



Common Sense Initiative

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*

Joseph Baker, *Director*

Business Impact Analysis

Agency, Board, or Commission Name: Board of Building Standards

Rule Contact Name and Contact Information: Regina Hanshaw, rhanshaw@com.ohio.gov; 614-728-1841

Regulation/Package Title (a general description of the rules' substantive content):

RCO Amendments

Rule Number(s): 4101:8-4-1, 4101:8-34-01, 4101:8-44-01

Date of Submission for CSI Review: 9/11/23

Public Comment Period End Date: 10/6/23

Rule Type/Number of Rules:

New/ rules

No Change/ rules (FYR?)

Amended/ 3 rules (FYR? N)

Rescinded/ rules (FYR?)

The Common Sense Initiative is established in R.C. 107.61 to eliminate excessive and duplicative rules and regulations that stand in the way of job creation. Under the Common Sense Initiative, agencies must balance the critical objectives of regulations that have an adverse impact on business with the costs of compliance by the regulated parties. Agencies should promote transparency, responsiveness, predictability, and flexibility while developing regulations that are fair and easy to follow. Agencies should prioritize compliance over punishment, and to that end, should utilize plain language in the development of regulations.

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

CSIPublicComments@governor.ohio.gov

Reason for Submission

1. R.C. 106.03 and 106.031 require agencies, when reviewing a rule, to determine whether the rule has an adverse impact on businesses as defined by R.C. 107.52. If the agency determines that it does, it must complete a business impact analysis and submit the rule for CSI review.

Which adverse impact(s) to businesses has the agency determined the rule(s) create?

The rule(s):

- a. Requires a license, permit, or any other prior authorization to engage in or operate a line of business.
- b. Imposes a criminal penalty, a civil penalty, or another sanction, or creates a cause of action for failure to comply with its terms.
- c. Requires specific expenditures or the report of information as a condition of compliance.
- d. Is likely to directly reduce the revenue or increase the expenses of the lines of business to which it will apply or applies.

Regulatory Intent

2. Please briefly describe the draft regulation in plain language.

Please include the key provisions of the regulation as well as any proposed amendments.

4101:8-4-01: Brings back exceptions for frost protection

4101:8-34-01: Adopts by reference 2023 NFPA 70 with Ohio modifications

4101:8-44-01: Adopts updated referenced editions of selected standards

3. Please list the Ohio statute(s) that authorize the agency, board or commission to adopt the rule(s) and the statute(s) that amplify that authority.

Revised Code § 3781.01: <http://codes.ohio.gov/orc/3781.01>

Revised Code § 3781.06: <http://codes.ohio.gov/orc/3781.06>

Revised Code § 3781.10: <http://codes.ohio.gov/orc/3781.10>

Revised Code § 4740.14: <http://codes.ohio.gov/orc/4740.14v1>

4. Does the regulation implement a federal requirement? Is the proposed regulation being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal law or to participate in a federal program?

If yes, please briefly explain the source and substance of the federal requirement.

No.

5. **If the regulation implements a federal requirement, but includes provisions not specifically required by the federal government, please explain the rationale for exceeding the federal requirement.**

NA

6. **What is the public purpose for this regulation (i.e., why does the Agency feel that there needs to be any regulation in this area at all)?**

Revised Code § 3781.10 directs the Board to “formulate and adopt rules governing the erection, construction, repair, alteration and maintenance of all buildings specified in section 3781.06 of the Revised Code...” Additionally, Revised Code 3781.06 provides:

Any building that may be used as a place of resort, assembly, education, entertainment, lodging, dwelling, trade, manufacture, repair, storage, traffic, or occupancy by the public, any residential building, and all other buildings or parts and appurtenances of those buildings erected within this state, shall be so constructed, erected, equipped, and maintained that they shall be safe and sanitary for their intended use and occupancy.

This statute defines safe and sanitary as follows:

“Safe,” with respect to a building, means it is free from danger or hazard to the life, safety, health, or welfare of persons occupying or frequenting it, or of the public and from danger of settlement, movement, disintegration, or collapse, whether such danger arises from the methods or materials of its construction or from equipment installed therein, for the purpose of lighting, heating, the transmission or utilization of electric current, or from its location or otherwise.

“Sanitary,” with respect to a building, means it is free from danger or hazard to the health of persons occupying or frequenting it or to that of the public, if such danger arises from the method or materials of its construction or from any equipment installed therein, for the purpose of lighting, heating, ventilating, or plumbing.

7. **How will the Agency measure the success of this regulation in terms of outputs and/or outcomes?**

The enforcement of these rules will be implemented by certified township, city, and county residential building departments. Rule 4101:8-1-01 lays out the administrative procedures certified building departments must follow to implement the substantive requirements of these rules to determine compliance. These provisions require a builder or owner to make application to a building department to obtain an approval to build (permit). As part of this application the owner must submit sufficient information and/or construction documents for the building official/plans examiner to determine whether the proposed work complies with the code. After the builder or owner obtains the approval (permit), construction may commence and the building department inspectors will inspect the construction to ensure that the work conforms to the original approval. Rule 4101:8-1-01 § 105.2 provides that in the

absence of fraud or a serious safety or sanitation hazard, any residential structure built in accordance with approved plans shall be conclusively presumed to comply with these rules. The Board requires that certified residential building departments submit an annual yearly operational report which lists the following information: current employees and their certifications, total number of permits issued during the year for each type of occupancy, total number of inspections made, the total value of construction, and the total number of appeals of the code requested by a builder or owner during the year.

8. **Are any of the proposed rules contained in this rule package being submitted pursuant to R.C. 101.352, 101.353, 106.032, 121.93, or 121.931?**

If yes, please specify the rule number(s), the specific R.C. section requiring this submission, and a detailed explanation.

NA

Development of the Regulation

9. **Please list the stakeholders included by the Agency in the development or initial review of the draft regulation.**

If applicable, please include the date and medium by which the stakeholders were initially contacted.

On May 20, 2019, the Board received Petition 19-03 from the Ohio Building Officials Association requesting reinstatement of exception for frost protection in the garages which was removed with the adoption of the 2019 Residential Code of Ohio effective January 1, 2019. Petition 19-03 is attached as Exhibit A. Based on Residential Construction Advisory Committee (RCAC) recommendation the Board approved the petition at its meeting on August 2, 2019, but the adoption of change was put on hold due to COVID.

On August 11, 2020, the Board received Petition 20-11 from Julius Ballanco requesting updated referenced editions of standards recognizing Low Global Warming Potential (Low GWP) Group A2L refrigerants. Petition 20-11 is attached as Exhibit B. The Board approved the petition at its meeting on November 20, 2020, but the adoption of the changes were put on hold due to COVID.

On March 18, 2022, the Board received Petition 22-01 from the Ohio Electrical Coalition requesting the Board update the edition of the National Electrical Code (NFPA 70) referenced in the Residential Code of Ohio from the 2017 to the 2020 edition. Petition 22-01 is attached as Exhibit C. Based on RCAC recommendation the Board approved the petition at its meeting on December 16, 2022.

The Board maintains a stakeholder distribution including building department personnel, contractors, designers and professional associations. The stakeholder list is available upon request.

