owners and Managers Association ("BOMA") – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis)
- g. Communication, Control, Alarm, Remote, Signaling Association ("CCARSA")
- h. Contract Electrical Inspector Association of Minnesota ("CEIAMN")
- i. IBEW Minnesota State Council
- j. League of Minnesota Cities
- k. Local chapters of the Association of Minnesota Building Officials ("AMBO") (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest)
- l. Local chapters of the International Brotherhood of Electrical Workers ("IBEW" Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999)
- m. Minnesota chapter of the International Association of Electrical Inspectors ("IAEI")
- n. Minnesota Electrical Association ("MEA")
- p. Minnesota Farm Bureau
- q. Minnesota Farmers Union
- r. Minnesota Mechanical Contractors Association
- s. Minnesota Municipal Utilities Association
- t. Minnesota Nursery & Landscape Association
- u. Minnesota Rural Electric Association (MREA)
- v. Minnesota Solar Energy Industries Association (MnSEIA)
- w. Minnesota State Fire Chiefs Association
- x. Minnesota Utility Contractors Association
- y. National Electrical Contractors Association ("NECA") – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports)
- z. Sustainable Farming Association of Minnesota

A copy of the e-mail, the Notice, and e-mailing list are attached to this certificate.


Amanda Spuckler
Rules Specialist

Spuckler, Amanda (DLI)

From: Spuckler, Amanda (DLI)
Sent: Monday, March 16, 2020 8:08 AM
To: Spuckler, Amanda (DLI)
Subject: Minnesota Board of Electricity Rulemaking Notice

Bcc: Jeni.Ankeny@mnabc.com; info@agcmn.org; tworke@agcmn.org; Julie Ring; info@bamn.org; grace@bamn.org; reception@batc.org; David@BATC.org; office@bomasaintpaul.org; joe.spartz@bomastpaul.org; membership@bomampls.org; kl@bomampls.org; gkratzner@oneidacres.com; john@jramanagement.com; WBraun@ARNAN.com; Schlie, Wade (DLI); MinnesotaIAEI@gmail.com; andy@andysnope.com; dunmacht@lmc.org; bridgetprivate@ambomn.com; james.williamette@ci.stpaul.mn.us; il23@mtn.org; lu23@ibew23.org; info@ibew110.org; jmcnamara@ibew110.org; 160@ibew160.org; rjb@ibew160.org; Dsmithlcl242@unions-america.com; office@ibew292.org; jheimerl@ibew292.org; ibewlocalunion294@gmail.com; BUSMGR294@gmail.com; bonnie@ibewlocal343.org; chad@ibewlocal343.org; adamgustafson32@gmail.com; roakes@ibewlocal949.org; ibew1999@eventis.net; customerservice@iaei.org; dclements@iaei.org; mea@electricalassociation.com; calbert@electricalassociation.com; info@fbmn.org; cradatz@fbmn.org; info@mfu.org; gary@mfu.org; gthaden@minnesotamca.org; vroberts@ci.detroit-lakes.mn.us; markn@austinutilities.com; cassie@mnla.biz; info@mrea.org; darrick@mrea.org; INFO@MNSEIA.ORG; dshaffer@mnseia.org; jennifer@msfca.org; president@msfca.org; info@muca.org; stephaniem@muca.org; luke@stpaulneca.org; dmanderson@mplsneca.org; necanet@twinportsneca.com; NECADAVE@TWINPORTSNECA.COM; info@sfa-mn.org; theresa@sfa-mn.org

Minnesota Rules, Part 1315.0200

You are receiving this email because under the Minnesota Administrative Procedures Act, each Minnesota agency must make reasonable efforts to notify persons or classes of persons who may be significantly affected by the rule being proposed. The Minnesota Board of Electricity has identified you as a person or organization who may be affected by the proposed rule.

The Minnesota Board of Electricity intends to adopt permanent rules governing the adoption of the 2020 edition of the National Electrical Code, Minnesota Rules, part 1315.0200.

The following document related to this rulemaking will be published in the March 16, 2020, edition of the *State Register*:

- Dual Notice: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received.

The Dual Notice provides details about the hearing and cancellation of the hearing.

The Dual Notice, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are available in the rulemaking docket.

The comment period for this rulemaking ends at **4:30 p.m. on Wednesday, April 15, 2020**.

Questions?

Contact us at dli.rules@state.mn.us.

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



Minnesota Board of Electricity

DUAL NOTICE: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received; Revisor's ID Number R-04632

Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200

Introduction. The Minnesota Board of Electricity ("Board") intends to adopt rules without a public hearing following the procedures in the rules of the Office of Administrative Hearings, *Minnesota Rules*, parts 1400.2300 to 1400.2310, and the Administrative Procedure Act, *Minnesota Statutes*, sections 14.22 to 14.28. If, however, 25 or more persons submit a written request for a hearing on the rules by 4:30 p.m. on April 15, 2020, the Board will hold a public hearing in the Minnesota Room, Department of Labor and Industry, 443 Lafayette Road N., St. Paul, Minnesota 55155. **An Administrative Law Judge will conduct the hearing** starting at 9:00 a.m. on Monday, May 4, 2020, and continuing until the hearing is completed. To find out whether the Board will adopt the rules without a hearing or if it will hold the hearing, you should contact the agency contact person after April 15, 2020, and before May 4, 2020.

Agency Contact Person. Submit any comments or questions on the rules or written requests for a public hearing to the agency contact person. The agency contact person is Amanda Spuckler at the Minnesota Department of Labor and Industry, 443 Lafayette Rd. N., St. Paul, Minnesota 55155, telephone (651) 284-5006, and email: dli.rules@state.mn.us.

Subject of Rules and Statutory Authority. The proposed rules amend part 1315.0200 to incorporate by reference the 2020 edition of the National Electrical Code ("NEC"), without Minnesota amendments, as approved by the American National Standards Institute ("ANSI") and published by the National Fire Protection Association ("NFPA"). Notable changes to the 2020 NEC relate to expanded Ground-Fault Circuit-Interrupter ("GFCI") protection for dwellings, service panelboard surge protection, and outdoor emergency disconnects required for first responder access. The 2020 NEC was also revised to address and correct the unintended consequences of expanded GFCI requirements for certain agricultural building areas as adopted by the 2017 NEC. The statutory authority to adopt the rules is *Minnesota Statutes*, section 326B.32, subdivision 2, clause (a), subitem (3) (2018). A copy of the proposed rules is published in the *State Register* and attached to this notice as mailed.

Comments. You have until 4:30 p.m. on Wednesday, April 15, 2020, to submit written comment in support of or in opposition to the proposed rules or any part or subpart of the rules. Your comment must be in writing and received by the agency contact person by the due date. Comment is encouraged. Your comments should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed. You are encouraged to propose any change that you desire. Any comments that you have about the legality of the proposed rules must also be made during this comment period.

Request for a Hearing. In addition to submitting comments, you may also request that the Board hold a hearing on the rules. You must make your request for a public hearing in writing, which the agency contact person must receive by 4:30 p.m. on Wednesday, April 15, 2020. You must include your name and address in your written request. In addition, you must identify the portion of the proposed rules that you object to or state that you oppose the entire set of rules. Any request that does not comply with these requirements is not valid and the Board cannot count it when determining whether it must hold a public hearing. You are also encouraged to state the reason for the request and any changes you want made to the proposed rules.

Withdrawal of Requests. If 25 or more persons submit a valid written request for a hearing, the Board will hold a public hearing unless enough persons withdraw their requests in writing. If enough requests for hearing are withdrawn to reduce the number below 25, the Board must give written notice of this to all persons who requested a hearing, explain the actions the Board took to affect the withdrawal, and ask for written comments on this action. If a public hearing is required, the Board will follow the procedures in *Minnesota Statutes*, sections 14.131 to 14.20.

Alternative Format/Accommodation. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request or if you need an accommodation to make this hearing accessible, please contact the agency contact person at the address or telephone number listed above.

Modifications. The Board might modify the proposed rules, either as a result of public comment or as a result of the rule hearing process. It must support modifications by data and views submitted to the agency or presented at the hearing. The adopted rules may not be substantially different than these proposed rules unless the Board follows the procedure under *Minnesota Rules*, part 1400.2110. If the proposed rules affect you in any way, the Board encourages you to participate in the rulemaking process.

Cancellation of Hearing. The Board will cancel the hearing scheduled for May 4, 2020, if the agency does not receive requests for a hearing from 25 or more persons. If you requested a public hearing, the Board will notify you before the scheduled hearing whether the hearing will be held. You may also call the agency contact person listed above at (651) 284-5006 after April 15, 2020, to find out whether the hearing will be held. On the scheduled day, you may check for whether the hearing will be held by calling (651) 284-5006 or going on-line at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

Notice of Hearing. If 25 or more persons submit valid written requests for a public hearing on the rules, the Board will hold a hearing following the procedures in *Minnesota Statutes*, sections 14.131 to 14.20. The Board will hold the hearing on the date and at the time and place listed above. The hearing will continue until all interested persons have been heard. Administrative Law Judge Barbara Case is assigned to conduct the hearing. Judge Case's legal assistant, Michelle Hendrickson, may be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, telephone (651) 361-7896, fax (651) 539-0310, and email: michelle.l.hendrikson@state.mn.us.

Hearing Procedure. If the Board holds a hearing, you and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to participate. You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case at the address or facsimile number listed in the Notice of Hearing section above

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

Statement of Need and Reasonableness. The statement of need and reasonableness summarizes the justification for the proposed rules, including a description of who will be affected by the proposed rules and an estimate of the probable cost of the proposed rules. It is now available from the agency contact person. You may review or obtain copies for the cost of reproduction by contacting the agency contact person. Or, you may access a free copy on the agency's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>

Lobbyist Registration. *Minnesota Statutes*, chapter 10A, requires each lobbyist to register with the Minnesota Campaign Finance Board. Questions about this requirement may be directed to that Board at: Suite #190, Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (651) 539-1180 or 1-800-657-3889, and at: <https://cfb.mn.gov/>.

Adoption Procedure if No Hearing. If no hearing is required, the Board may adopt the rules after the end of the comment period. The Board will submit the rules and supporting documents to the Office of Administrative Hearings for a legal review. You may ask to be notified of the date the rules are submitted to that office. If you want to receive notice of this, to receive a copy of the adopted rules, or to register with the agency to receive notice of future rule proceedings, submit your request to the agency contact person listed above.

Adoption Procedure after a Hearing. If a hearing is held, after the close of the hearing record, the Administrative Law Judge will issue a report on the proposed rules. You may ask to be notified of the date that the Administrative Law Judge's report will become available and you can make this request at the hearing or in writing to the Administrative Law Judge. You may also ask to be notified of the date that the Board adopts the rules and files the same with the Secretary of State by requesting this at the hearing or by writing to the agency contact person stated above.

Order. I hereby order that the rulemaking hearing be held at the date, time, and location listed above.

March 09, 2020

A handwritten signature in cursive script that reads "Daniel Westberg". The signature is written in black ink and is positioned above the printed name and title.

Daniel Westberg, Chair
Minnesota Board of Electricity

1.1 **Board of Electricity**1.2 **Proposed Permanent Rules Updating the Minnesota Electrical Code**1.3 **1315.0200 SCOPE.**1.4 *[For text of subpart 1, see Minnesota Rules]*

1.5 Subp. 1a. **Electrical code.** All new electrical wiring, apparatus, and equipment for
1.6 electric light, heat, power, technology circuits and systems, and alarm and communication
1.7 systems must comply with the regulations contained in the ~~2017~~ 2020 edition of the National
1.8 Electrical Code (NEC) as approved by the American National Standards Institute
1.9 (~~ANSI/NFPA 70-2017~~ 70-2020), Minnesota Statutes, section 326B.35, and the Minnesota
1.10 State Building Code as adopted by the commissioner of labor and industry. The ~~2017~~ 2020
1.11 edition of the National Electrical Code, developed and published by the National Fire
1.12 Protection Association, Inc., is incorporated by reference and made part of the Minnesota
1.13 State Building Code. The National Electrical Code is not subject to frequent change and is
1.14 available in the office of the commissioner of labor and industry, from the Minnesota
1.15 Bookstore, 660 Olive Street, Saint Paul, MN 55155, through public libraries, from major
1.16 bookstores and other retail sources, or from National Fire Protection Association, Inc., One
1.17 Batterymarch Park, Quincy, MA 02169-7471.

1.18 Subp. 2. [Repealed, 12 SR 102; 12 SR 151]

1.19 **EFFECTIVE DATE.** Minnesota Rules, part 1315.0200, is effective July 1, 2020, or five
1.20 business days after publication of the notice of adoption in the State Register, whichever is
1.21 later.

Additional Notice Plan Email List

- a. Associated Builders and Contractors Jeni.Ankeny@mnabc.com (Jennifer Ankeny, Vice-President, Business Development & Membership)
- b. Associated General Contractors of Minnesota info@agcmn.org; tworke@agcmn.org (Tim Worke, CEO)
- c. Association of Minnesota Counties ring@mncounties.org (Julie Ring, Executive Director)
- d. Builders Association of Minnesota (“BAM”) info@bamn.org; grace@bamn.org (Grace Keliher, Executive Vice President)
- e. Housing First Minnesota reception@batc.org; David@BATC.org (David Siegel, Executive Director)
- f. Building Owners and Managers Association (“BOMA”) – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis) office@bomasaintpaul.org; joe.spartz@bomastpaul.org (Joe Spartz, President, BOMA St. Paul) membership@bomampls.org; kl@bomampls.org (Kevin Lewis, President/CEO, BOMA Minneapolis); gkratzner@oneidacres.com (BOMA Duluth)
- g. Communication, Control, Alarm, Remote, Signaling Association (“CCARSA”) john@jramanagement.com (John Arlandson, Board Member); WBraun@ARNAN.com (Bill Braun, Board President)
- h. Contract Electrical Inspector Association of Minnesota (“CEIAMN”) wade.schlie@state.mn.us; MinnesotaIAEI@gmail.com
- i. IBEW Minnesota State Council andy@andysnope.com (Andy Snope, Legislative Director)
- j. League of Minnesota Cities dunmacht@lmc.org (David Unmacht, Executive Director)
- k. Local chapters of the Association of Minnesota Building Officials (“AMBO”) (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest) bridgetprivate@ambomn.com (AMBO secretary) james.williamette@ci.stpaul.mn.us (Jim Williamette, AMBO chair)
- l. Local chapters of the International Brotherhood of Electrical Workers (“IBEW” Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999) il23@mtn.org; lu23@ibew23.org (Duane Peters, Business Manager, local 23) info@ibew110.org; jmcnamara@ibew110.org (Jamie McNamara, Business Manager) 160@ibew160.org; rjb@ibew160.org (Robert J. Boogren, Business Manager) Dsmithlcl242@unions-america.com (Don Smith, Business Manager) office@ibew292.org; jheimerl@ibew292.org (Jeff Heimerl, Business Manager) ibewlocalunion294@gmail.com; BUSMGR294@gmail.com (Dan Hendrickson, Business Manager) bonnie@ibewlocal343.org; chad@ibewlocal343.org (Chad Katzung, Business Manager) adamgustafson32@gmail.com (Adam Gustafson, Business Manager, 731) roakes@ibewlocal949.org (Rick Oakes, Business Manager) ibew1999@eventis.net (Paul Woelfel, Business Manager)
- m. Minnesota chapter of the International Association of Electrical Inspectors (“IAEI”) customerservice@iaei.org; dclements@iaei.org (David Clements, President/CEO)

- n. Minnesota Electrical Association (“MEA”) mea@electricalassociation.com; calbert@electricalassociation.com (Clara Albert, Executive Director)
- o. Minnesota Electronic Security and Technology Association Jeff Bird, President, 161 St. Anthony Avenue, Suite 820, St. Paul, MN, 55103
- p. Minnesota Farm Bureau info@fbmn.org; cradatz@fbmn.org (Chris Radatz, Executive Director)
- q. Minnesota Farmers Union info@mfu.org; gary@mfu.org (Gary Wertish, President)
- r. Minnesota Mechanical Contractors Association gthaden@minnesotamca.org (Gary Thaden, Government Affairs Director)
- s. Minnesota Municipal Utilities Association vroberts@ci.detroit-lakes.mn.us (Vernell Roberts, President) markn@austinutilities.com (Mark Nibaur, President Elect)
- t. Minnesota Nursery & Landscape Association cassie@mnl.biz (Cassie Larson, CAE, Executive Director)
- u. Minnesota Rural Electric Association (MREA) info@mrea.org; darrick@mrea.org (Darrick Moe, President & CEO)
- v. Minnesota Solar Energy Industries Association (MnSEIA) INFO@MNSEIA.ORG; dshaffer@mnseia.org (David Shaffer, Executive Director)
- w. Minnesota State Fire Chiefs Association jennifer@msfca.org (Jennifer Rzepka, Executive Director); president@msfca.org (T. John Cunningham, President)
- x. Minnesota Utility Contractors Association info@muca.org; stephaniem@muca.org (Stephanie Menning, Executive Director)
- y. National Electrical Contractors Association (“NECA”) – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports) luke@stpaulneca.org (Luke Kuhl, Executive Director, St. Paul); dmanderson@mplsneca.org (David Manderson, Executive Director, Minneapolis); necanet@twinportsneca.com; NECADAVE@TWINPORTSNECA.COM (Dave Orman, Executive Director)
- z. Sustainable Farming Association of Minnesota info@sfa-mn.org; theresa@sfa-mn.org (Theresa Keaveny, Executive Director)

Exhibit H.1

Minnesota Board of Electricity

**CERTIFICATE OF GIVING ADDITIONAL NOTICE OF RESCHEDULED HEARING
UNDER THE ADDITIONAL NOTICE PLAN**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor’s ID Number R-04632**

I certify that on April 20, 2020 at St. Paul, Ramsey County, Minnesota, I e-mailed a link to the Notice of Rescheduled Hearing to the following entities listed in the chapter 1315 Additional Notice Plan:

- a. Associated Builders and Contractors
- b. Associated General Contractors of Minnesota
- c. Association of Minnesota Counties
- d. Builders Association of Minnesota (“BAM”)
- e. Housing First Minnesota
- f. Building Owners and Managers Association (“BOMA”) – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis)
- g. Communication, Control, Alarm, Remote, Signaling Association (“CCARSA”)
- h. Contract Electrical Inspector Association of Minnesota (“CEIAMN”)
- i. IBEW Minnesota State Council
- j. League of Minnesota Cities
- k. Local chapters of the Association of Minnesota Building Officials (“AMBO”) (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest)
- l. Local chapters of the International Brotherhood of Electrical Workers (“IBEW” Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999)
- m. Minnesota chapter of the International Association of Electrical Inspectors (“IAEI”)
- n. Minnesota Electrical Association (“MEA”)
- p. Minnesota Farm Bureau
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- s. Minnesota Municipal Utilities Association
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- u. Minnesota Rural Electric Association (MREA)
- v. Minnesota Solar Energy Industries Association (MnSEIA)
- w. Minnesota State Fire Chiefs Association
- x. Minnesota Utility Contractors Association
- y. National Electrical Contractors Association (“NECA”) – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports)
- z. Sustainable Farming Association of Minnesota

A copy of the e-mail, the Notice, and e-mailing list are attached to this certificate.



Amanda Spuckler
Rules Specialist

From: [Spuckler, Amanda \(DLI\)](#)
To: [Spuckler, Amanda \(DLI\)](#)
Cc: [RULES_DLI \(DLI\)](#)
Bcc: [Jeni.Ankeny@mnhbc.com](#); [info@agcmn.org](#); [twerke@agcmn.org](#); [Julie Ring](#); [info@bamn.org](#); [grace@bamn.org](#); [bkhalloran@redmondmn.com](#); [reception@batc.org](#); [David@BATC.org](#); [office@bomasaintpaul.org](#); [joe.spartz@bomastpaul.org](#); [membership@bomampls.org](#); [kl@bomampls.org](#); [gkratzner@oneidacres.com](#); [john@jramanagement.com](#); [WBraun@ARNAN.com](#); [Schlie, Wade \(DLI\)](#); [MinnesotaIAEI@gmail.com](#); [andy@andysnope.com](#); [dunmacht@lmc.org](#); [bridgetprivate@ambomn.com](#); [james.williamette@ci.stpaul.mn.us](#); [il23@mtn.org](#); [lu23@ibew23.org](#); [info@ibew110.org](#); [jmcnamara@ibew110.org](#); [160@ibew160.org](#); [rjb@ibew160.org](#); [Dsmithlcl242@unions-america.com](#); [office@ibew292.org](#); [jheimerl@ibew292.org](#); [ibewlocalunion294@gmail.com](#); [BUSMGR294@gmail.com](#); [bonnie@ibewlocal343.org](#); [chad@ibewlocal343.org](#); [adamgustafson32@gmail.com](#); [roakes@ibewlocal949.org](#); [ibew1999@eventis.net](#); [customerservice@iaei.org](#); [dcléments@iaei.org](#); [mea@electricalassociation.com](#); [calbert@electricalassociation.com](#); [info@mnesta.org](#); [info@fbmn.org](#); [cradatz@fbmn.org](#); [info@mfu.org](#); [gary@mfu.org](#); [gthaden@minnesotamca.org](#); [vroberts@ci.detroit-lakes.mn.us](#); [markn@austinutilities.com](#); [cassie@mnl.biz](#); [info@mrea.org](#); [darrick@mrea.org](#); [INFO@MNSEIA.ORG](#); [dshaffer@mnseia.org](#); [jennifer@msfca.org](#); [president@msfca.org](#); [info@muca.org](#); [stephaniem@muca.org](#); [luke@stpaulneca.org](#); [dmanderson@mplsneca.org](#); [necanet@twinportsneca.com](#); [NECADAVE@TWINPORTSNECA.COM](#); [info@sfa-mn.org](#); [theresa@sfa-mn.org](#)

Subject: Minnesota Board of Electricity Notice of Rescheduled Hearing
Date: Monday, April 20, 2020 8:48:00 AM
Attachments: [image007.png](#)
[image008.png](#)
[image009.png](#)

Notice of Rescheduled Hearing

Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

You are receiving this email because under the Minnesota Administrative Procedures Act, each Minnesota agency must make reasonable efforts to notify persons or classes of persons who may be significantly affected by the rule being proposed. The Minnesota Board of Electricity has identified you as a person or organization who may be affected by the proposed rule.

The May 4, 2020, rules hearing governing the adoption of the 2020 National Electrical Code, Minnesota Rules, part 1315.0200, is being rescheduled due to the current health crisis and the extension of Governor Walz's peacetime emergency powers.

The rescheduled public hearing will take place starting at 9:00 a.m. on **Wednesday, August 19, 2020**, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry

The following document related to this rulemaking will be published in the April 20, 2020, edition of the *State Register*:

- Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

The Notice of Rescheduled Hearing provides details about the hearing.

The Notice of Rescheduled Hearing, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are [available in the rulemaking docket](#).

Questions?

Contact us at dli.rules@state.mn.us.

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



Additional Notice Plan Email List

- a. Associated Builders and Contractors Jeni.Ankeny@mnabc.com (Jennifer Ankeny, Vice-President, Business Development & Membership)
- b. Associated General Contractors of Minnesota info@agcmn.org; tworke@agcmn.org (Tim Worke, CEO)
- c. Association of Minnesota Counties ring@mncounties.org (Julie Ring, Executive Director)
- d. Builders Association of Minnesota (“BAM”) info@bamn.org; grace@bamn.org (Grace Keliher, Executive Vice President); bkhalloran@redmondmn.com (Brian Halloran, BAM lobbyist, Redmond Associates)
- e. Housing First Minnesota reception@batc.org; David@BATC.org (David Siegel, Executive Director)
- f. Building Owners and Managers Association (“BOMA”) – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis) office@bomasaintpaul.org; joe.spartz@bomastpaul.org (Joe Spartz, President, BOMA St. Paul) membership@bomampls.org; kl@bomampls.org (Kevin Lewis, President/CEO, BOMA Minneapolis); gkratzner@oneidacres.com (BOMA Duluth)
- g. Communication, Control, Alarm, Remote, Signaling Association (“CCARSA”) john@jramanagement.com (John Arlandson, Board Member); WBraun@ARNAN.com (Bill Braun, Board President)
- h. Contract Electrical Inspector Association of Minnesota (“CEIAMN”) wade.schlie@state.mn.us; MinnesotaIAEI@gmail.com
- i. IBEW Minnesota State Council andy@andysnope.com (Andy Snope, Legislative Director)
- j. League of Minnesota Cities dunmacht@lmc.org (David Unmacht, Executive Director)
- k. Local chapters of the Association of Minnesota Building Officials (“AMBO”) (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest) bridgetprivate@ambomn.com (AMBO secretary) james.williamette@ci.stpaul.mn.us (Jim Williamette, AMBO chair)
- l. Local chapters of the International Brotherhood of Electrical Workers (“IBEW”) Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999)
il23@mtn.org; lu23@ibew23.org (Duane Peters, Business Manager, local 23)
info@ibew110.org; jmcnamara@ibew110.org (Jamie McNamara, Business Manager)
160@ibew160.org; rjb@ibew160.org (Robert J. Boogren, Business Manager)
Dsmithlcl242@unions-america.com (Don Smith, Business Manager)
office@ibew292.org; jheimerl@ibew292.org (Jeff Heimerl, Business Manager)
ibewlocalunion294@gmail.com; BUSMGR294@gmail.com (Dan Hendrickson, Business Manager)
bonnie@ibewlocal343.org; chad@ibewlocal343.org (Chad Katzung, Business Manager)
adamgustafson32@gmail.com (Adam Gustafson, Business Manager, 731)
roakes@ibewlocal949.org (Rick Oakes, Business Manager)
ibew1999@eventis.net (Paul Woelfel, Business Manager)

- m. Minnesota chapter of the International Association of Electrical Inspectors (“IAEI”) customerservice@iaei.org; dcllements@iaei.org (David Clements, President/CEO)
- n. Minnesota Electrical Association (“MEA”) mea@electricalassociation.com; calbert@electricalassociation.com (Clara Albert, Executive Director)
- o. Minnesota Electronic Security and Technology Association Jeff Bird, President, 161 St. Anthony Avenue, Suite 820, St. Paul, MN, 55103; info@mnesta.org
- p. Minnesota Farm Bureau info@fbmn.org; cradatz@fbmn.org (Chris Radatz, Executive Director)
- q. Minnesota Farmers Union info@mfu.org; gary@mfu.org (Gary Wertish, President)
- r. Minnesota Mechanical Contractors Association gthaden@minnesotamca.org (Gary Thaden, Government Affairs Director)
- s. Minnesota Municipal Utilities Association vroberts@ci.detroit-lakes.mn.us (Vernell Roberts, President) markn@austinutilities.com (Mark Nibaur, President Elect)
- t. Minnesota Nursery & Landscape Association cassie@mnlb.biz (Cassie Larson, CAE, Executive Director)
- u. Minnesota Rural Electric Association (MREA) info@mrea.org; darrick@mrea.org (Darrick Moe, President & CEO)
- v. Minnesota Solar Energy Industries Association (MnSEIA) INFO@MNSEIA.ORG; dshaffer@mnseia.org (David Shaffer, Executive Director)
- w. Minnesota State Fire Chiefs Association jennifer@msfca.org (Jennifer Rzepka, Executive Director); president@msfca.org (T. John Cunningham, President)
- x. Minnesota Utility Contractors Association info@muca.org; stephaniem@muca.org (Stephanie Menning, Executive Director)
- y. National Electrical Contractors Association (“NECA”) – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports) luke@stpaulneca.org (Luke Kuhl, Executive Director, St. Paul); dmanderson@mplsneca.org (David Manderson, Executive Director, Minneapolis); necanet@twinportsneca.com; NECADAVE@TWINPORTSNECA.COM (Dave Orman, Executive Director)
- z. Sustainable Farming Association of Minnesota info@sfa-mn.org; theresa@sfa-mn.org (Theresa Keaveny, Executive Director)

OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the May 04, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Dual Notice of Hearing as described in the March 16, 2020 *State Register* (44 SR 1025), is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will take place starting at 9:00 a.m. on Wednesday, August 19, 2020, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155. For complete information concerning participation at the rescheduled public hearing, please view the Dual Notice of Hearing referenced above or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit H.2

Minnesota Board of Electricity

CERTIFICATE OF GIVING ADDITIONAL NOTICE OF REVISED FORMAT OF HEARING UNDER THE ADDITIONAL NOTICE PLAN

Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor’s ID Number R-04632

I certify that on July 13, 2020 at St. Paul, Ramsey County, Minnesota, I e-mailed a link to the Notice of Revised Format of Hearing to the following entities listed in the chapter 1315 Additional Notice Plan:

- a. Associated Builders and Contractors
- b. Associated General Contractors of Minnesota
- c. Association of Minnesota Counties
- d. Builders Association of Minnesota (“BAM”)
- e. Housing First Minnesota
- f. Building Owners and Managers Association (“BOMA”) – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis)
- g. Communication, Control, Alarm, Remote, Signaling Association (“CCARSA”)
- h. Contract Electrical Inspector Association of Minnesota (“CEIAMN”)
- i. IBEW Minnesota State Council
- j. League of Minnesota Cities
- k. Local chapters of the Association of Minnesota Building Officials (“AMBO”) (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest)
- l. Local chapters of the International Brotherhood of Electrical Workers (“IBEW” Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999)
- m. Minnesota chapter of the International Association of Electrical Inspectors (“IAEI”)
- n. Minnesota Electrical Association (“MEA”)
- p. Minnesota Farm Bureau
- q. Minnesota Farmers Union
- r. Minnesota Mechanical Contractors Association
- s. Minnesota Municipal Utilities Association
- t. Minnesota Nursery & Landscape Association
- u. Minnesota Rural Electric Association (MREA)
- v. Minnesota Solar Energy Industries Association (MnSEIA)
- w. Minnesota State Fire Chiefs Association
- x. Minnesota Utility Contractors Association
- y. National Electrical Contractors Association (“NECA”) – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports)
- z. Sustainable Farming Association of Minnesota

A copy of the e-mail, the Notice, and e-mailing list are attached to this certificate.



