



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of Labor and
Workforce Development**

Labor Standards and Safety

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April 21, 2017

The Honorable Representative Sam Kito III
Alaska House of Representatives
120 Fourth Street, Room 403
Juneau, AK 99801

Dear Representative Kito,

This letter is in response to concerns received by your office about a provision in the upcoming 2017 edition of the National Electrical Code. An erroneous interpretation of this code would create an unrealistic requirement for dock, marina, and boatyard owners. The Department of Labor and Workforce Development interprets the National Electrical Code according to the developers' intent, and hopes to allay any concerns that it might do otherwise.

Under AS 18.60.580, the National Electrical Code (NEC), developed and published by the National Fire Protection Association (NFPA), constitutes the minimum electrical safety standards of the state, applying to new installations and alterations to existing installations. The Alaska Department of Labor and Workforce Development may adopt the most recent version by regulation. The department may only adopt amendments issued by the American National Standards Institute, the body that approves the NEC. Any other amendments must be made in Alaska statute.

The department updates to a new NEC edition on a three-year cycle. The 2014 edition is the current version adopted in 8 AAC 70.025. The process of adopting the 2017 edition will begin in the spring of 2018, with an expected effective date near the end of 2018. This timeframe allows public and industry analysis of the new version, with ample time for legislation if amendments are necessary to adapt the code to Alaska's environment.

Several local organizations have expressed concern about a provision of the 2017 edition. Section 555.3 defines ground-fault protection requirements for marinas, boatyards, and commercial and noncommercial docking facilities. It reads:

“555.3 Ground-Fault Protection. The overcurrent protective devices that supply the marina, boatyards, and commercial and noncommercial docking facilities shall have ground-fault protection not exceeding 30 mA.”

There is concern that the department may interpret this provision as requiring 30 mA ground-fault protection for all overcurrent protective devices in an affected facility, up to and including the main feeder. According to industry representatives, a 30 milliamp protection requirement at

the main would create an unacceptable number of nuisance trips due to the cumulative effect of small leakage currents across a marina, dock, or boatyard.

Through research and consultation with NFPA technical representatives, the department has determined that this is not the intended effect of the section. Instead, the intent is to require 30 milliamp ground-fault protection at each supply point in the marina. This may be achieved through 30 mA protection at pedestals or branch circuits.

The National Fire Protection Association committee that revised Section 555.3 stated in its revision comments, "The 30 mA ground-fault limit is consistent with that recommend in the Fire Protection Research Foundation report 'Assessment of Hazardous Voltage/Current in Marinas, Boatyards and Floating Buildings'".¹ The referenced report is available to the public and provides background information for the new language.² The final sentence of that report specifically refrains from making a recommendation on main feeder protection, citing the need for further study before an appropriate protection level may be determined.

Because of confusion over the meaning of the new Section 555.3, several organizations submitted resolutions supporting the addition of a Fine Print Note to Alaska's adoption of the 2017 NEC:

"FPN: The 30 mA requirement can be applied to all feeder circuits or all branch circuits in lieu of the main overcurrent protective device."

The primary drafter of this note, professional engineer Mark Morris, stated in an October 2016 email to the Governor's office: "This is not a change to the National Electrical Code, it is just a clarification of the code to assist folks in interpreting the code." The department agrees with his assessment but believes adoption of this note is unnecessary. Assistance in interpreting the code is available through means other than legislation. The NFPA offers its members one-on-one help answering technical questions.³ There are also resources available from private code consultants, and Mechanical Inspection's own electrical inspectors provide assistance when questions arise. In recognition of the extraordinary amount of uncertainty in this matter, Mechanical Inspection will soon publish a bulletin on its website to recognize and clarify misconceptions surrounding Section 555.3.⁴

As the agency responsible for administering the National Electrical Code for the State, the Mechanical Inspection Section of the Department of Labor and Workforce Development will enforce Section 555.3 of the 2017 edition of the code according to the intent of the National Fire Protection Association. The department will not enforce an erroneous interpretation requiring 30

¹ http://www.nfpa.org/Assets/files/AboutTheCodes/70/70_A2016_NEC-P19_FD_ballotfinal.pdf, p. 81

² <http://www.nfpa.org/~media/files/news-and-research/resources/research-foundation/research-foundation-reports/electrical/rfassessmentofhazardousvoltagecurrentinmarinasboatyardsandfloatingbuildings.pdf?la=en>

³ <http://www.nfpa.org/codes-and-standards/resources/nfpa-technical-questions>

⁴ <http://labor.state.ak.us/lss/mihome.htm>

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milliamp ground-fault protection at the main overcurrent device. We will continue to educate and inform the public prior to regulatory adoption in 2018.

Please do not hesitate to contact me if you have additional questions or concerns.

Respectfully,



Deborah Kelly
Director

cc: Heidi Drygas, Commissioner, Department of Labor and Workforce Development
William Harlan, Program Manager, Mechanical Inspection
Alice Ruby, Mayor, City of Dillingham
Lew Williams III, Mayor, City of Ketchikan
Thomas Donek, CBJ Docks & Harbors Board Chairman, Port of Juneau
Stan Eliason, Harbormaster, City and Borough of Sitka
Carl Uchtyl, President, Alaska Association of Harbormasters and Port Administrators