On March 2, 2023, the Board sent an email to all agency stakeholders informing them of a scheduled stakeholder meeting on March 22, 2023 to hear comments and respond to questions on these rules. The notice summarized the proposed rules and provided other information, background and resources for stakeholder review and also informed stakeholders that if they could not attend the stakeholder meeting, they could submit questions or comments via email: [Proposed 2019 Residential Code of Ohio Amendments | Ohio Department of Commerce](#) On March 22, 2023, the Board conducted a stakeholder meeting on the proposed rules at 1:00 PM and the following individuals attended: In-Person: Chris Randles, Summit County, David Molnar, OBOA/Richland County, Charles Huber, City of Lakewood, Ron Bartley, Nicholas Montan, Tuscarawas County, Lisa Reiheld, ICC, Tracie Boyd, SFM, Kim Boulter, Changing Spaces Ohio, Courtney Hines, Delaware Cty Board of DD, Jennifer Corcoran Changing Spaces Ohio, Matthew Helton, Changing Spaces Ohio, Chase Waits, DCBDD, Lane Beougher, OFCC and Kurt Beres, MA Design; Virtual: Christopher Parmelee, Jarrod Clay, Robert Glass, Joseph R. Briscar, Todd Hager, Duane Matlack, Troy Warnock, Jeremy M. Williams, Tim Thompson, Steve Risser and Brady Campbell.

10. What input was provided by the stakeholders, and how did that input affect the draft regulation being proposed by the Agency?

There were no comments on the proposed 2019 RCO Amendments presented at the March 22, 2023 Stakeholder Meeting. Written comments were received from Joe Bargdill Mark Ichrist, Stehlin, Michael and Bill Toole. Summaries of written comments received with Board action on the comments are attached as Exhibit D.

11. What scientific data was used to develop the rule or the measurable outcomes of the rule? How does this data support the regulation being proposed?

The proposed changes are as a result of petitions from affected industries. Additionally, the Board adopts rules affecting 1-, 2-, & 3- family dwellings based on recommendations from the RCAC pursuant to Revised Code § 4740.14. In making recommendation regarding the residential code, the RCAC must consider the following: (1) the impact that the state residential building code may have upon the health, safety, and welfare of the public; (2) the economic reasonableness of the residential building code; (3) the technical feasibility of the residential building code; and (4) the financial impact that the residential building code may have on the public's ability to purchase affordable housing

All the amendments included in this package have been developed and/or reviewed and approved by the RCAC. The membership of the RCAC includes: one architect, one fire service representative, one mayor, two building official representatives, one remodeler, and three general residential contractors.

- 12. What alternative regulations (or specific provisions within the regulation) did the Agency consider, and why did it determine that these alternatives were not appropriate? If none, why didn't the Agency consider regulatory alternatives? *Alternative regulations may include performance-based regulations, which define the required outcome, but do not dictate the process the regulated stakeholders must use to comply.***

Construction standards for 1-, 2- & 3- Family dwellings are traditionally based on empirical design which is prescriptive and the industry preference. Performance-based construction standards commonly require registered design professional knowledge and expertise. The RCO does not require drawings/construction documents to be prepared by a registered design professional, therefore the provisions must not require specialized knowledge so a homeowner can know how to comply with the code when doing an alternation. However, the RCO does permit a registered design professional's alternative engineered design as a compliance alternative method to the prescriptive requirements.

- 13. What measures did the Agency take to ensure that this regulation does not duplicate an existing Ohio regulation?**

Editorial changes are routinely made to the rules to provide consistency with the Ohio Revised Code and other Board and agencies' rules. Additionally, RC § 3781.10 gives the Board sole authority to adopt rules which regulate the erection, construction, repair, alteration, and maintenance of all buildings or classes of buildings specified RC § 3781.06 including residential and non-residential buildings.

- 14. Please describe the Agency's plan for implementation of the regulation, including any measures to ensure that the regulation is applied consistently and predictably for the regulated community.**

For these rules to be enforced by a local government, its building department must be certified by the Board. The Board also certifies the personnel who work within these departments to ensure only qualified personnel are enforcing the Board's rules. Certified personnel must complete continuing education to maintain their certifications and continue to be authorized to enforce these rules. The Board has authority to suspend or revoke certifications for failure to properly enforce the rules. Also, the Board has two staff members dedicated to responding to complaints by persons affected by the Board rules. This program helps promote consistent and predictable application of the Board rules.

Additionally, the Board adopted the 2023 edition of the NEC in the 2024 Ohio Building Code effective March 1, 2023. As part of the adoption of the 2023 NEC, the Board will partner with the National Fire Protection Association to offer post-adoption training on the new standard. Also, the Board has approved continuing education courses for code officials on the 2023 NEC in preparation of the adoption of the new standard.

Adverse Impact to Business

15. Provide a summary of the estimated cost of compliance with the rule(s). Specifically, please do the following:

a. Identify the scope of the impacted business community, and

Homebuilders, design professionals, contractors, homeowners, code enforcement personnel

b. Quantify and identify the nature of all adverse impact (e.g., fees, fines, employer time for compliance, etc.).

The adverse impact can be quantified in terms of dollars, hours to comply, or other factors; and may be estimated for the entire regulated population or for a representative business. Please include the source for your information/estimated impact.

- Becoming familiar with the changes through research and training
- Increased cost of construction due to changes that require different construction methods/materials/products or increased stringency of construction standards.

16. Are there any proposed changes to the rules that will reduce a regulatory burden imposed on the business community? Please identify. (*Reductions in regulatory burden may include streamlining reporting processes, simplifying rules to improve readability, eliminating requirements, reducing compliance time or fees, or other related factors*).

Yes, the reinstatement of exception for frost protection in the garages which was removed with the adoption of the 2019 Residential Code of Ohio.

17. Why did the Agency determine that the regulatory intent justifies the adverse impact to the regulated business community?

The residential construction industry is represented on the RCAC, the Board, and participates as stakeholders in the rule development process. Any increased cost as a result of these changes is acceptable for the level of increased safety and uniformity achieved, and often the extent of the cost impact of a code change is dependent on design choices. Particularly with the adoption of the 2023 NEC, the newer standard advances new methods, materials and installation practices for safely distributing electrical power and safe interaction with electrical systems, but also changes to rules used for calculations to modernize and reflect improvements in energy efficiency which may provide relief on the overall cost of the electrical system. Additionally, the Ohio changes to the 2023 NEC offset increased costs of some of the new requirements affecting 1-, 2- & 3- family including the elimination of mandatory surge protection and an exception for GFCI protection for certain HVAC equipment.

Regulatory Flexibility

18. Does the regulation provide any exemptions or alternative means of compliance for small businesses? Please explain.

The rules do not have special exemptions or alternative means of compliance specifically for small business. The RCO requires a building official to issue an adjudication order to an owner when the design or construction of a building does not comply with the RCO. The adjudication order must comply with RC Chapter 119 and give the owner an opportunity to appeal. This mechanism is often utilized by an owner voluntarily to obtain a variance from the requirements. Variance requests are heard by a certified local board of building appeals.