Amanda Spuckler
Rules Specialist

From: [Spuckler, Amanda \(DLI\)](#)
To: [Spuckler, Amanda \(DLI\)](#)
Bcc: Jeni.Ankeny@mnabc.com; info@agcmn.org; tworke@agcmn.org; Julie.Ring; info@bamn.org; grace@bamn.org; bkhalloran@redmondmn.com; remi@bamn.org; reception@batc.org; David@BATC.org; office@bomasaintpaul.org; joe.spartz@bomastpaul.org; membership@bomampls.org; kl@bomampls.org; gkratzner@oneidacres.com; john@jramanagement.com; WBraun@ARNAN.com; [Schlie, Wade \(DLI\)](mailto:Schlie, Wade (DLI)); MinnesotaIAEI@gmail.com; andy@andysnope.com; dunmacht@lmc.org; bridgetprivate@ambomn.com; james.williamette@ci.stpaul.mn.us; il23@mtn.org; lu23@ibew23.org; info@ibew110.org; jmcmamara@ibew110.org; 160@ibew160.org; rjb@ibew160.org; Dsmithlcl242@unions-america.com; office@ibew292.org; jheimerl@ibew292.org; ibewlocalunion294@gmail.com; BUSMGR294@gmail.com; bonnie@ibewlocal343.org; chad@ibewlocal343.org; adamgustafson32@gmail.com; roakes@ibewlocal949.org; ibew1999@enventis.net; customerservice@iaei.org; dcllements@iaei.org; mea@electricalassociation.com; calbert@electricalassociation.com; info@mnesta.org; info@fbmn.org; cradatz@fbmn.org; info@mfu.org; gary@mfu.org; gthaden@minnesotamca.org; vroberts@ci.detroit-lakes.mn.us; markn@austinutilities.com; cassie@mnla.biz; info@mrea.org; darrick@mrea.org; INFO@MNSEIA.ORG; dshaffer@mnseia.org; jennifer@msfca.org; president@msfca.org; info@muca.org; stephaniem@muca.org; luke@stpaulneca.org; dmanderson@mplsneca.org; necanet@twinportsneca.com; NECADAVE@TWINPORTSNECA.COM; info@sfa-mn.org; theresa@sfa-mn.org
Subject: Minnesota Board of Electricity Notice of Revised Format of Hearing
Date: Monday, July 13, 2020 8:06:00 AM
Attachments: [image007.png](#)
[image008.png](#)
[image009.png](#)

Notice of Revised Format of Hearing

Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

You are receiving this email because under the Minnesota Administrative Procedures Act, each Minnesota agency must make reasonable efforts to notify persons or classes of persons who may be significantly affected by the rule being proposed. The Minnesota Board of Electricity has identified you as a person or organization who may be affected by the proposed rule.

The format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, is being revised to a WebEx format due to concerns over public group meetings during the current COVID-19 health pandemic. The following document related to this rulemaking will be published in the July 13, 2020, edition of the *State Register*:

- Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

The Notice of Revised Format of Hearing provides details about the hearing.

The Notice of Revised Format of Hearing, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are [available in the rulemaking docket](#).

Questions?

Contact us at dli.rules@state.mn.us.

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Notice of Rescheduled Hearing as described in the April 20, 2020 *State Register* (44 SR 1204), is being revised to a Webex format due to concerns over public group meetings during the current COVID-19 health pandemic. Pursuant to *Minnesota Statutes*, section 13D.021, subdivision 1 (2019), the Board Chair has determined that this meeting will be conducted remotely because it is not practical or prudent for an in-person meeting due to the current pandemic.

Hearing Procedure. You and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to view the presentation by joining the hearing by internet, mobile device or phone as follows:

To view the presentation and join the hearing by internet, navigate on your computer to: <https://tinyurl.com/y9d39rt6> or <https://minnesota.webex.com> and enter:

- Meeting Number: 146 735 1484
- Meeting Password: nxJ9pQ7N2hW

To join from a mobile device:

[+1-415-655-0003](tel:+14156550003), [146 735 1484###](tel:+14156550003) United States Toll
[1-855-282-6330](tel:+18552826330), [146 735 1484###](tel:+18552826330) United States Toll Free

To join by phone:

+1-415-655-0003 United States Toll
1-855-282-6330 United States Toll Free

To join from a video system or application:

Dial 1467351484@minnesota.webex.com

You can also dial 173.243.2.68 and enter your meeting number.

You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when

the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case. Judge Case can be reached by contacting legal assistant Michelle Hendrickson at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, St. Paul, MN 55164-0620, telephone (651) 361-7896, fax (651) 539-0130, and email Michelle.L.Hendrickson@state.mn.us.

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

For more information concerning this rulemaking and participation at the revised public hearing, please view the initial Dual Notice of Hearing as published in the March 16, 2020 edition of the *State Register* (44 SR 1025) or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.



July 06, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Additional Notice Plan Email List

- a. Associated Builders and Contractors Jeni.Ankeny@mnabc.com (Jennifer Ankeny, Vice-President, Business Development & Membership)
- b. Associated General Contractors of Minnesota info@agcmn.org; tworke@agcmn.org (Tim Worke, CEO)
- c. Association of Minnesota Counties ring@mncounties.org (Julie Ring, Executive Director)
- d. Builders Association of Minnesota (“BAM”) info@bamn.org; grace@bamn.org (Grace Keliher, Executive Vice President); bkhalloran@redmondmn.com (BAM lobbyist, Redmond Associates); Remi Stone (remi@bamn.org)
- e. Housing First Minnesota reception@batc.org; David@BATC.org (David Siegel, Executive Director)
- f. Building Owners and Managers Association (“BOMA”) – Minnesota chapters (St. Paul, Duluth, Greater Minneapolis) office@bomasaintpaul.org; joe.spartz@bomastpaul.org (Joe Spartz, President, BOMA St. Paul) membership@bomampls.org; kl@bomampls.org (Kevin Lewis, President/CEO, BOMA Minneapolis); gkratzner@oneidacres.com (BOMA Duluth)
- g. Communication, Control, Alarm, Remote, Signaling Association (“CCARSA”) john@jramanagement.com (John Arlandson, Board Member); WBraun@ARNAN.com (Bill Braun, Board President)
- h. Contract Electrical Inspector Association of Minnesota (“CEIAMN”) wade.schlie@state.mn.us; MinnesotaIAEI@gmail.com
- i. IBEW Minnesota State Council andy@andysnope.com (Andy Snope, Legislative Director)
- j. League of Minnesota Cities dunmacht@lmc.org (David Unmacht, Executive Director)
- k. Local chapters of the Association of Minnesota Building Officials (“AMBO”) (Arrowhead, Southeast, 10,000 Lakes, Southwest and Northwest) bridgetprivate@ambomn.com (AMBO secretary) james.williamette@ci.stpaul.mn.us (Jim Williamette, AMBO chair)
- l. Local chapters of the International Brotherhood of Electrical Workers (“IBEW”) Local 23, 110, 160, 242, 292, 294, 343, 731, 949, and 1999)
il23@mtn.org; lu23@ibew23.org (Duane Peters, Business Manager, local 23)
info@ibew110.org; jmcnamara@ibew110.org (Jamie McNamara, Business Manager)
160@ibew160.org; rjb@ibew160.org (Robert J. Boogren, Business Manager)
Dsmithlcl242@unions-america.com (Don Smith, Business Manager)
office@ibew292.org; jheimerl@ibew292.org (Jeff Heimerl, Business Manager)
ibewlocalunion294@gmail.com; BUSMGR294@gmail.com (Dan Hendrickson, Business Manager)
bonnie@ibewlocal343.org; chad@ibewlocal343.org (Chad Katzung, Business Manager)
adamgustafson32@gmail.com (Adam Gustafson, Business Manager, 731)
roakes@ibewlocal949.org (Rick Oakes, Business Manager)
ibew1999@eventis.net (Paul Woelfel, Business Manager)

- m. Minnesota chapter of the International Association of Electrical Inspectors (“IAEI”) customerservice@iaei.org; dcllements@iaei.org (David Clements, President/CEO)
- n. Minnesota Electrical Association (“MEA”) mea@electricalassociation.com; calbert@electricalassociation.com (Clara Albert, Executive Director)
- o. Minnesota Electronic Security and Technology Association Jeff Bird, President, 161 St. Anthony Avenue, Suite 820, St. Paul, MN, 55103; info@mnesta.org
- p. Minnesota Farm Bureau info@fbmn.org; cradatz@fbmn.org (Chris Radatz, Executive Director)
- q. Minnesota Farmers Union info@mfu.org; gary@mfu.org (Gary Wertish, President)
- r. Minnesota Mechanical Contractors Association gthaden@minnesotamca.org (Gary Thaden, Government Affairs Director)
- s. Minnesota Municipal Utilities Association vroberts@ci.detroit-lakes.mn.us (Vernell Roberts, President) markn@austinutilities.com (Mark Nibaur, President Elect)
- t. Minnesota Nursery & Landscape Association cassie@mnlb.biz (Cassie Larson, CAE, Executive Director)
- u. Minnesota Rural Electric Association (MREA) info@mrea.org; darrick@mrea.org (Darrick Moe, President & CEO)
- v. Minnesota Solar Energy Industries Association (MnSEIA) INFO@MNSEIA.ORG; dshaffer@mnseia.org (David Shaffer, Executive Director)
- w. Minnesota State Fire Chiefs Association jennifer@msfca.org (Jennifer Rzepka, Executive Director); president@msfca.org (T. John Cunningham, President)
- x. Minnesota Utility Contractors Association info@muca.org; stephaniem@muca.org (Stephanie Menning, Executive Director)
- y. National Electrical Contractors Association (“NECA”) – Minnesota Chapters (St. Paul, Minneapolis, Twin Ports) luke@stpaulneca.org (Luke Kuhl, Executive Director, St. Paul); dmanderson@mplsneca.org (David Manderson, Executive Director, Minneapolis); necanet@twinportsneca.com; NECADAVE@TWINPORTSNECA.COM (Dave Orman, Executive Director)
- z. Sustainable Farming Association of Minnesota info@sfa-mn.org; theresa@sfa-mn.org (Theresa Keaveny, Executive Director)

Exhibit I



March 19, 2020

Suzanne Todnem
Minnesota Department of Labor and Industry
443 Lafayette Road
St. Paul, MN 55155

Jamie M. McNamara

BUSINESS MANAGER
FINANCIAL SECRETARY

1330 Conway Street
Suite 110
St. Paul, Minnesota 55106

651-776-4239
Fax: 651-772-8795
www.ibew110.org

Referral Office
651-776-4239 ext. 740



Re: Adoption of the 2020 National Electrical Code

As a licensed electrical worker for over 35 years and an electrical inspector for over 15 years, I would like to see the earliest possible adoption and without amendment to the 2020 National Electrical Code. I'm requesting that the 2020 NEC be adopted no later than July 1, 2020 if possible.

The National Fire Protection Associations the publisher of the 2020 NEC provides an adoption process that is conducted through an open, transparent process incorporating many opportunities to provide anyone and everyone an opportunity to comment on proposed changes or submit changes to the 2017 NEC to make the 2020 NEC.

Sincerely,

Jamie M. McNamara
Business Manager/Financial Secretary
IBEW Local 110

JMM/ap
opeiu#12

From: info@acbma.org
To: [RULES, DLI \(DLI\)](#)
Cc: [Lippert, Kevin](#); [Dollar II, Randall](#); [Alan Manche](#); steve.litchfield@schneider-electric.com; marcelo.valdes@us.abb.com; [Kaiser, Matthew H.](#)
Subject: Minnesota Board of Electricity Adoption of 2020 National Electrical Code
Date: Wednesday, April 15, 2020 1:37:28 PM
Attachments: [ACBMA Letter to MN Board of Electricity re_ 2020NEC Adoption.PDF](#)

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Attn: Amanda Spuckler

Dear Ms. Spuckler:

Attached please find a letter from the American Circuit Breaker Manufacturers Association.
Thank you.

Matthew H. Kaiser
Assistant Secretary
American Circuit Breaker
Manufacturers Association



04/15/2020

Minnesota Board of Electricity
Minnesota Department of Labor & Industry
443 Lafayette Road
St. Paul, MN 55155

Attn: Amanda Spuckler

RE: State of Minnesota Adoption of the 2020 National Electrical Code®

Dear Ms. Spuckler:

I serve as the Assistant Secretary of my client, the American Circuit Breaker Manufacturers Association (ACBMA), a nonprofit industry association of circuit breaker manufacturers with manufacturing facilities in North America, and am also a partner in the law firm of Thompson Coburn LLP. I write this letter in my capacity as Assistant Secretary of the ACBMA. The ACBMA is the leading national association for safety issues relating to the commercial and residential use of circuit breakers whose membership is comprised of the four largest North American manufacturers of circuit breakers. The statements contained herein reflect the unanimous position of the ACBMA's membership.

The ACBMA is dedicated to advancing the understanding and use of circuit breakers to promote electrical safety. A key component of our mission is to advocate for each state in this country to adopt the latest edition of the National Fire Protection Association (NFPA) 70® – National Electrical Code (NEC®) – so as many Americans as possible can be protected from the inherent hazards of electricity. We support the Minnesota Board of Electricity in their adoption process of the 2020 edition of the NEC® and recommend an unamended, full adoption of the code.

We understand that Article 210 Section 12 (210.12) pertaining to Arc-Fault Circuit-Interrupter (AFCI) protection is a particular area on which the Minnesota Board of Electricity would appreciate more information. This article has been in the code for nearly 20 years. The protection of your home's electrical circuits to prevent electrical fires due to arcing of a damaged conductor to a parallel or series arc originated with the bedroom outlets. There has been incremental expansion of AFCI protection to other circuits in living areas of the home in subsequent code cycles. The current law in Minnesota, the 2017 edition of the NEC®, requires AFCI protection in kitchens, laundry areas, and other locations in the dwelling unit. A modification to reduce the areas protected in this article would introduce a higher risk of electrical and fire hazard in Minnesota homes going forward.

The ACBMA, through its members, has logged data in two areas of AFCI installations: interoperability and reliability. The most recent data shows reported issues identified as either "Nuisance Trip" or "Interoperability" were only 0.0078% of AFCI circuit breakers shipped.

Furthermore, the National Electrical Manufacturers Association (NEMA) and the Association of Home Appliance Manufacturers (AHAM) conduct quarterly joint efforts covering product standards and testing to address these “perceived” issues of interoperability. ACBMA, through its members, has documented tens of thousands of compatibility tests to ensure that AFCI circuit breakers operate properly regardless of the supported appliance load. Collectively, the ACBMA and its members have gone above and beyond to control quality in the two areas of interoperability and reliability.

According to the December 2018 report from the US Fire Administration and FEMA, there has been a 22% decline in residential building electrical fire from 2007 to 2016. This downward trend is largely attributed to greater fire safety awareness and response, better construction materials, and new fire prevention technologies like AFCI. Any modification to reduce the areas in Article 210 Section 12 would introduce a higher risk of electrical and fire hazard in Minnesota homes going forward. We support the Minnesota Board of Electricity in their adoption process of the 2020 edition of the NEC® and recommend an unamended, full adoption of the code.

**AMERICAN CIRCUIT BREAKER
MANUFACTURERS ASSOCIATION**

A handwritten signature in blue ink, reading "Matthew H. Kaiser", is written over a horizontal line.

Matthew H. Kaiser
Assistant Secretary

From: [McClintock, Tim](#)
To: [Spuckler, Amanda \(DLI\)](#)
Subject: Minnesota 2020 NEC Adoption Process
Date: Wednesday, April 15, 2020 12:51:11 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[Direct Adoption with signatures Final 511.pdf](#)

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Dear Ms. Spuckler:

Please find attached a proclamation from the Electrical Code Coalition in response to the Minnesota Board of Electricity 2020 NEC adoption process.

Thank you,

Tim McClintock
National Electrical Manufacturers Association
Midwest Field Representative
11813 Township Road 516
Shreve, OH 44676
(330) 749-9782
tim.mcclintock@nema.org

5D94C012



The Importance of Adopting the Latest Edition Of the National Electrical Code®

The undersigned members of the Electrical Code Coalition support direct adoption of the latest edition of the *National Electrical Code*. Direct adoption means that it is not adopted through a building code or other standard, but is directly adopted through direct legislative or administrative action. Direct action ensures that the requirements are not dependent on a code that is unrelated or only peripherally related.

The latest edition represents the latest technological advances. The NEC is revised every three years. Each edition goes through an extensive public vetting process to ensure that it meets technical and societal needs for minimum electrical safety.

Building inspection departments are evaluated by the Insurance Services Office (ISO) based on use of up to-date Codes and Standards. Adoption of the latest edition of the NEC can result in lower insurance premiums for property owners in a jurisdiction.

The National Electrical Code is responsive. The Code is revised every three years to ensure that the requirements take into account the latest in technology and safety. This ANSI-based consensus process includes expertise from installers, inspectors, electric utilities, testing laboratories, manufacturers and others.

Industry training programs and industry magazines and other resources support the current edition. When the new edition is released, all of the industry resources switch their focus to the new edition. All of the trade magazines and industry web sites want to provide up-to-date information.

Electricians and electrical inspectors trained and working to the current edition have increased opportunities. Uniform adoption of the latest edition NEC across jurisdictions will help open up opportunities for electricians, contractors, and inspectors to work in various jurisdictions since they will all have been trained to the same technologically current, safety oriented code.


The Electrical Code Coalition: An Industry Coalition Supporting Qualified Electrical Inspectors



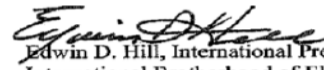
Thomas R. Kuhn, President
Edison Electric Institute



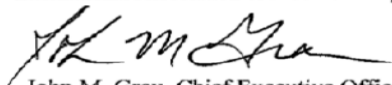
Larry Mullins, Executive Vice President and CEO
Independent Electrical Contractors



David E. Clements, CEO and Executive Director
International Association of Electrical Inspectors



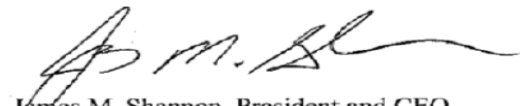
Edwin D. Hill, International President
International Brotherhood of Electrical
Workers



John M. Grau, Chief Executive Officer
National Electrical Contractors Association



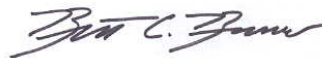
Evan R. Gaddis, President and CEO
National Electrical Manufacturer's Association



James M. Shannon, President and CEO
National Fire Protection Association®



Keith Williams, President and CEO
Underwriters Laboratories Inc.



Brett Brenner, President
Electrical Safety Foundation Intl. (ESFI)

Spuckler, Amanda (DLI)

Subject: FW: 2020 NEC Adoption

From: Wiese, Angie (CI-StPaul) <angie.wiese@ci.stpaul.mn.us>

Sent: Thursday, April 2, 2020 9:29 AM

To: ELECTRICITY, DLI (DLI) <dli.electricity@state.mn.us>

Cc: Andy Speltz <andy.speltz@ci.red-wing.mn.us>; Ben Foster (Benjamin.Foster@minneapolismn.gov) <Benjamin.Foster@minneapolismn.gov>; Chris Fuller <cfuller@ci.saint-anthony.mn.us>; Darrin Bramwell <dbramwell@cityofeagan.com>; Smith, James G (DPS) <james.g.smith@state.mn.us>; Osmonson, Kathi (DPS) <kathi.osmonson@state.mn.us>; Kip LaMotte <kip.lamotte@newbrightonmn.gov>; Nisja, Jon (DPS) <jon.nisja@state.mn.us>; Sara Ahlquist (SAhlquist@minnetonkamn.gov) <SAhlquist@minnetonkamn.gov>; Tom Pitschneider (tpitschneider@shakopeemn.gov) <tpitschneider@shakopeemn.gov>; Wiese, Angie (CI-StPaul) <angie.wiese@ci.stpaul.mn.us>

Subject: 2020 NEC Adoption

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Minnesota Board of Electricity
Minnesota Department of Labor and Industry
443 Lafayette Road
St Paul, MN 55

Re: Adoption of the 2020 National Electrical Code

I am writing to you on behalf of the Fire Marshals Association of Minnesota (FMAM). FMAM strongly supports the Minnesota Board of Electricity's recommendation to adopt the National Electric Code to the 2020 edition without amendments. The following are a sample of the reasons that FMAM supports adopting the 2020 National Electric Code:

- Adopting the current cycle of an electrical code keeps pace with changes and updates in electrical safety technology, methods, and products.
- It enacts an electrical code that provides more emphasis on new and emerging technologies that will impact the built environment.
- The new edition ensures that minimum safety requirements are in place for alternative energy.
- Additionally, it impacts first responders with a new requirement for emergency disconnecting means at one- and two-family dwelling units to ensure first responders can safely remove power from an involved structure.

Again, FMAM supports the Minnesota Electrical Board recommendation to adopt the 2020 National Electric Code. Adoption will ensure that Minnesota remains at the forefront of developments in the electrical industry and that electrical systems are safe for citizens across Minnesota. Thank you for your time and consideration. If you have any further questions or concerns, please do not hesitate to contact me.

Yours in public safety,

Angie Wiese, PE, CBO

President
Fire Marshals Association of Minnesota
651-266-8953

From: [Andrew Snope](#)
To: [RULES, DLI \(DLI\)](#)
Subject: IBEW Local 292 Supports adoption of 2020 NEC
Date: Monday, April 13, 2020 12:37:34 PM
Attachments: [Adoption of 2020 NEC.pdf](#)

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Thank You.

Andy

Andy Snope

Andy Snope

Electrician

Business Representative

Legislative and Political Director

IBEW Local 292, Minneapolis

Direct 612-617-4238

Cell 612-562-7565

Main 612-379-1292



International Brotherhood of Electrical Workers Local Union 292



312 Central Ave SE, Suite 292 • Minneapolis, MN 55414 • www.ibew292.org

Jeff Heimerl, Business Manager

April 7, 2020

Amanda Spuckler
dli.rules@state.mn.us
Minnesota Department of Labor and Industry
443 Lafayette Road
St. Paul, MN 55155

Re: Proposed Amendment to Rules Governing the Adoption of the 2020 National Electrical Code, chapter 1315

IBEW Local Union 292 urges the earliest possible adoption, without amendment, of the 2020 National Electrical Code. We are requesting that the 2020 NEC be adopted no later than July 1, 2020.

Within the Electrical Industry the IBEW Local 292 represents 3,500 licensed or registered Electrical Workers (Apprentices, Journeyworkers, Masters, and Power Limited Technicians) that work throughout the state of Minnesota who use and apply the NEC daily.

The newest addition of the National Electrical Code when issued, quickly becomes the industry training standard throughout the state of Minnesota and the United States. The IBEW/NECA Joint Training Centers are currently providing instruction on the 2020 National Electrical Code. The industry is already gearing up to the changes within the 2020 code. Early adoption will keep everybody in the industry on the same code, which will lessen confusion, expedite installations and increase public health and safety.

The National Electrical Code adoption process, at the National level, was conducted through an open, transparent process incorporating many opportunities to provide comment on proposed changes. In Minnesota the State Board of Electricity, consisting of representatives from all areas of the Electrical Industry, examined the changes for the 2020 NEC and recommend a timely adoption.

For these reasons, IBEW Local 292 urges the earliest possible effective date for adoption of the 2020 NEC without amendment in order to protect the public health and safety of the residents of Minnesota.

Sincerely,

Jeffery J. Heimerl
IBEW Local 292
Business Manager
612-617-4237
jheimerl@ibew292.org

Andy Snope
IBEW Local 292
Legislative Director
612-617-4238
asnope@ibew292.org

JJH/AS: jg
opeiu #12, afl-cio



292

office 612/379-1292 • 800/337-8310 • fax 612/379-9326 • office@ibew292.org

IBEW Local Union 292 is committed to Equal Employment Opportunity and Affirmative Action for our Members and Employees

000179

From: [David Clements](#)
To: [RULES, DLI \(DLI\)](#)
Subject: FW: Minnesota Board of Electricity
Date: Monday, April 13, 2020 1:51:17 PM
Attachments: [Minnesota Board of Electricity 2020.pdf](#)

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Amanda Spuckler

On behalf of the International Association of Electrical Inspectors please forward the attached letter to the Minnesota Board of Electricity regarding adoption of the 2020 Edition of the National Electrical Code.

If you have any questions please feel free to contact my office.

David Clements

CEO

Phone: 972-235-1455 ext. 29

Fax: 972-235-3855



INTERNATIONAL ASSOCIATION OF ELECTRICAL INSPECTORS

P.O. Box 830848 • Richardson, Texas 75083-0848
972.235.1455 • fax 972.671.7139 • email: dclements@iaei.org • website www.iaei.org

April 13, 2020

David Clements
President/CEO

2020 OFFICERS
BOARD OF
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Michal Hofkin
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Ken Masters

Timothy Pope

James Rogers

Greg Taylor

Layne Western

David Williams

Minnesota State Board of Electricity
Minnesota Department of Labor and Industry
443 Layfayette Road North
St. Paul, Minnesota 55155

Re: IAEI Supports Adoption of 2020 Edition of the National Electrical Code

Dear Board of Electricity Members:

The International Association of Electrical Inspectors (IAEI) is an association of electrical inspectors and associate members representing the full spectrum of the electrical industry for the purpose of promoting the safe use of electricity. One of the goals of IAEI is to present the profession's viewpoint, concerns, and other important information to legislators, administrators, regulators, and other bodies.

IAEI participates in the consensus process with two electrical inspector members representing the organization on each NFPA Code-making panel that processes the Code requirements as submitted from the public for each new edition of the National Electrical Code® (NEC). The consensus Code-making process addressed many safety requirements and new technologies that have been substantiated by proposers and were debated by the Code-making panels. They then received public scrutiny and comments and were adopted in accordance with the National Fire Protection Association (NFPA) process.

IAEI has supported timely adoption of the National Electrical Code® (NEC) by state and local jurisdictions for many years. Early adoption of the most current edition of the NEC ensures a uniform and up-to-date standard of safety in the built environment.

IAEI and its local Chapters and Divisions respectfully request that your Board consider adoption of the 2020 edition of the NEC.

Thank you for your dedication in providing a safe electrical environment in your jurisdiction.

Sincerely,

A handwritten signature in black ink that reads "David Clements".

David Clements
President & CEO
International Association of Electrical Inspectors

From: [McClintock, Tim](#)
To: [RULES, DLI \(DLI\)](#)
Subject: MN 2020 NEC Adoption
Date: Friday, March 27, 2020 11:25:22 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[MN 2020 NEC NEMA Letter.pdf](#)

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Dear Ms. Spuckler:

Pursuant to the Dual Notice published in the State Register on March 16, 2020, please attached comments from the National Electrical Manufacturers Association (NEMA) in support of the Board of Electricity's intention to adopt the 2020 NEC for the State of Minnesota.

Thank you for your time and consideration in this matter.

Best regards,

Tim McClintock

National Electrical Manufacturers Association

Midwest Field Representative

11813 Township Road 516

Shreve, OH 44676

(330) 749-9782

tim.mcclintock@nema.org

5D94C012





National Electrical Manufacturers Association

The association of electrical equipment
and medical imaging manufacturers
www.nema.org

March 24, 2020

Minnesota Board of Electricity
Minnesota Department of Labor and Industry
443 Lafayette Road
St Paul, MN 55155

Re: NEMA Supports Adoption of 2020 Edition of the National Electrical Code

Dear Members of the Board:

On behalf of the National Electrical Manufacturers Association (NEMA), I am writing to express support for the update of Minnesota's electrical code from the 2017 edition of the National Electrical Code® (NEC) to the 2020 edition of the NEC. For many years, Minnesota has championed the standard of excellence by being one of the first states in the nation to adopt the newest edition of the NEC—putting the safety of its citizens first and prioritizing the economic well-being of its businesses and industry.

As the association representing over 325 electrical and medical imaging manufacturers that make the equipment used in a variety of sectors—electric transmission and distribution, commercial and residential buildings, water treatment and delivery, transportation, industrial processes, food, healthcare, agriculture, and manufacturing—NEMA supports regulatory action and programs that efficiently provide affordable, safe, and reliable electricity to the American public. NEMA member companies have a significant presence in the state of Minnesota, representing 16 companies with 28 manufacturing and engineering facilities that support the state's economy. Member companies in Minnesota collectively employ over 8,000 state residents.

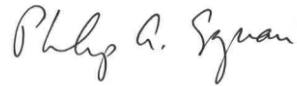
NEMA has long supported timely adoption of the National Electrical Code® (NEC) by state and local jurisdictions. We maintain that prompt adoption of the most current edition of the NEC is the best way to ensure a uniform and up-to-date standard of safety for all occupants in the built environment. Current codes mean safer and more economically prosperous communities.

