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Urgent Notice to Municipalities Concerning Fire and Electrical Requirements for Telecommunications Antennas and Associated Equipment

Severe weather events are increasing across the country, putting additional stress on utility poles that support communications equipment, and increasing the possibility of pole failure. Pole failure is a major concern because of its potential to cause fire and property damage. In addition, electrical engineers have recently discovered instances of sub-standard wiring in certain wireless antennas – another serious fire risk. Therefore, we are urging municipalities to immediately upgrade their municipal codes and enforcement to include specific language on structural integrity as well as updated electrical and fire specifications.

All telecommunications installations should be required to comply with specifications of the APCO International Public Safety Grade Site Hardening Requirements ANS 2.106.1, the National Electric Code (NEC) 2020 edition and the National Fire Protection Association Fire Code 1 (2024). We also recommend the following items be required in any telecommunications permit application:

- A detailed list of all associated equipment necessary for operation, with load calculations.
- A one-line diagram of the electrical system, and a plot plan showing the location of the service disconnecting means.
- A short circuit and coordination study (“SCCS”) calculated pursuant to the IEEE 551-2006: "Recommended Practice for Calculating AC Short-Circuit Currents in Industrial and Commercial Power Systems" or the latest version of that standard.
- A set of structural plans demonstrating that the supporting structure will be able to sustain the burden imposed by the equipment pursuant to APCO requirements.

For an example of an updated code, please see the Malibu, California "Fire & Safety Protocol" contained on pp. 3 and 4, items 16 and 17. https://malibucity.org/DocumentCenter/View/28468/PLN-WP_WRP-Submittal-Checklist#

In addition, we strongly recommend that the code allow the municipality, at its discretion, to select and retain independent consultant(s) with expertise and appropriate credentials in telecom and/or electrical and fire safety to review and assess all applications for small cell and macro tower antenna installations, including, but not limited to, application completeness and accuracy, engineering analysis, and compliance with fire and safety codes and FCC radio frequency emissions limits.

Where codes permit, retroactive analysis of existing antennas for structural integrity, and conformity with recently upgraded electrical and fire safety recommendations should be performed to ensure citizen safety.

This message is not intended, and should not be interpreted, as offering legal advice. Please consult qualified legal advisors to determine how to implement these suggestions into your local code. Special thanks to attorneys Scott McCollough and Julian Gresser, electrical engineer Erik Anderson, and fire specialist Susan Foster for their groundbreaking work on this issue. More information including a webinar can be found at www.bbilan.org.