Also, the RCO permits alternative engineered designs prepared by a registered design professional to not strictly comply with the prescriptive requirements of the rules. To obtain approvals based on alternative engineered designs, the design professional must submit sufficient technical information to demonstrate that the performance meets the intent of the rules.

19. How will the agency apply Ohio Revised Code section 119.14 (waiver of fines and penalties for paperwork violations and first-time offenders) into implementation of the regulation?

Revised Code § 3781.102 does not authorize the Board to set the fees and/or penalties assessed by local certified residential building departments in connection with the enforcement of these rules. Compliance with the rules is accomplished through construction conforming to the certificate of plan approval (permit). Therefore, there are no potential paperwork violations of these rules.

20. What resources are available to assist small businesses with compliance of the regulation?

The Board's technical staff spends approximately 25% of their time responding to questions on the building codes and educating design professionals, contractors, the public, and code officials of the intent of the Board's rules assisting all parties in compliance.



OHIO BUILDING OFFICIALS ASSOCIATION

PO BOX 1506, COLUMBUS OH 43216-1506
www.oboa.org



Founded 1961

May 16, 2019

CHAPTER MEMBERS

BOCONEO

COCOA

FBOA

MVBOC

NCOBOA

NWOBOA

ODPCA

SWOBOA

Ohio Board of Building Standards
PO Box 4009
Reynoldsburg OH 43068-9009

*Via e-mail Regina.Hanshaw@com.state.oh.us, Steven.Regoli@com.state.oh.us,
& Jay.Richards@com.state.oh.us*

SUBJECT: Application for Rule Change, 2019 Edition Residential Code of Ohio
403.1.4.1

OBOA Board of Directors April 26, 2019 authorized me to submit subject document (attached). Our point-of-contact's Charles Huber, (W) 216-529-6689, e-mail Charles.Huber@lakewoodoh.net

Sincerely,

John Cheatham
President

Atch
a/s

APPLICATION

FOR
RULE CHANGE



BOARD OF BUILDING STANDARDS

6606 Tussing Road, P.O. Box 4009

Reynoldsburg, Ohio 43068-9009

(614) 644-2613

bbs@ohio.gov

www.com.state.oh.us/dico/bbs/default.aspx

Pursuant to section 3781.12 of the Revised Code and rules adopted by the Board of Building Standards, application is herewith submitted to adopt, amend, or annul a rule adopted by the Board pursuant to section 3718.10 of the Revised Code.

For BBS use:	
Petition #:	<u>19-03</u>
Date Recv'd:	<u>May 20, 2019</u>

Submitter: John Cheatham, Ohio Building Officials' Association
(Contact Name) (Organization/Company)

Address: PO Box 1506
(Include Room Number, Suite, etc.)

Columbus OH 43216-1506
(City) (State) (Zip)

Telephone Number: 440-429-8030 **Fax Number:** _____

Date: May 16, 2019 **E-mail Address:** JCheatham@safebuilt.com

Code Section: 2019 Edition Residential Code of Ohio 403.1.4.1

General Explanation of Proposed Change (attach additional sheets if necessary):

Reinstate Exceptions 1 & 2 to Section 403.1.4.1 provided by 2018 Edition International Residential Code and 2013 Residential Code of Ohio to footing frost protection requirements. These exceptions are consistent with 2015 Edition International Building Code (IBC)/2017 Ohio Building Code Section 1809.5 Exception. 2015 IBC Commentary shows exception "... applies to low-risk structures, such as a detached garage. ..."

Explanation of Cost Impact of Proposed Code Change*: Reduces construction cost of a 20' X 20' = 400 SF residential detached garage by an estimated \$2,500.

*Attach additional cost information as necessary to justify any statement of cost increase or cost decrease.

Information on Submittal (attach additional sheets if necessary):	
1. Sponsor:	John Cheatham, Ohio Building Officials' Association. Point-of-contact's Charles Huber, Charles.Huber@lakewoodoh.net ph 216-529-6689. Organization sponsoring or requesting the rule change (if any)
2. Rule Title:	2019 Edition Residential Code of Ohio Section 403.1.4.1 Frost Protection Title of rule change
3. Purpose/ Objective:	Reinstate Exceptions 1 & 2 to Section 403.1.4.1 provided by 2018 Edition International Residential Code and 2013 Residential Code of Ohio to footing frost protection requirements. These exceptions are consistent with 2015 International Building Code (IBC)/2017 Ohio Building Code Section 1809.5 Exception. 2015 IBC Commentary shows exception "... applies to low risk structures, such as a detached garage. ..." Technical justification for the proposed rule change
4. Formatted Rule Language (Using Strike-out for Deleted Text and Underline for Added Text)	<p>Frost protection. Except where otherwise protected from frost, foundation walls piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:</p> <ol style="list-style-type: none"> 1. Extended below the frost line specified in Table 301.2.(1); 2. Constructing in accordance with Section 403.3; 3. Constructing in accordance with ASCE 32; or 4. Erected on solid rock. <p>Footings shall not bear on frozen soil unless the frozen condition is permanent that extend below the frost line.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Deleted <u>Protection of free-standing accessory structures with an area of 600 square feet (56 m2) or less, of light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.</u> 2. Deleted <u>Protection of free-standing accessory structures with an area of 400 square feet (37 m2) or less, of other than light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.</u> 3. Decks not supported by a dwelling need not be provided with footings that extend below the frost line. <p>Use strike-out for deleted text and underline for added text</p>
5. Notes:	<ol style="list-style-type: none"> 1. To encourage uniformity among states using model codes, it is recommended that the submitter first submit any code change directly to ICC and participate in the national model code development process. 2. Please provide a copy of application and documentation. 3. Use a separate form for each code change proposal.

BOARD OF BUILDING STANDARDS

6606 Tussing Road, P.O. Box 4009
Reynoldsburg, Ohio 43068-9009
(614) 644-2613
bbs@ohio.gov

www.com.state.oh.us/dico/bbs/default.aspx



APPLICATION FOR RULE CHANGE

Pursuant to section 3781.12 of the Revised Code and rules adopted by the Board of Building Standards, application is herewith submitted to adopt, amend, or annul a rule adopted by the Board pursuant to section 3718.10 of the Revised Code.

For BBS use:
Petition #: 20-11
Date Recv'd: August 18, 2020

Submitter: Julius Ballanco, P.E. (Contact Name) JB Engineering and Code Consulting, P.C. (Organization/Company)
Address: 1661 Cardinal Drive (Include Room Number, Suite, etc.)
Munster (City) IN (State) 46321 (Zip)
Telephone Number: (219) 922-6171 Fax Number: (219) 922-6172
Date: August 17, 2020 E-mail Address: JBEngineer@aol.com

Code Section: Section 1402 - Central Furnaces

General Explanation of Proposed Change (attach additional sheets if necessary):
Update UL/CSA 60335-2-40 listing. The latest edition is bi-national whereas the previous was tri-national. Also updates ASHRAE 34 to the latest edition since it addresses the newer Low GWP refrigerants.

Explanation of Cost Impact of Proposed Code Change*: The code change proposal will not increase or decrease the cost of construction. As a result, there is no impact to cost.
*Attach additional cost information as necessary to justify any statement of cost increase or cost decrease.