The NEC focuses on the proper installation of electrical systems and equipment to protect people and property from hazards arising from the use of electricity in the built environment. The code also allows for the safe use of new technologies including electric vehicle charging equipment and distributed generation such as solar photovoltaic panels.

Through adoption of the 2020 NEC, businesses today will be able to take advantage of lower infrastructure start-up and operational costs through new and improved technology. For instance, modernized rules in the 2020 NEC, used for the calculations of improvements in energy efficiency, may provide relief for the overall cost of the electrical system. Additionally, requirements relating to alternative energy continue to stay relevant so as to not become a barrier to the implementation of those technologies as they evolve.

Once again, NEMA urges the Minnesota Board of Electricity to maintain this tradition of excellence by adopting the 2020 edition of the NEC. If you have any questions, please contact Tim McClintock at Tim.McClintock@nema.org or (303) 749-9782.

Sincerely,

A handwritten signature in cursive script that reads "Philip A. Squair".

Philip Squair
Vice President of Government Relations
National Electrical Manufacturers Association (NEMA)

From: [Gary Thaden](#)
To: [RULES, DLI \(DLI\)](#)
Subject: NECA supports adoption of NEC
Date: Monday, April 13, 2020 12:17:31 PM
Attachments: [NECA supports NEC 2020 Adoption.pdf](#)

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-Gary Thaden
Government Affairs Director
Minnesota Contractors of National Electrical Contractors Association
10590 Wayzata Blvd., Suite 100
Minneapolis, MN 55305
651/646-2121 or cell 612/840-1233
Gthaden@Gmail.Com



NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION

April 13, 2020

Minnesota Department of Labor and Industry
Amanda Spuckler
443 Lafayette Road North
St. Paul, MN 55155
Via email to: dli.rules@state.mn.us

Re: Proposed Permanent Rules Relating to 2020 National Electrical Code

The Minnesota contractors of the National Electrical Contractors Association urge adoption of the 2020 National Electrical Code (NEC) without amendments.

There are over 250 Minnesota NECA contractors with thousands of electrical employees (journey workers, masters, apprentices, and power limited technicians) who use and apply the National Electrical Code daily.

The industry believes the adoption of the 2020 NEC is necessary for several reasons. Hundreds of electrical apprentices have received copies of the 2020 code. The 2020 edition is being taught to apprentices by the Joint Apprentice Training Committee's (JATC) trainers across the state of Minnesota. Those same JATCs have conducted "train the trainer" seminars on the 2020 code. Those trainers have taught the thousands of journey-level electricians, power limited technicians and masters electricians on the 2020 NEC in 2019 and 2020. Last fall the NECA National Convention (which included over 40 Minnesota contractors) conducted numerous seminars on the 2020 edition of the National Electrical Code. The industry is already gearing up to change to the 2020 code. In addition, the national association is offering online, on-demand NEC 2020 courses. Adoption will keep everybody in the industry on the same code, which will lessen confusion, expedite installations and increase public and workplace health and safety. Due to the widespread preparation for the 2020 NEC we urge adoption on July 1, 2020.

At National Fire Protection Association meetings over several years, the National Electrical Code is adopted using an open consensus Code-development process. Any member of the public has an opportunity to propose and promote amendments to the NEC.

Adopting the 2020 NEC, without amendments, allows for a freer flow of commerce across state lines. For example, if the solar photovoltaic systems sections of the NEC are enacted

without amendment, it would allow for easier shipment of electrical solar components to install solar systems in Minnesota.

The National Electrical Code, without amendments, has been used by the State of Minnesota and its electrical industry for decades. We have trained for and used this quality electrical code every day on Minnesota's construction job sites.

For these reasons, the Minnesota contractors of the National Electrical Contractors Association urges the adoption of the 2020 NEC, without amendments, to protect public health and safety of the workers and citizens of Minnesota.

Sincerely,

Gary Thaden

Gary Thaden
Government Affairs Director
Minnesota-Dakotas Conference of the
National Electrical Contractors Association
10590 Wayzata Blvd, Suite 100
Hopkins, MN 55305
651-646-2121
GThaden@GMail.Com

From: [Sanders, Russ](#)
To: [RULES, DLI \(DLI\)](#)
Subject: 2020 National Electrical Code
Date: Friday, April 10, 2020 4:15:05 PM
Attachments: [MN Board of Electricity.pdf](#)

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Dear Ms Spuckler:

Please see the enclosed letter from the National Fire Protection Association (NFPA) supporting the adoption of the 2020 National Electrical Code (NEC). If there is anything NFPA can do to further support this adoption, please let me know.

Thank you very much,

Russ

Russell E. Sanders, Central Regional Director
National Fire Protection Association
3257 Beals Branch Road
Louisville, KY 40206
USA

Mobile: +1-502-727-0239

www.nfpa.org

National Fire Protection Association

The leading information and knowledge resource on fire, electrical and related hazards.

IT'S A BIG WORLD. LET'S PROTECT IT TOGETHER.®

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NFPA

Central Regional Office 3257 Beals Branch Road, Louisville, KY 40206 USA
Phone: 1+ (502) 894-0411 Fax: 1+ (505) 894-0519 Email: rsanders@nfpa.org

April 10, 2020

Minnesota Board of Electricity
Minnesota Department of Labor and Industry
443 Lafayette Road
St Paul, MN 55

Re: NFPA Supports Adoption of the 2020 National Electrical Code

Dear Board Members:

The NEC focuses on the proper installation of electrical systems and equipment to protect people and property from hazards arising from the use of electricity. As electrical equipment has become more complex and widespread, the NEC has adapted to meet new challenges. Revised every three years to allow for new technologies and improved installation safety practices, the code is the most detailed of any code or standard. As a result, the NEC is a ready-to-use, comprehensive code suitable for adoption.

The NEC is developed and produced by the National Fire Protection Association (NFPA), an independent, not-for-profit standards developing organization and advocate of fire, building, and electrical safety. Since 1911, NFPA has been the sponsor of the NEC and the requirements of this standard have continued to evolve with America's heavy reliance on reliable and safe electrical energy. The NEC is developed through an open, transparent, and balanced process accredited by the American National Standards Institute.

For experts in the electrical community, the NEC is considered the blueprint for electrical safety throughout the world. We believe the best measure of the NEC's valuable role in public safety is its widespread use and past performance. Today, the NEC serves as the basis for electrical codes in all 50 states and around the world. NFPA is proud that the quality of the NEC makes it the most widely used and adopted code for electrical installations and the most widely adopted construction code in the world.

It is our hope that Minnesota continues to move forward with the timely adoption of the 2020 NEC and remains a leader in electrical safety in the U.S.

Respectfully,

Russell E. Sanders

From: [Don Iverson](#)
To: [RULES, DLI \(DLI\)](#)
Subject: State of Minnesota 2020 NEC Adoption
Date: Monday, April 13, 2020 10:54:53 AM
Attachments: [image001.png](#)
[MN Support Letter SQD 041320.pdf](#)

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Dear Ms. Spuckler:

Pursuant to the Notice published in the State Register on March 16, 2020, please see attached comments from the Schneider Electric/SQ D in support of the Board of Electricity's intention to adopt the 2020 NEC for the State of Minnesota.

I appreciate your time and consideration in this matter.

Best regards,

Don Iverson

Manager, Industry Codes &
External Relations
North America Operations
Schneider Electric

Cell: (517) 204-0559
E don.iverson@se.com
Customer Care 888-778-2733

1601 Mercer Rd
Lexington, Kentucky 40511
United States



April 13, 2020

Ms. Amanda Spuckler
Minnesota Department of Labor & Industry
443 Lafayette Rd.
St. Paul, MN. 55155

Re: Schneider Electric Supports Adoption of the 2020 Edition of the National Electrical Code.

Dear Ms. Spuckler:

On behalf of Schneider Electric, I am writing to express support of Minnesota Department of Labor & Industry activity to adopt the 2020 Edition of the National Electrical Code for all structures in the state.

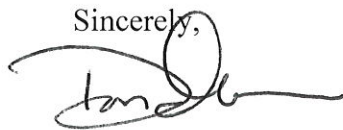
As a global specialist in energy management, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in Utilities & Infrastructures, Industrial & Machine manufacturers, Non-residential buildings, Data Centers & Networks. Focused on making energy safe, reliable, efficient, productive and green.

Schneider Electric continues to advocate for timely adoption of the National Electrical Code (NEC). The NEC focuses on the proper installation of electrical systems and equipment supporting safe electrical infrastructure installations which establishes the safe use of electricity. Our products are designed and manufactured to comply with the most current edition of the National Electrical Code. Electrical infrastructure that does not utilize the most current electrical code restricts the use of the most current technology and can be less efficient and more costly for not only Schneider Electric to manufacturer, but also for the construction industry to implement.

The adoption of the 2020 NEC will permit the construction industry to take advantage of enhanced electrical shock and fire safety in residential structures being built in the state. It also expands cost-effective infrastructure solutions and utilize emerging technological advancements while enhancing safety in commercial buildings such as Arc Energy Reduction for worker safety.

Once again, Schneider Electric urges the Minnesota Department of Labor & Industry to adopt the 2020 NEC for all structures in the built environment to further the mission of electrical safety for all citizens in the state.

Sincerely,



Don Iverson
Manager of Industry Codes & External Affairs



Schneider Electric
1620 Mercer Rd
Lexington, KY 40511
Tel. (517) 204-0559
www.us.schneider-electric.com

From: [Bryant, Ashley](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Minnesota's adoption of the NEC 2020
Date: Tuesday, April 14, 2020 7:06:18 PM
Attachments: [Minnesota letter Siemens.doc](#)

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----- Unrestricted -----

Ms. Spuckler,

Please review the attached letter of support for the adoption of NEC 2020 unamended.

Thank you,

Best regards,

Ashley Bryant

Siemens Industry, Inc.
SI LP PRM C&E
5400 Triangle Parkway
Norcross, GA 30092-2450, USA
Mobil: +1 404 697-1587
<mailto:ashley.bryant@siemens.com>

Siemens Technical Support: 1-800-333-7421



April 14, 2020

Minnesota Board of Electricity
Minnesota Department of Labor & Industry
443 Lafayette Road
St. Paul, MN 55155

RE: State of Minnesota Adoption of the 2020 National Electrical Code®

Dear Ms. Spuckler,

I am writing to support the Minnesota Board of Electricity in their adoption process of the 2020 edition of the NEC® and recommend an unamended, full adoption of the code. For many years, Minnesota has been one of the champion states to adopt the entire current electrical code on a regular revision schedule, demonstrating that the safety of its citizens and economic well-being of its industry is of utmost importance.

I understand that Article 210 Section 12 (210.12) pertaining to Arc-Fault Circuit-Interrupter (AFCI) protection is a particular area on which the Minnesota Board of Electricity would appreciate more information. This article has been in the code for nearly 20 years. The protection of your home's electrical circuits to prevent electrical fires due to arcing of a damaged conductor to a parallel or series arc originated with the bedroom outlets. There has been incremental expansion of AFCI protection to other circuits in living areas of the home in subsequent code cycles. The current law in Minnesota, the 2017 edition of the NEC®, requires AFCI protection in kitchens, laundry areas, and other locations in the dwelling unit. A modification to reduce the areas protected in this article would introduce a higher risk of electrical and fire hazard in Minnesota homes going forward.

Siemens has logged data in two areas of AFCI installations: interoperability and reliability. The most recent data shows reported issues identified as either "Nuisance Trip" or "Interoperability" were only 0.0078% of AFCI circuit breakers shipped. Furthermore, the National Electrical Manufacturers Association (NEMA) and the Association of Home Appliance Manufacturers (AHAM) conduct quarterly joint efforts covering product standards and testing to address these "perceived" issues of interoperability. Siemens has documented tens of thousands of compatibility tests to ensure that AFCI circuit breakers operate properly regardless of the supported appliance load. Siemens has gone above and beyond to control quality in the two areas of interoperability and reliability.

The U.S. Fire Administration, in May of 2019, published their Residential Building Fire Trends report. Between the years of 2008 – 2017, they reported the following statistics in regards to Residential Building Electrical Malfunction Fire Trends:

- 14% decrease in fires
- 19% decrease in deaths
- 34% decrease in injuries
- 35% decrease in dollar loss

These reductions in fires, deaths, injuries and dollar loss have a strong correlation to the expanded use of AFCIs. Any modification to reduce the areas in Article 210 Section 12 would introduce a higher risk of electrical and fire hazard in Minnesota homes going forward.

We support the Minnesota Board of Electricity in updating the National Electric Code® to the current 2020 edition with no amendments to help keep residents safe with a smart technology that has been protecting homes in surrounding states and across the U.S. since 1999.

Thank you for your consideration on this important issue.

With kind regards,

Ashley Bryant
Senior Product Manager, Electronic Circuit Breakers
Siemens Industry, Inc.
5400 Triangle Parkway
Siemens Industry, Inc.

5400 Triangle Parkway
Norcross, GA 30092
USA

Tel.: +1 770-326-2000
Fax: +1 770-326-2211
www.usa.siemens.com/lowmediumvoltage

Norcross, GA 30092-2450, USA
Tel.: +1 404 697-1587
<mailto:ashley.bryant@siemens.com>

From: [Pete Steele](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Request for Full Adoption of 2020 NEC
Date: Saturday, April 11, 2020 3:51:16 PM

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Minnesota Board of Electricity,

Minnesota has been a leader in electrical safety and a key component of that has been due to timely code adoption.

As a new homeowner myself, peace of mind is a special kind of intangible through knowing my family and children are safe, and up to date building codes help drive that quality in construction and standards.

There is no technical or scientific knowledge to support any claims against 2020 NEC Adoption, so I believe timely code adoption by July 1st is an easy decision.

Pete

From: [Smith, David A](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Submission Letter - Eaton Recommends Full Adoption of 2020 NEC by Minnesota Board of Electricity
Date: Monday, April 13, 2020 3:03:21 PM
Attachments: [image001.png](#)
[20200413 Eaton MN BoardofElec 2020NEC.pdf](#)

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Hello,

On behalf of Eaton, I would like to submit the attached PDF as a formal letter of support to the Minnesota Board of Electricity urging full, unamended adoption of the 2020 edition of the National Electrical Code®. Please let me know of any additional information or material I can provide.

Thank you,

David A. Smith

Codes & Standards Specialist

Commercial & Residential Distribution Solutions

Electrical Sector, Americas

412-759-2676

DavidASmith@Eaton.com





Powering Business Worldwide

April 13, 2020

Minnesota Board of Electricity
Minnesota Department of Labor & Industry
443 Lafayette Road
St. Paul, MN 55155

RE: Adoption of the 2020 National Electrical Code®

On behalf of Eaton, we encourage the State of Minnesota to adopt the 2020 National Electrical Code® without amendment.

Eaton employs nearly 760 associates in 5 facilities across the State of Minnesota. Our employees develop, manufacture, and sell safe and reliable electrical equipment and Eaton spends over \$170 million annually with our supply chain in the State. Our workforce in Minnesota provides market leading solutions used in general construction, performing to the highest standards of safety and reliability. Many of these products are installed in homes, commercial buildings, industrial facilities, and utilities in this State and across the country.

Each edition of the NEC® is the culmination of a three-year process where each article is administered by technical experts representing all parties of the electrical industry. All parties, including the National Association of Home Builders, provide input throughout the process. All language in the code requires a two-thirds majority to be included or omitted. Any change to the code would be overruling a national best practice consensus and minimum safety requirement.

For many years, Minnesota has been a leader in the timely and unamended adoption of the National Electrical Code®, putting the safety of its citizens first. This code update will ensure Minnesota's communities continue to provide an acceptable level of public safety while supporting the latest technological advancements.

Eaton has long supported the timely and unamended adoption of the National Electrical Code® by state and local jurisdictions. Codes and standards are important to Eaton's business, employees, and other stakeholders because they work to ensure products are built to provide a level of safety that we all expect. Current codes promote a uniform and up-to-date standard that protects the safety of all occupants in the built environment and produces safer and more economically prosperous communities.

As such, Eaton urges the Minnesota Board of Electricity to continue tradition of leadership by fully adopting the 2020 edition of the NEC®.

Sincerely,

David Smith
Codes & Standards Specialist
Eaton Commercial & Residential Distribution Solutions
Electrical Sector, Americas

From: [Lichtenstein, Thomas R.](#)
To: [RULES, DLI \(DLI\)](#)
Subject: UL Supports Adoption of The 2020 Edition of the National Electrical Code
Date: Monday, April 13, 2020 3:26:58 PM
Attachments: [image003.jpg](#)
[Minnesota 2020 NEC adoption FINAL \(003\).pdf](#)

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Hi Amanda,

Please find the attached letter of support for the Adoption of the 2020 NEC for the consideration of the Minnesota Board of Electricity.

Thanks!

Best Regards,

Tom Lichtenstein
Senior Regulatory Engineer
Distinguished Member of Technical Staff
Codes and Regulatory Services
Connected Technologies

UL LLC.
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April 13, 2020

Minnesota Board of Electricity
Minnesota Department of Labor and Industry
443 Lafayette Rd. N.
St. Paul, Minnesota 55155
Email: dli.rules@state.mn.us.

Subject: UL Supports Adoption of The 2020 Edition of the National Electrical Code

Dear Board Members,

We at Underwriters Laboratories (UL) are deeply committed to advancing the safety of the citizens of the State of Minnesota. The National Electrical Code (NEC®), NFPA 70, serves as an important tool in advancing electrical safety and UL believes state and local adoption of the 2020 NEC® is critical to achieving the most up-to-date safety outcomes. For this reason, UL is writing to request that the Minnesota Board of Electricity move forward with the adoption of 2020 NFPA 70 NEC® without amendment. Adoption will enable enforcement of the latest advancements in electrical safety.

UL is driven by our global Safety Mission – promoting safe living and working environments by the application of safety science and hazard-based safety engineering. Founded in 1894, UL has earned a reputation as a global leader in product safety standards development, testing and certification, especially in the areas of fire and electrical safety, the basis of UL's founding. UL therefore works closely with the electrical installation community to coordinate product safety standardization/certification with installation safety practice to achieve the most desirable safety outcomes.

In conclusion, UL urges the Minnesota Board of Electricity to contribute to the safety of its citizens by adopting, without amendment, the latest electrical safety requirements as represented by the 2020 edition of the NEC®.

Should you have any questions, please contact our UL representative for Minnesota, Tom Lichtenstein, at thomas.r.lichtenstein@ul.com or by phone at (847) 664-2160.

Sincerely,

A handwritten signature in black ink that reads "Blewitt".

Thomas Blewitt
Vice President and Chief Technical Officer
UL LLC, Connected Technologies
Phone: +1 631 546 2332
Thomas.V.Blewitt@ul.com

CC: Tom Lichtenstein, UL Senior Regulatory Engineer

Spuckler, Amanda (DLI)

From: Nick Erickson <nick@housingfirstmn.org>
Sent: Monday, April 13, 2020 3:47 PM
To: Spuckler, Amanda (DLI)
Subject: Housing First Minnesota Comments on Electrical Code
Attachments: HousingFirstMN-Comments-ElectricalCode.pdf

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Amanda,

Please see the attached letter from Housing First Minnesota to the Board of Electricity regarding the adoption of the 2020 National Electrical Code under Minnesota Rules 1315.

In our letter, Housing First Minnesota does request a hearing.

Please let me know if you have any questions.

Nick Erickson

Director of Research and Regulatory Affairs

☎ 651.697.7586 ☎ 612.210.8332

2960 Centre Pointe Drive, Roseville, MN 55113

HousingFirstMN.org





April 13, 2020

Minnesota Board of Electricity
c/o Minnesota Department of Labor and Industry
443 Lafayette Road N.
St. Paul, MN 55155

VIA ELECTRONIC DELIVERY

To the Minnesota Board of Electricity:

This letter contains the official comments of Housing First Minnesota to Minnesota Rules Chapter 1315 of the Minnesota Electrical Code (Proposal). By way of background, Housing First Minnesota represents more than 1,100 member companies statewide. Our diverse membership, which produces homes throughout Minnesota, is engaged in all aspects of housing, including land development, new home construction, multi-family construction and home remodeling.

Our comments on the Proposal reflect Housing First Minnesota's core principle that all housing policies should strike the balance of safety, durability and affordability. This vision is not unique to Housing First Minnesota. It is also the policy of the state of Minnesota. The enabling statutory language for Minnesota's building codes says the these codes are intended to "provide basic and uniform performance standards, establish reasonable safeguards for health, safety, welfare, comfort, and security of the residents of this state and provide for the use of modern materials, devices, materials, and techniques which **will in part tend to lower construction costs**. The construction of buildings should be permitted at the least possible cost consistent with recognized standards of health and safety." (Emphasis Added)

BACKGROUND

For the past two years, the Minnesota Department of Labor and Industry has emphasized affordability considerations in its adoption of the latest building codes. The Minnesota Pollution Control Agency, in its 2019 update to the Minnesota Construction Stormwater Permit, also emphasized affordability, with the only cost increase coming as a result of a change in Federal policy. The Minnesota Board of Plumbing, in its ongoing review of the Minnesota Plumbing Code, goes further yet as it considers amending out wasteful requirements from its previous iteration.

Against these recent and ongoing rulemaking initiatives by the State of Minnesota, the Proposal stands in stark contrast, both in approach and published content. Residential electrical costs will likely increase by at least 10 percent if the Proposal is adopted without amendment.



During a September 2019 tour of a housing project by the Senate Select Committee on Home Ownership and Availability, members of the State Senate and the housing industry spoke at length about the various costly housing policies that collectively have contributed to an erosion of housing affordability in Minnesota. Electrical Code requirements, including arc fault protection adopted in 2017, were among the three dozen policies that had a combined impact of up to \$100,000 for new, single-family homes.

Housing First Minnesota has concerns in two broad areas; technical issues with the language and provisions of the Proposal, and the process used in adoption both nationally and in Minnesota.

Housing First Minnesota formally requests a hearing on the adoption of the Proposal.

Technical Policy Considerations & Recommendations

Housing First Minnesota has identified nine (9) areas of concerns with the existing Minnesota Electrical Code and the Proposal that adopts the 2020 National Electrical Code. For clarity, all references refer to the 2020 National Electric Code, which would be adopted under the Proposal.

1. **210.8(A): GFCI. 250-Volt GFCI Provision.** In residential construction, only a single appliance is serviced by a single 250-volt connection. These appliances are stationary, and the risk of water is virtually non-existent.

Recommendation: Amend Minnesota Rules 1315 to exclude 210.8(A) on 250-Volt receptacles.

2. **210.8(A)(5): GFCI Protection, Basements.** As written, the change to 210.8(A)(5) would require GFCI receptacles in basements, finished or unfinished. Our members

Recommendation: Amend Minnesota Rules 1315 to retain the language of the 2017 National Electric Code.

3. **210.12(A) Arc-Fault Circuit-Interrupter Protection, Dwelling Units.** The requirement for AFCIs is most applicable to newly built homes, yet electrical distribution fires occur most in dwellings more than 40 years old. Housing First Minnesota's members report there has been a sharp increase in consumers reports of "nuisance tripping" in the past two years. This provision has been the source of a large number of complaints from new-home owners and a substantial source of customer call-backs and questions.

Recommendation, revise this section as follows:

(A) Means of Protection: Dwelling Units. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit

kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through (6):

(A)(1) – (C) unchanged.

(D) Branch Circuit Extensions or Modifications — ~~Dwelling Units and Dormitory Units~~. In any of the areas specified in 210.12(A) ~~or~~ (B), where branch-circuit wiring is modified, replaced, or extended, the branch circuit shall be protected by one of the following:

Rest of section remains unchanged.

4. 210:52 (C) (2) Island and Peninsular Countertops and Work Surfaces.

While this new requirement may seem relatively minor, Housing First Minnesota’s members noted that this change, along with the inclusion of the change to 314.27(C) (Boxes At Ceiling Suspended, Paddle Fans) will cause increased costs to engineering, design and labor to ensure that these two changes are met simultaneously while maintaining the designs the market demands.

Recommendation: Amend Minnesota Rules 1315 to retain the 2017 National Electrical Code language.

- 5. 230.67: Surge Protection Devices.** Our State Building Codes are meant to protect the health and safety of occupants and durability of the structure. 230.67 is about maintaining the appliances, in the rare event that an electrical surge causes damage. These devices can be overly sensitive, and the activation of surge protection can produce a complete loss of power during winter months – shutting down furnaces. During an especially cold winter, homebuyers could see massive damage from burst pipes. This section is in conflict with the intent of the code and should be removed.

Recommendation: Amend Minnesota Rules 1315 to retain this as instruction to installation when a homeowner chooses to install this device.

- 6. 230.85: Exterior Disconnect, Dwellings.** As noted above, with Minnesota’s cold climate, any potential loss in power to the dwelling in winter months can cause costly damage to a dwelling. For dwellings relying on sump pumps, the complete loss of power can lead to water in the basement. Exterior disconnect devices have the potential for misuse and vandalism. As with 230.67, the negative outcomes to the homeowner far outweigh the benefit as the vast majority of the devices required under 230.85 will never be used.

Recommendation: Amend Minnesota Rules 1315 to retain 2017 NEC language which

required this only when a photovoltaic system is present.

7. **314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Throughout the various building codes adopted by our State, Minnesota follows the practice of use at time of permitting. Changing requirements for possible future uses only adds cost to the home and makes the homeowner pay for a situation that will likely never occur. The inclusion of this item runs counter to the legislative intent of the building code.

While the component costs may seem nominal, there are labor costs on the framing and drywall trades that will be impacted by this change, increasing the cost to homes.

Recommendation: Amend Minnesota Rules 1315 to not adopt 314.27(C) for dwellings unless a paddle fan is being installed at the time of permitting.

8. **406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.**

As Housing First Minnesota has recommended amending 210.12(A) to exclude Arc Fault-Interrupter Protection in new homes, this provision has been modified for consistency.

Recommendation: Amend Minnesota Rules as follows:

406.4(D)(4) Arc-Fault Circuit-Interrupter Protection. Where a receptacle outlet is located in any areas specified in 210.12(A) or (B), a replacement receptacle at this outlet shall be one of the following:

Rest of section remains unchanged.

9. **406.9. (C) Receptacle Limitations in Bathrooms.**

Members report that homeowners want an easily accessible receptacle in their bathrooms and the National Electric Code has long recognized this fact

Recommendation: Amend Minnesota Rules 1315 to retain the 2017 National Electric Code requirements.

Housing First Minnesota recognizes that the adoption of Minnesota amendments to the National Electric Code by the Board is unprecedented. The adoption of these amendments would prevent Housing First Minnesota from seeking a legislative remedy to our concerns. Both the Senate Select Committee on Home Ownership and Availability and the Legislative Commission on Housing Affordability have shown interest in reducing, not adding to, the cost of housing in our state.

Process Considerations – Nationally

Over the past decade, the model codes prepared by various entities have regrettably become sales channels for product manufacturers. The practice of “regulatory marketing” increases the

cost of construction through the inclusion of specific products in the model codes. For the companies manufacturing these now-mandated products, this practice is a financial win. For the consumer, it all too often results in unnecessarily higher home prices. The sales figures for the product manufacturers grow at the expense of housing affordability.

This is an area of deep concern for Housing First Minnesota across all model codes, not uniquely the electrical code. From insulation manufacturers who lobby to increase insulation requirements in the International Energy Conservation Code, to the dishwasher air gap device in the Plumbing Code, the practice of regulatory marketing is all too common. While this may occur at the national level, state regulators can rectify this unseemly practice and must make a concerted effort to do so.

Process Considerations - Minnesota

Upon the release of the Proposal, many Housing First Minnesota members raised concerns about the process, which adopts the National Electric Code recommendations with no Minnesota amendments.

Our concerns are rooted in the fact that, while most rulemaking bodies housed under the Department of Labor and Industry amend and produce the various model codes on which our industry relies, the Board of Electricity does not. The practice of adopting the model codes, without rigorous review and amendments, rewards entities that engage in regulatory marketing, while unnecessarily raising costs for Minnesota consumers.

Further, the adoption of the Proposal without amendments underscores the need for legislative oversight of housing policies. In recent Legislative sessions, the Minnesota Legislature has considered oversight of new housing policies when the cost to homeowners is \$1,000 or greater. Industry practitioners estimate that the cost of the Proposal is \$2,000 per new home. This Proposal would certainly enhance the oversight considerations being debated by the Legislature.

CONCLUSION

The combination of amendments proposed by Housing First Minnesota would save buyers of new homes up to \$2,000. This relief comes at a time when Minnesota has the highest new housing costs in the Midwest and critically low inventory available for sale. Policy makers at all levels are examining ways to decrease, not increase the cost of housing. Additionally, the suggested amendments address several existing provisions which have caused practical challenges for homeowners, and warranty callbacks for builders, electricians and appliance installers.

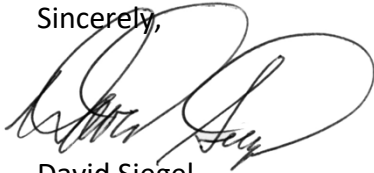
The State of Minnesota has in recent code cycles successfully navigated an effective balance between safety and affordability. Unfortunately, the Proposal departs from this and threatens to establish a worrisome precedent. We urge the Board of Electricity to reconvene with a stated

objective of better balancing safety and affordability, and examining the items we have highlighted herein.

