DEPARTMENT OF LABOR AND INDUSTRY

National Electrical Code (NEC) Article 547 - Agricultural Buildings

Following is a typical scenario and three electrical code questions and answers related to service configurations on agricultural premises.

Conditions

- Applicable electrical code; 2026 NEC
- The premise falls within the scope of NEC Article 547
- The existing electrical infrastructure on the agricultural premises varies and was installed at different times over the course of many years.
- The entire existing electrical infrastructure on the premises is presumed to have been in compliance with the NEC that was in effect at the time of the original installation.
- Due to the changes in the NEC over many code cycles, specifically those in Article 547, some of the existing electrical infrastructure on the premises does not comply with the current edition of the NEC.
- There is an existing 600 ampere non-fused, double-pole, double-throw transfer switch mounted at grade level on the center yard pole (distribution point).
- A new 200 ampere underground feeder needs to be installed in a new livestock building located 100 feet from the center yard pole (distribution point).

Note – For the purpose of this example all code requirements such as overcurrent protection, grounding, bonding, terminations, physical protection, etc. are presumed to be in compliance.

Question 1: Is it permissible to install a new set of service conductors from the load side of the non-fused grade-level transfer switch to the line side of an immediately adjacent, new, service-rated disconnecting means that incorporates overcurrent protection?

Answer: Yes. NEC 547.40 requires that a distribution point supply any building(s) or structure(s) where livestock is confined and is located on the same premises. The NEC does not limit the number of buildings on multi-building premises.

Question 2: From the newly installed service-rated disconnecting means at the center yard pole (distribution point), is an equipment grounding conductor required to be installed with the new 200 ampere underground feeder to the new building?

Answer: Yes. NEC 547.42 states that an underground electrical supply shall comply with NEC 547.42. NEC 547.42 states that where the service disconnecting means and overcurrent protection are located at the distribution point, the underground feeder to the building or structure served shall meet the requirements of NEC 250.32 and Article 225, Parts I and II. NEC 250.32(A) states that the building or structure supplied by the

feeder shall have a grounding electrode (or grounding electrode system). NEC 250.32(B) states that an equipment grounding conductor shall be run with the supply conductors to the building or structure disconnecting means and to the grounding electrode.

Question 3: Is the existing 600 ampere non-fused, double-pole, double-throw transfer switch mounted at grade level on the center yard pole required to be replaced with equipment that provides overcurrent protection for the existing supply conductors that extend from the distribution point?

Answer: No. However, other code requirements must be considered and may require upgrading of the equipment and compliance with the current electrical code. As an example, additional load may result in the existing equipment to be undersized and require that it be replaced with equipment of adequate rating. In addition, any new building or structure where livestock is confined and is extended from the distribution point must meet the requirements of 547.42.