Information on Submittal (attach additional sheets if necessary):																													
1. Sponsor:	<p>JB Engineering and Code Consulting, P.C.</p> <p style="text-align: center;">Organization sponsoring or requesting the rule change (if any)</p>																												
2. Rule Title:	<p>2019 Ohio Residential Code - Chapter 44</p> <p style="text-align: center;">Title of rule change</p>																												
3. Purpose/ Objective:	<p>UL 60335-2-40 has been significantly updated in the 2019 edition. Most new products over the next few years, because UL 1995 will be obsoleted effective 1/1/2024 (see the attached notification from UL concerning this transition from UL 1995 to UL/CSA 60335-2-40). The newest 3rd edition of UL 60335-2-40, published November 2019, has many new requirements for electrical and refrigerant safety. The 3rd edition includes requirements for UV-C germicidal lamp systems, CO₂ systems, photovoltaic systems, new marking requirements, water ingress rating system as well as allowances for Low Global Warming Potential (Low GWP) Group A2L refrigerants. Nationally Recognized Testing Laboratories (NRTL's), as they are approved by OSHA, will use the latest version of the UL 60335-2-40 safety standard for certification testing.</p> <p>The reference to ANCE as a sponsor of this UL/CSA 60335-2-40 standard has been removed as ANCE in Mexico withdrew from the 3rd Edition and is no longer associated with this standard after the 2nd Edition.</p> <p>ASHRAE 34-2019 includes many new Low GWP refrigerants that do not appear in previous editions of the standard. It should be noted that the 2021 ICC International Residential Code references the 2019 edition of ASHRAE 34.</p> <p>The titles shown in Section 4401.3 - Referenced Standards for UL/CSA 60335-2-40 have been updated to reflect the current title of the standards.</p> <p style="text-align: center;">Technical justification for the proposed rule change</p>																												
4. Formatted Rule Language (Using Strike-out for Deleted Text and Underline for Added Text)	<table border="0"> <tr> <td>ANCE</td> <td></td> </tr> <tr> <td>Standard Referenced</td> <td>Title</td> </tr> <tr> <td>NMX J 521/2-40 ANCE - 2014/CAN/CSA 22.2</td> <td>Safety of Household and Similar Electric</td> </tr> <tr> <td>No. 60335-2-40-2012/UL 60335-2-40:</td> <td>Appliances, Part 2-40: Particular Requirements for Heat Pumps, Air-Conditioners and Dehumidifiers</td> </tr> <tr> <td>ASHRAE</td> <td></td> </tr> <tr> <td>Standard Referenced</td> <td>Title</td> </tr> <tr> <td><u>34—2013 2019</u></td> <td><u>Designation and Safety Classification of Refrigerants</u></td> </tr> <tr> <td>CSA</td> <td></td> </tr> <tr> <td>Standard Referenced</td> <td>Title</td> </tr> <tr> <td><u>CSA C22.2 No. 60335-2-40-2019</u></td> <td><u>Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition</u></td> </tr> <tr> <td>UL</td> <td></td> </tr> <tr> <td>Standard Referenced</td> <td>Title</td> </tr> <tr> <td>1995-2011<u>2015</u></td> <td>Heating and Cooling Equipment—with revisions through July 2015</td> </tr> <tr> <td><u>60335-2-40-2019</u></td> <td><u>Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition</u></td> </tr> </table> <p style="text-align: center;">Use strike-out for deleted text and underline for added text</p>	ANCE		Standard Referenced	Title	NMX J 521/2-40 ANCE - 2014/CAN/CSA 22.2	Safety of Household and Similar Electric	No. 60335-2-40-2012/UL 60335-2-40:	Appliances, Part 2-40: Particular Requirements for Heat Pumps, Air-Conditioners and Dehumidifiers	ASHRAE		Standard Referenced	Title	<u>34—2013 2019</u>	<u>Designation and Safety Classification of Refrigerants</u>	CSA		Standard Referenced	Title	<u>CSA C22.2 No. 60335-2-40-2019</u>	<u>Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition</u>	UL		Standard Referenced	Title	1995-2011 <u>2015</u>	Heating and Cooling Equipment—with revisions through July 2015	<u>60335-2-40-2019</u>	<u>Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers – 3rd Edition</u>
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Exhibit C

March 17, 2022

Ms. Regina Hanshaw
Executive Secretary
Ohio Board of Building Standards
6606 Tussing Road
Reynoldsburg, OH 43068

Subject: Petition to Update NFPA 70

Dear Ms. Hanshaw:

Pursuant to Ohio Revised Code Section 3781.12, please find attached a petition from the Ohio Electrical Coalition requesting the Ohio Board of Building Standards update the 2017 edition of NFPA 70 to the 2020 edition of NFPA 70 for the Residential Code of Ohio.

Thank you for your time and consideration regarding this matter.

Sincerely,

Tom Moore

Ohio Electrical Coalition
Petition to update referenced standard
(NFPA 70) National Electrical Code
for the Residential Code of Ohio

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APPLICATION

FOR
RULE CHANGE



BOARD OF BUILDING STANDARDS

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Pursuant to section 3781.12 of the Revised Code and rules adopted by the Board of Building Standards, application is herewith submitted to adopt, amend, or annul a rule adopted by the Board pursuant to section 3718.10 of the Revised Code.

For BBS use:
Petition #: _____
Date Recv'd: _____

Submitter: Thomas E Moore Ohio Electrical Coalition
(Contact Name) (Organization/Company)

Address: 3462 Brunk Road
(Include Room Number, Suite, etc.)
Akron Ohio 44312
(City) (State) (Zip)

Telephone Number: 330-289-7932 **Fax Number:** _____

Date: March 17, 2022 **E-mail Address:** tmoore1767@gmail.com

Code Section: Referenced Standard NFPA 70: 4101:8-34 & 4101:8-44-01

General Explanation of Proposed Change (attach additional sheets if necessary):

Please see attachment

Explanation of Cost Impact of Proposed Code Change*: Please see attachment

*Attach additional cost information as necessary to justify any statement of cost increase or cost decrease.

Information on Submittal (attach additional sheets if necessary):	
1. Sponsor:	<p style="text-align: center;">Ohio Electrical Coalition</p> <p style="text-align: center;"><small>Organization sponsoring or requesting the rule change (if any)</small></p>
2. Rule Title:	<p>4101:8-34 Electrical: 3401.1 Electrical and 4101:8-44-01 Referenced Standards 70-20 National Electrical Code</p> <p style="text-align: center;"><small>Title of rule change</small></p>
3. Purpose/ Objective:	<p>Please see attachment</p> <p style="text-align: center;"><small>Technical justification for the proposed rule change</small></p>
4. Formatted Rule Language (Using Strike-out for Deleted Text and Underline for Added Text)	<p>Please see attachment</p> <p style="text-align: center;"><small>Use strike-out for deleted text and underline for added text</small></p>
5. Notes:	<ol style="list-style-type: none"> 1. To encourage uniformity among states using model codes, it is recommended that the submitter first submit any code change directly to ICC and participate in the national model code development process. 2. Please provide a copy of application and documentation. 3. Use a separate form for each code change proposal.