If you have any comments on the considerations and recommendations of Housing First Minnesota, please contact Nicholas Erickson, Housing First Minnesota's Director of Research and Regulatory Affairs. He can be reached at nick@housingfirstmn.org.

Thank you for the consideration of our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "David Siegel". The signature is fluid and cursive, with the first name "David" and last name "Siegel" clearly distinguishable.

David Siegel
Executive Director
Housing First Minnesota

CC:

Legislative Commission on Housing Affordability
Senate Select Committee on Home Ownership Affordability and Availability

From: [Mike Barden](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Tuesday, April 14, 2020 2:12:12 PM
Attachments: [image001.gif](#)
[image002.png](#)

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

1. **210.8(A): GFCI. 250-Volt GFCI Provision.** Retain the language of the 2017 National Electric Code.
2. **210.8(A)(5): GFCI Protection, Basements.** Retain the language of the 2017 National Electric Code.
3. **210.12(A) Arc-Fault Circuit-Interrupter Protection, Dwelling Units.** Revert to the 2014 National Electrical Code
4. **210:52 (C) (2) Island and Peninsular Countertops and Work Surfaces.** Retain the language of the 2017 National Electric Code.
5. **230.67: Surge Protection Devices.** Retain the language of the 2017 National Electric Code.
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7. **314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
8. **406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.



Mike Barden

Vice President of Construction Operations : : Minnesota Division

Office (952) 229-0730 : : **Cell** (317) 281-3373

Mike.Barden@PulteGroup.com

From: [William Burgess](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Tuesday, April 14, 2020 1:00:47 PM

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- 8. 406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
- 9. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Bill Burgess
President Lennar Minnesota

Spuckler, Amanda (DLI)

From: Kyla Burgoyne <KBurgoyne@drhorton.com>
Sent: Tuesday, April 14, 2020 11:24 AM
To: RULES, DLI (DLI)
Subject: Hearing Request on MN Rules Chapter 1315

Importance: High

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Thank you for consideration of my comments.



KYLA BURGOYNE
Purchasing Manager

D.R. HORTON
20860 Kenbridge Cr, #100, Lakeville, MN 55044
o: 952.985.7810 m: 612.221.1581

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From: dave@craftsmancustomhomesmn.com
To: [RULES, DLI \(DLI\)](#)
Subject: New Electrical Code
Date: Wednesday, April 15, 2020 2:20:13 PM

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Thank you for consideration of my comments.

Dave Gardner
Craftsman Custom Homes Inc.

From: [Sarah Dulong](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 12:41:14 PM
Importance: High

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Subject: Hearing Request on MN Rules Chapter 1315

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Thank you for consideration of my comments.

Sarah Dulong
Director of Marketing & Closing Coordinator
Ron Clark Construction & Design
7500 West 78th Street
Edina, MN 55439
952-947-3027
www.RonClark.com
Proud recipient of the MN Business Ethics Award!

From: [Steve Ellefsen](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Tuesday, April 14, 2020 12:59:06 PM
Attachments: [image001.png](#)

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Thank you for consideration of my comments.

Steve Ellefsen

Director of Product Development

Lennar Corporation - MN

Steve.Ellefsen@Lennar.com

www.lennar.com

Office Direct: 952-229-6026

16305 36th Avenue N., Suite 600

Plymouth, MN 55446

From: [Engelbrecht, Ed](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 9:21:10 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

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Thank you for consideration of my comments.

Ed Engelbrecht

CEO | Pella Northland

C: 641.780.6015 | Engelbrechteg@pellamn.com

15300 25th Ave N., Ste. 100 Plymouth, MN 55447

From: [Timothy Fohr](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 8:33:39 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
Importance: High

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Thank you for consideration of my comments and your focus on making housing more affordable for ALL Minnesotans. Especially important NOW more than ever!

Tim Fohr
Director of Forward Planning

952-249-3087 (Office)

tim.fohr@lennar.com
www.lennar.com

From: [james fuschetto](#)
To: [RULES, DLI \(DLI\)](#)
Cc: [james fuschetto](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 1:35:25 PM

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

- 1. 210.8(A): GFCI. 250-Volt GFCI Provision.** Retain the language of the 2017 National Electric Code.
- 2. 210.8(A)(5): GFCI Protection, Basements.** Retain the language of the 2017 National Electric Code.
- 3. 210:52 (C) (2) Island and Peninsular Countertops and Work Surfaces.** Retain the language of the 2017 National Electric Code.
- 4. 230.67: Surge Protection Devices.** Retain the language of the 2017 National Electric Code.
- 5. 230.85: Exterior Disconnect, Dwellings.** Retain the language of the 2017 National Electric Code.
- 6. 314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
- 7. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Jim Fuschetto

From: [Samantha Grose](#)
To: [RULES, DLI \(DLI\)](#)
Subject: New Electrical Code
Date: Tuesday, April 14, 2020 1:05:36 PM

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

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9. 406.9. (C) Receptacle Limitations in Bathrooms. Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Samantha
Principal Designer & Owner
952.994.5877

Oak & Arrow Homes

From: [James Julkowski](#)
To: [RULES, DLI \(DLI\)](#)
Subject: New Electrical code
Date: Wednesday, April 15, 2020 10:52:25 AM
Attachments: [image001.png](#)

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

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- 9. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you

James Julkowski

Owner

Cell (612) 685-5291

james@julkowskiinc.com

Julkowski, Inc.

2087 Old Highway 8 NW

From: [Gary Kraemer](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Addressing the New Electrical Code
Date: Tuesday, April 14, 2020 1:23:29 PM

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

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- 8. 406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
- 9. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Best Regards,

Gary Kraemer, President

John Kraemer & Sons, Inc.
Custom Building & Renovations
4906 Lincoln Drive
Edina, MN 55436
www.JKandSons.com

(Office) 952-935-9100
(Cell) 612-910-2791

4 Time Housing 1st MN Builder of the Year
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From: [Randy Kulzer](#)
To: [RULES, DLI \(DLI\)](#)
Subject: hearing request on MN Rules chapter 1315
Date: Tuesday, April 14, 2020 1:55:50 PM
Attachments: [image003.jpg](#)
Importance: High

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

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9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.



Randy Kulzer

Construction Manager

D.R. HORTON

20860 Kenbridge Ct. #100, Lakeville, MN 55044

o: 952.985.7815 **m:** 612.366.4303

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From: [Dale Loeffler](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 9:25:16 AM
Attachments: [image001.png](#)

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

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9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Dale Loeffler | Territory Market Manager, Twin Cities
612.819.0630 | [marvin.com](#)



From: Andy@bmichels-const.com
To: [RULES, DLI \(DLI\)](#)
Subject: FW: Electrical Code Comments - Call For Member Participation
Date: Tuesday, April 14, 2020 4:10:47 PM

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Dear Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

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- **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for your considerations on these items and your continued smart decisions to ensure cost of remodeling and building homes for the residents of MN remains competitive and straight forward for the consumer to understand.

Andrew Michels
Vice President
Bob Michels Construction, Inc.
C: 651.248.7534

“The bitterness of poor workmanship remains long after the sweetness of low price is forgotten.”
— Benjamin Franklin

From: [Mike Diebel](#)
To: [RULES, DLI \(DLI\)](#)
Date: Wednesday, April 15, 2020 1:28:18 PM

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

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9. 406.9. (C) Receptacle Limitations in Bathrooms. Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Mike Diebel
Cardinal Remodeling

From: Jason
To: Electrical Code Issues
Subject: Electrical Code Issues
Date: Tuesday, April 24, 2020 1:44:02 PM

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

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9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Jason Myrle



Jason Myrle | President
jmyrle@jasonmyrle.com | 855-882-7977
J Christian Remodeling
Best of Houzz 2015, 2016, 2017, 2018
NAEC 2018 Remodeling Committee Chair
NARI Certified Kitchen & Bath Remodeler
www.jasonmyrle.com

Spuckler, Amanda (DLI)

From: Art Pratt <apratt@pratthomes.com>
Sent: Tuesday, April 14, 2020 12:32 PM
To: RULES, DLI (DLI)
Subject: To the Minnesota Board of Electricity

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- 9. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Art Pratt
Pratt Homes
apratt@pratthomes.com
direct 651-236-8380

From: John Quinlivan
To: BULES, Bill (D&D)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 11:56:15 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
Importance: High

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To the Minnesota Board of Electricity:

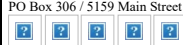
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Thank you for consideration of my comments.



John Quinlivan / Founder
Office: 763.479.3117 Mobile: 612.418.1002
PO Box 306 / 5159 Main Street E #200 / Maple Plain, MN / 55359 / MN Lic: BC531961



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From: [John Rask](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Wednesday, April 15, 2020 9:21:53 AM

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To the Minnesota Board of Electricity:

As a local builder and member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

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Thank you for consideration of my comments.

John Rask
Vice President of Land

M/I Homes of Minneapolis, LLC | Land
5354 Parkdale Drive | #100 | St. Louis Park, MN | 55416
www.mihomes.com/Minneapolis

Phone: (763) 586-7202
Mobile: (612) 910-9909
jrask@mihomes.com

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From: [James R. Slaikeu](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Tuesday, April 14, 2020 4:21:39 PM
Attachments: [image001.jpg](#)

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Thank you for consideration of my comments.



JIM SLAIKEU

Division President

D.R. HORTON – MINNESOTA

20860 Kenbridge Court Suite #100, Lakeville, MN 55044

o: 952-985.7403 **m:** 651.319.3140

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From: [Brian Thompson](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Tuesday, April 14, 2020 7:43:55 PM
Attachments: [image002.jpg](#)
[image003.jpg](#)
[image004.png](#)
Importance: High

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Subject: Hearing Request on MN Rules Chapter 1315

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9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Brian Thompson
VP of Purchasing
Lennar

Brian.Thompson@Lennar.com
www.lennar.com

Office Phone: 952-249-3032
Cell Phone: 612-490-1643

16305 36th Avenue North. Suite 600

From: tim@jeskeelectric.com
To: [RULES, DLI \(DLI\)](#)
Subject: Addressing the New Electrical Code
Date: Wednesday, April 15, 2020 4:16:17 PM
Attachments: [image003.jpg](#)

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To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

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- 7. 314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
- 8. 406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
- 9. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Tim Jeske

Owner/General Manager

Jeske Electric, Inc.

4124 Mackenzie Ct NE, Suite 100, St. Michael, MN 55376

Mobile | 763.286.1619 Office | 763.428.3902 Fax | 763.428.3904

MN LIC# EA000929 WI LIC# 1476068

www.jeskeelectric.com

From: [Lisa Ulett](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request on MN Rules Chapter 1315
Date: Tuesday, April 14, 2020 1:44:57 PM
Attachments: [image001.png](#)
[image002.png](#)

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

1. **210.8(A): GFCI. 250-Volt GFCI Provision.** Retain the language of the 2017 National Electric Code.
2. **210.8(A)(5): GFCI Protection, Basements.** Retain the language of the 2017 National Electric Code.
3. **210.12(A) Arc-Fault Circuit-Interrupter Protection, Dwelling Units.** Revert to the 2014 National Electrical Code
4. **210:52 (C) (2) Island and Peninsular Countertops and Work Surfaces.** Retain the language of the 2017 National Electric Code.
5. **230.67: Surge Protection Devices.** Retain the language of the 2017 National Electric Code.
6. **230.85: Exterior Disconnect, Dwellings.** Retain the language of the 2017 National Electric Code.
7. **314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
8. **406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Lisa Ulett



LISA ULETT

Division Procurement Manager :: Minnesota Division

direct (952-229-0734) :: **mobile** (952-220-3743)

pultegroup.com

From: [Laura Scheidecker](#)
To: [RULES, DLI \(DLI\)](#)
Cc: nick@housingfirstmn.org; [Kate Wigley](#)
Subject: Addressing the New Electrical Code
Date: Wednesday, April 15, 2020 1:56:37 PM

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

- 1. 210.8(A): GFCI. 250-Volt GFCI Provision.** Retain the language of the 2017 National Electric Code.
- 2. 210.8(A)(5): GFCI Protection, Basements.** Retain the language of the 2017 National Electric Code.
- 3. 210.12(A) Arc-Fault Circuit-Interrupter Protection, Dwelling Units.** Revert to the 2014 National Electrical Code
- 4. 210:52 (C) (2) Island and Peninsular Countertops and Work Surfaces.** Retain the language of the 2017 National Electric Code.
- 5. 230.67: Surge Protection Devices.** Retain the language of the 2017 National Electric Code.
- 6. 230.85: Exterior Disconnect, Dwellings.** Retain the language of the 2017 National Electric Code.
- 7. 314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
- 8. 406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
- 9. 406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Laura Wiener Scheidecker
Cardinal Realty | Homebuilders | Remodeling
Direct: 651.379.1175
Office: 651.739.8033
laura@cardinalremodeling.com
www.cardinalremodeling.com

Spuckler, Amanda (DLI)

From: Anthony Wiener <anthony@cardinalrealtors.com>
Sent: Tuesday, April 14, 2020 11:32 AM
To: RULES, DLI (DLI)
Subject: New Electrical Code

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

1. **210.8(A): GFCI. 250-Volt GFCI Provision.** Retain the language of the 2017 National Electric Code.
2. **210.8(A)(5): GFCI Protection, Basements.** Retain the language of the 2017 National Electric Code.
3. **210.12(A) Arc-Fault Circuit-Interrupter Protection, Dwelling Units.** Revert to the 2014 National Electrical Code
4. **210.52 (C) (2) Island and Peninsular Countertops and Work Surfaces.** Retain the language of the 2017 National Electric Code.
5. **230.67: Surge Protection Devices.** Retain the language of the 2017 National Electric Code.
6. **230.85: Exterior Disconnect, Dwellings.** Retain the language of the 2017 National Electric Code.
7. **314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
8. **406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Tony

Cardinal Homebuilders

From: [Nick Zawadski](#)
To: [RULES, DLI \(DLI\)](#)
Subject: Hearing Request
Date: Tuesday, April 14, 2020 1:38:34 PM
Attachments: [image001.png](#)

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

To the Minnesota Board of Electricity:

As a member of the housing industry, I am writing to formally request a hearing on Minnesota Rules Chapter 1315.

Additionally, I believe the Board of Electricity should discontinue its practice of not adopting any Minnesota-specific amendments to the National Electric Code. Specifically, Minnesota Rules Chapter 1315 should be amended as follows:

1. **210.8(A): GFCI. 250-Volt GFCI Provision.** Retain the language of the 2017 National Electric Code.
2. **210.8(A)(5): GFCI Protection, Basements.** Retain the language of the 2017 National Electric Code.
3. **210.12(A) Arc-Fault Circuit-Interrupter Protection, Dwelling Units.** Revert to the 2014 National Electrical Code
4. **210.52 (C) (2) Island and Peninsular Countertops and Work Surfaces.** Retain the language of the 2017 National Electric Code.
5. **230.67: Surge Protection Devices.** Retain the language of the 2017 National Electric Code.
6. **230.85: Exterior Disconnect, Dwellings.** Retain the language of the 2017 National Electric Code.
7. **314.27(C) Boxes at Ceiling Suspended, Paddle Fans.** Retain the language of the 2017 National Electric Code.
8. **406.4(D)(4) Arc-Fault Circuit-Interrupter Protection Replacement.** Revert to the 2014 National Electrical Code
9. **406.9. (C) Receptacle Limitations in Bathrooms.** Retain the language of the 2017 National Electric Code.

Thank you for consideration of my comments.

Nick Zawadski

651-261-9603

NickZ@ZawadskiHomes.com

www.zawadskihomes.com

Exhibit J

No letter requesting authorization to omit the text of the proposed rule is submitted because the Board of Electricity did not submit such a letter. Therefore, no order authorizing such an omission is submitted.

Exhibit K

Minnesota Board of Electricity

CERTIFICATE OF SENDING THE NOTICE AND THE STATEMENT OF NEED AND REASONABLENESS TO LEGISLATORS AND THE LEGISLATIVE COORDINATING COMMISSION

Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632

I certify that on March 12, 2020 when the Department mailed Notice of Intent to Adopt Rules under Minnesota Statutes, section 14.14 or 14.22, I sent a copy of the Notice and the Statement of Need and Reasonableness to certain Legislators and the Legislative Coordinating Commission by depositing them in the State of Minnesota's central mail system for United States mail with postage prepaid or by sending an electronic copy via email. I mailed and e-mailed these documents to comply with Minnesota Statutes, section 14.116. A copy of the cover letter is attached to this Certificate.



Amanda Spuckler
Rules Specialist

March 12, 2020

Senator Eric Pratt, Chair, sen.eric.pratt@senate.mn

Senator Justin Eichorn, Vice Chair

Capitol Office

95 University Avenue W.

Minnesota Senate Building, Room 3213

Senator Bobby Jo Champion, Ranking Democrat, sen.bobby.champion@senate.mn

Senate Jobs and Economic Growth Finance

Representative Mike Sundin, Chair, rep.mike.sundin@house.mn

Representative Erin Koegel, Vice Chair, rep.erin.koegel@house.mn

Representative Bob Vogel, Republican Lead, rep.bob.vogel@house.mn

House Labor Committee

Representative Tim Mahoney, Chair, rep.tim.mahoney@house.mn

Representative Mohamud Noor, Vice Chair, rep.mohamud.noor@house.mn

Representative Bob Gunther, Republican Lead, rep.bob.gunther@house.mn

House Jobs and Economic Development Finance Division

Representative Laurie Halverson, Chair, rep.laurie.halverson@house.mn

Representative Zack Stephenson, Vice Chair, rep.zack.stephenson@house.mn

Representative Tim O'Driscoll, Republican Lead, rep.tim.odriscoll@house.mn

House Commerce Committee

Re: In the Matter of the Proposed Rules of the Minnesota Board of Electricity Governing
Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200;
Revisor's ID Number R-04632

Dear Legislators:

Executive Summary: The Minnesota Board of Electricity intends to adopt rule amendments to the Minnesota Electrical Code, Minnesota Rules, Chapter 1315, to adopt the 2020 edition of the National Electrical Code ("NEC"). The Minnesota Electrical Code is part of the Minnesota State Building Code. Minnesota Statutes, Section 326B.32, subdivision 2 (a)(3) (2018), requires the Board to adopt the Minnesota Electrical Code, which must be the most current version of the NEC. The 2020 edition is the most current edition of the NEC.

Minnesota Statutes, section 14.116(b), states:

When an agency mails notice of intent to adopt rules under section 14.14 or 14.22, the agency must send a copy of the same notice and a copy of the statement of need and reasonableness to the chairs and ranking minority party members of the legislative policy

and budget committees with jurisdiction over the subject matter of the proposed rules and to the Legislative Coordinating Commission.

We plan to publish a Dual Notice: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received, in the March 16, 2020, State Register. We are now mailing the Notice under section 14.225.

As required by section 14.116, the Department is sending you a copy of the notice and the Statement of Need and Reasonableness. For your information, I have also attached a copy of the rule. Electronic copies of these documents and other rulemaking information are available at <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

If you have any questions about these rules, please contact me at amanda.spuckler@state.mn.us or (651) 284-5361.

Very truly yours,



Amanda Spuckler
Rules Specialist
Email: amanda.spuckler@state.mn.us
Phone: (651) 284-5361

Enclosures: Dual Notice
Proposed Rule
Statement of Need and Reasonableness

cc: Legislative Coordinating Commission, lcc@lcc.leg.mn

Spuckler, Amanda (DLI)

From: Spuckler, Amanda (DLI)
Sent: Thursday, March 12, 2020 8:29 AM
To: lcc@lcc.leg.mn; sen.eric.pratt@senate.mn; sen.bobby.champion@senate.mn;
rep.mike.sundin@house.mn; rep.erin.koegel@house.mn; rep.bob.vogel@house.mn;
rep.tim.mahoney@house.mn; rep.mohamud.noor@house.mn;
rep.bob.gunther@house.mn; rep.laurie.halverson@house.mn;
rep.zack.stephenson@house.mn; rep.tim.odriscoll@house.mn
Cc: Lebowski, Jeffrey F (DLI)
Subject: Minnesota Board of Electricity Rulemaking Notice, Minnesota Rules, Part 1315.0200
Attachments: Letter to legislators.pdf; 1315_Dual Notice_Final.pdf; RD4632_certified.pdf; SONAR_2020_NEC_Final_03-09-20.pdf

Pursuant to Minnesota Statutes, section 14.116(b), please review the attached cover letter, the Dual Notice, proposed rule, and the Statement of Need and Reasonableness for the above-referenced rules. Additional information is [available in the rulemaking docket](#)

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



Exhibit K.1

Minnesota Board of Electricity

**CERTIFICATE OF SENDING THE NOTICE OF RESCHEDULED HEARING TO
LEGISLATORS AND THE LEGISLATIVE COORDINATING COMMISSION**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on April 16, 2020 when the Department mailed Notice of Intent to Adopt Rules under Minnesota Statutes, section 14.14 or 14.22, I sent a copy of to certain Legislators and the Legislative Coordinating Commission by depositing them in the State of Minnesota's central mail system for United States mail with postage prepaid or by sending an electronic copy via email. I mailed and e-mailed these documents to comply with Minnesota Statutes, section 14.116. A copy of the cover letter is attached to this Certificate.



Amanda Spuckler
Rules Specialist

April 16, 2020

Senator Eric Pratt, Chair, sen.eric.pratt@senate.mn

Senator Justin Eichorn, Vice Chair

Capitol Office

95 University Avenue W.

Minnesota Senate Building, Room 3213

Senator Bobby Jo Champion, Ranking Democrat, sen.bobby.champion@senate.mn

Senate Jobs and Economic Growth Finance

Representative Mike Sundin, Chair, rep.mike.sundin@house.mn

Representative Erin Koegel, Vice Chair, rep.erin.koegel@house.mn

Representative Bob Vogel, Republican Lead, rep.bob.vogel@house.mn

House Labor Committee

Representative Tim Mahoney, Chair, rep.tim.mahoney@house.mn

Representative Mohamud Noor, Vice Chair, rep.mohamud.noor@house.mn

Representative Bob Gunther, Republican Lead, rep.bob.gunther@house.mn

House Jobs and Economic Development Finance Division

Representative Laurie Halverson, Chair, rep.laurie.halverson@house.mn

Representative Zack Stephenson, Vice Chair, rep.zack.stephenson@house.mn

Representative Tim O'Driscoll, Republican Lead, rep.tim.odriscoll@house.mn

House Commerce Committee

Re: Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing
Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200;
Revisor's ID Number R-04632

Dear Legislators:

The Minnesota Board of Electricity intends to adopt rule amendments to the Minnesota Electrical Code, Minnesota Rules, Chapter 1315, to adopt the 2020 edition of the National Electrical Code ("NEC"). To that end, the Board published a Dual Notice: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received in the March 16, 2020 *State Register* (44 SR 1025). This Dual Notice was mailed to you on March 12, 2020, in accordance with Minnesota Statutes, section 14.116(b). The Dual Notice stated that if twenty-five requests for hearing were received then a hearing will be held on May 4, 2020.

The Board received the twenty-five requests necessary for a hearing. However, due to the current health crisis and extension of Governor Walz's peacetime emergency powers, the above-mentioned hearing is rescheduled to Wednesday, August 19, 2020, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155.

Electronic copies of the Notice of Rescheduled Hearing and other rulemaking information are available at <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

If you have any questions about these rules, please contact me at amanda.spuckler@state.mn.us or (651) 284-5361.

Very truly yours,



Amanda Spuckler
Rules Specialist
Email: amanda.spuckler@state.mn.us
Phone: (651) 284-5361

Enclosures: Notice of Rescheduled Hearing

cc: Legislative Coordinating Commission, lcc@lcc.leg.mn

From: [Spuckler, Amanda \(DLI\)](#)
To: lcc@lcc.leg.mn; sen.eric.pratt@senate.mn; sen.bobby.champion@senate.mn; rep.mike.sundin@house.mn; rep.erin.koegel@house.mn; rep.bob.vogel@house.mn; rep.tim.mahoney@house.mn; rep.mohamud.noor@house.mn; rep.bob.gunther@house.mn; rep.laurie.halverson@house.mn; rep.zack.stephenson@house.mn; rep.tim.odriscoll@house.mn
Cc: [Lebowski, Jeffrey F \(DLI\)](#)
Subject: Minnesota Board of Electricity - Notice of Rescheduled Hearing for Proposed Amendments to Part 1315.0200
Date: Thursday, April 16, 2020 10:46:00 AM
Attachments: [1315 letter to legislators and LCC Rescheduled.pdf](#)
[Notice of Rescheduled Hearing.pdf](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)

Please review the attached cover letter and Notice of Rescheduled Hearing for the above-referenced rules. Additional information is [available in the rulemaking docket](#).

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Rescheduled Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the May 04, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Dual Notice of Hearing as described in the March 16, 2020 *State Register* (44 SR 1025), is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will take place starting at 9:00 a.m. on Wednesday, August 19, 2020, and continue until the hearing is completed, at the Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota 55155. For complete information concerning participation at the rescheduled public hearing, please view the Dual Notice of Hearing referenced above or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit K.2

Minnesota Board of Electricity

**CERTIFICATE OF SENDING THE NOTICE OF REVISED FORMAT OF HEARING
TO LEGISLATORS AND THE LEGISLATIVE COORDINATING COMMISSION**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on July 9, 2020 when the Department mailed Notice of Revised Format of Hearing under Minnesota Statutes, section 14.14 or 14.22, I sent a copy of to certain Legislators and the Legislative Coordinating Commission by depositing them in the State of Minnesota's central mail system for United States mail with postage prepaid or by sending an electronic copy via email. I mailed and e-mailed these documents to comply with Minnesota Statutes, section 14.116. A copy of the cover letter is attached to this Certificate.



Amanda Spuckler
Rules Specialist

July 9, 2020

Senator Eric Pratt, Chair, sen.eric.pratt@senate.mn

Senator Justin Eichorn, Vice Chair

Capitol Office

95 University Avenue W.

Minnesota Senate Building, Room 3213

Senator Bobby Jo Champion, Ranking Democrat, sen.bobby.champion@senate.mn

Senate Jobs and Economic Growth Finance

Representative Mike Sundin, Chair, rep.mike.sundin@house.mn

Representative Erin Koegel, Vice Chair, rep.erin.koegel@house.mn

Representative Bob Vogel, Republican Lead, rep.bob.vogel@house.mn

House Labor Committee

Representative Tim Mahoney, Chair, rep.tim.mahoney@house.mn

Representative Mohamud Noor, Vice Chair, rep.mohamud.noor@house.mn

Representative Bob Gunther, Republican Lead, rep.bob.gunther@house.mn

House Jobs and Economic Development Finance Division

Representative Laurie Halverson, Chair, rep.laurie.halverson@house.mn

Representative Zack Stephenson, Vice Chair, rep.zack.stephenson@house.mn

Representative Tim O'Driscoll, Republican Lead, rep.tim.odriscoll@house.mn

House Commerce Committee

Re: Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing
Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200;
Revisor's ID Number R-04632

Dear Legislators:

The Minnesota Board of Electricity intends to adopt rule amendments to the Minnesota Electrical Code, Minnesota Rules, Chapter 1315, to adopt the 2020 edition of the National Electrical Code ("NEC"). To that end, the Board published a Dual Notice: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing if 25 or More Requests for Hearing Are Received in the March 16, 2020 *State Register* (44 SR 1025). This Dual Notice was mailed to you on March 12, 2020, in accordance with Minnesota Statutes, section 14.116(b). The Dual Notice stated that if twenty-five requests for hearing were received then a hearing would be held on May 4, 2020.

The Board received the twenty-five requests necessary for a hearing. However, due to the current health crisis, the above-mentioned hearing was rescheduled to Wednesday, August 19, 2020 as described in the April 20, 2020 *State Register* (44 SR 1204). Also, due to the current health crisis, the hearing will be a virtual proceeding via WebEx. The enclosed Notice of Revised Format of

Hearing that will be published in the July 13, 2020 State Register describes how interested or affected persons may participate or view the presentation via WebEx.

Electronic copies of the Notice of Revised Format of Hearing and other rulemaking information are available at <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

If you have any questions about these rules, please contact me at amanda.spuckler@state.mn.us or (651) 284-5361.

Very truly yours,



Amanda Spuckler
Rules Specialist
Email: amanda.spuckler@state.mn.us
Phone: (651) 284-5361

Enclosures: Notice of Revised Format of Hearing

cc: Legislative Coordinating Commission, lcc@lcc.leg.mn

From: [Spuckler, Amanda \(DLI\)](#)
To: lcc@lcc.leg.mn; sen.eric.pratt@senate.mn; sen.bobby.champion@senate.mn; rep.mike.sundin@house.mn; rep.erin.koegel@house.mn; rep.bob.vogel@house.mn; rep.tim.mahoney@house.mn; rep.mohamud.noor@house.mn; rep.bob.gunther@house.mn; rep.laurie.halverson@house.mn; rep.zack.stephenson@house.mn; rep.tim.odriscoll@house.mn
Subject: Minnesota Board of Electricity - Notice of Revised Format of Hearing for Proposed Amendments to Part 1315.0200
Date: Thursday, July 09, 2020 7:53:00 AM
Attachments: [1315 letter to legislators and LCC revised hearing format.pdf](#)
[Notice of Reformatted Hearing signature.pdf](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

Please review the attached cover letter and Notice of Revised Format of Hearing for the above-referenced rules. Additional information is [available in the rulemaking docket](#).

