199—27.5(476) Engineering standards.

27.5(1) *Requirement for good engineering practice.* The electric plant of the electric cooperative or municipal electric utility shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practice in the electric industry to ensure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

27.5(2) *Standards incorporated by reference.* Applicable provisions in the publications listed below as standards of accepted good practice unless otherwise ordered by the commission. The standards listed below are recommended for use by municipal electric utilities.

a. Iowa Electrical Safety Code, as defined in 199—Chapter 25.

b. National Electrical Code, ANSI/NFPA 70-2026, published October 3, 2025.

c. IEEE C57.13.1-2017, IEEE Guide for Field Testing of Relaying Current Transformers, as published October 31, 2018; and IEEE PC57.13.3, IEEE Approved Draft Guide for Grounding of Instrument Transformer Secondary Circuits and Cases, as published March 10, 2026.

d. American National Standard for Electric Power Systems and Equipment Voltage Ratings (60 Hertz), ANSI C84.1-2020, published September 3, 2020.

e. Recommended Practice for System Grounding of Industrial and Commercial Power Systems, IEEE 3003.1-2019, published August 9, 2019.

f. IEEE 1159-2019, IEEE Recommended Practice for Monitoring Electric Power Quality, as published August 13, 2019.

g. IEEE 519-2022, IEEE Standard for Harmonic Control in Electric Power Systems, as published August 5, 2022.

h. At railroad crossings, the engineering standards for pipelines rule found in 199—Chapter 42.

i. Iowa Stray Voltage Guide, located at www.iowastrayvoltageguide.com, published July 2014.

j. American National Standard for Electric Meters—Code for Electricity Metering, ANSI C12.1-2026, published February 3, 2026.

k. IEEE Guide for Electric Power Distribution Reliability Indices, IEEE 1366-2022, published November 22, 2022.

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