March 16, 2022

Ohio Board of Building Standards
Regina Hanshaw, Executive Secretary
6606 Tussing Road
Reynoldsburg, Ohio

Re: Petition to update referenced standard (NFPA 70) National Electrical Code 2017 edition to the 2020 edition

Rule Titles:

4101:8-34 Electrical: **3401.1 Electrical.** *The provisions of the National Electrical Code, NFPA 70, shall be incorporated herein and shall govern the installation, testing and operation of the electrical systems of one-, two- and three-family dwellings and their accessory structures, except for the following:*

~~1. Section 210.8(A)(2) shall be modified to read:~~ Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use ~~except for the receptacle located to serve a garage door opener when the device is a single receptacle and located in the ceiling.~~

~~2. Section 210.8(A)(5) shall be modified to read:~~ Unfinished portions or areas of the basement not intended as habitable rooms.

Exceptions:

~~1. A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault circuit-interrupter protection.~~

~~2. A single receptacle located to serve a sump pump shall not be required to have ground-fault circuit-interrupter protection when there is a duplex receptacle with ground-fault circuit-interrupter protection within six (6) feet of the sump pump.~~

~~3. Section 210.8(D) shall be deleted.~~

~~4. Section 210.12(A) shall be modified to read:~~

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, sun rooms, recreational rooms, closets, hallways, laundry rooms, or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through (6):

~~(1) A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit.~~

~~(2) A listed branch-feeder-type AFCI installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.~~

~~(3) A listed supplemental arc-protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:~~

~~a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.~~

~~b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 15.2 m (50 ft.) for a 14 AWG conductor or 21.3 m (70 ft.) for a 12 AWG conductor.~~

~~c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.~~

(4) A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:

- a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
- b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 15.2 m (50 ft.) for a 14 AWG conductor or 21.3 m (70 ft.) for a 12 AWG conductor.
- c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
- d. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination type AFCI and shall be listed as such.

(5) If RMC, IMC, EMT, Type MC, or steel-armored Type AC cables meeting the requirements of 250.118, metal wireways, metal auxiliary gutters, and metal outlet and junction boxes are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

(6) Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 50 mm (2 in.) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit. Exception No. 1: Where an individual branch circuit to a fire alarm system installed in accordance with 760.41(B) or 760.121(B) is installed in RMC, IMC, EMT, or steel-sheathed cable, Type AC or Type MC, meeting the requirements of 250.118, with metal outlet and junction boxes, AFCI protection shall be permitted to be omitted.

Exception No. 2: Branch circuits supplying receptacle outlets installed to serve only the kitchen countertop surfaces shall be permitted to be installed without arc-fault circuit interrupter protection.

4101:8-44-01 Referenced standards: ~~70-17 National Electrical Code~~ 70-20 National Electrical Code

Submitter: Thomas E. Moore, Ohio Electrical Coalition, 3462 Brunk Rd, Akron, Ohio 44312, 330-289-7932, tmoore1767@aol.com

Sponsor: Ohio Electrical Coalition

Reason and Technical Justification for Rule Change:

Pursuant to O.R.C. 3781.12, the Ohio Electrical Coalition respectfully requests the Ohio Board of Building Standards update the 2017 edition of NFPA 70 with the 2020 edition of NFPA 70 for one- two- and three-family dwellings.

The purpose of NFPA 70 is simple and straightforward; to protect persons and property from hazards arising from the use of electricity. For over 125 years the National Electrical Code has codified requirements that establish a minimum level of safety for electrical systems installed in homes, businesses and elsewhere. As the use of electrically powered equipment has increased throughout our history, so has the need to develop requirements that allow new technologies to be safely implemented into workplaces and homes.

NFPA 70 is created through an exhaustive stakeholder consensus process that considers input from a balance of interests and reflects the collective knowledge of qualified electricians, electrical inspectors, manufacturers, testing lab personnel, and other professionals that review and act on input from the public with the singular focus of ensuring safe electrical installations.

The OBBS has taken an important step in public safety with moving forward with the adoption process for the 2020 NEC for all structures regulated by the Ohio Building, Mechanical and Plumbing Codes, which includes 4-family and larger multifamily dwellings. Ohio citizens are highly dependent on reliable and safe electrical power where they work, where they recreate and most importantly, where they live. Adoption of the 2012 NFPA 70 for the Residential Code of Ohio will ensure the same level of protection is provided, regardless of the size of the dwelling unit.

In addition to a request to update to the 2020 edition of NFPA 70, this petition is also requesting deletion of the Ohio specific amendments to NFPA 70 sections 210.8(A)(2) & (A)(5), 210.8(D) and 210.12(A). The potential for a shock hazard is not simply reduced by the fact that the receptacle is in a dedicated space. From a hazard-based safety-engineering standpoint, you would only want to defeat or eliminate a primary safety device if the hazard could be greater if the safety device was not defeated. One would have to make this case with a sump pump, garage door opener or dishwasher if the GFCI were to be eliminated from that location.

Published data from the U.S. Consumer Product Safety Commission show a decreasing trend in the number of electrocutions in the United States since the introduction of GFCI devices. The US Consumer Product Safety Commission (US CPSC) conducted a cost/benefit analysis of a proposal for additional GFCIs in new residential installations.¹ As reflected in this study, the expected benefits would be a reduction of societal costs associated with residential electrocutions, which translates to the benefit of this life-saving technology being greater than the initial upfront cost.

The original call for enhanced branch circuit and cord protection came from the CPSC based on fires attributed to electrical origin. The manufacturers, in concert with Underwriters Laboratories, worked to develop a product and a product standard to address the CPSC concern. The AFCI was the product developed as the means to mitigate the types of circuit malfunctions that circuit breakers and fuses are not designed to protect against. Modern technology has provided us with the opportunity to incorporate this next generation of circuit protection devices into homes and other occupancies. These devices advance the cause of electrical safety by providing early reaction and circuit interruption where wiring systems concealed within walls and ceilings are damaged. Requirements for AFCIs have been included in NFPA 70 since the 1999 edition. These devices also respond to damaged appliance cords, a known cause of home fires. The current amendment removes these requirements from receptacles serving kitchen countertops, which lessen the level of protection provided for the public.

The US Fire Administration published a report² in May 2019 that shows a decline in the number of fires attributed to electrical malfunction. Data for the 10-year period of 2008 to 2017 reflected a 14% decrease in fires, 19% decrease in deaths, 34% decrease in injuries and 35% decrease in dollar loss.

Following are some key changes that impact electrical safety:

Keeping the regulatory document current with industry trends in new technology and delivery and generation of electric power.

- 230.67. New requirement covering surge protection for dwelling units aligns with the everchanging electrical industry landscape to protect against surges that can damage sensitive electronics and systems found in most modern appliances, safety devices and equipment used in dwellings. With the expanded use of distributed energy resources, these can also contribute introduction of surges into the system.
- 230.85. 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.

