

Should this item be pulled from the consent agenda the following motion is suggested:

POSSIBLE MOTION

I MOVE TO approve Resolution 2017-02 on first and final reading.

MEMORANDUM

To: Mayor Hunter and Members of the Assembly

From: Stan Eliason, Harbormaster

Date: January 17th 2017

Subject: NEC Code

The National Electrical Code is updated every 3 years. The proposed code change will apply to new harbor construction. I will use the new Sitka Transient Float, as an example for better understanding of the resolution.

The Sitka Transient Float has 62 meters consisting of 30amp and 50amp service. These meters are equipped with GFI's (ground fault interrupters). The GFI's will trip the breaker if a fault aboard a vessel is detected at <30mA. Currently, the load center (distributes power to the individual meters) has overcurrent protection. The protection is set at 100mA's. Individual vessels with a ground fault of >30mA will not trip their individual breaker. However, with a combined ground fault of 100mA's from multiple faulty vessels, the over current protection device will trip, *leaving all vessels without electrical service*. So far this has not happened.

The proposed NEC change would require the overcurrent protection at the load center to be set at 30mA's, which is the same protection setting as the individual meters (GFI's). As stated in the resolution "many boats may have small amounts of ground current". I can attest to this statement. I have tested hundreds of vessels over the years for ground faults. Many vessels did have issues with their electrical systems and have since been remedied. This is an ongoing challenge in our harbor system, as vessels electrical systems are aging, as well as mistakes made while wiring a vessel. If the proposed NEC code passes at the State level, Sitka Boaters will be faced with the following issues.

- Battery drainage could leave bilges inoperable and the vessel subject to sinking which creates environmental fuel spills and other damage to our pristine Alaska environment
- Refrigeration would shut off leaving food to spoil and required refrigerated medications (insulin) would go bad
- Medical devices would be shut off (CPAP)
- Sensitive electronics could be damaged
- Loss of revenue to and from FAS vessels (frozen at sea).

CITY AND BOROUGH OF SITKA

RESOLUTION NO. 2017-02

A RESOLUTION OF THE CITY AND BOROUGH OF SITKA, ALASKA, IN SUPPORT OF THE STATE OF ALASKA ADOPTING THE FOLLOWING FINE PRINT NOTE TO THE 2017 NATIONAL ELECTRICAL CODE ARTICLE 555.3: "FPN: THE 30MA REQUIREMENT CAN BE APPLIED TO ALL FEEDER CIRCUITS OR ALL BRANCH CIRCUITS IN LIEU OF THE MAIN OVERCURRENT PROTECTION DEVICE."

WHEREAS, the 2017 Edition of the National Electrical Code, Article 555.3 requires 30mA ground fault protection at the overcurrent devices feeding a marina, boatyard, commercial and noncommercial docking facilities; and

WHEREAS, the City and Borough of Sitka acknowledges the real world reality that many boats may have small amounts of ground current that are well below the trip level of 30mA (0.030 amps), however, when added together at the main circuit breaker may exceed the 30mA code requirement and thus shut down the entire harbor electrical system; and

WHEREAS, the City and Borough of Sitka recognizes that it is necessary to detect electrical ground current at its source and therefore to disconnect power at the source of the problem instead of disconnecting power to the entire harbor and in doing so creating other safety and operation problems.

NOW, THEREFORE, BE IT RESOLVED that the Assembly of the City and Borough of Sitka fully supports the passage by the state legislature to adopt the following fine print note to the 2017 National Electrical Code Article 555.3: "FPN: The 30mA requirement can be applied to all feeder circuits or all branch circuits in lieu of the main overcurrent protection device."

PASSED, APPROVED, AND ADOPTED by the Assembly of the City and Borough of Sitka, Alaska on this 24th day of January, 2017.

Matthew Hunter, Mayor

ATTEST:

Sara Peterson, CMC
Municipal Clerk

1st and final reading 1/24/17