

UTILITY POLICY NO. 2016-2

PROTECTION OF MAINE DOT OWNED UNDERGROUND ELECTRICAL SERVICE CONNECTIONS

Initial Policy Development Date: December 2016

Last Revision Date: May 2018

Purpose and Scope:

This policy has two purposes. The first is to provide guidance for the protection of MaineDOT owned underground electrical service connections. The second is to bring MaineDOT construction practices in line with the most current version of the Utility Accommodation Rules.

Historically, there have been discrepancies between what MaineDOT has required from public and private electric utility users and providers for electrical transmission and distribution networks in the state Right-Of-Way and what the Department has constructed to feed municipal/state lighting and traffic signalization equipment. This policy will help to modify the Departments construction practices to bring them in line with the requirements of the Utility Accommodation Rules.

Background:

Every year, MaineDOT constructs numerous underground electric service connections to “control cabinets” for traffic signalization equipment or “breaker boxes” for highway lighting purposes. In general, the service lines feeding the control cabinets and breaker boxes are live.

Lines exiting control cabinets are live feeds to the traffic signals, while the line leaving breaker boxes after the “electrical disconnect” to highway lighting standards are typically timed-controlled to be dead during daylight hours. In either case, the wires beyond the control cabinet or breaker box can be shut off without involving the power company.

Construction requirements for private and commercial electrical transmission and distribution services in the state Right-Of-Way as presented in the Utility Accommodation Rules dated October 14, 2014, are summarized below:

Cover - The minimum Cover for all underground Electric Supply Lines and Services within the Highway limits shall be 36 inches.

Services - In addition to complying with all other applicable electrical codes and standards, and the depth requirements specified herein, underground Electric Supply Lines and Services within the Highway limits, shall be in steel conduit or concrete encased PVC conduit. PVC conduit as used in this policy includes Polyvinylchloride conduit and High Density Polyethylene conduit. Concrete encasement consists of a minimum of 4 inches

of concrete above, below and on both sides of the conduit that shall have a minimum compressive strength of 3000 psi and a maximum aggregate size of 1-inch. When trenchless technologies are used to install PVC conduit, concrete encasement shall not be required.

Future MaineDOT Underground Electric Service Construction Practices:

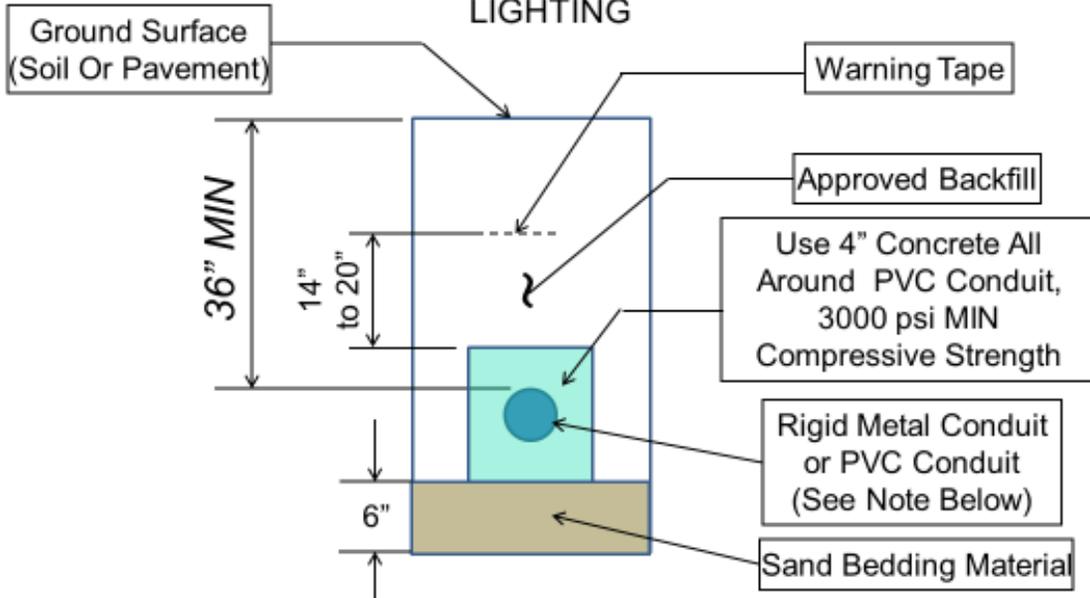
For the purposes of this policy, Electric Supply Lines will be considered as from the power company connection to the meter trim (Secondary Utility Power). In view of the requirements for private and commercial electrical transmission and distribution services presented in the Utility Accommodation Rules, and considering the electrical services required to power MaineDOT traffic signalization equipment and lighting, the Department has adopted the following construction practices for the purpose of protecting MaineDOT-owned underground electrical service connections:

- Whenever possible, the meter and breaker panel feeding traffic signal control boxes or lighting control boxes shall be constructed within 30 feet of the service drop pole.
- All underground service connections carrying Secondary Utility Power to the meter and breaker panel, or, directly to MaineDOT traffic signalization control cabinets or lighting breaker boxes shall be in Rigid Metal conduit or concrete encased PVC conduit. (See Attached Trench Detail)
- All service connection conduits shall be a minimum of 36 inches below finish grade to the top of conduit.
- Where trenchless technologies are employed to install the service connection conduit, Schedule 120 PVC conduit shall be used for the trenchless bore section of conduit. In addition, concrete encasement shall be used for any conduit placed in trench sections more than 10 feet before or after the limits of the trenchless bore conduit.
- The construction practices described above shall be used for service connections up to a maximum of 600 feet.
- There may be rare exceptional cases where the service connection must exceed 600 feet. In these cases, the power companies may require primary power be run over 600 feet for the purpose of power consumption and dependable service. These cases will be evaluated on a case-by-case basis for alternate power feed methods and/or the need for steel or concrete encased conduit.

The most current version of the Utility Accommodation Rule requirements for Electric Supply Lines and Services will be used as reference when the Rules are revised in the future. Standard Detail 626(07), Conduit Trench for Traffic Signals, Highway Signing and Lighting, will also be revised to reflect the most current version of the Utility Accommodation Rules and this policy.

REVISED STANDARD DETAIL 626 (07)

CONDUIT TRENCH FOR TRAFFIC SIGNALS, HIGHWAY SIGNING AND LIGHTING



NOTE: All PVC Conduits Containing Electrical Supply Lines Feeding Secondary Utility Power To A Meter And Breaker Panel, Or, Directly to Traffic Signalization Control Cabinets or Highway Lighting Breaker Boxes Shall Be Concrete Encased.

Ver May 2018