- Article 242 Overvoltage Protection – new article addresses installation requirements for Surge-Protective Devices (SPD) and Surge Arrestors used to achieve this protection.
- Article 625 Electric Vehicle Power Transfer System – requirements for electric vehicles and supply equipment to encompass bidirectional current exchange.
- Updates to Articles 690 Solar Photovoltaic (PV) Systems, 706 Energy Storage Systems, Article 710 Standalone Systems and Article 712 Direct-Current Micro-grids continue to support new and expanding technologies, which has immeasurable societal benefits at both a micro- and macro-economic perspective.

Examples of new and revised requirements that may provide relief on the overall cost of the electrical system.

- 210.11(C)(3) & (4). Revision specifies which receptacle outlets are required to be on the required 20 ampere circuit for bathrooms and garages which provides more flexibility with circuiting in those areas.
- Article 220 Branch-Circuit, Feeder, and Service Load Calculations – Several revisions to this article, including the modernization of the tables currently in use for calculations, which has been extensively revised to reflect improvements in energy efficiency and may grant substantial relief for sizing of service and feeder distribution systems.
- 225.30(B). Revised to permit multiple smaller feeders, with smaller conductors and lower rated OCPD's to allow more flexibility with the design.

Protecting electrical workers while maintaining or servicing electrical or electrically powered equipment.

- 230.62(C). New requirement that provides additional shock protection with barriers to be placed in service equipment to prevent inadvertent contact.
- 230.71(B). Requirements for service disconnecting means is revised by eliminating the risk of the inability to establish an electrically safe work condition for justified energized work that must be performed within service equipment enclosures with more than one service disconnect.

Protecting people from electric shock in homes, workplaces and places of recreation.

- First introduced in the early 1970s, their continued expansion to cover areas in homes and workplaces where occupants are particularly susceptible to electric shock accidents can be directly attributed to reductions in electrocutions and electric shock accidents.
- Revision to add floating buildings to the scope of Article 555 and revised to provide greater flexibility with the application of ground-fault protection requirements.

These examples illustrate the importance of regularly updating NFPA 70 in order to recognize new methods and installation practices for safely distributing electrical power, safe interaction with electrical systems, to address safety concerns not previously covered in the referenced standard and to put new requirements in place that facilitate the safe implementation of new technology covering the generation, distribution and management of electrical power. This is the work performed during the revision process by the volunteer industry subject matter experts who serve on the NFPA technical committees. Updating to the 2020 NFPA 70 is a vitally important and proactive step for consumer protection and for the safe advancement of new electrical system technology.

The cost impact of complying with the 2020 edition of NFPA 70 will vary depending on the design approach and should be considered holistically by considering the safety benefit alongside of the cost. Additionally, there are numerous types of materials, equipment and device options in the electrical marketplace, and multiple methods for achieving code compliance. The coalition is prepared to submit a cost impact analysis if petition is approved to begin the review and rulemaking process.

Updating NFPA 70 makes sure communities continue to provide an acceptable level of public safety while supporting the latest technological advances, which is core to the mission of the OBBS.

This petition is submitted on behalf of the Ohio Electrical Coalition, which is comprised of a broad cross section of industry stakeholders committed to moving electrical safety forward in the State of Ohio through timely adoption of the 2020 edition of NFPA 70. Ohio citizens expect their electrical system will be safe from fire and shock hazards. This code update will ensure that Ohio remains at the forefront of technological developments in the electrical industry and ensure that electrical systems are safe for homeowners and citizens across Ohio, the most important stakeholder in the adoption and enforcement of construction safety codes.

The coalition members look forward to supporting the OBBS with moving forward with revising and updating Ohio electrical safety requirements that will enable us to be competitive and enhance the safety of our workforce, communities, and families.

Sincerely,

Ohio Electrical Coalition

[¹Consumer Product Safety Commission – Economic Considerations – GFCIs](#)

[²US Fire Administration – Residential Building Electrical Malfunction Fire Trends \(2008-2017\)](#)



"Let the Code Decide"
OHIO CHAPTER
International Association of
Electrical Inspectors

President

Karl Frederick
Central Division

March 16, 2022

First Vice-President

Zach Jenkins
Northwest Division

Ohio Board of Building Standards
6606 Tussing Rd
Reynoldsburg, OH 43068

Second Vice-President

William Buetler
Western Reserve

Subject: 2020 NFPA 70, National Electrical Code (NEC) Update

Immediate Past-President

Michael Koken
Eastern Division

The Ohio Chapter IAEI strongly encourages the Ohio Board of Building Standards to update its current NFPA 70, from the 2017 edition to the 2020 edition for Residential Code of Ohio regulated occupancies and supports the petition submitted on behalf of the Ohio Electrical Code Coalition. The OBBS has proven time and time again that they are at the forefront of public safety by adopting codes that ensure the health, safety and security of the occupants or users of buildings.

Secretary/Treasurer

Lorenzo Adam
Southwest Division

The NEC provides for the practical safeguarding of persons and property from the hazards arising from the use of electricity.

Inspector Member

Pete Baldauf
Southwest Division

In addition to new requirements to address advancing alternative technologies and improved safety for the electrical worker, the 2020 NEC also expands important safety requirements for dwelling unit occupancies. While expansion of important safety requirements may add cost, the 2020 NEC also includes requirements that provide economic relief.

Inspector Member

Jeff Affolter
Akron Division

The Ohio Chapter IAEI Board of Directors respectfully requests the OBBS move forward with updating the NFPA 70, NEC, to the 2020 edition. Embracing these requirements by updating to the 2020 NEC is an important step forward with public safety.

Western Section

Chapter Representative

Jeff Grassi
Western Reserve Division

Education Chairman

Gaylord Poe
Southwest Division

Respectfully,

Historian

Armand Lenarz
Akron Division

Karl J. Frederick

Karl Frederick, President

On behalf of the Board Members of the Ohio Chapter IAEI



CHAPTER

OHIO BUILDING OFFICIALS ASSOCIATION



Founded 1961

PO BOX 1506, COLUMBUS OH 43216-1506
oboa.clubexpress.com

March 15, 2022

CHAPTER MEMBERS

BOCONEO

COCOA

FBOA

MVBOC

NCOBOA

NWOBOA

OCPT

ODPCA

SWOBOA

SWOFSC

Ohio Board of Building Standards
PO Box 4009
Reynoldsburg OH 43068-9009

**SUBJECT: Petition to Amend Residential Code of Ohio to Adopt 2020 Edition
National Electrical Code**

Ohio Building Officials' Association Resolution 2021-4 (attached) adopted by the general membership November 8, 2021 supports a petition for the Residential Code of Ohio to adopt the 2020 Edition National Fire Protection Association standard 70, National Electrical Code.