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



Exhibit K.3

Minnesota Board of Electricity

**CERTIFICATE OF MAILING A NOTICE OF HEARING TO THOSE WHO
REQUESTED A HEARING**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on April 16, 2020, I mailed a Notice of Hearing by sending an electronic copy via email to all persons who requested a hearing. The Notice is given under Minnesota Statutes, section 14.25, subdivision 1. Copies of both the Notice and of the mailing list are attached to this Certificate.



Amanda Spuckler
Rules Specialist

Minnesota Board of Electricity

NOTICE OF HEARING TO THOSE WHO REQUESTED A HEARING

Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-04632, OAH docket number 82-9001-36673

To persons who requested a hearing. In accordance with Minnesota Statutes, section 14.25, subdivision 1, the Department is sending this Notice to all persons who requested a hearing.

There will be a hearing. In the March 16, 2020, State Register, on pages 1025 to 1028, the Board of Electricity published a Notice of Intent to Adopt Rules relating to the adoption of the 2020 National Electrical Code. The Notice stated that the Board would hold a hearing on the proposed rules if 25 or more persons submitted written requests. We have received a sufficient number of requests for a hearing.

However, the hearing will not be conducted as stated in the State Register on March 16, 2020. Instead, the May 04, 2020 hearing is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will be held in the Minnesota Room of the Department of Labor and Industry located 443 Lafayette Road North in St. Paul, starting at 9:00 a.m. on **Wednesday, August 19, 2020**, and continuing until the hearing is completed. A Notice of Rescheduled Hearing will be published in the State Register on April 20, 2020.

Administrative Law Judge. Administrative Law Judge Barbara Case will conduct the hearing. Judge Case's legal assistant, Michelle Hendrickson, may be reached at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, Saint Paul, Minnesota 55164-0620, telephone at (651) 361-7896, fax (651) 539-0310, and email: michelle.l.hendrikson@state.mn.us.

Agency Contact Person. The agency contact person is: Amanda Spuckler at the Minnesota Department of Labor and Industry, 443 Lafayette Rd. N., St. Paul, Minnesota 55155, telephone (651) 284-5006, and email: dli.rules@state.mn.us. You should direct questions or comments about the rules to the agency contact person. A copy of the Notice of Intent to Adopt Rules, as published in the State Register on March 16, 2020, is available upon request from the agency contact person or may be viewed on the Board's website, along with additional hearing information, at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.

April 16, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

From: [Spuckler, Amanda \(DLI\)](#)
To: [Spuckler, Amanda \(DLI\)](#)
Cc: [RULES, DLI \(DLI\)](#)
Bcc: [David@HousingFirstMN.org](#); [KBurgoyne@drhorton.com](#); [anthony@cardinalrealtors.com](#); [apratt@pratthomes.com](#); [steve.ellefsen@lennar.com](#); [Bill.Burgess@Lennar.com](#); [samantha@oakarrowhomes.com](#); [gary@jkandsons.com](#); [nickz@zawadskihomes.com](#); [jason@jcarstenremodeling.com](#); [Lisa.Ulett@PulteGroup.com](#); [rkulzer@drhorton.com](#); [Mike.Barden@PulteGroup.com](#); [andy@bmichels-const.com](#); [JRSlaikeu@drhorton.com](#); [Brian.Thompson@Lennar.com](#); [Tim.Fohr@Lennar.com](#); [EngelbrechtEG@PellaMN.com](#); [jask@MIHOMES.com](#); [dloeffler@marvin.com](#); [james@julkowskiinc.com](#); [john@gordon-james.com](#); [sarah@ronclark.com](#); [mike@cardinalremodeling.com](#); [jafuschetto@hotmail.com](#); [laura@cardinalremodeling.com](#); [dave@craftsmancustomhomesmn.com](#); [tim@jeskeelectric.com](#); [nick@housingfirstmn.org](#)
Subject: Notice of Hearing To Those Who Requested a Hearing, Minnesota Rules, Part 1315.0200
Date: Thursday, April 16, 2020 11:38:00 AM
Attachments: [1315 Notice of hearing to those who requested a hearing.pdf](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)

You are receiving this email because you have requested a hearing on the proposed rules governing the adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200. The Department received hearing requests from more than 25 persons. Consequently, there will be a hearing.

However, the hearing will not be conducted as stated in the State Register on March 16, 2020. Instead, the May 04, 2020 hearing is being rescheduled due to the current health crisis and extension of Governor Walz's peacetime emergency powers. The rescheduled public hearing will be held at the Department of Labor and Industry on **Wednesday, August 19, 2020**. A Notice of Rescheduled Hearing will be published in the State Register on April 20, 2020.

Additional information about the status of the rulemaking is available in the [rulemaking docket](#).

Thank you.

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155

Phone: (651) 284-5361 | Web: www.dli.mn.gov



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Jim Fuschetto	jafuschetto@hotmail.com
Laura Scheidecker	laura@cardinalremodeling.com
Dave Gardner	dave@craftsmancustomhomesmn.com
Tim Jeske	tim@jeskeelectric.com

Exhibit K.4

Minnesota Board of Electricity

**CERTIFICATE OF MAILING A NOTICE OF REVISED FORMAT OF HEARING TO
THOSE WHO REQUESTED A HEARING**

**Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota
Rules, Part 1315.0200; Revisor's ID Number R-04632**

I certify that on July 13, 2020, I mailed a Notice of Revised Format of Hearing by sending an electronic copy via email to all persons who requested a hearing. The Notice is given under Minnesota Statutes, section 14.25, subdivision 1. Copies of both the Notice and of the mailing list are attached to this Certificate.



Amanda Spuckler
Rules Specialist

From: [Spuckler, Amanda \(DLI\)](#)
To: [Spuckler, Amanda \(DLI\)](#)
Bcc: [David@HousingFirstMN.org](#); [nick@housingfirstmn.org](#); [KBurgoyne@drhorton.com](#); [anthony@cardinalrealtors.com](#); [apratt@pratthomes.com](#); [steve.ellefsen@lennar.com](#); [Bill.Burgess@Lennar.com](#); [samantha@oakarrowhomes.com](#); [gary@jkandsons.com](#); [nickz@zawadskihomes.com](#); [jason@jcarstenremodeling.com](#); [Lisa.Ulett@PulteGroup.com](#); [rkulzer@drhorton.com](#); [Mike.Barden@PulteGroup.com](#); [andy@bmichels-const.com](#); [JRSlaikeu@drhorton.com](#); [Brian.Thompson@Lennar.com](#); [Tim.Fohr@Lennar.com](#); [EngelbrechtEG@PellaMN.com](#); [jask@MIHOMES.com](#); [dloeffler@marvin.com](#); [james@julkowskiinc.com](#); [john@gordon-james.com](#); [sarah@ronclark.com](#); [mike@cardinalremodeling.com](#); [jafuschetto@hotmail.com](#); [laura@cardinalremodeling.com](#); [dave@craftsmancustomhomesmn.com](#); [tim@jeskeelectric.com](#)
Subject: Minnesota Board of Electricity Notice of Revised Format of Hearing
Date: Monday, July 13, 2020 8:06:00 AM
Attachments: [image002.png](#)
[image004.png](#)
[image006.png](#)

Notice of Revised Format of Hearing

Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

You are receiving this email because you have requested a hearing on the proposed rules governing the adoption of the 2020 National Electrical Code, Minnesota Rules, part 1315.0200..

The format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, is being revised to a WebEx format due to concerns over public group meetings during the current COVID-19 health pandemic. The following document related to this rulemaking will be published in the July 13, 2020, edition of the *State Register*:

- Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200

The Notice of Revised Format of Hearing provides details about the hearing.

The Notice of Revised Format of Hearing, proposed rules and Statement of Need and Reasonableness, along with other information about the status of the rulemaking, are [available in the rulemaking docket](#).

Questions?

Contact us at dli.rules@state.mn.us.

Amanda Spuckler

Rules Specialist and Outreach | Education, Rules and Code Development

Minnesota Department of Labor and Industry

443 Lafayette Road N., St. Paul, MN 55155
Phone: (651) 284-5361 | Web: www.dli.mn.gov



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Jim Fuschetto	jafuschetto@hotmail.com
Laura Scheidecker	laura@cardinalremodeling.com
Dave Gardner	dave@craftsmancustomhomesmn.com
Tim Jeske	tim@jeskeelectric.com

OFFICIAL NOTICES

Minnesota Board of Electricity

Notice of Revised Format of Hearing on Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-04632

Notice is hereby given that the format of the August 19, 2020 rules hearing on the proposed amendment to Rules governing adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200, referenced in the Minnesota Board of Electricity's Notice of Rescheduled Hearing as described in the April 20, 2020 *State Register* (44 SR 1204), is being revised to a Webex format due to concerns over public group meetings during the current COVID-19 health pandemic. Pursuant to *Minnesota Statutes*, section 13D.021, subdivision 1 (2019), the Board Chair has determined that this meeting will be conducted remotely because it is not practical or prudent for an in-person meeting due to the current pandemic.

Hearing Procedure. You and all interested or affected persons, including representatives of associations or other interested groups, will have an opportunity to view the presentation by joining the hearing by internet, mobile device or phone as follows:

To view the presentation and join the hearing by internet, navigate on your computer to: <https://tinyurl.com/y9d39rt6> or <https://minnesota.webex.com> and enter:

- Meeting Number: 146 735 1484
- Meeting Password: nxJ9pQ7N2hW

To join from a mobile device:

[+1-415-655-0003](tel:+14156550003), [146 735 1484###](tel:+14156550003) United States Toll
[1-855-282-6330](tel:+18552826330), [146 735 1484###](tel:+18552826330) United States Toll Free

To join by phone:

+1-415-655-0003 United States Toll
1-855-282-6330 United States Toll Free

To join from a video system or application:

Dial 1467351484@minnesota.webex.com

You can also dial 173.243.2.68 and enter your meeting number.

You may present your views either orally at the hearing or in writing at any time before the hearing record closes. All evidence presented should relate to the proposed rules. You may also submit written material to the Administrative Law Judge to be recorded in the hearing record for five working days after the public hearing ends. At the hearing the Administrative Law Judge may order that this five-day comment period is extended for a longer period but not more than 20 calendar days. Following the comment period, there is a five-working-day rebuttal period when

the Board and any interested person may respond in writing to any new information submitted. No one may submit new evidence during the five-day rebuttal period.

All post-hearing comments and responses must be submitted to the Administrative Law Judge no later than 4:30 p.m. on the due date. The Office of Administrative Hearings strongly encourages all persons submitting comments and responses to do so using the Administrative Hearings' Rulemaking eComments website at: <https://minnesotaoah.granicusideas.com>. If using the eComments website is not possible, you may submit post-hearing comments in person, via United States mail, or by facsimile addressed to Judge Case. Judge Case can be reached by contacting legal assistant Michelle Hendrickson at the Office of Administrative Hearings, 600 North Robert Street, P.O. Box 64620, St. Paul, MN 55164-0620, telephone (651) 361-7896, fax (651) 539-0130, and email Michelle.L.Hendrickson@state.mn.us.

All comments or responses received will be available for review at the Department of Labor and Industry or on the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>. This rule hearing procedure is governed by *Minnesota Rules*, parts 1400.2000 to 1400.2240, and *Minnesota Statutes*, sections 14.131 to 14.20. You may direct questions about the procedure to the Administrative Law Judge.

For more information concerning this rulemaking and participation at the revised public hearing, please view the initial Dual Notice of Hearing as published in the March 16, 2020 edition of the *State Register* (44 SR 1025) or visit the Board's website at: <http://www.dli.mn.gov/about-department/rulemaking/rulemaking-docket-minnesota-rules-1315>.



July 06, 2020

Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit K.5

Kwesi Pasley
Executive Budget Officer
Minnesota Management and Budget
658 Cedar St., Suite 400
St. Paul, MN 55155

January 14, 2020

Re: In the Matter of the Proposed Rules of the Minnesota Board of Electricity Adopting and Incorporating the 2020 National Electrical Code for Use in Minnesota, Minnesota Rules, Chapter 1315, Minnesota Electrical Code; Revisor's ID Number RD-4632

Dear Mr. Pasley,

Minnesota Statutes, section 14.131, requires that an agency or board engaged in rulemaking consult with the Commissioner of Minnesota Management and Budget, "to help evaluate the fiscal impact and fiscal benefits of the proposed rule on units of local government."

Enclosed for your review are copies of the following documents on proposed rule amendments relating to the Minnesota Electrical Code, Minnesota Rules, Chapter 1315.

1. The Governor's Office Proposed Rule and SONAR Form (signed by Board Chair Daniel Westberg).
2. The 10/22/19 Revisor's draft of the proposed rule.
3. The 01/14/20 near-final draft of the SONAR.

I have also delivered copies of these documents to the Governor's office today.

If you or any other representative of the Commissioner of Minnesota Management & Budget has questions about the proposed rule, please call me at 651-284-5172. Please send any correspondence about this matter by email to me at jeffrey.f.lebowski@state.mn.us or to the following address: Jeffrey F. Lebowski, Minnesota Department of Labor and Industry, 443 Lafayette Road North, St. Paul, Minnesota, 55155

Yours very truly,



Jeffrey F. Lebowski
General Counsel

Office Memorandum

Date: January 27, 2020

To: Jeffrey F. Lebowski, General Counsel,
Department of Labor and Industry

From: Kwesi Pasley, Executive Budget Officer,
Minnesota Management and Budget

Subject: M.S. 14.131 – Review of Proposed Amendment to the Minnesota Electrical Code, Minnesota Rules, Chapter 1315, Revisor’s ID Number R-04632

Background

The Department of Labor and Industry (DLI) is proposing amendments to the rules relating to the Minnesota Electrical Code, in Minnesota Rules, Chapter 1315. Pursuant to M.S. 14.131, the Commissioner of Minnesota Management and Budget has been asked to help evaluate the fiscal impacts and benefits these changes may have on local units of government.

As identified in the Statement of Need and Reasonableness (SONAR), pursuant to M.S. 326B.106, the Commissioner of the Department of Labor and Industry (DLI) must review model building codes every six years for potential adoption, with amendments, for use in Minnesota beginning with the 2018 editions of the model codes. DLI is proposing to adopt and incorporate the 2020 version of the National Electrical Code, without any Minnesota specific amendments.

Evaluation

On behalf of the Commissioner of Minnesota Management and Budget, I have reviewed the proposed changes and the draft of the SONAR to explore the potential fiscal impact these changes may have on local governments.

The adoption of the 2020 version of the National Electrical Code is not anticipated to have a substantial cost to local units of government. Local governments may incur costs associated with purchasing new code books (\$110 per person maximum) and any educational expenses (\$170 per person maximum) necessary for the training of enforcement officials.

The Department’s findings regarding the fiscal impact of this proposal to local governments are sound and agreed to.

cc: Ahna Minge, Executive Budget Coordinator, Minnesota Management and Budget

Exhibit K.6



Minnesota Board of Electricity
c/o Minnesota Department of Labor & Industry
443 Lafayette Road North
St Paul, MN 55155-4344
dli.cclboards@state.mn.us

January 07, 2020

Commissioner Thom Petersen
Minnesota Department of Agriculture
625 Robert Street North
Saint Paul, MN 55155-2538

Re: §14.111 Rulemaking Notice/Adoption of the 2020 National Electrical Code

Dear Commissioner Petersen,

Pursuant to Minn. Stat. §14.111 (2018), please accept this correspondence as official notice of the fact that the Minnesota Board of Electricity is in the process of adopting the 2020 National Electrical Code (“NEC”) for use in this state as part of Minnesota Rules, Chapter 1315, the Minnesota Electrical Code. You are being provided this notice because the Board has determined that adoption of the 2020 NEC as incorporated by the Minnesota Electrical Code will affect farming operations in the State of Minnesota.

Specifically, Article 547, §547.5(G) of the 2020 NEC was revised by the National Fire Protection Association (“NFPA”) to eliminate Ground Fault Circuit Interrupter (“GFCI”) protection for receptacles rated above 125-volt, single phase, 20-ampere (*240-volt and 3-phase receptacles*) in areas of agricultural buildings that are included within the scope of Article 547, such as areas of equipotential plane, dirt confinement areas, wet and damp locations, and the outdoors. A revision in the 2017 NEC resulted in the expansion of GFCI protection for non-dwelling unit receptacles to include all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less, and three-phase receptacles rated 150 volts to ground or less, and 100 amperes or less. This change had unforeseen and wide-ranging consequences to other sections of the NEC, in particular to code sections addressing agricultural buildings, which resulted in frequent unintended and unwanted tripping of GFCI protective devices in those building areas. The additional 2017 NEC GFCI protection requirements of above 125-volt, single phase, 15- and 20-ampere applications have also created unintended financial hardship for farm and agricultural building owners. Therefore, §547.5(G) of the 2020 NEC was revised to eliminate GFCI protection requirements for agricultural building receptacles rated above 125-volt, single phase, 20-ampere (*240-volt and 3-phase receptacles*).

Thank you for your attention to this matter. If you have any questions or concerns relative to the change in the 2020 NEC described above, please feel free to contact me directly at (651) 284-5172 or jeffrey.f.lebowski@state.mn.us.

Sincerely,



Jeffrey F. Lebowski
General Counsel
Minnesota Board of Electricity
Minnesota Department of Labor & Industry

cc: Daniel Westberg, Chair
Minnesota Board of Electricity

Attachment: Proposed Rule Draft Chapter 1315

1.1 **Board of Electricity**1.2 **Proposed Permanent Rules Updating the Minnesota Electrical Code**1.3 **1315.0200 SCOPE.**1.4 *[For text of subpart 1, see Minnesota Rules]*

1.5 Subp. 1a. **Electrical code.** All new electrical wiring, apparatus, and equipment for
1.6 electric light, heat, power, technology circuits and systems, and alarm and communication
1.7 systems must comply with the regulations contained in the ~~2017~~ 2020 edition of the National
1.8 Electrical Code (NEC) as approved by the American National Standards Institute
1.9 (ANSI/NFPA ~~70-2017~~ 70-2020), Minnesota Statutes, section 326B.35, and the Minnesota
1.10 State Building Code as adopted by the commissioner of labor and industry. The ~~2017~~ 2020
1.11 edition of the National Electrical Code, developed and published by the National Fire
1.12 Protection Association, Inc., is incorporated by reference and made part of the Minnesota
1.13 State Building Code. The National Electrical Code is not subject to frequent change and is
1.14 available in the office of the commissioner of labor and industry, from the Minnesota
1.15 Bookstore, 660 Olive Street, Saint Paul, MN 55155, through public libraries, from major
1.16 bookstores and other retail sources, or from National Fire Protection Association, Inc., One
1.17 Batterymarch Park, Quincy, MA 02169-7471.

1.18 Subp. 2. [Repealed, 12 SR 102; 12 SR 151]

1.19 **EFFECTIVE DATE.** Minnesota Rules, part 1315.0200, is effective July 1, 2020, or five
1.20 business days after publication of the notice of adoption in the State Register, whichever is
1.21 later.

Exhibit K.7

Meeting Minutes: Board of Electricity

Date: January 8, 2019
Time: 9:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Members Present:

David Curtis
Alfreda Daniels
Cole Funseth
Derrick Givens
Michael Hanson
Duane Hendricks – Secretary
Chad Kurdi
Peter Lindahl
Scott Novotny – Vice Chair
Daniel Westberg – Chair
John Williamson
Weston Wilson – via teleconference

Members Absent:

None

DLI Staff & Visitors:

Jeff Lebowski (DLI)
Lyndy Logan (DLI)
Dean Hunter (DLI)
Marty Kumm (DLI)
Steve Dudley (DLI)
Todd Green (DLI)
Charlie Durenberger (DLI)
Michelle Dreier (MEA)
Dave Dressler (IBEW)
Adam Hanson (ABC)
Gary Thaden (NECA)
Russ Ernst (MNESTA)
David Disch (MNESTA)
Jeff Keljik (MEA)
Ray Zeran (IBEW)
Jack Klempke (Comm)

1. **Call to Order**

The meeting was called to order at 9:00 a.m. by Chair Westberg. Roll call was taken by Secretary Hendricks and a quorum was declared with 12 of 12 voting members present.

2. **Approval of Meeting Agenda**

A motion was made by Lindahl, seconded by Novotny, to approve the agenda as presented. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

3. **Approval of Previous Meeting Minutes**

A motion was made by Hendricks, seconded by Givens, to approve the October 8, 2018, meeting minutes as presented. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

4. **Regular Business**

a. **Expense Approval** – reviewed and approved the per diem and expenses.

- b. **Enforcement & licensing update** – Charlie Durenberger gave a summary of enforcement statistics for 2013-2018 – see below table.

ELECTRICAL

	CASES OPENED	CASES CLOSED	ACTIVE CASES	ORDERS
2018	297	292	160	105
2017	356	353	196	109
2016	317	432	235	124
2015	523	468	328	178
2014	250	238	220	171
2013	284	286	177	112

- c. **Inspections update**
Williamson referred to electrical news in the winter edition of the CCLD Newsletter. Visit: <http://www.dli.mn.gov/sites/default/files/pdf/review49winter18.pdf>

5. Special Business

- a. 2020 National Electrical Code
Lebowski gave an overview of Minnesota’s formal rulemaking process.

A motion was made by Novotny, seconded by Lindahl, to authorize Chair Westberg to initiate the rulemaking process to adopt the 2020 National Electrical Code by publishing a Request for Comments in accordance with Minnesota Statutes, Chapter 14. The roll call vote was unanimous with 12 votes in favor; the motion carried.

6. Committee Reports

Construction Codes Advisory Council (CCAC) – has not met because the Energy Code has not released its findings. The CCAC is waiting for this before scheduling a meeting.

7. Complaints

No complaints brought forth

8. Open Forum

Jeff Keljik, Minnesota Electrical Association, asked if the electrical test would be modified and Williamson said the journeyworker exam was reduced to 80 questions from 100. The license exam guide was completely reformatted. The master electrician test will also be reduced to 80 questions from 100. The “passing score” for all examinations is 70%. Historically since the 1980’s, journeyworker exams have had a “passing rate” in the range of 40-45%. *Lindahl said he would be concerned with lowering the standard just because of a labor shortage to squander down the standards for safety for those folks that are going to have electrical work done at their houses or buildings. [Testers] need to come prepared, slacking on preparation is not what should be catered to.*

Williamson said the department believes competency can be equitably assessed with 80 questions instead of 100.

9. Board Discussion

Lindahl said he would be concerned

10. Announcements

Next regularly scheduled meetings – 9:00 a.m. Minnesota Room, DLI

- a. April 9, 2019
- b. July 9, 2019
- c. October 8, 2019

11. Adjournment

A motion was made by Novotny, seconded by Daniels, to adjourn the meeting at 9:40 a.m. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Duane Hendricks

Duane Hendricks
Secretary

Exhibit K.8

Meeting Minutes: Board of Electricity

Date: October 8, 2019
Time: 9:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Members Present:

David Curtis
Alfreda Daniels
Cole Funseth
Derrick Givens
Michael Hanson
Duane Hendricks – Vice-Chair
Chad Kurdi
Peter Lindahl – Secretary
Scott Novotny
Daniel Westberg – Chair
John Williamson
Weston Wilson

Members Absent:

None

DLI Staff & Visitors:

Jeff Lebowski (DLI)
Lyndy Logan (DLI)
Neil Furman (DLI)
Dean Hunter (DLI)
Marty Kumm (DLI)
Steve Dudley (DLI)
Todd Green (DLI)
Adam Hanson (ABC)
Gary Thaden (NECA)
Ray Zeran (IBEW Local 132)
Michelle Dreier (Electrical Assn.)
Jerry Daniel (TX Dept of Licensing) – Tele
Yvonne Feinleib (TX Dept of Licensing) – Tele
Derrick Atkins (Mpls JATC)
Craig Mulder (State of WI)
Gary Krause (State of WI)
Greg Mueller (State of WI)

1. **Call to Order**

The meeting was called to order at 9:01 a.m. by Chair Westberg. Roll call was taken by Secretary Hendricks and a quorum was declared with 12 of 12 voting members present in person.

2. **Approval of Meeting Agenda**

A motion was made by Kurdi, seconded by Hanson, to approve the agenda as presented. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

3. **Approval of Previous Meeting Minutes**

A motion was made by Hendricks, seconded by Curtis, to approve the July 9, 2019, meeting minutes as presented. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

4. **Regular Business**

- a. **Expense Approval** – reviewed and approved the per diem and expenses.
- b. **Enforcement & licensing update** – A handout was provided to members with the number of electrical enforcement actions/orders.

c. **Inspections update**

Williamson demonstrated the department's new web-based permitting software, iMS, that replaced eTrakit on Oct. 7, 2019, for obtaining electrical permits.

5. **Special Business**

a. **Reciprocity**

Dudley referred to the Electrical License Reciprocity Comparison Chart for Minnesota, Wisconsin, and Texas – **see Attachment A.**

TEXAS:

Jerry Daniel, Texas Department of Licensing and Regulation, addressed the Board via teleconference. Daniel said Texas is part of the NERA group and believes a reciprocity agreement with Minnesota would help all electricians. Three years ago, when in Duluth for the NERA meeting, he spoke with several representatives that wanted a reciprocity agreement [between MN and TX] and therefore they've asked for this.

Lindahl asked Daniel how many electricians there are in Texas and Daniel said approximately 150,000 licensed electricians, and must all have, at a minimum, an apprentice license. Hendricks asked how long licensing for apprentices and journey workers have been in place and Daniel said this was passed in 2003 with an effective date of September 1, 2004. Hendricks asked if there were any licensing requirements in place prior to 2004 and Daniel said not state-wide, but at least 80-90% of the state were governed by municipality licenses. Hendricks asked if those doing electrical work prior to 2004 became licensed by the state and Daniel said yes, those with a municipal electrical license received a state license of equal value; however, reciprocity they are seeking with Minnesota would not include these individuals, only individuals that pass the State of Texas's examination. Lindahl asked if Texas municipalities had different licensing exams prior to 2004 and Daniel said yes; however, municipality exams required 8,000 hours to become a journey worker plus a passing exam score. Lindahl asked if each municipality had their own exam and Daniel said yes, but that now all state requirements must be met. Daniel explained that those with municipality licenses prior to 2004 were grandfathered in and did not have to take the state's exam. He further explained that these individuals would not be included in a reciprocity agreement [with Minnesota]. Lindahl asked how these individuals would be differentiated from those that passed Texas's exam and Daniel said their system separates those who took the exam and those grandfathered in. Texas would collaborate with NERA to approve reciprocity for only those individuals that meet state requirements to perform electrical work in Minnesota who would be able to perform electrical work through a reciprocity agreement. Lindahl asked if those that passed Texas's exam would receive reciprocity to perform electrical work in Minnesota automatically and Daniel said no, only if the 8,000-hour requirement of on the job training were completed and the state's exam had a passing score – those grandfathered in would not be eligible. Kurdi asked which version of the NEC has been adopted by Texas and Daniel replied 2017 and Texas will be adopting the 2020 NEC in 2020. Lindahl asked if Texas inspectors are exclusively electrical inspectors or if other types of inspections are performed and Daniel said

absolutely, they are for the state of Texas; however, some municipalities have combination inspectors. Novotny asked Daniel how many inspectors the state of Texas has, and Daniel said currently they have two – they mainly handle unincorporated areas. Inspections in cities are handled by municipal inspectors. Larger cities such as Houston (37 inspectors), Austin (21 inspectors), San Antonio, and Dallas (30 inspectors), employ inspectors that were previously licensed electricians. Hendricks asked Daniel if Texas has measured the success of the pass rates of their exams (since 2004) and if work/inspections [performed] met NEC criteria. Daniel said he wasn't sure what Hendricks was asking but said that yes, [all inspections] meet NEC criteria. Texas developed and write their own exams that are a product of Texas. PSI ensures exams are psychometrically sound, dependable in a court of law, and are the property of Texas. Current exams are written on the NEC and will be updated to NEC 2020. Daniel said the journey worker pass/fail rate is approximately 40%. There is a lot of work in Texas. He is not concerned that there will be a lot of individuals from Texas working in Minnesota – Texas has a lot of work with a 21% shortage and he believes that both states could benefit from a reciprocity agreement.

Lebowski asked Chair Westberg if the Board wanted to make a motion on reciprocity with Texas now or wait and do both Texas and Wisconsin at one time. Westberg and other members agreed to make a one motion that would include both states.

