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**Sent:** Wednesday, September 22, 2021 4:16 PM  
**To:** Madani, Mo  
**Subject:** Comments on Appendix C Draft

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Hello Sir,

I have reviewed the Appendix C Existing Building Safety Inspection Guide draft and submit to you the following comments:

- **“Electrical” on Page 2 (Make these same changes to 1-3 at Part V. A, B, and C on Page 34):**

- Structural problems in existing buildings may have catastrophic consequences. Just as important are potential [shock, electrocution, fire, or arc-flash](#) hazards to building occupants caused by electrical deficiencies. These are often qualified under the following three headings:

1. Electric service [and other power production sources](#)
2. [Feeders and branch circuits](#) ~~and raceways~~
3. [Utilization equipment for life and property safety](#) ~~Emergency lighting, essential power and fire alarm systems.~~

As such, they warrant special attention in terms of [maintenance](#), periodic, [and milestone special](#) inspections. For additional information on structural and electrical evaluations, see the “Resource Material” at the end of this appendix.

**Substantiation for recommended changes:**

- Listing out the types of electrical hazards that can be created by electrical deficiencies adds emphasis to the potential problems.
- I agree there are essentially three “parts” to a premises wiring system. My recommendations to list items 1-3 clarify what those three “parts” actually entail.
  - Electrical service and other power production sources can include the utility supply, onsite renewable energy sources, energy storage systems, and standby generators. All these represent the supply of electrical energy to a building.
  - The distribution of electrical energy throughout a building is done so through feeders and branch circuits which includes a host of wiring methods and materials beyond just “raceways.”
  - Utilization equipment for life and property safety includes all the devices, equipment, and systems that keep the building and people safe from the above mentioned electrical hazards.

- Electrical systems warrant all three inspection types outlined in this document and not just the “periodic” inspections.
- **Section 5.A. on Page 8:**
  - In addition to the structural considerations noted above, the building envelope components (including balconies and roof), electrical system\*, and the mechanical and plumbing systems shall be inspected at the noted frequency interval to maintain public safety. \*Electrical systems shall comply with the NFPA 70B, Recommended Practice for Electrical Equipment Maintenance.

**Substantiation for recommended changes:**

- The NFPA 70B is the go-to recommended practice for electrical equipment maintenance and should be referenced in this document. It should be noted that the NFPA 70B is being converted to a Standard for the 2023 update cycle with an ongoing effort to coordinate this document with the NFPA 70 and NFPA 70E.
- **Section V. on Page 34:**
  - ~~ELECTRICAL/FIRE ALARM~~ SYSTEMS EVALUATION
    - A. Electrical Service and other Power Production Sources  
 A description of the ~~type of~~ service and other power production sources supplying the building or structure must be provided, including but not limited to the phase, voltage, and ampere ratings along with the type of overcurrent protection being provided. ~~stating the size of amperage, if three (3) phase or single (1) phase, and if the system is protected by fuses or breakers. Proper~~ Grounding and bonding of the service and other power production sources should ~~also~~ be in compliance with the NFPA 70 ~~good standing. The meter and~~ Electric rooms should have sufficient working space and dedicated equipment space to allow for safe working and inspection practices to be performed. ~~clearance for equipment and for the serviceman to perform both work and inspections.~~ Auxiliary gutters, wireways, and electrical panels, switchboards, and switchgear should all be in good operational condition throughout the entire building or structure premises wiring system.
    - B. Feeders and Branch Circuits ~~and Raceways~~  
Feeders and bbranch circuits in the building must all be identified, and an evaluation of the ~~conductors~~ wiring methods and materials must be performed. There should also exist proper grounding and bonding for of devices, equipment, and systems used installed in the building, such as lighting, appliances, and motors. ~~an emergency generator, or elevator motor.~~ All types of wiring methods and materials present in the building must be detailed and individually inspected. The evaluation of each type of ~~conduit and~~ raceway or cable assembly, if applicable, must be done individually. The ~~conduits~~ raceways in the building should be free from ~~erosion~~ corrosion and checked for any physical damage. ~~considerable dents in the conduits that may be prone to cause a short.~~ The All conductors, and cables, and flexible cords ~~in these conduits~~ should be chafe damage free, and their ~~currents not over the rated amount.~~

C. Utilization Equipment for Life and Property Safety ~~Emergency Lighting/Essential Power/Fire Alarm Systems~~

Means of egress lighting, illuminated exit signs, lighting and emergency lighting, along with voice annunciation systems and a functional fire alarm must be tested to confirm they are in good working condition. Other life and property safety devices including but not limited to ground-fault circuit interrupters, smoke detectors, carbon monoxide detectors, heat detectors, and surge-protective devices should be inspected and tested for proper operation.

**Substantiation for recommended changes:**

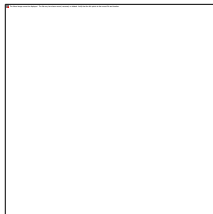
- These revisions add clarity and corrects some of the terminology used to describe electrical equipment and systems while harmonize with the recommended edits on Page 2.

Thank you for the opportunity to participate and contribute to this project and effort.

I look forward to seeing you in Maitland next week... 😊

TAKE CARE,

Bryan



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