Sincerely,

Robert Eifert
President

Atch
a/s



OHIO BUILDING OFFICIALS ASSOCIATION

RESOLUTION 2021-4

of the

ANNUAL MEETING OF THE MEMBERS

concerning



A CODE CHANGE PETITION IMPLORING THE OHIO BOARD OF BUILDING STANDARDS TO ADOPT THE 2020 NFPA 70 (NATIONAL ELECTRICAL CODE) AS THE REFERENCE STANDARD FOR RESIDENTIAL CONSTRUCTION

WHEREAS the Board of Building Standards formulates and adopts rules governing the erection, construction, repair, and alteration of buildings known as the Ohio Building Code, Ohio Mechanical Code, Ohio Plumbing Code, and the Residential Code of Ohio; and

WHEREAS on September 2, 2021, the Board of Building Standards issued a notice of its intent to amend the Ohio Administrative Code to update rules for the Ohio Building, Mechanical, and Plumbing Codes to reference the the 2020 edition of NFPA 70 (National Electrical Code); and

WHEREAS the reference standard for Residential Code of Ohio would remain the 2017 edition of NFPA 70 (National Electrical Code); and

WHEREAS many electrical contractors and designers work on both Residential and Non-Residential projects requiring them to learn, maintain and work from two standards which would cause unnecessary burden as well as additional expense; and

WHEREAS Ohio Building Officials Association members who are charged with enforcement of Ohio building codes, recognize the need for consistent enforcement of a single reference standard for effective plan approval and inspection of electrical work on both Residential and Non-Residential projects.

BE IT RESOLVED that the members of this organization here assembled on Monday November 8, 2021 do hereby support a code change petition imploring the Ohio Board of Building Standards to adopt the 2020 NFPA 70 (National Electrical Code) as the reference standard for the Residential Code of Ohio.



NATIONAL FIRE PROTECTION ASSOCIATION

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

March 14, 2022

Ms. Regina Hanshaw
Executive Secretary
Ohio Board of Building Standards
6606 Tussing Rd
Reynoldsburg, OH 43068

Dear Ms. Hanshaw:

NFPA 70 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 NFPA 70 has adapted to meet new challenges. Revised every three years to allow for new technologies and improved installation safety practices, NFPA 70 is a ready-to-use, comprehensive standard suitable for adoption.

NFPA 70 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 NFPA 70 and the requirements of this standard have continued to evolve with America's reliance on reliable and safe electrical energy. NFPA 70 is developed through an open, transparent, and balanced process accredited by the American National Standards Institute.

The NFPA 70 community has worked diligently to make sure safe installation rules are in place for the continuously changing electrical industry landscape. The 2020 edition of NFPA 70 has been issued by the NFPA Standards Council.

NFPA supports the petition filed on behalf of the Ohio Electrical Coalition, to update the 2017 edition of NFPA 70 to the 2020 edition. We encourage the Ohio Board of Building Standards to move forward by providing its citizens with the appropriate level of safety outlined in the 2010 edition of NFPA.

Sincerely,

A handwritten signature in black ink, appearing to read 'Meredith Hawes', written in a cursive style.

Meredith Hawes
Regional Director, North Central Region
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169



March 16, 2022

Regina Hanshaw, Executive Secretary
Board of Building Standards
6606 Tussing Rd
P. O. Box 4009
Reynoldsburg, OH 43068-9009

Re: Greater Cincinnati Electrical Association (GCEA) support for timely adoption of the entire "2020 NEC"

Dear Regina,

I am writing on behalf of the GCEA. The GCEA is an association that represents the interest of our members who are electrical industry companies in the greater Cincinnati area. Our mission is to provide "Quality electric service" to our community. We pursue this mission by providing on-going training, by stressing safety, and by providing a venue for communications across the different electrical company divisions necessary for a complete electrical community. GCEA membership includes electrical contractors, electrical material distributors, manufacturers, manufacturer reps, utilities, and electrical safety inspectors.

The GCEA's Board of Trustees would like to state it is in full support of the Ohio Code Coalition's petition in regards to the timely adoption of the "2020 National Electrical Code" (2020 NEC) for all electrical installations including 1, 2, and 3 – family dwellings.

Typically our members are working daily on multiple jobs in various stages of completion and having two versions of the NEC active at one time is awkward and causes an additional concern on each project. The GCEA strongly supports the alleviation of this burden on our industry.

Sincerely

A handwritten signature in black ink, appearing to read "Terrence J. Eibel", is written over a faint, larger version of the same signature.

Terrence J. Eibel

Executive Director, GCEA
P.O. Box 58183
Cincinnati, OH 45258
513-922-6501



March 16, 2022

Ohio Board of Building Standards
Regina Hanshaw, Executive Secretary
6606 Tussing Road
Reynoldsburg, OH 43068

Subject: Support for Petition to update the referenced National Electrical Code to the 2020 edition

Dear Secretary Hanshaw,

We at Underwriters Laboratories (UL) are deeply committed to advancing the safety of the citizens of the state of Ohio. UL believes NFPA 70, the National Electrical Code® (NEC®) serves as an important tool in advancing that safety. Adoption of the most current edition of the code, in this case the 2020 NEC® by the Ohio Board of Building Standards is critical to keeping pace with safety science. Pursuant to the Ohio Revised Code 3781.12, I am writing on behalf of UL to request that the State of Ohio move forward with the adoption of 2020 NFPA 70 NEC as requested in the petition filed by the Ohio Electrical Coalition.

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 the installation safety practice to achieve the most desirable safety outcomes.

In conclusion, UL urges the Ohio Board of Building Standards to ensure the safety of its citizens by adopting the latest electrical safety requirements as represented by the 2020 edition of the NEC®.

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

Sincerely,

A handwritten signature in black ink that reads "Deborah Jennings-Conner".

Deborah Jennings-Conner
VP, Regulatory Services

UL LLC
12 Laboratory Drive

Underwriters Laboratories Inc.
333 Pfingsten Road, Northbrook, IL 60062-2096 USA
T: 847.272.8800 / F: 847.272.8129 / W: UL.com



PO Box 13995
Research Triangle Park, NC 27709
T: (919) 549-1603
M: (919) 308-4888
W: ul.com

cc: Tom Lichtenstein Senior Regulatory Engineer



**INDEPENDENT ELECTRICAL
CONTRACTORS**

Independent Electrical Contractors of Greater Cincinnati
586 King's Run Dr.
Cincinnati, OH 45232
Ph 513-542-0400
www.iec-cincy.com

March 10, 2022

Regina Henshaw, Executive Secretary
Ohio Board of Building Standards
6606 Tussing Rd.
Reynoldsburg, OH 43068-9009

RE: 2020 National Electrical Code Adoption

Dear Regina,

The Independent Electrical Contractors of Greater Cincinnati request a rule change to update the 2017 edition of NFPA 70 with the 2020 edition of NFPA 70 in accordance with ORC 3781.12.

The 2020 NEC provides numerous changes that will enhance public safety and advance new methods, materials and installation practices. It also includes important changes to rules used for certain calculations which modernize and acknowledge improvements in energy efficiency which may account for and contribute savings in the overall cost of an electrical system.

Living in a strong, technology-driven consumer world that regularly sees advancements, in said technologies, warrants regular and up-to-date standards for implementation to help ensure the safety of the end-user and their property. Updating to the 2020 NEC provides a critical and necessary step towards continued consumer health preservation and evolution of safely implementing technologies in electrical systems.

The NEC is the most widely adopted consensus Code in the world. Consensus is a key word when developing the document. The NFPA provides the document rules and governing procedures that stipulate all NEC changes have had public input and public review. Technical committee membership classifications are used to maintain balanced Code Making Panels that represent their Principal interest to ensure changes are necessary and in the best interest of public safety.