WISCONSIN:

Garry Krause, Bureau Director, Department of Safety and Professional Services, State of Wisconsin, addressed the Board. Krause said he was formerly licensed as an electrical journey worker in Minnesota; therefore, he is very familiar with Minnesota's electrical licensing requirements. Krause introduced Greg Mueller, one of the state's inspectors. Krause said Wisconsin has been working through several legislative activities, such as, mandatory statewide commercial inspection effective on 1/1/2020. The state already requires mandatory residential inspection. There are approximately 6,000 licensed journey workers and 6,000 master electricians licensed in Wisconsin. Most individuals fail the journey worker exam the first time it is taken. There is a general, overall pass rate of 25-30%. Wisconsin is currently using the 2017 code, and for one- and two-family dwellings they use the 2011; however, effective 1/1/2020 they will be using the 2017. Licensed electrical inspectors must take an exam to receive their credentials. They are currently processing 200 municipalities for approval (must pass the state's new ordinance). There are two parts municipalities must pass – must adopt the state's ordinance (a copy was provided in its entirety to the BOE) and they must submit their credentialled licensed individuals. Therefore, the state knows exactly who the municipality inspectors are and only credentialled individuals are approved. They have a full-time staff member committed to the integrity of this process. There is a shortage around the country of workers and contractors, as you are all aware, as this was discussed at the last NERA meeting. Krause was formerly a dean of a technical college and was also an apprenticeship coordinator for both segments – the ABC and the IBEW. There is a long border of communities where people are going back and forth with contractors and there is a need for staffing across the country. Recently Wisconsin

workers went to Nebraska and this created a lot of turmoil for companies when workers must be re-licensed in every state. Wisconsin is a bordering state [to Minnesota], laws are very similar, almost identical, as shown by the comparison chart (Attachment A). He emphasized how important this opportunity would be for employers and employees. This would be a great opportunity and believes that with the adoption of Wisconsin's new laws that Wisconsin and Minnesota are almost identical. Their system is designed to address most of the questions asked earlier by the Board – they are on the same page [as Minnesota] and this would be good for both states.

Wilson asked how many journey workers were licensed in Wisconsin and Kraus said approximately 6,000, all have taken the examination. No journey workers have been grandfathered in. Wilson asked who would be grandfathered in and Kraus said only those that hold a Registered Master Electrician license (must have been born before January 1, 1956 and have at least 15 years of experience). All licensed journey workers have passed the state's examination.

Lindahl asked if journeyworker electricians licensed in the 1980's would have been required to take the state's exam and Mueller said that the state began administering examinations in 1986. Mueller further explain that individuals licensed prior to 1986 had to take the state's test in order to receive a journey worker license. Prior to this, from 1986 to 2014, there was an optional exam, but it was administered by the state. Some municipalities had their own licensing but none of these were grandfathered. There was no grandfathering of any type of license. Krause said their exam questions are created in-house by content experts, next the exam goes to credentialing. All individuals, when in the same room, receive a different test that is randomly generated from a pool of questions. His staff doesn't have access to the questions. They are kept in a locked storage system. There is great integrity in their testing process. Exam questions can't be accessed, they are auto-generated and auto-coded.

Lindahl asked if the test administered in 1986 is the same test used to today or was it changed. Mueller doesn't know how many questions, or time allotted, was included in the test in 1986; however, the exam is updated every time the NEC code cycles are updated. At least since the mid 1990's the number of questions and time allotted have been the same with only updates to a new code. Lindahl said the critical point is allowing someone to get a license as a formality to cover the status of licensed or not licensed. Krause said they haven't made the test easier, there is a high failure rate. No exam can leave the room and there are numerous complaints that their exam is too hard. Hendricks said there is a 2017 test,

Lebowski said the Board of Electricity makes approval or disapproval of reciprocity agreements and, if approved, the DLI Commissioner *may* enter into an agreement with that state.

A motion was made by Kurdi, seconded by Hanson, to enter into a Reciprocal Agreement with Texas. The majority vote ruled with 7 votes in favor, 5 opposed, of the motion; the motion carried.

A motion was made by Lindahl, seconded by Wilson, to deny entering into a Reciprocal Agreement with Wisconsin. The vote was 7 to deny, 5 to accept the motion; the motion was denied and did not carry.

A motion was made by Kurdi, seconded by Hanson, to approve entering into a Reciprocal Agreement with Wisconsin. The majority vote ruled with 7 votes in favor, 5 opposed, of the motion; the motion carried.

b. NEC Adoption

The Rules Subcommittee provided the full Board with their NEC Adoption report and recommended that the Board adopt the 2020 NEC as-is without Minnesota specific amendments. Lindahl said he is for accepting the 2020 NEC code as is. Williamson said the Board needs a motion.

A motion was made by Givens, seconded by Novotny, to accept the NEC Committee’s recommendation to go forward without amendments. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

A motion was made by Williamson, seconded by Givens, to authorize and direct the Board Chair to pursue adoption of the 2020 NEC without Minnesota amendments, including the publication of the Board’s Dual Notice of Intent to Adopt Rules in the *State Register*, providing Additional Notice to those who have registered their names with the Board for that purpose, acting as the Board’s representative at any possible Hearing on the rules, signing any required filings or final Order for Adoption of the rules, and doing anything else in the rulemaking process necessary to ensure the successful adoption of the 2020 NEC in the State of Minnesota. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

A motion was made by Williamson, seconded by Givens, to establish an effective date of July 1, 2020, because the Board finds that an earlier effective date than that provided for in Minn. Stat. 326B.13, subd. 8, is necessary to protect the public’s health and safety after considering among other things, training time needed for enforcement and compliance with the new Code, the need for uniformity with past practice and among the several states participating in reciprocity, and general business continuity. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

6. Committee Reports

Construction Codes Advisory Council (CCAC) – met on July 18, 2019. The next meeting will be at 9:30 a.m. on Oct. 21, 2019.

Kurdi asked if it included the Building Code and Lebowksi said yes, approximately 12 chapters that are considered the State Building Code. Williamson chapter 1513 is the Electrical Code and is part of the Building Code, it doesn't stand alone.

7. Complaints

No complaints brought forth

8. Open Forum

Nothing

9. Board Discussion

Westberg thanked the NEC Committee for their work.

Dudley summarized the NERA meeting he attended on August 13, 2019, in Utah – see **Attachment B.**

10. Announcements

Next regularly scheduled meetings – 9:00 a.m. Minnesota Room, DLI

a. January 14, 2020

11. Adjournment

A motion was made by Givens, seconded by Daniels, to adjourn the meeting at 10:15 a.m. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Peter Lindahl

Peter Lindahl
Secretary

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

Attachment A

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
1	Statewide licensing	MN Statute 326B.33 Subd. 20	Yes	MN Statute 326B.33	Yes.	WI statute 101.862, with exceptions.	Yes	Texas Occupations Code 51.4041(c) allows reciprocity agreements (subject to approval by the governor)
2	Electrical inspections covered statewide	NERA	Yes. State and municipal	MN Statute 326B.36	Yes. State and municipal.	New one and two family dwellings in SPS 320.10. Farms, public buildings places of employment, etc. in SPS 316.012 and 316.013. Exception for existing industrial and manufacturing facilities in state statute 101.875(2).	Inspections are not mandatory by law, but are required by city and county ordinance.	
3	State administered exam	MN Rule 3800.3520, MN Statute 326B.33 Subd. 20, & NERA	Yes, Minnesota writes and proctors our own exams	MN Rule 3800.3520, MN Statute 326B.33 Subd. 18	Yes. Wisconsin writes and administers its own exams.	SPS 305.09	Yes, Texas creates its own exam, which is administered by a third-party vendor.	Texas Occupations Code 1305.162
4	Number of questions	MN Statute 326B.33 Subd. 20, & NERA		80 Policy		Set by policy and not an Administrative rule.	80	Candidate information bulletin located at https://urlz.com/UzdVt
5	Time allowed	MN Statute 326B.33 Subd. 20, & NERA	5,5 hours	Policy	4 hours	Set by policy and not an Administrative rule.	4 hours	Candidate information bulletin located at https://urlz.com/UzdVt
6	Open book/memory	MN Statute 326B.33 Subd. 20, & NERA	Open book	Policy	Open book	SPS 305.09(4)(b) Set by policy and not an Administrative rule.	Open book	Candidate information bulletin located at https://urlz.com/UzdVt
7	Minimum score	MN Statute 326B.33 Subd. 20, & NERA		70% Policy		70% SPS 305.09(6)(a)	70%	16 Texas Administrative Code 73.21 ("An individual applicant must achieve a passing score on an examination approved by the executive director of the Texas Department of Licensing and Regulation.")
8	Qualifying experience to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	All hours can be obtained in new installation of light, heat, power in any occupancy type	MN Rule 3800.3520, MN Statute 326B.33	Experience in installing, maintaining, or repairing electrical wiring. Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring	WI statute 101.87(1)	Hours may be gained if under the supervision of a master electrician; must be performing "electrical work" as defined by statute and rule	Texas Occupations Code 1305.002(11); Texas Occupations Code 1305.155(1); 16 Texas Administrative Code 73.10(21)
9	Qualifying experience to qualify to examine (years/hours)	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	8000/4 years OJT	MN Rule 3800.3520, MN Statute 326B.33	8000 hrs. and 4 years OJT or Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring that has a duration of at least 3 years and that is approved by the U.S. department of labor or by the department of workforce development	WI statute 101.87(1)	8,000 hours of on-the-job training under the supervision of a master electrician	Texas Occupations Code 1305.155

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

Attachment A

JOURNEYWORKER							
Sort	Subject	Reciprocity Similarities	Minnesota	Wisconsin	Texas		
			Citation	Citation			Citation
10	Hours granted for the successful completion of a 2 year technical college electrical course	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, MN statute 326B.33 Subd. 2	2000 MN Rule 3800.3520, MN Statute 326B.33	2000 WI statute 101.87(2m)	n/a	n/a	
11	Out of state experience accepted	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	Yes, as long as it is comparable to experience gained in Minnesota MN Rule 3800.3520	Yes. WI statute 101.87(1)	Yes, as long as it is comparable to experience gained in Texas	Texas Occupations Code 1305.164; Texas Occupations Code 51.4041(b)	
12	Minimum education requirements to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	2 hours CE per year for Minnesota registered unlicensed electricians. No apprenticeship education required. No education requirements for individuals who gained experience in other states MN Rule 3800.3520, MN Statute 326B.33	None.	No education or apprenticeship is required to take the examination; however, electrical apprentices are required to take 12 hours per year of CE.	16 Texas Administrative Code 73.25	
13	Military experience accepted	MN Rule 3800.3520	Yes. Must provide DD214 and MOS must be for electrical MN Rule 3800.3520	Yes, if the experience is in installing, maintaining, or repairing electrical wiring. WI statute 101.87(1)	Yes. Must provide DD214 and MOS must be for electrical work.	Texas Occupations Code 1305.1645	
14	Duration of journeyworker license	Policy	2 years Policy	4 years SPS 305.06	1 year	16 Texas Administrative Code 73.22	
15	Continuing education content required to renew journeyworker license	MN Rule 3800.3602	12 hours code 4 hours statute, rules, technical MN Rule 3800.3602	Content not specified, but has to relate to the skills and knowledge of the license category. Classes must be state approved. SPS 305.08(1)(a) and (d)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25	
16	Continuing education hours required to renew journeyworker license	MN Rule 3800.3602	16 hours prior to renewal - 2 year cycle MN Rule 3800.3602	24 hours. Classes must be state approved. SPS 305.44(6)(b) and 305.08(1)(a)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25	
17	NERA Member		Yes	Yes	Yes		
18	Reciprocal States		Alaska, Arkansas, Colorado, Iowa, Montana, Nebraska, North Dakota, South Dakota, Wyoming	New Hampshire, Iowa	Alaska (pending), Arkansas, Idaho, Iowa (pending) Louisiana (master only), Montana, Nebraska, New Mexico, North Carolina, Oklahoma (pending), South Dakota, Wyoming		
19	Code Cycle	MN Rule 1315.0200	2017 MN Rule 1315.0200	1 and 2 family dwellings are on 2011 until January 1, 2020 when they go to 2017. Everything else is on 2017		2017 Texas Occupations Code 1305.101; 16 Texas Administrative Code 73.100	

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

Meeting was called to order on August 13, 2019 at 8:00 am. There were representatives from 16 of the 18 NERA states present. Representatives from North Dakota and New Mexico were not present. James Schmidt of North Dakota had a conflict in his schedule and was unable to attend but sent an update on his state that I have added in this report. Kelly Hunt is no longer the representative for New Mexico, and they have not replaced him yet. NERA is going to reach out to New Mexico. Brad Stevens was the chair.

There were three new NERA representatives this year:

- James McClain – Colorado
- Garry Krause – Wisconsin
- Jane Allred - Wyoming

Tim McClintock (NFPA) presented on the 2020 changes to the NEC

- New articles
- Space about electrical equipment
- GFCI expansion
- Load calculations
- Six disconnect rule
- Emergency disconnect requirements for one- and two-family dwellings
- Surge protection

Round table discussions on:

How to standardize CE requirements:

- One CE provider for all NERA states
 - This would be met with opposition from all the independent providers
- If a state is willing to accept a reciprocal license, why can't we accept reciprocal CE credits?
 - The differences in the states statutes and rules regarding what qualify' s for CE credit prevents this

How can NERA help states reciprocate licenses in emergency situations?

- Prompt response sent to Nebraska
- Arkansas has issued temp license
- Iowa has issued temp apprentice license

Apprenticeship training courses

- Most states require 576 hours of education to qualify to examine
- Many states follow the federal department of labor (DOL) requirements

Professional proctors for exams and a standard NERA journeyman/journeyworker exam

- PSI, Prove, ICC
 - Prove will allow the state they are proctoring for to own the exams

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- NERA exam bank of questions
 - Average pass rate – 42% to 48%
 - This would allow for states to proctor their own exams, or utilize other proctors
 - Who will own the questions?
 - Who will oversee creating of the bank?
 - All NERA states to submit questions
 - What will be in the bank of questions?
 - Code and theory
 - Statute's, Rule's, and amendments would be up to each state to add them to their exam
- Bylaws
 - Who is allowed to be a voting member of NERA?
 - A letter from the state must be sent to the secretary stating who the voting member is
 - Alternate is by proxy
 - Joe (Oklahoma) proposed to change the NERA chair from a one-year term to a two-year term to make sure the hosting state is no longer the chair due to the extra work load of both hosting and being the chair. This passed.
- Seven NERA states conduct background checks prior to issuing a license. They will not issue a license to anyone with a felony

Alaska

- 2,087 licenses issued
- 682 trainees
- New reciprocal agreement with Iowa, and working on becoming reciprocal with Texas
- Number of issued licenses has declined
- Work is slowing
- No major changes, but licensing is being scrutinized by legislation.

Arkansas

- Solar is strong
- Solar is exempt on farms
- No major changes
- All licenses were evaluated by legislation with no changes. There is a sunset clause of three years at which time all licenses will be re-evaluated. There were no changes to licensing because they are a member of NERA and already have reciprocity
- 4000 hours experience on large commercial and industrial projects in order to qualify to examine

Colorado

- 8758 Journeyworker

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- 5000 master
- 886 Residential
- 12000 Helpers
- 3896 Contractors
- Solar licensing requirements:
 - Must be NABCEP certified for the DC side
 - Licensed electrical contractor required for the AC side

Idaho

- New Governor asked for each agency to provide information to prove why they are needed
- All proposed rule changes did not pass. Working under pending emergency rules
- Rule making process according to the Governor is for every new rule added, they must remove two rules.
- New provisional Journeyworker license. They will issue a provisional license to anyone who is licensed as a journeyworker in any other state. This license is good for one year.
- Removed the education requirement in order to qualify to examine
 - 8000 hours with 576 education hours to qualify
 - 16000 hours without education
 - 24 hours of CE required if not in an apprenticeship program with 576 hours of education
- Ratio can be adjusted according to the amount of education of the apprentice
- Looking at creating all new exams due to the high number of contested questions
- Looking at reciprocity with all state licenses, without a reciprocal agreement

Iowa

- Things have been quiet
- Will issue a license to individuals with felonies that did not harm others
- Preapproval by the Board is required to be allowed to start a DOL apprentice program
- Looking at raising the ratio for licensed to unlicensed individuals

Maine

- No education required for a helper. Background checks required
- A helper can stay a helper for as long as they wish
- 576 hours of education and 8000 hours of experience (in any category) required to qualify to examine
- Correspondence courses are allowed
- 15 hours of CE required prior to renewal
- Language change in their statute states: comparable experience or training that is acceptable to the Board. This will allow individuals to qualify to examine easier.
- Looking at adjusting solar fees
- Looking into licensing changes for the racking on large scale solar

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- Trying to become reciprocal with more states
- Legislation pushing for less regulation

Montana

- Adoption of language change for reciprocity from “may reciprocate” to “shall reciprocate with states that are substantially equivalent”
 - Legislation looked closely at licensing, and since Montana was a member of NERA, they only changed the wording from may to shall.
- Five organizations over the past few years
- Jason reached out to Washington state in order to attempt to have them join NERA. Washington has not responded.
- Failed exam
 - First time they can reapply
 - Second time they must wait six months
 - Third time they must go back for more education

Oklahoma

- 1-3 ratio was implemented
- New statute states, an electrical contractors license can be issued if the individual has taken an equivalent exam whether they are reciprocal with that state or not.
- 16000 registered and licensed individuals
- 4000 hours experience on large commercial and industrial projects in order to qualify to examine

Nebraska

- Legislation is looking into reciprocity with every state
- Legislation is attempting to reduce licensing by removing background checks
- The restricted journeyworker license, anyone with a state journeyworker license will qualify to examine. The restricted license is nonreciprocal
- Irrigation license may be re-instated
- No license required for agricultural work

New Hampshire

- 63% of all licensee's are over 50 years old, 1/3 of them are over 60
- 1800 apprentices
- License is not required for technology circuits or systems
- 1-year credit allowed for an approved high school program. This 1 year is towards the required education component
- NERA membership has helped to keep legislation from forcing more reciprocity
- The NEC cannot be adopted until it has been in publication for at least two years

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- If an apprentice fails the exam ten times, they are required to repeat the course

North Dakota

- Was not in attendance but sent an update.
- Creates and proctors their own exams
- Looking for a program to replace LXR
- Added power limited technicians license
- Tentative 2020 NEC adoption-April 1, 2020

South Dakota

- Introduced listing and labeling requirements for industrial machinery. They used Minnesota Rule 3801.3620 as a guide
- Legislation has expanded their Board to oversee licensing
- No big changes

Texas

- Petition to remove the 2000 hour per year cap but will keep the 4-year requirement for experience hours to qualify to examine. If someone submits over 2500 hours in one year will trigger an investigation
- Over 5000 have taken the journeyworkers exam last year
- 18%-20% pass rate for the master
- An individual can re-examine until they pass
- Working with Arizona to help implement state licensing in Arizona
- Background checks required
- Fines for unlicensed electrical work can be as high as \$5000 per day

Utah

- Follow the NEC for commercial work, and the IRC for residential
- 1-3 ratio on residential. 1-1 ratio on commercial and industrial, but may change to 1-2.
- 2000 hour cap per year is under scrutiny
- 10% of all licenses per year must be reviewed
- Eliminating the categories from experience hours required
- Practical, hands on is required on the exam

Wisconsin

- January 2020, mandatory commercial inspections increase
- Looking for more inspectors
- Municipalities must adopt statutes in their entirety
- No Board
- Many new solar sites

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- Implementing more training
- Use eSLA to track licensing
- Looking at a possible license fee reduction
- Discussion on adopting the 2020 NEC. Looking into rapid adoption
- Working to reciprocate with Minnesota and Texas

Wyoming

- Licensing and permitting is all electronic
- Plan review required for solar and wind
- 8 state inspectors
- Permits are required for electrical work, but only random inspections are required
- Work has increased by 5% and is projected to increase to 12%

Exhibit K.9

Minnesota Board of Electricity

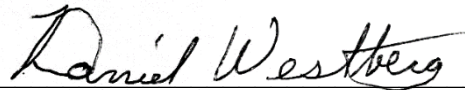
CERTIFICATE OF THE BOARD OF ELECTRICITY AUTHORIZING RESOLUTION

Proposed Permanent Rules Adopting the 2020 National Electrical Code, Minn. Rule Part 1315.0200, R-04632

I, Daniel Westberg, certify that I am a member and the Chair of the Board of Electricity, a Board authorized under the laws of the State of Minnesota; that the following is a true, complete, and correct copy of a resolution that the Board of Electricity adopted at a properly convened meeting on October 08, 2019, that a quorum was present, and that a majority of those present voted for the resolution, which has not been rescinded or modified. The Board resolved the following:

1. The Chair of the Board of Electricity is authorized and directed to sign and to give the Notice of the Board's Intent to Adopt Rules using Alternate Notices of whether a hearing will be held in the Revisor of Statutes draft, file number RD4632, identified as Minnesota Rules, parts 1315.0200, to be effective July 01, 2020, or five business days after publication of the notice of adoption in the State Register, whichever is later, with any modifications approved by the Board. The Chair must give notice to all persons who have registered their names with the Board for that purpose. The Chair must also publish the Notice in the *State Register*. Furthermore, the Chair is authorized and directed to do anything else needed to complete this Notice.
2. If there are fewer than 25 outstanding hearing requests, the Chair of the Board of Electricity is authorized and directed to sign the Order Adopting Rules and to do anything else needed to adopt these rules without a hearing.
3. The Chair of the Board of Electricity is authorized and directed to act as the Board's representative at the hearing, if one is required, and do anything else needed to adopt these rules with a hearing. This includes authority to sign the Order Adopting Rules if there are no modifications to the rules other than modifications approved by the Board.

October 14, 2019



Daniel Westberg, Chair
Minnesota Board of Electricity

Exhibit K.10

**2020 National Electrical Code
Cost Comparison of the 2017 NEC and the 2020 NEC
Revised 20200427**

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Sort	Topic	Change	Effect	2017 NEC Section	2017 Cost	2020 NEC Section	2020 Cost	Mandatory Items Cost Difference	Optional Items Cost Difference	Added Labor Cost	Notes	Source
2	1	GFCI protection for all 125-volt through 250-volt receptacles	New	Two-pole GFCI circuit breakers for electric ranges, dryers, etc.	N/A	\$11	210.8(A)	\$94		\$83	Nominal	The cost difference compares a standard 30-amp breaker to a GFCI breaker	https://tinyurl.com/slhn8fu
3	2	GFCI protection for dwelling unit outdoor outlets rated 50-amperes or less	New	Two-pole GFCI circuit breakers for A/C condensing units, etc.	N/A	\$11	210.8(F)	\$94		\$83	Nominal	The cost difference compares a standard 30-amp breaker to a GFCI breaker	https://tinyurl.com/slhn8fu
4	3	Emergency disconnecting means required for 1- & 2-family dwellings	New	Various solutions; may require disconnect switch on exterior of home	N/A	\$120	230.85	\$278	\$158		Nominal	The cost difference compares a standard meter socket to one with an additional main breaker	https://tinyurl.com/rdddxsg
5	4	Expanded GFCI for all basements	Revision	GFCI required regardless of unfinished or finished basement	210.8(A)(5)	\$41	210.8(A)(5)	\$48		\$7	Nominal	The cost difference compares an AFCI breaker to a dual-function GFCI/AFCI breaker	https://tinyurl.com/y8yn9tgZ
6	5	Kitchen island and peninsular countertops	Revision	Measurements will be based on the total square footage of the countertop work surface	210.52(C)	\$10	210.52(C)	\$20		\$10	Nominal	The cost difference compares one receptacle to two receptacles on a typical island measuring 20-sq. ft.	https://tinyurl.com/swggc9t
7	6	Service equipment surge protective devices	New	All services supplying dwelling units will require a surge protective device	N/A	\$0	230.67	\$98	\$98		Nominal	Surge protective devices are new in the 2020 NEC	https://tinyurl.com/rcstkce
8													
9									\$256	\$183	Subtotals		
10		The cost estimates will vary greatly depending on factors such as the type of work being done, the size of the project, the condition of any existing electrical work, and other factors.		For example, a new home may be built with all gas appliances, contain no kitchen islands or peninsulas, nor have a basement; that would eliminate the need for many of the 2020 NEC revisions. In that situation, the estimated costs for materials and labor would be substantially less.						\$439	Total		
11													
12													
13													

Exhibit K.11



Home Innovation

RESEARCH LABS™

ESTIMATED COSTS OF THE 2014, 2017, AND 2020 NEC CODE CHANGES FOR SINGLE-FAMILY AND MULTIFAMILY BUILDINGS

Prepared For

**National Association of
Home Builders**

DECEMBER 2019

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ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

AFCI	Arc-Fault Circuit Interrupter
EA	Each
GFCI	Ground-Fault Circuit Interrupter
IBC	International Building Code
IRC	International Residential Code
LF	Linear feet
NAHB	National Association of Home Builders
NEC	National Electric Code
O&P	Overhead and profit
SF	Square feet
T.H.	Townhouse

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BACKGROUND

The National Association of Home Builders (NAHB) identified 10 changes in the 2014 and 2017 National Electrical Code¹ (NEC), which were approved for buildings built under the 2015 and 2018 International Residential Code (IRC) and International Building Code (IBC)², respectively, and six changes in the 2020 NEC which could have a significant cost impact for builders. Home Innovation Research Labs (Home Innovation) reviewed the code changes and performed a cost analysis on several reference houses and buildings to estimate the expected cost impact.

METHODOLOGY

Baseline metrics were defined for four representative single-family houses, built to the IRC, and four multifamily buildings and one 4-story townhouse, built to the IBC, in order to determine the cost impact of the code changes.

The Reference Houses and their site locations were initially defined in a report titled “Estimated Costs of the 2015 Code Changes” prepared by Home Innovation for NAHB. These single-family houses were selected for their similarity to new home offerings in the six metropolitan areas selected as site locations - Miami, Dallas, Los Angeles, Seattle, New York, and Chicago, and their size proximity to a national average of 2,607 SF. Features of the Reference Houses are summarized in the next section.

The Reference Buildings were initially defined in a report titled “Estimated Costs of the 2018 Code Changes for Multifamily Buildings” prepared by Home Innovation for NAHB (April 2018). The Reference Buildings were adopted from the studies documented in the report. Features of the Reference Buildings are summarized in the next section.

The Reference Houses and Reference Buildings serve as the baselines for the analysis to estimate the cost impact of the 2014, 2017, and 2020 NEC code changes. All buildings are in compliance with the minimum requirements of the 2015 IRC/IBC (for the 2014 NEC changes) and 2018 IRC/IBC (for the 2017 NEC changes).

The cost impacts in this analysis have been developed primarily with data adapted from the following sources: 2019 Residential Cost (for Reference Houses) and Electrical Cost (for Reference Buildings) with RSMeans Data³; distributors’ or big box retailers’ websites. The cost for individual code changes are shown in Appendix A. Costs are reported at the national level and can be modified for a region using builders’ known bid prices or by applying a location factor adjustment shown in Appendix B. Appendix A costs are reported as both total to the builder and total to consumer. The total cost to builder includes overhead and profit (designated in the tables as “w/O&P”) applied to individual component costs (i.e., materials and labor) to represent the cost charged by the sub-contractor. The total cost to consumer is based on the builder’s gross margin, reported as 18.9% of construction cost in the 2016 Cost of Doing Business. The cost summary tables shown in the Results section below show the total cost to consumer only.

¹ NFPA 70, National Electrical Code (NEC), <https://www.nfpa.org/NEC>

² International Code Council, www.iccsafe.org/Pages/default.aspx

³ RSMeans, <https://www.rsmeans.com/>

Reference Houses

The features of the Reference Houses are summarized in the table below. Additional details and basis for selection of building criteria are provided in Appendix C. Elevations and floor plans are provided in Appendices E-H.

Table 1. Reference House Features

Reference House	1	2	3	4
Square Feet	2,607	2,607	2,607	2,607
Foundation	Slab	Slab	Basement	Basement
Number of Stories	1	2	1	2
Number of Bedrooms	3	4	3	4
Number of Bathrooms	2	2.5	2	3
Garage, attached	2-car	2-car	2-car	2-car
Laundry Room/Closet	Yes	Yes	Yes	Yes

Reference Buildings

The features of the Reference Buildings are summarized in the table below. Additional details and basis for selection of building criteria are provided in Appendix D. Elevations and floor plans are provided in Appendices I-M.

Table 2. Reference Building Features

Reference Building	1	2	3	4	T.H.
Approx. Total Size	19,500 SF	43,150 SF	44,500 SF	462,600 SF	2,500 SF
Number of Stories	2	3	4	5	4
Number of Units	24	36	48 + shared	167	1
Parking	Surface Lot	Surface Lot	Surface Lot	Enclosed public parking garage	Private garage
Laundry	Communal	In unit	In unit	In unit	In unit

RESULTS

Estimated Cost Impact of 2014, 2017, and 2020 NEC Code Compliance

The Tables below summarize the estimated cumulative impact of the selected code changes on the cost of constructing the Reference Houses and Reference Buildings. The costs represent cost to consumers (homeowners or building owners). See Appendix A for details and costs to builders.

