

4-23-2015

260526 - Grounding & Bonding for Electrical Systems

Sandra Hickey
sandra.hickey@unh.edu

Follow this and additional works at: https://scholars.unh.edu/pdch_5_26

Recommended Citation

Hickey, Sandra, "260526 - Grounding & Bonding for Electrical Systems" (2015). *Division 26 – Electrical*. 4.
https://scholars.unh.edu/pdch_5_26/4

This Article is brought to you for free and open access by the Chapter 5 – Technical Construction and Renovation Standards at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in Division 26 – Electrical by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact nicole.hentz@unh.edu.

SECTION 26 0526 – GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

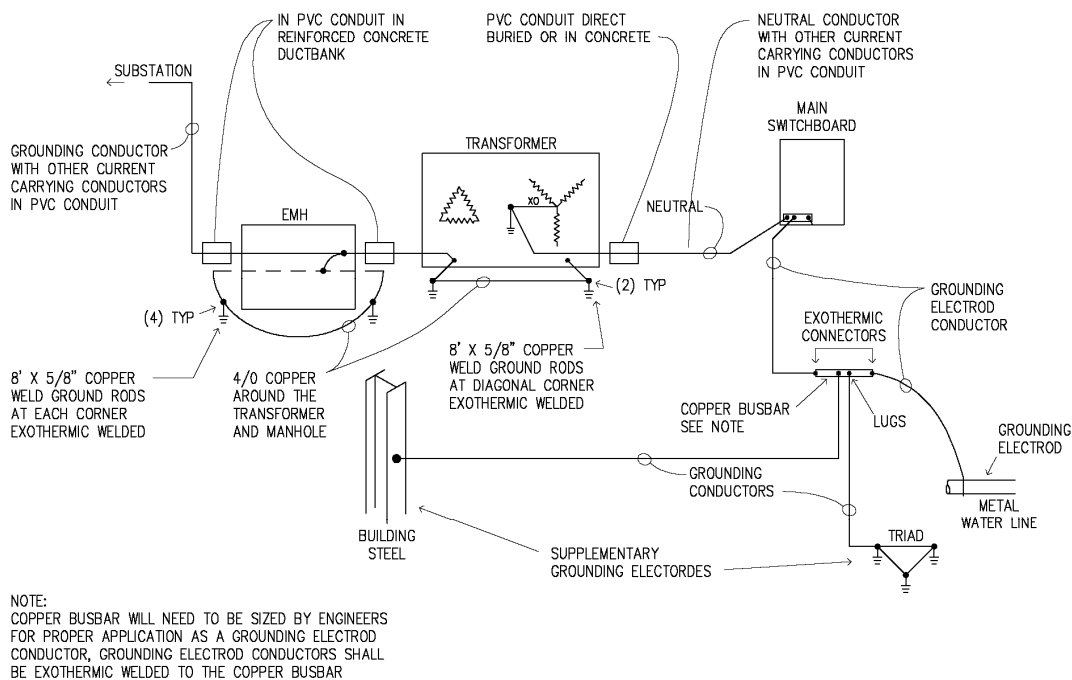
- 1.1 See Chapter 5, Division 01, Section 017700.1.1.B.1.i Closeout Procedures - Project Record Documents for equipment list requirements for all equipment provided in this section.
- 1.2 Grounding shall be done at the service entrance equipment in each building by connecting the neutral bus of the service equipment to a grounding electrode, street side of the water meter if the water service is a metal water lines. The metal cabinet of the service equipment must also be connected to the neutral bus in order to provide equipment grounding. Building steel columns shall be bonded to the grounding system grid.
- 1.3 If a metal water line does not service the building other means of grounding shall be applied. Each building must have a grounding electrode for its service. The proper grounding electrode system will be determined by the Engineer/Owner and will comply with all applicable codes.
- 1.4 Provide UL approved mechanical grounding connectors to ground water piping with no. 4/0 copper to ground system. Ground all roof mounted fans, pipes, ducts, railings, and other metallic equipment per NEC requirements.
- 1.5 Under no circumstances is the electrical neutral to be used as an equipment ground beyond the point of the service entrance equipment.
- 1.6 Under no circumstances is the electrical neutral to be tied to the equipment ground except as stated above.
- 1.7 All raceway, conduit systems shall have an equipment grounding conductor pulled in with the other conductors beyond point of service. Each joint and termination must be tight so that there is electrical continuity.
- 1.8 All junction boxes, pull boxes, switch boxes, outlet boxes, etc., shall be bonded to the equipment grounding conductor by means of a green bonding jumper and screw.
- 1.9 All devices (switches/receptacles etc.) having a grounding terminal shall have a bonding jumper installed tied directly to the equipment grounding conductor. (No exceptions).
- 1.10 All metal buildings shall be grounded at each major structural steel column to an exterior grounding ring.
- 1.11 Care shall be taken not to create a parallel path to the neutral conductor by any other means of grounding.
- 1.12 The grounding for all Separately Derived Alternating – Current Systems shall comply with the Separately Derived Alternating – Current Systems drawing that has been