I urge the state of Ohio to adopt the 2020 NEC without delay or modifications to the document.

Sincerely,

Matthew Hittinger

Matthew Hittinger
Executive Director
Independent Electrical Contractors of Greater Cincinnati



March 11, 2022

Ms. Regina Hanshaw
Executive Secretary
Ohio Board of Building Standards
6606 Tussing Road
Reynoldsburg, OH 43068

Re: Schneider Electric Supports the Ohio Electrical Coalition Petition to Adopt the 2020 Edition of the National Electrical Code for the Residential Code of Ohio.

Dear Ms. Hanshaw:

I am writing to inform you of Schneider Electric's support of the Ohio Electrical Coalition Petition to Adopt the 2020 Edition of the National Electrical Code for the Residential Code of Ohio.

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 750 plus Ohio employees are located in various offices and four manufacturing facilities across the state. We support thousands of additional direct and indirect jobs in Ohio by working with over 400 vendors and suppliers located in the state.

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 which supports safe electrical infrastructure installations further advancing the safe use of electricity. Our products are designed and manufactured to comply with the most current edition of the NEC. 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 the most cost-effective infrastructure solution and utilize emerging technological advancements while enhancing safety in Residential buildings in the state.

Once again, Schneider Electric urges the OBBS to promptly initiate the review and adoption of the 2020 NEC for the Residential Code of Ohio.

Sincerely,

Don Iverson
Manager of Industry Codes & External Affairs



March 15, 2022

Ms. Regina Hanshaw
Executive Secretary
Ohio Board of Building Standards
6606 TUssing Road
Reynoldsburg, OH 43068

Re: Support Adoption of 2020 Edition of the National Electrical Code

Dear Ms. Hanshaw,

I am writing in support of updating the Residential Code of Ohio from the 2017 edition of the National Electrical Code® (NEC) to the 2020 edition of the NEC. For many years, Ohio has been one of the first 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.

Siemens employs 1,959 people throughout Ohio who, along with their families, would be impacted by this update. There are 21 Siemens locations reporting \$611M in sales last year. Income tax paid to the state exceeds \$450k with employee wages exceeding \$226M.

Updating the National Electric Code® to the current 2020 edition with no amendments would help to keep Ohio residents safe.

Thank you for your consideration on this important issue.

With kind regards,

Ashley Bryant
Senior Product Manager, Electronic Circuit Breakers
Siemens Industry, Inc.
3617 Parkway Lane
Peachtree Corners, GA 30092, USA
Tel.: +1 404 697-1587
<mailto:ashley.bryant@siemens.com>



National Electrical Manufacturers Association

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

March 17, 2022

Ms. Regina Hanshaw
Executive Secretary
Ohio Board of Building Standards
6606 Tussing Road
Reynoldsburg, OH 43068

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

Dear Ms. Hanshaw:

On behalf of the National Electrical Manufacturers Association (NEMA), I am writing to express support for the update of the Residential Code of Ohio from the 2017 edition of the National Electrical Code® (NEC) to the 2020 edition of the NEC.

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 Ohio, representing 44 companies with 142 manufacturing and engineering facilities that support the state's economy. Member companies in Ohio collectively employ over 70,077 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.

National Electrical Manufacturers Association
1300 North 17th Street, Suite 900 - Rosslyn, VA 22209

Once again, NEMA urges the Ohio Board of Building Standards 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 black ink, appearing to read "Todd Sims". The signature is fluid and cursive, with a prominent initial "T" and a large "S".

Todd Sims
Director, Government Relations
National Electrical Manufacturers Association

Exhibit D

2019 Residential Code of Ohio Amendments Comments						
Commenter	Email	Code Section	Comment	Staff Comments	RCAC Recommendation	Code Committee Action
Joe Bargdill	joe.bargdill@westerville.org	317.1, 328.1, 507.2.1	<p>Section 403.1.2. Wood Treatment for pressure treated lumber below grade shall have a label showing rating UC4B according to AWPA U1.</p> <p>Note: most pressure treated lumber on the market (other than 4 x 4 or heavier) are only rated for ground contact. When used as a wood foundation material or pole building lumber below grade, the lumber should reflect a direct burial rating.</p> <p>Sections 317.1, 328.1, and 507.2.1 should also note this change.</p>	RCO Sections are not being amended. Keep comments for RCO 5 year rule review	Agreed	No action required
mark ichtist	1171cplchristmd@gmail.com	Chpts 34 & 44	<p>It is my belief that the 2023 NEC be adopted for both the commercial and residential codes.</p> <p>One reason is it can be confusing keeping track of all of them. By the time they are adopted, there will be buildings still being inspected under the 2017 NEC. Having to remember the changes for the 2020 and 2023 as well as the 2017 will be more time consuming, and contractors as well as inspectors may get confused.</p> <p>I also believe they that it is an additional burden both on contractors and building departments spend money on both books, when the most recent standard is already published.</p> <p>Finally I believe the code should be adopted in full.</p> <p>There is not a reason in my opinion to take things out, when the code is a minimum safety standard as written.</p>	Ohio is updating edition of base NFPA 70 (NEC) for both residential and non-residential buildng codes at the same time which is atypical. Opportunity to eliminate the typical time lag.	RCAC considered the benefits of changing the reference to the 2023 NEC (NFPA 70) and modified their recommendation to the Board. Recommend adoption of the 2023 NEC as the base standard as amended by provision in RCO Chpater 34	Approved amended rules that reference the 2023 National Electric Code (NEC/NFPA70) with amendmenets in RCO Chpater 34

Stehlin, Michael	Michael.Stehlin@hamilton-co.org	403.1.4.1	<p>I am writing in support of the proposed changes to the 2019 RCO. Specifically, I wholly support reinsertion of the exceptions that allow freestanding accessory structures under 600 and 400 SF to have footings less than frost depth. It is common in our jurisdiction to have detached garages and sheds of 200-600SF built with monolithic slabs with a turn down edge of 18" in depth. It was totally unnecessary to remove these exceptions in the 2019 RCO, and I am extremely supportive of their reintroduction. Detached accessory structures have been built this way for decades without any problem.</p>	In support - thank you	None	No action required
Bill Toole	wrt@tooleinspectors.com	Chpts 34 & 44	<p>I would propose not accepting the 2020 NEC and go to the 2023 NEC for use in review and inspection for the residential sector to match the acceptance of the 2023 NEC proposed for the 2024 OBC. Uniformity in the review and inspections process, the use of one referenced standard, ease of use for the installing contractor to only have to use one referenced standard, elimination of confusion for owners, designers and contractors rapidly come to mind in utilizing the same referenced standard year for review and regulation.</p>	<p>Ohio is updating edition of base NFPA 70 (NEC) for both residential and non-residential building codes at the same time which is atypical. Opportunity to eliminate the typical time lag.</p>	<p>RCAC considered the benefits of changing the reference to the 2023 NEC (NFPA 70) and modified their recommendation to the Board. Recommend adoption of the 2023 NEC as the base standard as amended by provision in RCO Chapter 34</p>	<p>Approved amended rules that reference the 2023 National Electric Code (NEC/NFPA70) with amendments in RCO Chapter 34</p>