Table 3. Estimated Cost Impact of 2014 NEC Code Changes

Description	Code Section	Cost (\$)								
		Reference Houses				Reference Buildings				T.H.
		1	2	3	4	1	2	3	4	
GFCI within 6-ft. of kitchen sink	210.8(A)(7)	47	32	32	32	742	1,074	1,342	2,637	16
GFCI within 6-ft. of shower or bathtub	210.8(A)(9)	0	0	32	0	0	568	0	963	16
GFCI for 15- & 20-amp receptacle in laundry	210.8(A)(10)	16	16	16	16	0	568	758	2,637	16
GFCI for 15- & 20-amp receptacles in garages of multifamily buildings	210.8(B)(8)	0	0	0	0	0	0	0	111	0
GFCI for outlets supplying dishwashers in dwelling units	210.8(D)	16	16	16	16	379	568	758	2,637	16
AFCI for branch circuits supplying kitchen and laundry areas	210.12(A)	184	184	184	184	2,951	6,639	5,778	30,796	184
One receptacle for each car parking space that should not supply receptacle outside garage	210.52(G)(1)	172	172	172	172	0	0	0	0	211
One 125V 15- or 20-amp receptacle outlet within 50-ft. of electrical service equipment for multifamily buildings.	210.64	0	0	0	0	401	401	401	801	0
Total		435	420	452	420	4,473	9,818	9,037	40,582	459

Table 4. Estimated Cost Impact of 2017 NEC Code Changes

Description	Code section	Cost (\$)								
		Reference Houses				Reference Buildings				T.H.
		1	2	3	4	1	2	3	4	
Measurement for GFCI within 6-ft. of kitchen sink is from the inside edge of sink	210.8(A)(7)	(16)	(16)	(16)	(16)	(395)	(568)	(758)	(2,637)	(16)
One 120V 20-amp branch circuit in garage and it can supply only readily accessible receptacle outside garage	210.11(C)(4)	19	19	19	19	0	0	0	0	19
Total		3	3	3	3	(395)	(568)	(758)	(2,637)	3

Table 5. Estimated Cost Impact of 2020 NEC Code Changes

Description	Code Section	Cost (\$)								
		Reference Houses				Reference Buildings				T.H.
		1	2	3	4	1	2	3	4	
GFCI for 250-volt receptacles	210.8(A)	273	273	136	273	3,272	9,817	13,089	45,540	273
GFCI for all basement receptacles	210.8(A)(5)	0	0	63	0	0	0	0	0	0
GFCI for 250-volt outdoor outlets	210.8(F)	136	136	136	136	0	4,368	5,824	20,263	136
Surge Protection for dwellings	230.67	246	246	246	246	5,907	8,860	11,813	41,100	246
Emergency Disconnects for one- and two-family dwellings	230.85	86	86	86	86	0	0	0	0	86
Total		741	741	667	741	9,179	23,045	30,727	106,903	741

APPENDIX A: INCREMENTAL COST FOR EACH CODE CHANGE

Reference Code Section

2014 NEC 210.8(A)(7) Ground-Fault Circuit Interrupter Protection for Personnel, Dwelling Units, Sinks

Summary of the Code Change:

The code change revised this section to require GFCI protection of 125-volt, 15- and 20-ampere receptacles installed within 6 ft. of the outside edge of a sink that are not covered by the kitchen countertop rule in 210.8(A)(6). Previously, kitchen sinks were excluded.

Cost Implication of the Code Change:

This code change may increase the cost of construction. The change is applicable where an outlet for a food waste disposal under the kitchen sink is within 6 ft. of the sink, or where an outlet in a wall space, not already covered by the kitchen countertop rule, is within 6 ft. of the kitchen sink. For example, this change would apply where a receptacle located in a low wall beneath a kitchen counter pass through and facing an adjacent room, as required by 210.52(A)(2) Wall Space, and not covered by the kitchen countertop requirement because the receptacle is located more than 12-in. below the countertop per 210.52(C)(5), is within 6 ft. of the kitchen sink. Reference House 1 has two such receptacles; the other reference houses and some reference buildings each have one. It is also assumed that each dwelling unit has one food waste disposal receptacle outlet within 6 ft. of the kitchen sink.

The analysis is based on a review of the reference houses and reference buildings to evaluate applicability and summarized in the tables below. Costs are based on duplex outlets that are tamper-resistant for all outlets as required by Section 406.4(D)(5) and GFCI outlets that are self-testing as required by their listing.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15- or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15-amp	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Houses	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	15.79	3	47.37
Reference House 2	EA	15.79	2	31.58
Reference House 3	EA	15.79	2	31.58
Reference House 4	EA	15.79	2	31.58

Reference Buildings	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1	EA	15.79	47	742.13
Reference Building 2	EA	15.79	68	1,073.72
Reference Building 3	EA	15.79	85	1,342.15
Reference Building 4	EA	15.79	167	2,636.93
Reference Townhouse	EA	15.79	1	15.79

Reference Code Section

2014 NEC 210.8(A)(9) Ground-Fault Circuit Interrupter Protection for Personnel, Dwelling Units, Bathtubs or shower stalls

Summary of the Code Change:

The code change is a new requirement for GFCI protection of 125-volt, 15- and 20-ampere receptacles installed within 6 ft. of the outside edge of a bathtub or shower stall.

Cost Implication of the Code Change:

This code change may increase the cost of construction. This change is applicable to receptacle outlets located in the wall of the master bedroom or hallway outside of the bathroom that are within 6 ft. of the edge of the shower or bathtub when measured through the door. The receptacles inside the bathroom were already required to be GFCI protected in the previous codes. The analysis is based on an estimate of the number of applicable outlets that now require GFCI protection. For Reference House 3, there are 2 receptacles in the master bedroom that are within 6 ft. of the edge of the bathtub. Similarly, there were several receptacle outlets within 6 ft. of the bathtub or shower for Reference Buildings 2 and 4 and the Reference Townhouse.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15- or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15-amp	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Houses	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference House 3	EA	15.79	2	31.58

Reference Buildings	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 2	EA	15.79	36	568.44
Reference Building 4	EA	15.79	61	963.19
Reference Townhouse	EA	15.79	1	15.79

Reference Code Section

2014 NEC 210.8(A)(10) Ground-Fault Circuit Interrupter, Dwelling Units, Laundry areas

Summary of the Code Change:

The code change is a new requirement for GFCI protection of 125-volt, 15- and 20-ampere receptacles installed in laundry areas.

Cost Implication of the Code Change:

This code change will increase the cost of construction as it will require GFCI protected receptacle outlet instead of standard outlet for dwelling units with laundry areas. This change applies to dwelling units and therefore does not apply to common laundry areas in multifamily buildings. One receptacle per dwelling unit is assumed for all Reference Houses, Reference Buildings 2 and 4, and the Reference Townhouse.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15- or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15-amp	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Houses	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	15.79	1	15.79
Reference House 2	EA	15.79	1	15.79
Reference House 3	EA	15.79	1	15.79
Reference House 4	EA	15.79	1	15.79

Reference Buildings	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 2	EA	15.79	36	568.44
Reference Building 3	EA	15.79	48	757.92
Reference Building 4	EA	15.79	167	2,636.93
Reference Townhouse	EA	15.79	1	15.79

Reference Code Section

2014 NEC 210.8(B)(8) Ground-Fault Circuit Interrupter, Other Than Dwelling Units, Garages, service bays and similar areas other than vehicle exhibition halls and showrooms.

Summary of the Code Change:

The code change is a new requirement for GFCI protection of 125-volt, 15- and 20-ampere receptacles installed in garages, service bays and similar areas located at other than dwelling units. The requirement does not apply to receptacles installed in showroom or exhibition areas.

Cost Implication of the Code Change:

This code change will increase the cost of construction for buildings with garage. This code change is applicable to garages, service bays and similar areas in multi-family residential homes. This code change is only applicable to Reference Building 4 which is the only multi-family building with garage. Receptacle outlets are required to be GFCI protected.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15-amp or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15-amp	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Buildings	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 4	EA	15.79	7	110.53

Reference Code Section

2014 NEC 210.8(D) Ground-Fault Circuit Interrupter, Kitchen Dishwasher Branch Circuit

Summary of the Code Change:

The code change is a new requirement for GFCI protection of outlets that supply dishwashers installed in dwelling areas.

Cost Implication of the Code Change:

This code change will increase the cost of construction with the new requirement of GFCI protection for outlets supplying dishwashers. It is assumed that each dwelling unit has one outlet for dishwasher.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15- or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15A	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Houses	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	15.79	1	15.79
Reference House 2	EA	15.79	1	15.79
Reference House 3	EA	15.79	1	15.79
Reference House 4	EA	15.79	1	15.79

Reference Buildings	GFCI protection for receptacle outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1	EA	15.79	24	378.96
Reference Building 2	EA	15.79	36	568.44
Reference Building 3	EA	15.79	48	757.92
Reference Building 4	EA	15.79	167	2,636.93
Reference Townhouse	EA	15.79	1	15.79

Reference Code Section

2014 NEC 210.12(A) Arc-Fault Circuit Interrupter, Dwelling Units

Summary of the Code Change:

The code change is a revision to expand the AFCI protection requirement to kitchens and laundry areas, and to specify that AFCI protection is required for branch circuits supplying outlets and devices.

Cost Implication of the Code Change:

This code change will increase the cost of construction with the new requirement of AFCI protection for branch circuits supplying kitchen and laundry areas. Following the minimum code requirement, we will assume that there are 2 branch circuits supplying the kitchen and 1 branch circuit supplying the laundry area. The cost of standard circuit breaker is deducted from the cost of AFCI combination-type circuit breaker.

Component	Unit	Material	w/O&P	Quantity	Cost
AFCI combination-type 20-amp, 1-pole circuit breaker	EA	58.00	63.80	1	63.80
Standard 20-amp, 1-pole Circuit Breaker	EA	11.00	12.10	(1)	(12.10)
Total to builder					51.70
Total to Consumer					61.47

Reference Houses	AFCI protection for branch outlets			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	61.47	3	184.41
Reference House 2	EA	61.47	3	184.41
Reference House 3	EA	61.47	3	184.41
Reference House 4	EA	61.47	3	184.41

Reference Buildings	AFCI protection for branch outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1	EA	61.47	48	2,950.56
Reference Building 2	EA	61.47	108	6,638.76
Reference Building 3	EA	61.47	94	5,778.18
Reference Building 4	EA	61.47	501	30,796.47
Reference Townhouse	EA	61.47	3	184.41

Reference Code Section

2014 NEC 210.52(G)(1) Dwelling Unit Receptacle Outlets; Basements, Garages, and Accessory Buildings; Garages

Summary of the Code Change:

The code change is a revision to require at least one receptacle outlet for each car parking space in a dwelling unit garage and to restrict the branch circuit supplying garage receptacle outlets from supplying outlets located outside of the garage. This is only applicable to a one-family dwelling.

Cost Implication of the Code Change:

This code change will increase the cost of construction for single-family houses with a garage. The analysis assumes that the branch circuit serving the garage also served outlets outside the garage before the code change, so the cost will include one additional branch circuit dedicated to the garage, plus one additional outlet on this same circuit for the second parking space for the two-car garages of the Reference Houses and Reference Townhouse.

Component for Reference Houses	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Duplex outlet, 15-amp recep., metal box, plate, Type NM cable	EA	8.70	23.00	31.70	46.50	1	46.50
Wire 14/2 NM	LF	0.18	1.32	1.50	2.36	40	94.40
Circuit Breaker 15-amp, 1-pole	EA	4.10	4.10		4.10	1	4.10
Total to Builder							145.00
Total to Consumer							172.41

Component for Reference Buildings	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Duplex outlet, 15-amp recep., metal box, plate, Type NM cable	EA	8.70	33.00	41.70	59.00	1	59.00
Wire 14/2 NM	LF	0.18	1.78	1.96	2.86	40	114.40
Circuit Breaker 15-amp, 1-pole	EA	4.10	4.10		4.10	1	4.10
Total to Builder							177.50
Total to Consumer							211.05

Reference Houses	Addition of standard outlet and dedicated circuit			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	172.41	1	172.41
Reference House 2	EA	172.41	1	172.41
Reference House 3	EA	172.41	1	172.41
Reference House 4	EA	172.41	1	172.41

Reference Buildings	Addition of standard outlet and dedicated circuit			
	Unit	Unit Cost	Quantity	Cost
Reference Townhouse	EA	211.05	1	211.05

Reference Code Section

2014 NEC 210.64 Electrical Service Areas

Summary of the Code Change:

The code change is a new requirement specifying the installation of at least one 125-volt, 15- or 20-ampere receptacle outlet within 50 feet of electrical service equipment for all buildings other than one- and two- family dwelling units.

Cost Implication of the Code Change:

This code change will increase the cost of construction for multifamily buildings. The analysis is based on installing one additional branch circuit with outlet for each electrical service equipment room or area in a building.

Component	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Circuit breaker, 15-amp, 1-pole	EA					1	0.00
Conduit, EMT, 1/2-in.	LF	0.80	2.74	3.54	4.96	25	124.00
Wire, #14 THW	LF	0.06	0.36	0.42	0.60	75	45.00
Duplex outlet, 15-amp recep., metal box, plate, EMT & wire	EA	30.50	90.00	120.50	168.00	1	168.00
Total to Builder							337.00
Total to Consumer							400.69

Reference Buildings	Addition of standard outlet with conduit			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1	EA	400.69	1	400.69
Reference Building 2	EA	400.69	1	400.69
Reference Building 3	EA	400.69	1	400.69
Reference Building 4	EA	400.69	2	801.38

Reference Code Section

2017 NEC 210.8(A)(7) Ground-Fault Circuit Interrupter Protection for Personnel, Dwelling Units, Sinks

Summary of the Code Change:

The code change clarifies how to establish the measurement of receptacles from a sink – the 6 ft. measurement is now made from the top inside edge of the sink bowl instead of the outside edge. Additionally, language was added under the main section 210.8(A) that this distance be measured as the shortest path “without piercing a floor, wall, ceiling, or fixed barrier, or passing through a door, doorway, or window”. This change may be interpreted as not requiring a GFCI protected receptacle for a food waste grinder within a cabinet beneath the kitchen sink. Note that GFCI protection is still specifically required for outlets that supply dishwashers installed in dwelling units per 210.8(D).

Cost Implication of the Code Change:

This code change may decrease the cost of construction. The analysis assumes GFCI protection is no longer required for receptacles serving disposals under the sink for all Reference Houses and Buildings.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15- or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15A	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Houses	Removal of GFCI protection in receptacle outlet			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	15.79	(1)	(15.79)
Reference House 2	EA	15.79	(1)	(15.79)
Reference House 3	EA	15.79	(1)	(15.79)
Reference House 4	EA	15.79	(1)	(15.79)

Reference Buildings	Removal of GFCI protection in receptacle outlet			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1	EA	15.79	(25)	(394.75)
Reference Building 2	EA	15.79	(36)	(568.44)
Reference Building 3	EA	15.79	(48)	(757.92)
Reference Building 4	EA	15.79	(167)	(2,636.93)
Reference Townhouse	EA	15.79	(1)	(15.79)

Reference Code Section

2017 NEC 210.11(C)(4) Branch Circuits Required, Dwelling Units, Garage Branch Circuits

Summary of the Code Change:

The code change is a new requirement to install at least one 120-volt 20-ampere branch circuit. This applies to attached garages and to detached garages supplied with power. The circuit cannot supply lighting outlets inside or outside of the garage, but an exception permits the circuit to supply readily accessible outdoor receptacle outlets.

Cost Implication of the Code Change:

This code change will increase the cost of construction for the Reference Houses and Reference Townhouse as this code change is only applicable for single-family residential houses. The 15-ampere branch circuit is replaced with a new 20-ampere branch circuit to supply the receptacles in the garage.

Component for Reference Houses	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Wire, 12/2 NM	LF	0.24	1.51	1.75	2.73	20	54.60
Circuit Breaker, 20-amp, 1-pole	EA	4.10		4.10	4.51	1	4.51
Duplex outlet, 20-amp recep., metal box, plate, Type NM cable	EA	9.85	27.00	36.85	55.00	1	55.00
Wire, 14/2 NM	LF	0.18	1.32	1.50	2.36	(20)	(47.20)
Circuit Breaker, 15-amp, 1-pole	EA	4.10			4.51	(1)	(4.51)
Duplex outlet, 15-amp recep., metal box, plate, Type NM cable	EA	8.70	23.00	31.70	46.50	(1)	(46.50)
Total to Builder							15.90
Total to Consumer							18.91

Component for Reference Buildings	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Wire, 12/2 NM	LF	0.24	1.92	2.16	3.15	20	63.00
Circuit Breaker, 20-amp, 1-pole	EA	4.10		4.10	4.51	1	4.51
Duplex outlet, 20-amp recep., metal box, plate, Type NM cable	EA	9.85	39.00	48.85	69.00	1	69.00
Wire, 14/2 NM	LF	0.18	1.78	1.96	2.86	(20)	(57.20)
Circuit Breaker, 15-amp, 1-pole	EA	4.10			4.51	(1)	(4.51)
Duplex outlet, 15-amp recep., metal box, plate, Type NM cable	EA	8.70	33.00	41.70	59.00	(1)	(59.00)
Total to Builder							15.80
Total to Consumer							18.79

Reference Houses	Replacing 15-amp branch circuit with 20-amp branch circuit			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	18.91	1	18.91
Reference House 2	EA	18.91	1	18.91
Reference House 3	EA	18.91	1	18.91
Reference House 4	EA	18.91	1	18.91

Reference Buildings	Replacing 15-amp branch circuit with 20-amp branch circuit			
	Unit	Unit Cost	Quantity	Cost
Reference Townhouse	EA	18.79	1	18.79

Reference Code Section

2020 NEC 210.8(A) Ground-Fault Circuit Interrupter Protection, Dwelling Units

Summary of the Code Change:

The code change will require receptacles serving 250-volt appliances, such as electric ranges and clothes dryers, to have GFCI protection when located in bathrooms, garages, crawl spaces, basements, laundry areas, or within 6 feet of sinks, bathtubs, or showers. This section previously applied to 125-volt appliances only.

Cost Implication of the Code Change:

This code change will increase the cost of construction for dwellings with electric clothes dryers and dwellings with electric ranges or stoves within 6 feet of the kitchen sink. As the receptacle outlets are typically not readily accessible, the cost analysis is based on substituting a GFCI circuit breaker for a standard circuit breaker for typical appliance ratings: 30-amp for electric dryers; 50-amp for electric ranges. The analysis will assume electric appliances for the Reference Houses and Reference Buildings: a review of the drawings shows all have applicable dryers except Reference Building 1 (common laundry) and all have applicable ranges except Reference House 3 (range is more than 6 feet from the sink).

Component	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
GFCI 30- or 50-amp 2-pole breaker	EA	114.00		114.00	125.40	1	125.40
Standard 30- or 50-amp 2-pole breaker	EA	9.75		9.75	10.73	(1)	(10.73)
Total to Builder							114.68
Total to Consumer							136.35

Reference Houses	GFCI protection for 250-volt receptacles			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	136.35	2	272.70
Reference House 2	EA	136.35	2	272.70
Reference House 3	EA	136.35	1	136.35
Reference House 4	EA	136.35	2	272.70

Reference Buildings	GFCI protection for 250-volt receptacles			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1 (24 units)	EA	136.35	24	3,272.37
Reference Building 2 (36 units)	EA	136.35	72	9,817.10
Reference Building 3 (48 units)	EA	136.35	96	13,089.46
Reference Building 4 (167 units)	EA	136.35	334	45,540.42
Reference Townhouse	EA	136.35	2	272.70

Reference Code Section

2020 NEC 210.8(A)(5) Ground-Fault Circuit Interrupter Protection, Dwelling Units, Basement Receptacles

Summary of the Code Change:

This code change requires GFCI protection for all receptacles in basements (the exception remains for receptacles supplying only a fire or burglar alarm). This section previously only applied to unfinished portions or areas of basements not intended as habitable rooms.

Cost Implication of the Code Change:

This code change will increase the cost of construction for houses with basements where a basement or portion of a basement is finished. The cost analysis is based on Reference House 3 that shows optional finished rooms in the basement (see Appendix G). These finished areas are estimated to require four independent circuits for wall receptacles with each circuit protected by one GFCI receptacle.

Component	Unit	Material	Total	w/O&P	Quantity	Cost
GFCI duplex outlet, 15- or 20-amp	EA	13.34	13.34	14.67	1	14.67
Standard duplex outlet, 15A	EA	1.06	1.06	1.17	(1)	(1.17)
Standard duplex outlet wall plate	EA	0.20	0.20	0.22	(1)	(0.22)
Total to Builder						13.28
Total to Consumer						15.79

Reference Houses	GFCI protection for basement receptacles			
	Unit	Unit Cost	Quantity	Cost
Reference House 3	EA	15.79	4	63.16

Reference Code Section

2020 NEC 210.8(F) Ground-Fault Circuit Interrupter Protection, Outdoor Outlets for Dwellings

Summary of the Code Change:

This new code section requires GFCI protection for outdoor outlets, single-phase, up to 250-volts and 50-amps, other than those covered in 210.8(A)3 outdoor receptacles. There is an exception for lighting outlets other than those covered in 210.8(C). This section is applicable to a condensing unit – the outdoor component of a typical HVAC split system air conditioner or heat pump system.

Cost Implication of the Code Change:

This code change will increase the cost of construction for dwellings with a condensing unit. The analysis is based on substituting a GFCI circuit breaker for a standard circuit breaker using typical condensing unit ratings: 30-amp for a 3-ton unit for all Reference Houses and the Reference Townhouse; 15/20-amp for a 1.5/2-ton unit for Reference Buildings 2, 3, and 4.

Component	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
GFCI 30-amp 2-pole breaker	EA	114.00		114.00	125.40	1	125.40
Standard 30-amp 2-pole breaker	EA	9.75		9.75	10.73	(1)	(10.73)
Total to Builder							114.68
Total to Consumer							136.35

Component	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
GFCI 15- or 20-amp 2-pole breaker	EA	101.45		101.45	111.60	1	111.60
Standard 15- or 20-amp 2-pole breaker	EA	8.68		8.68	9.55	(1)	(9.55)
Total to Builder							102.05
Total to Consumer							121.33

Reference Houses	GFCI protection for outdoor outlets			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	136.35	1	136.35
Reference House 2	EA	136.35	1	136.35
Reference House 3	EA	136.35	1	136.35
Reference House 4	EA	136.35	1	136.35

Reference Buildings	GFCI protection for outdoor outlets			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1 (24 units)	EA	121.33	0	0.00
Reference Building 2 (36 units)	EA	121.33	36	4,368.02
Reference Building 3 (48 units)	EA	121.33	48	5,824.03
Reference Building 4 (167 units)	EA	121.33	167	20,262.76
Reference Townhouse	EA	136.35	1	136.35

Reference Code Section

2020 NEC 230.67 Surge Protection, Dwelling Units.

Summary of the Code Change:

This new code section requires a surge-protective device (SPD) for all services supplying dwelling units.

Cost Implication of the Code Change:

This code change will increase the cost of construction. This change applies to all Reference Houses and each dwelling unit in all Reference Buildings. The cost analysis is based on a Type 2 installation: installing the SPD on the load side of and adjacent to the main electrical panel.

Component	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Surge-Protective Device	EA	97.89	60.00	157.89	197.44	1	197.44
20-amp 2-pole breaker	EA	8.68		8.68	9.55	1	9.55
Total to Builder							206.99
Total to Consumer							246.11

Reference Houses	Surge Protection			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	246.11	1	246.11
Reference House 2	EA	246.11	1	246.11
Reference House 3	EA	246.11	1	246.11
Reference House 4	EA	246.11	1	246.11

Reference Buildings	Surge Protection			
	Unit	Unit Cost	Quantity	Cost
Reference Building 1 (24 units)	EA	246.11	24	5,906.58
Reference Building 2 (36 units)	EA	246.11	36	8,859.87
Reference Building 3 (48 units)	EA	246.11	48	11,813.16
Reference Building 4 (167 units)	EA	246.11	167	41,099.96
Reference Townhouse	EA	246.11	1	246.11

Reference Code Section

2020 NEC 230.85 Emergency Disconnects, One- and Two-family Dwelling Units.

Summary of the Code Change:

This new code section requires a service disconnecting means that is labeled and installed in a readily accessible outdoor location for one- and two-family dwelling units. The intent of this change is to allow firefighters to quickly shut off electrical power before entering a house.

Cost Implication of the Code Change:

This code change will increase the cost of construction for one- and two-family dwellings. The analysis is based on the estimated cost to substitute a standard outdoor meter socket with a combination meter socket with integral main breaker. Further, the analysis includes the estimated cost to substitute a main breaker type indoor load center with a main lug type (no main circuit breaker). The analysis assumes that the labor to install these items does not change.

Component	Unit	Material	Labor	Total	w/O&P	Quantity	Cost
Combination meter socket with integral 200-amp main circuit breaker	EA	154.86		154.86	170.35	1	170.35
Standard meter socket	EA	60.10		60.10	66.11	(1)	(66.11)
Main lug type indoor load center, 200-amp, 30-space	EA	91.99		91.99	101.19	1	101.19
Main breaker type indoor load center, 200-amp, 30-space, with 200-amp main breaker	EA	121.00		121.00	133.10	(1)	(133.10)
Total to Builder							72.33
Total to Consumer							85.99

Reference Houses	Emergency Disconnect			
	Unit	Unit Cost	Quantity	Cost
Reference House 1	EA	85.99	1	85.99
Reference House 2	EA	85.99	1	85.99
Reference House 3	EA	85.99	1	85.99
Reference House 4	EA	85.99	1	85.99

Reference Buildings	Emergency Disconnect			
	Unit	Unit Cost	Quantity	Cost
Reference Townhouse	EA	85.99	1	85.99

APPENDIX B: LOCATION ADJUSTMENT FACTORS

State	City	Cost Adjustment Factor	State	City	Cost Adjustment Factor
Alabama	Birmingham	0.84	Montana	Billings	0.87
Alabama	Mobile	0.82	Nebraska	Omaha	0.90
Alaska	Fairbanks	1.24	Nevada	Las Vegas	1.02
Arizona	Phoenix	0.87	New Hampshire	Portsmouth	0.95
Arizona	Tucson	0.85	New Jersey	Jersey City	1.18
Arkansas	Little Rock	0.81	New Mexico	Albuquerque	0.83
California	Alhambra	1.16	New York	Long Island City	1.40
California	Los Angeles	1.14	New York	Syracuse	0.99
California	Riverside	1.14	North Carolina	Charlotte	0.94
California	Stockton	1.20	North Carolina	Greensboro	0.94
Colorado	Boulder	0.91	North Carolina	Raleigh	0.93
Colorado	Colorado Springs	0.86	North Dakota	Fargo	0.90
Colorado	Denver	0.89	Ohio	Columbus	0.91
Connecticut	New Haven	1.09	Oklahoma	Oklahoma City	0.81
Delaware	Dover	1.01	Oklahoma	Tulsa	0.82
District of Columbia	Washington, D.C.	0.92	Oregon	Bend	1.01
Florida	Fort Meyers	0.80	Pennsylvania	Norristown	1.09
Florida	Miami	0.81	Pennsylvania	State College	0.92
Florida	Orlando	0.82	Rhode Island	Providence	1.08
Florida	Tampa	0.80	South Carolina	Greenville	0.94
Georgia	Atlanta	0.88	South Dakota	Sioux Falls	0.87
Hawaii	Honolulu	1.22	Tennessee	Memphis	0.84
Idaho	Boise	0.90	Texas	Austin	0.79
Illinois	Carbondale	1.00	Texas	Dallas	0.83
Indiana	Indianapolis	0.93	Texas	Houston	0.83
Iowa	Des Moines	0.92	Texas	San Antonio	0.80
Kansas	Wichita	0.81	Utah	Ogden	0.82
Kentucky	Louisville	0.86	Utah	Provo	0.83
Louisiana	Baton Rouge	0.85	Utah	Salt Lake City	0.84
Maine	Portland	0.92	Vermont	Burlington	0.93
Maryland	Baltimore	0.93	Virginia	Fairfax	1.01
Massachusetts	Boston	1.18	Virginia	Winchester	1.01
Michigan	Ann Arbor	0.99	Washington	Tacoma	1.03
Minnesota	St. Paul	1.07	West Virginia	Charleston	0.95
Mississippi	Biloxi	0.83	Wisconsin	La Crosse	0.97
Missouri	Springfield	0.88	Wyoming	Casper	0.83

*Source: RSMMeans *Residential Cost Data 2019*. Sample cities are listed in this table; check RSMMeans for additional locations.

APPENDIX C: REFERENCE HOUSES

Reference House Characteristics

The four residential building designs used in this analysis are based on the data contained in the Census Bureau report, *Characteristics of New Single-Family Construction Completed*⁴. The report provides information about building foundation type and number of stories for new single-family detached construction over the previous nine-year period.

Table C-1. New Construction Foundation Types

Slab	54%
Crawlspace	17%
Basement	30%

Table C-2. New Construction Number of Stories

One-story	53%
Two-story	43%
Three-story	3%

The Census data supports defining the four reference houses as follows to encompass approximately 85% of the last decade's new single-family construction:

- One-story on slab foundation
- Two-story on slab foundation
- One-story on basement foundation
- Two-story on basement foundation

The table below covers the locations where each type of reference house foundation would be pragmatically constructed. All these selected cities, except Chicago, lie within the top ten states for construction starts in 2013.⁵ Chicago was selected to represent a Climate Zone 5 house.

Table C-3. Sites for Reference Houses

Reference House	Climate Zone	1	2	3	4
		Slab	Slab	Basement	Basement
Miami	1	X	X		
Los Angeles	3	X	X		X*
Dallas	3	X	X		X*
Seattle	4	X	X	X	X
New York	4	X	X	X	X
Chicago	5			X	X
Fairbanks	8			X	X

⁴ www.census.gov/construction/chars/completed.html

⁵ www.census.gov/construction/bps/pdf/2013statepiechart.pdf

Based on the data compiled by Home Innovation from the *2013 Builder Practices Survey (BPS)*⁶, a nationwide annual survey, the typical Heating, Ventilation, and Cooling (HVAC) systems used in new houses are summarized in the table below. According to the BPS, 44% of new homes are cooled with a central air conditioner. These results influenced the selection of a gas furnace with central (electric) air conditioner as the HVAC system in each of the reference houses.

