

SLEMCO

Specifications for Residential Underground Meter Pole Requirements

Applicable to residential and small noncommercial services receiving single-phase power at 120/240 volts through a 200 Amp meter base attached to a meter pole. The meter base service conductors enter through an underground conduit from either an underground or overhead source. In the event the customer requires larger than a 200 Amp service, special applications will be necessary and they are specified within these requirements.

The *Point of Connection* is the point of demarcation between SLEMCO and the customer. It shall be the customer's responsibility for compliance with the National Electrical Code (*NEC*) and any Governing Authority for all equipment beyond the *Point of Connection*. The customer is advised to use the services of a qualified electrician to assure compliance with all codes and regulations.

It should be noted that electrical pipe is the gray pipe and white water pipe is not acceptable. Therefore, schedule 40 or 80 electrical pipe discussed in this section is approved electrical conduit.

Items marked with ⑤ are indicated on Drawing No.5 – *Single-Phase Underground Meter Pole Requirements*.

- A. The meter pole is furnished and installed by customer. The meter pole shall be 3" thick by 12" wide of pressure treated lumber or equal self-supporting structure. The meter pole shall be installed a minimum of 36" below finished grade. The meter pole height above grade should be a minimum of 6' above finished grade and high enough such that the center of the meter base socket window can be installed between 5' and 6' above finished grade. ⑤
- B. Secondary conductors from transformer to meter base are furnished and installed by SLEMCO and paid for by customer. ⑤ Secondary conductors will be terminated by SLEMCO to source side of the meter base (*Point of Connection*).
- C. Secondary conduit furnished and installed by customer. After trenching, the trench may be backfilled and covered. Conduit must be 2" electrical conduit for a 200 Amp service. Electrical schedule 40 pipe is acceptable for below ground use. ⑤

In the event the customer requires larger than a 200 Amp service, this will require a current transformer (*CT*) metering installation. This will now require a minimum of a 3" electrical conduit. Please refer to the section entitled, *Residential Current Transformer Metering Schemes*, for details on typical installation.

- D. The above ground riser conduit furnished and installed by customer. This conduit must be 2" electrical schedule 80 pipe for a 200 Amp service and shall be securely mounted with a minimum of three (3) conduit straps with a maximum of 30" (*NEC 230.51A*) apart. If elbows are required, then PVC elbows shall be used. LB elbows and flex conduit cannot be used. ⑤

In the event the customer requires larger than a 200 Amp service, this will require a CT metering installation. This will now require a minimum of a 3" electrical conduit. Please refer to the section entitled, *Residential Current Transformer Metering Schemes*, for details on typical installation.

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Items marked with ②③④⑤ are indicated on the following drawings:

- ② Drawing No.2 – *Single-Phase Underground Service Requirements from an Existing Padmount Transformer*
- ③ Drawing No.3 – *Single-Phase Underground Service Requirements from a new Padmount Transformer*
- ④ Drawing No.4 – *Single-Phase Underground Service Requirements from an Overhead Source*
- ⑤ Drawing No.5 – *Single-Phase Underground Meter Pole Requirements*

- E. Customer will install a pull string (*white nylon*) in all electrical conduit that will require SLEMCO to install secondary conductors.
- F. Any underground service that requires three 90° (*degree*) turns or is further than 150', the customer must use standard steel 90° elbows with an 18" turn. A maximum of three 90° turns are allowed. Any underground service which is less than 150' with two or less 90° turns, the customer is allowed to use PVC long radius 90° elbows with a 36" turn. ⑤
- G. Customer must maintain a depth of 36" when installing electrical conduit for secondary conductors. ⑤
- H. **H1** If the customer is getting power from an overhead source, then the customer will stub up at the SLEMCO pole 36" above ground with electrical schedule 80 pipe. ④ The customer will also be required to leave three (3) joints of electrical schedule 40 pipe near the pole to be used by SLEMCO to install the riser up the pole even with neutral or bottom of transformer. The customer will also provide a 2" weather head along with the electrical schedule 40 pipe. According to NEC 230.24B1, the lowest point of the service conductor (*drip loop*) must be at least 10' above final grade.
H2 If the customer is getting power from an existing padmount transformer, then the customer must stop the electrical conduit 1' short of the transformer pad on the opposite side of the underground transformer from where the primary conductors enter. ② The front of the underground transformer is where the bushings are located and the rear behind that. The sides of the underground transformer are adjacent the front. The electrical conduit must be installed such that its direction is perpendicular to the side of the underground transformer. SLEMCO will install and provide the PVC long radius 90° elbow and conduit into the transformer.
H3 If the customer is getting power from an existing pedestal, then the customer must stop the electrical conduit 1' short of the pedestal's edge.
H4 If the customer is getting power from a new padmount transformer, then the customer must stub up the secondary and primary electrical conduits next to each other at the location of new padmount transformer. ③ See the section entitled, *Specifications for Residential Underground Primary Requirements*, for details on primary installation.
- I. Customer will complete installation of conduit into bottom left side of meter base using electrical schedule 80 pipe for section above ground into meter base. ⑤

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- J. Meter base furnished and installed by customer. When purchasing a meter base for underground service please specify hubless or underground meter base. The meter base shall be mounted such that the center of the meter socket window is between 5' and 6' above finished grade. ⑤ The meter base shall conform to SLEMCO's standards and shall be compatible with SLEMCO metering. The meter base shall be rated for 200 Amps.

In the event the customer requires larger than a 200 Amp service, this will require a CT metering installation. The equipment (*CT enclosure, disconnect switch, etc.*) necessary for CT metering will require an adjacent standalone structure or rack with suitable bracing for installation. Please refer to the section entitled, *Residential Current Transformer Metering Schemes*, for typical equipment configuration details.

- K. The main disconnect (*service panel*) and customer conductors (*from load side of the meter base to the main disconnect*) are furnished and installed by customer. The main disconnect shall be sized for 200 amps and must be of weather proof and watertight design. The customer conductors shall be copper and have a minimum size of #2/0 copper. ⑤
- L. The customer conductors exiting the main disconnect (*service panel*) is furnished and installed by customer and shall be sized according to the NEC or Governing Authority. These customer conductors shall be installed in electrical schedule 80 pipe above finished grade and electrical schedule 40 pipe underground. ⑤
- M. The customer will be responsible to furnish the meter base ground wire (*minimum #6 soft drawn copper*) and install this wire on the meter pole from the meter base to the ground rod. The meter base ground wire shall be connected in the ground wire lug, where provided, and not in the service neutral lug. The meter base ground wire must be stapled every 6". ⑤
- N. Ground rod, minimum 5/8" x 8' copperweld or 1/2" x 8' copper, furnished and installed by customer. Ground rod is to be set 1" below finished grade. ⑤ This is the minimum required by SLEMCO. Additional grounding may be required by the NEC or Governing Authority.

In the event the customer requires larger than a 200 Amp service, this will require a CT metering installation. This will now require one ground rod per every 200 Amps of service. Please refer to the section entitled, *Residential Current Transformer Metering Schemes*, for details on typical installation.

- O. This design may be used as a temporary meter pole for temporary service. If used as a temporary meter pole, the customer shall supply the service conductors long enough to reach the SLEMCO service connection point.

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- P. Variations of this design may be considered equal as long as NEC requirements are met. To assure acceptability where variations arise, contact SLEMCO prior to installation.

- Q. If a Governing Authority requires inspection, inspection tag must be in place and marked approved before SLEMCO will connect service. ⑤

- R. Important: the meter pole must be installed such that it is extremely sturdy before SLEMCO will connect service.