approved by the State Electrical Inspector and in compliance with NEC 250.30, (A) (1) through (6) for installation's on the University Durham Campus.

- 1.13 Building service grounding shall be in compliance with NEC 250. See Exhibit #1.

Exhibit #1

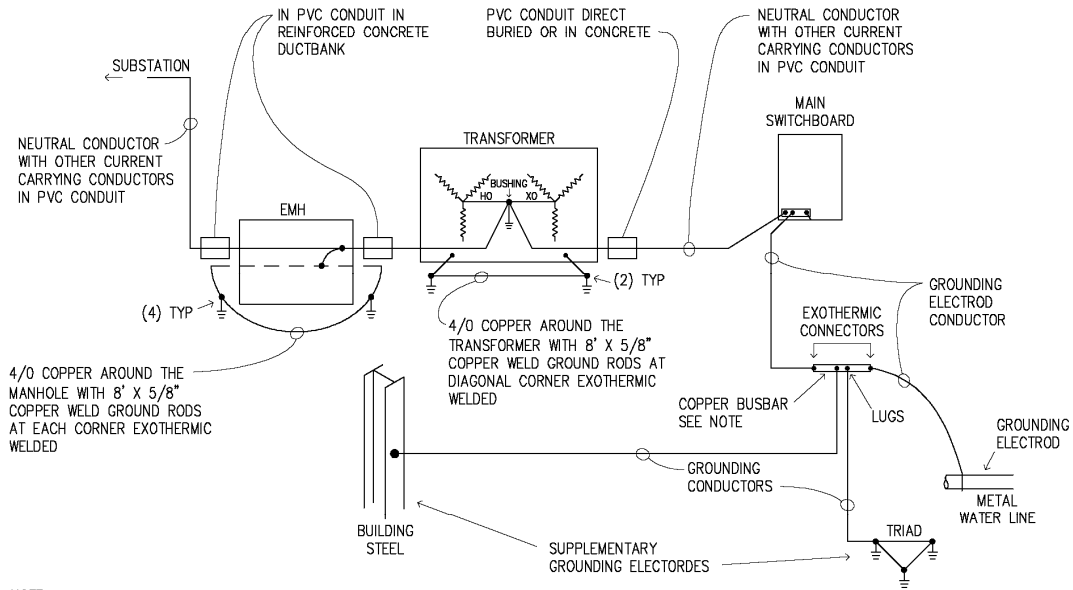
GROUNDING SEPARATELY DERIVED
 ALTERNATING - CURRENT SYSTEMS
 NEC 250.30,(A),(1)-(6)



1.14 The grounding for all Two or More Buildings or Structures Supplied from a Common Service shall comply with the Two or More Buildings or Structures Supplied from a Common Service drawing that has been approved by the State Electrical Inspector and in compliance with NEC 250.32, (B), (2) Grounding Conductor for installation's on the University Durham Campus. (See Exhibit #2). Exhibit below doesn't reflect two buildings, in addition the exhibit is an image that we can't modify, we need the original sketch.

Exhibit #2

GROUNDING TWO OR MORE BUILDINGS OR
 STRUCTURES SUPPLIED FROM A COMMON SERVICE.
 NEC 250.32,(B),(2) GROUNDING CONDUCTOR



NOTE:
 COPPER BUSBAR WILL NEED TO BE SIZED BY ENGINEERS
 FOR PROPER APPLICATION AS A GROUNDING ELECTRODE
 CONDUCTOR, GROUNDING ELECTRODE CONDUCTORS SHALL
 BE EXOTHERMIC WELDED TO THE COPPER BUSBAR

END OF SECTION 26 0526