Table C-4. Typical HVAC Systems Supplied with New Houses

Feature	% of Stock
Furnace or Boiler, natural gas or propane	48%
Central Air Conditioner, electric	44%
Standard Heat Pump with Backup Heat	41%
Geothermal Heat Pump	4%
Electric furnace, baseboard, or radiant	4%
Furnace or Boiler, oil	2%

Reference Houses Defined

The statistics presented in the foregoing tables support defining the features of the Reference Houses as detailed in the table below.

Table C-5. Features of the Reference Houses

Reference House	1	2	3	4
Square Feet	2,607	2,607	2,607	2,607
Foundation	Slab	Slab	Basement	Basement
Number of Stories	1	2	1	2
Number of Bedrooms	3	4	3	4
Number of Bathrooms	2	2.5	2	3
Garage, attached	2-car	2-car	2-car	2-car
Heat, Gas Furnace	Yes	Yes	Yes	Yes
Cooling, (Electric) central air	Yes	Yes	Yes	Yes
Hot Water, Gas 50-gallon tank	Yes	Yes	Yes	Yes
9 ft. Ceilings, 1 st	Yes	Yes	Yes	Yes
8 ft. Ceilings, 2 nd	n/a	n/a	Yes	Yes
Energy Star appliances	Yes	Yes	Yes	Yes
Laundry Room/Closet	Yes	Yes	Yes	Yes
Walls, 2x4 (Climate Zones 1 & 2)	Yes	Yes	n/a	n/a
Walls, 2x6 (Climate Zones 3 thru 8)	n/a	n/a	Yes	Yes
Bsmt., Conditioned, Unfinished	n/a	n/a	Yes	Yes
Furnace Location	Attic	Attic	Basement	Basement
Water Heater Location	Interior	Garage	Basement	Basement
Window SF/% gross wall	360/18%	315/12%	360/18%	330/12%
Cladding	Brick, 4 sides	Brick, 4 sides	Brick, 4 sides	Stucco
Roof Pitch	12/12	6/12	9/12	4/12

The furnace location has been designated as a platform in the attic for both slab reference houses, a common practice in mild climates; furnace would be located within conditioned space for cold climates.

⁶ www.homeinnovation.com/trends_and_reports/data/new_construction

APPENDIX D: REFERENCE BUILDINGS

Reference Building Characteristics

The five multifamily building designs used in this analysis were selected based on data contained in the Census Bureau report, *Characteristics of New Multifamily Buildings Completed*⁷ and a tabulation provided by Home Innovation of multifamily buildings certified to the National Green Building Standard. The Census Bureau report provides information as to the number of stories and number of dwelling units in multifamily new construction.

Table D-1. New Construction Number of Stories

One- and two-story	38%
Three story	43%
Four-story or more	19%

Table D-2. New Construction Number of Units

2 – 9	43%
10 – 49	48%
50 or more	9%

Using the Census Bureau and Home Innovation data, five reference buildings were selected as follows:

- Two-story apartment building with 24 units
- Three-story “garden-style” building (non-enclosed shared stairways, no elevators) and 36 units
- Four-story enclosed building on grade with 48 units and communal spaces (amenities)
- Four-story enclosed building with 167 units on top of a one-story podium
- Four-story townhouse with three bedrooms and a garage

⁷ www.census.gov/construction/chars/mfb.html

Reference Buildings Defined

The statistics presented in the foregoing tables support defining the features of the Reference Buildings as detailed in the table below.

Table D-3. New Construction Number of Units

Reference Building	1	2	3	4	T.H.
Approx. Total Size	19,500 SF	43,150 SF	44,500 SF	462,600 SF	2,500 SF
Approx. Footprint	60' x 162'	62' x 263'	57'x175'	186'x348'	16'x37'
Foundation	Crawlspace	Slab on grade	Slab on grade	Basement (garage)	Slab on grade
Number of Stories	2	3	4	5	4
Number of Units	24	36	48 + shared	167	1
Large Projections	None	Wood-framed balconies	None	Bolt-on balconies	Deck
Elevators	1	0	2	2	0
Stairways	3	6	2	2	1
Type/Location	Enclosed	Open	Enclosed	Enclosed	In-Unit
Parking	Surface Lot	Surface Lot	Surface Lot	Enclosed public parking garage	Private garage
Sprinklers		Yes	Yes	Yes	Yes
HVAC	Building boiler + in-unit radiators	Split system air cond. (outdoor condenser + in-unit air handler)	Split system heat pump (roof condenser + in-unit air handler)	Split system heat pump (roof condenser + in-unit air handler)	Outdoor condenser + indoor furnace
Laundry	Communal	In unit	In unit	In unit	In unit
1 st Floor Ceiling	9 ft	9 ft	10 ft	13 ft	11 ft
2 nd Floor Ceiling	8ft	9 ft	10 ft	11 ft	10 ft
3 rd Floor Ceiling	N/A	9 ft	10 ft	11 ft	10 ft
4 th Floor Ceiling	N/A	N/A	10 ft	11 ft	10 ft
5 th Floor Ceiling	N/A	N/A	N/A	10 ft	N/A
Attic Height	12 ft	12 ft	12 ft	N/A	N/A
Building Height	29 ft	39 ft	52 ft	56 ft	41 ft
Roof Slope	5/12 pitch	7/12 pitch	8/12 pitch	¼"/foot slope	¼" foot slope

APPENDIX E: REFERENCE HOUSE 1

One-Story House with Slab Foundation



Courtesy: LionsGate Homes at The Creekside



APPENDIX F: REFERENCE HOUSE 2

Two-Story House with Slab Foundation



Courtesy: Meritage Homes at Riverstone

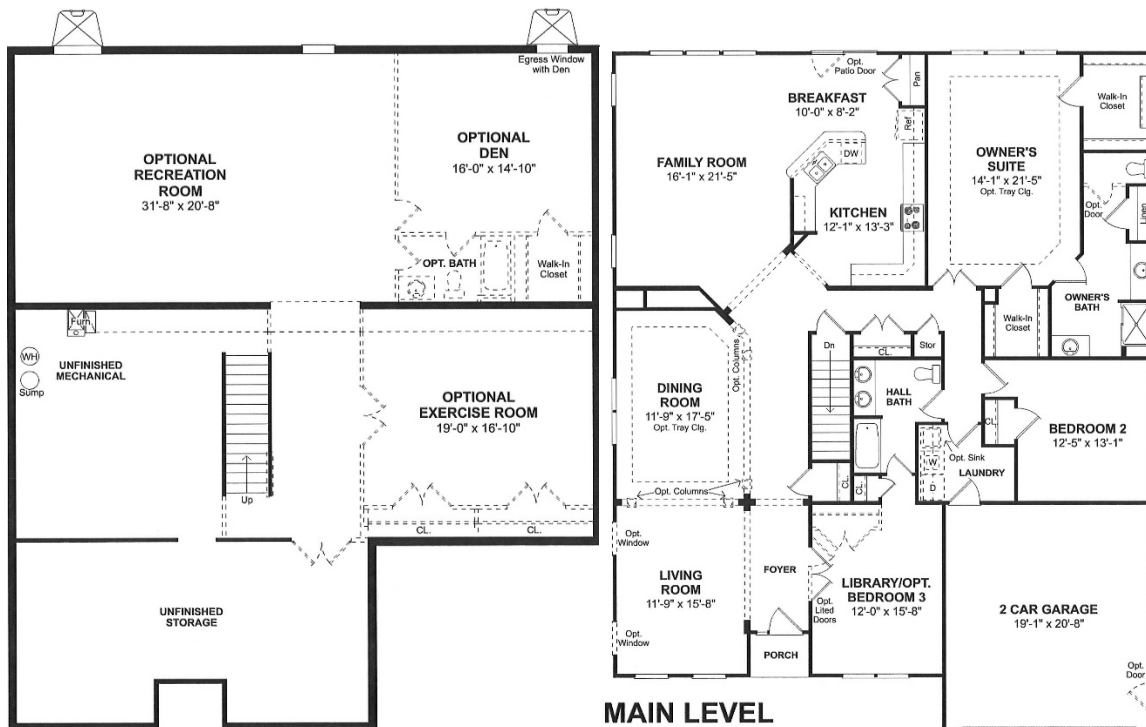


APPENDIX G: REFERENCE HOUSE 3

One-Story House with Basement Foundation



Courtesy: K Hovnanian Four Seasons at New Kent Vineyards

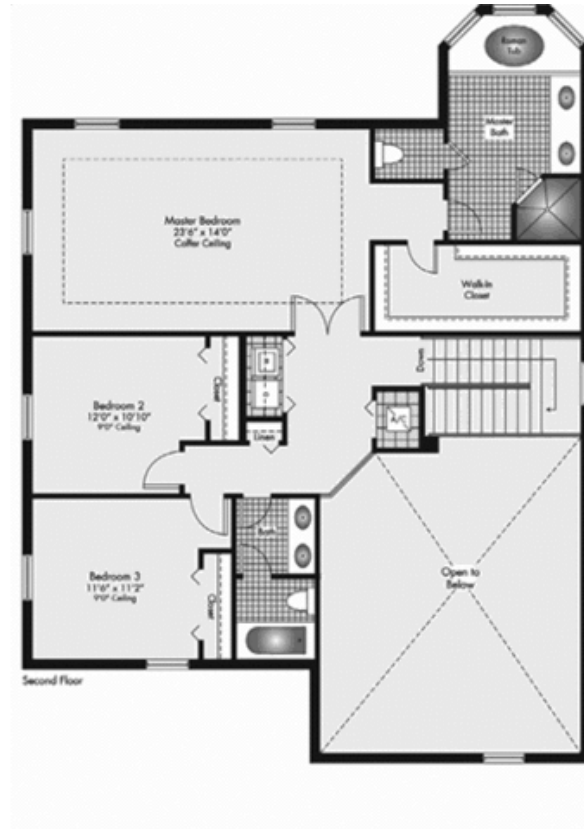


APPENDIX H: REFERENCE HOUSE 4

Two-Story House with Basement Foundation

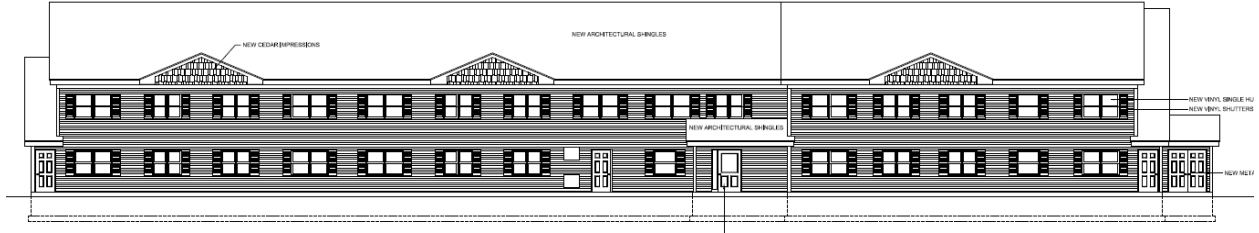


Courtesy: Lennar at Sorento Estates

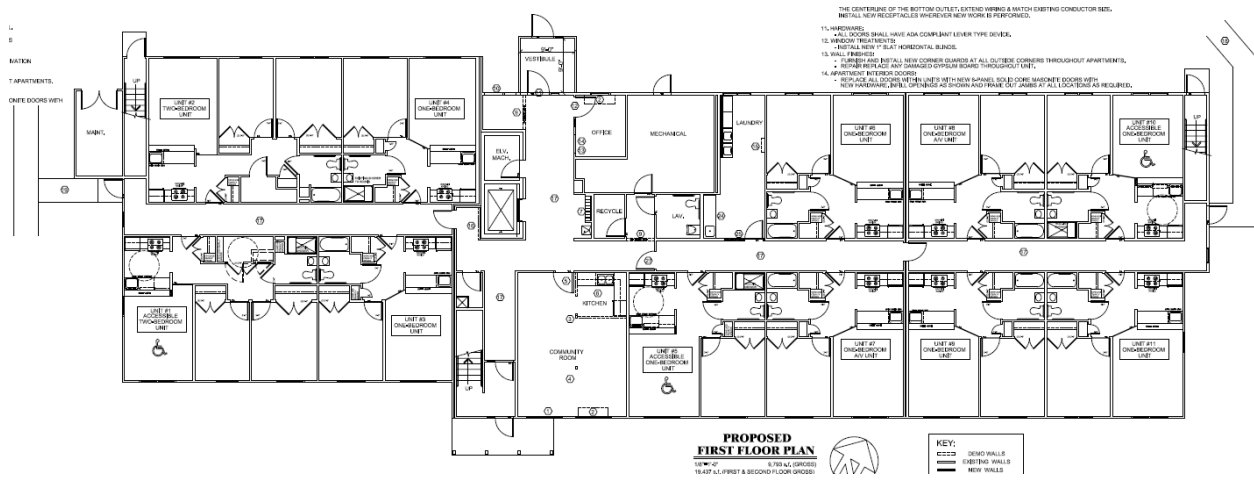


APPENDIX I: REFERENCE BUILDING 1

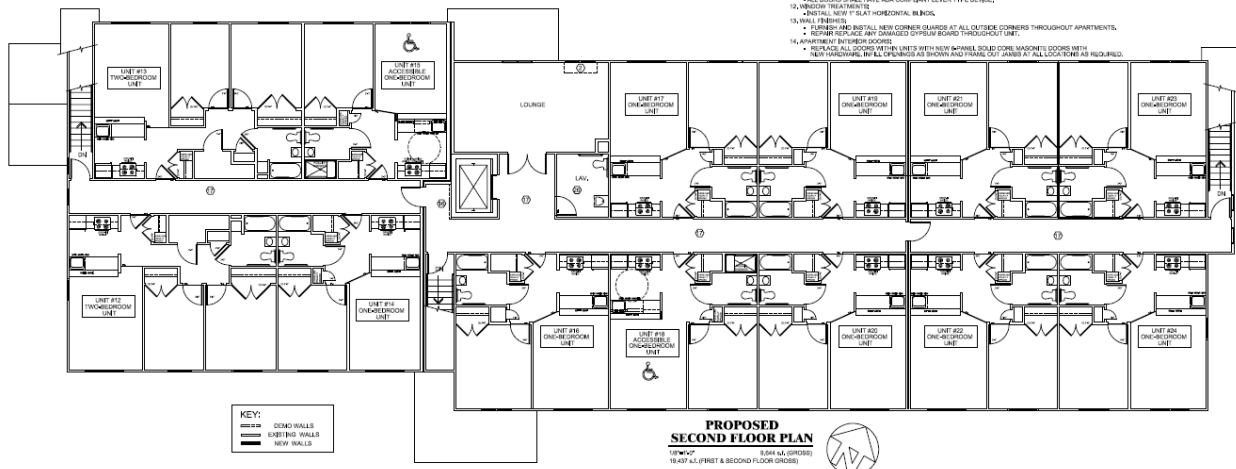
Two-Story Apartment Building, 24 Units



[ELEVATION]



[FIRST FLOOR PLAN]



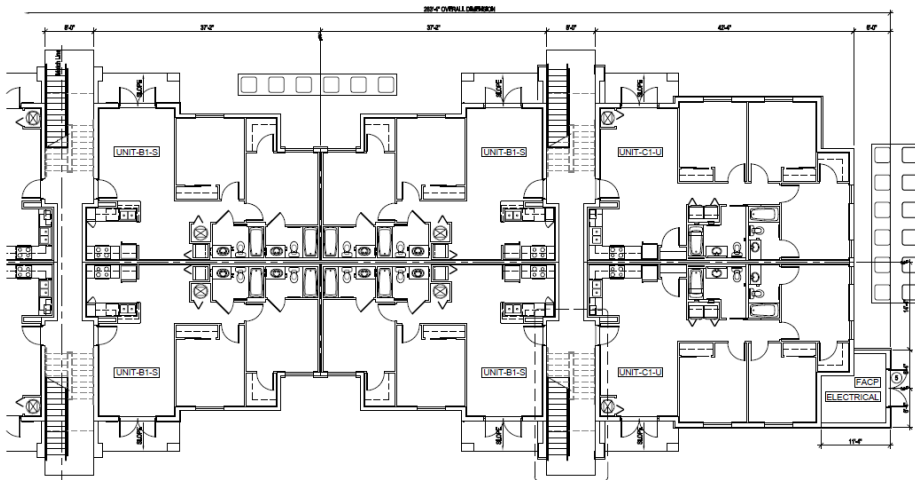
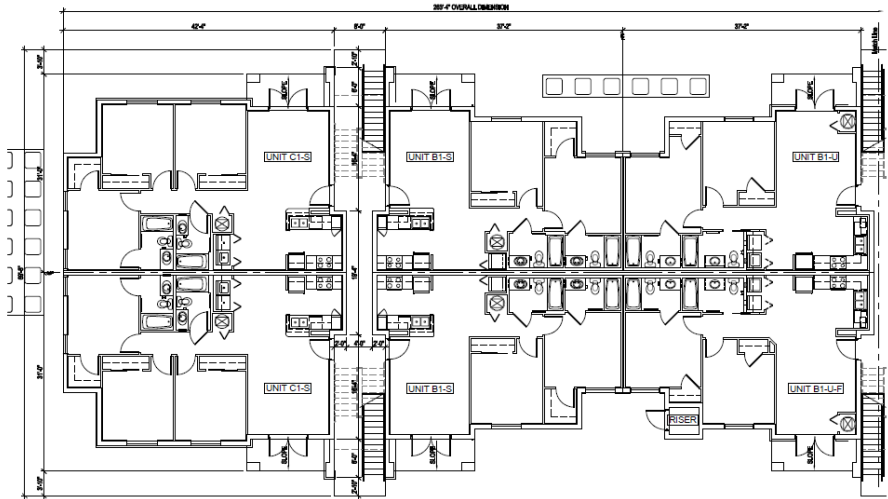
[SECOND FLOOR PLAN]

APPENDIX J: REFERENCE BUILDING 2

Three-Story Garden Style Building, 36 Units



[ELEVATION]



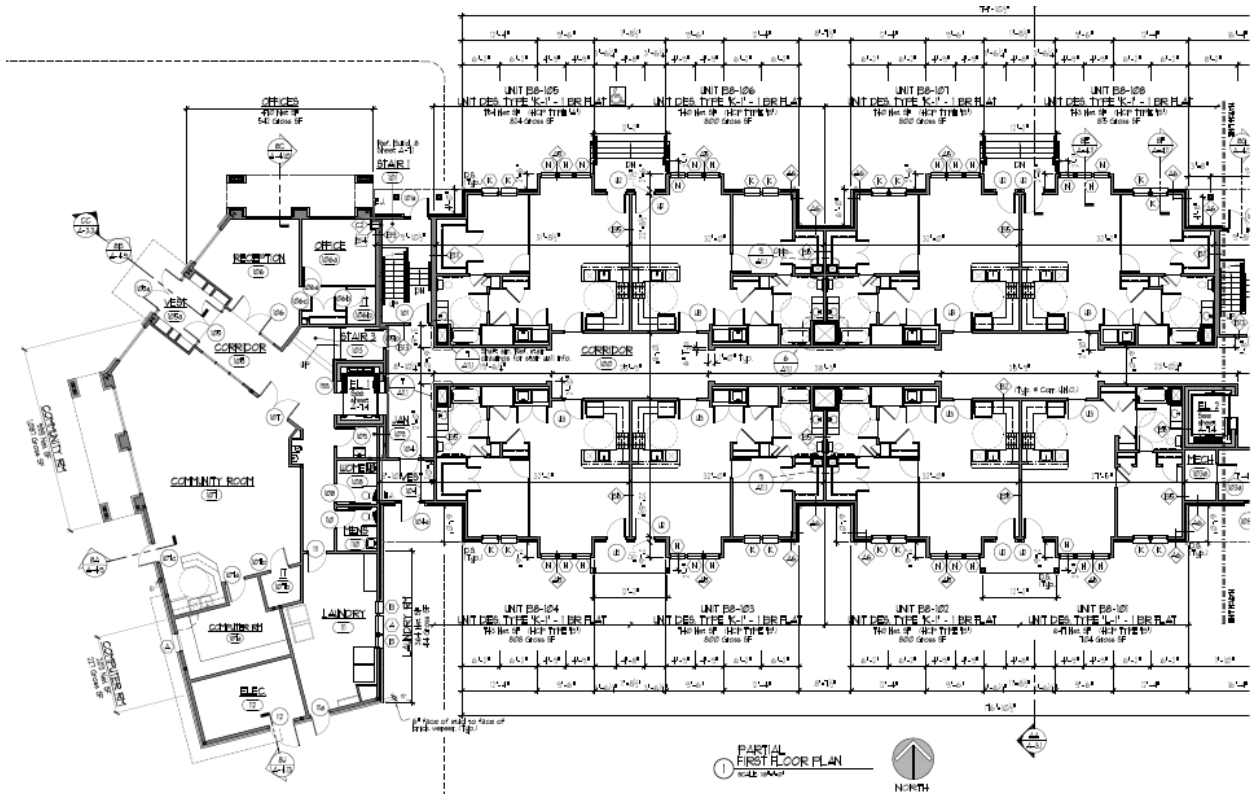
[FIRST FLOOR PLAN]

APPENDIX K: REFERENCE BUILDING 3

Four-Story Building on Grade, 48 Units & Common Areas



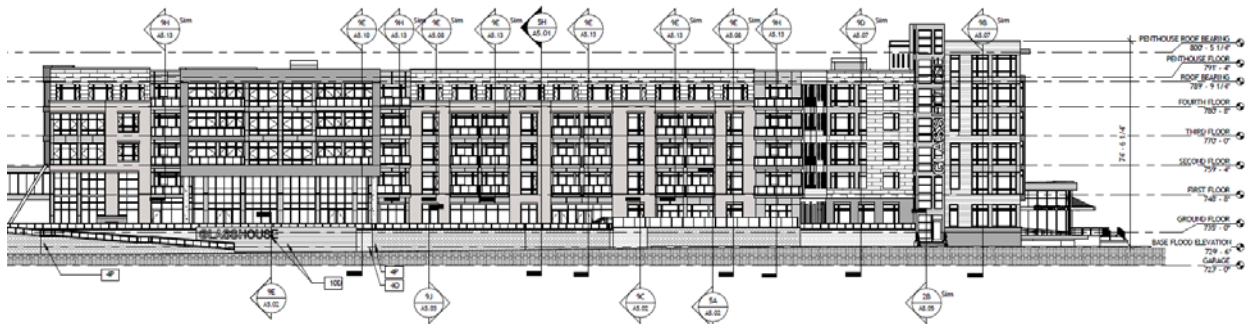
[ELEVATION]



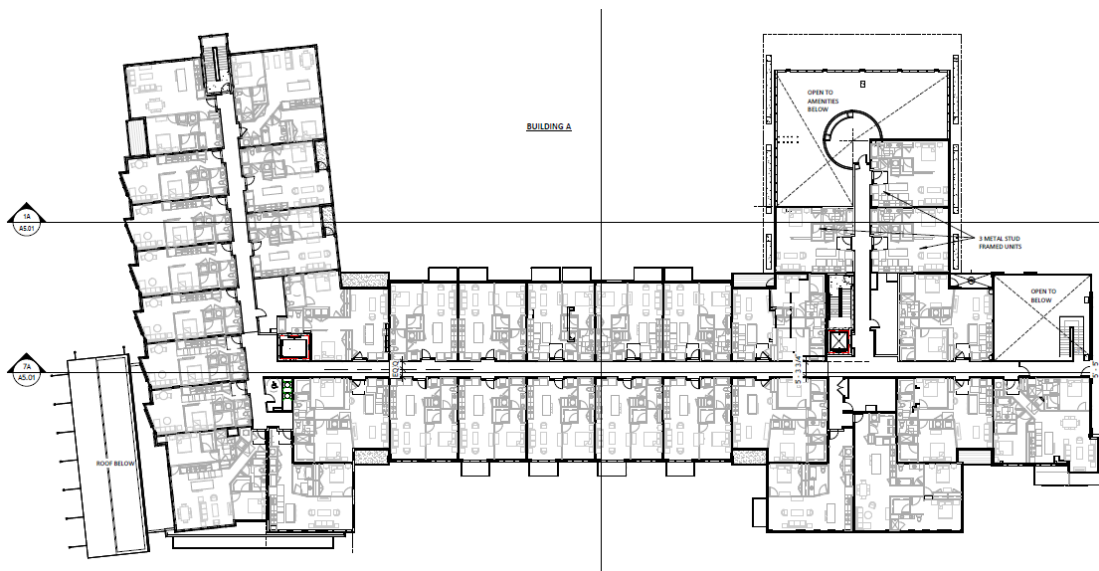
[PARTIAL FIRST FLOOR PLAN]

APPENDIX L: REFERENCE BUILDING 4

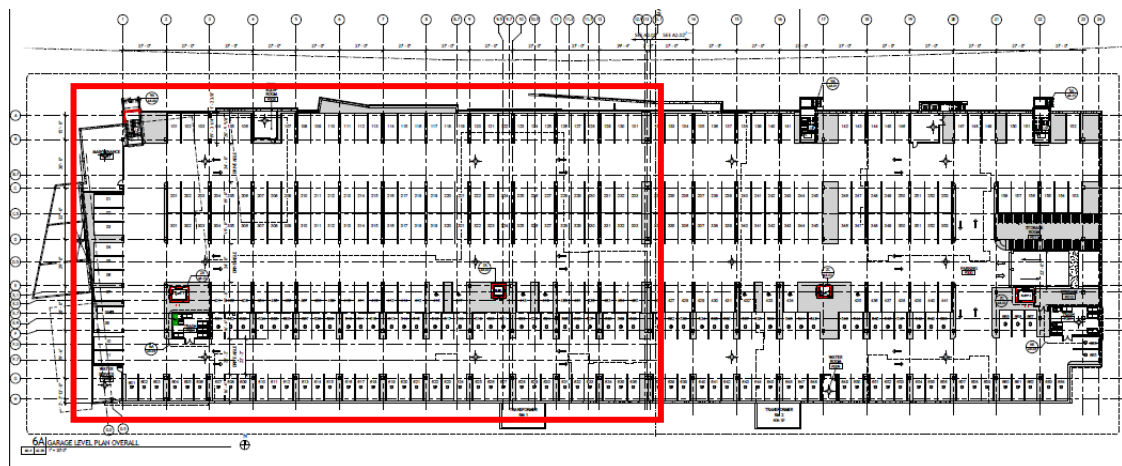
Five-Story Building on Two-Story Podium, 167 Units



[ELEVATION]



[FIRST FLOOR PLAN]



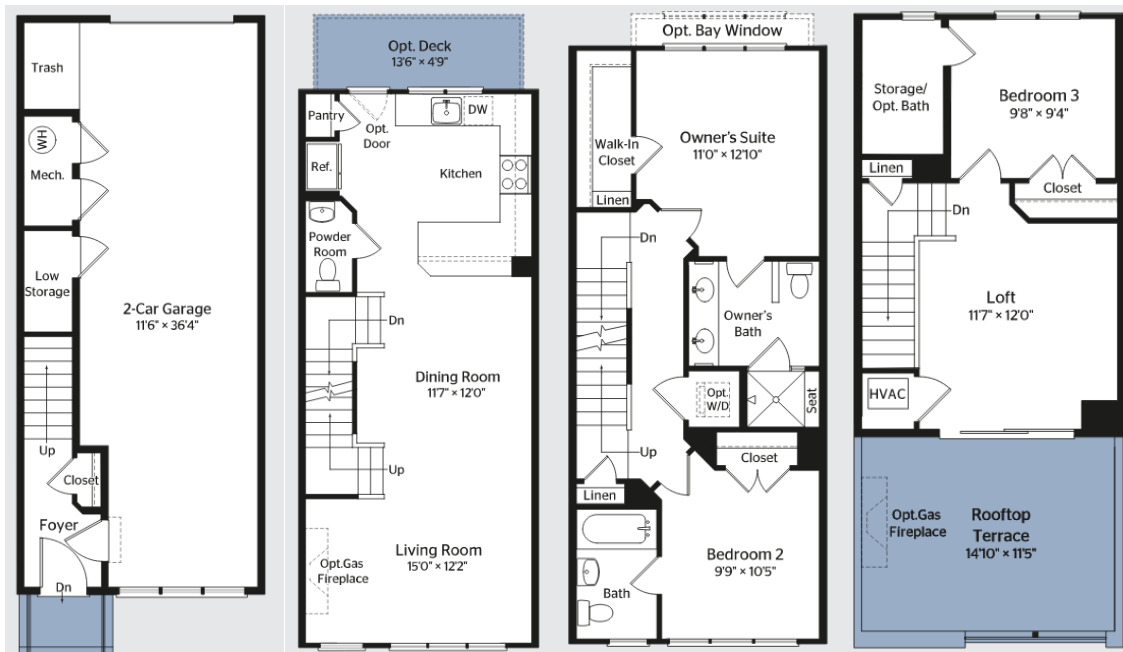
[GARAGE PLAN]

APPENDIX M: REFERENCE TOWNHOUSE

Four-Story Townhouse



[ELEVATION]



[FLOOR PLANS]



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