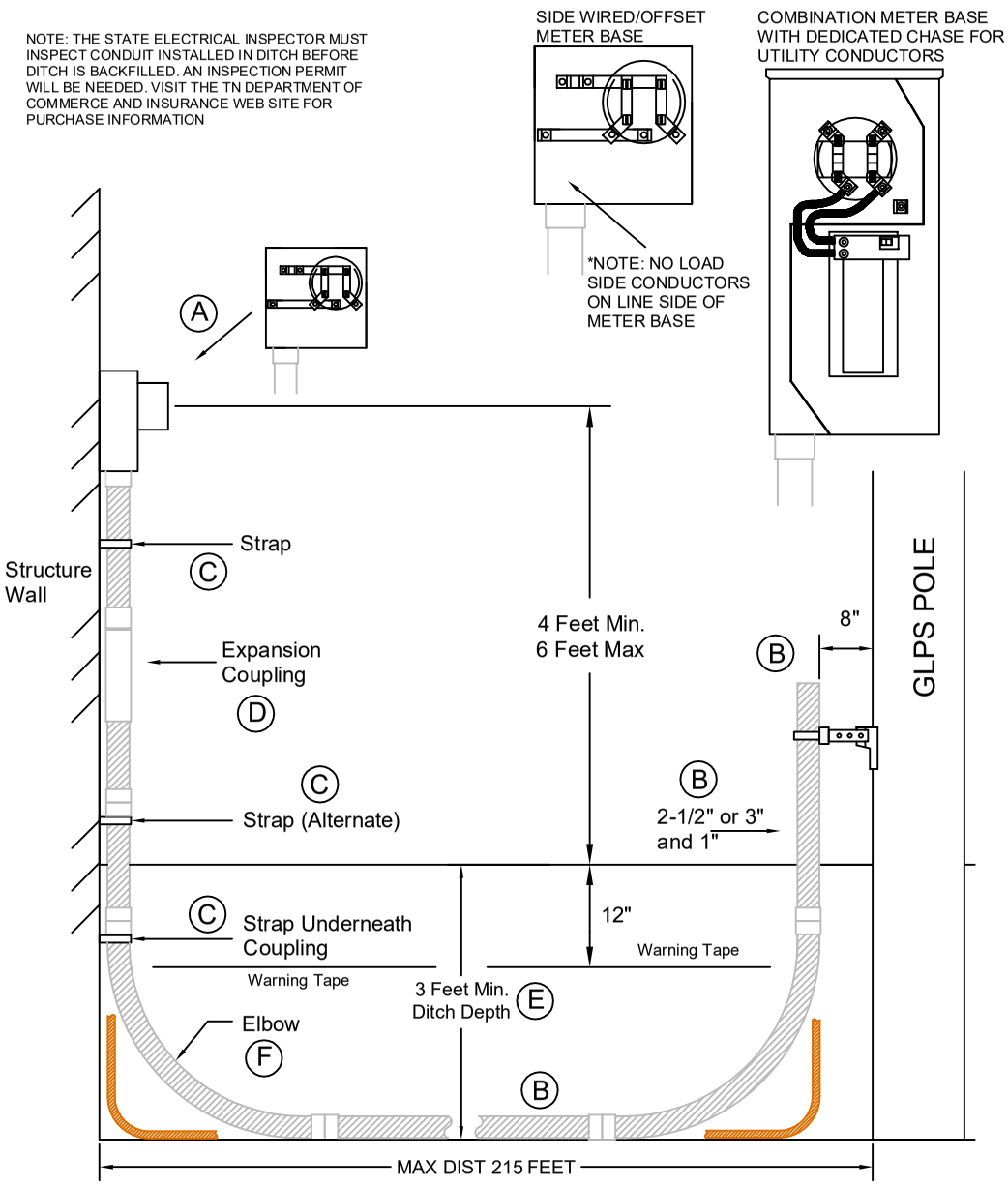
STANDARD UNDERGROUND ELECTRIC SERVICE REQUIREMENTS TO A STRUCTURE

100-200 AMP 120/240 Volt Single Phase

**THE REQUIREMENTS OF THIS SPECIFICATION ARE EFFECTIVE June 1, 2022 AND SUPERSEDE ALL PREVIOUS PUBLICATIONS

NOTE: BEFORE GLPS INSTALLS ANY FACILITIES ON PRIVATE PROPERTY, AN EASEMENT WILL NEED TO BE OBTAINED

NOTE: THE STATE ELECTRICAL INSPECTOR MUST INSPECT CONDUIT INSTALLED IN DITCH BEFORE DITCH IS BACKFILLED. AN INSPECTION PERMIT WILL BE NEEDED. VISIT THE TN DEPARTMENT OF COMMERCE AND INSURANCE WEB SITE FOR PURCHASE INFORMATION



*NOTE: 1 INCH COMMUNICATION DUCT NOT SHOWN IN ITS ENTIRETY FOR CLARITY

Greeneville Light and Power System
423-636-6200
www.glps.net

A. **UG METER BASE:** Customer must contact GLPS Engineering Department at 423-636-6241 to have the meter base location determined. GLPS may require relocation of the meter base when customer has not complied with this requirement. Meter base must be mounted a minimum of 4 feet and a maximum of 6 feet above finished grade. Meter base must be grounded per National Electric Code requirements.
NOTE: ONLY SIDE WIRED/OFFSET METER BASES OR METER BASE COMBINATIONS WITH A DEDICATED CHASE FOR UTILITY SIDE CONDUCTORS WILL BE ACCEPTED FOR GLPS TO FURNISH AND INSTALL THE UNDERGROUND SERVICE CONDUCTORS TO THE METER BASE.

B. **CONDUIT:** All underground services shall be installed in conduit regardless of soil conditions. ***NO LB'S, LL'S OR LR'S ARE PERMITTED ON THE LINE SIDE OF METER BASE***.
- Customer to furnish and install all conduit from meter base to GLPS pole per drawing. *Maximum underground service length from GLPS pole is 215 feet*. All joints to be glued.
- 2-1/2 inch or 3 inch UL listed Schedule 40 PVC conduit is required for the electrical service. No reducers or mixing of conduit sizes are permitted. Customer must also furnish and install a 1 inch UL listed Schedule 40 PVC conduit for future communications/meter reading. The 1 inch conduit is to be installed in close proximity and preferably in contact with the electrical service conduit. ***NOTE: THE 1 INCH CONDUIT CANNOT BE USED BY ANY OTHER ENTITY DUE TO ITS INSTALLED LOCATION. THE CONDUIT WILL NOT MEET NESC RULE 320B2c FOR MINIMUM SEPARATION REQUIREMENTS.***
- **GLPS WILL NOT ACCEPT HEATED CONDUIT REGARDLESS OF THE METHOD USED. UNDER NO CIRCUMSTANCES WILL GLPS ACCEPT CONDUIT OFFSETS TO AVOID NOTCHING/MODIFYING OF FOOTER.**
- All Conduits to be installed above grade and must not exceed 2 inches away from structure wall. Conduit at GLPS pole to be installed in contact with GLPS stand-off bracket. If GLPS stand-off bracket is not present during installation, install conduit 8 inches away from surface of pole. Seal the end of all conduits that do not enter an enclosure.

C. **COUPLING SUPPORT STRAP/STRAPS:** Install strap directly below coupling ensuring contact with coupling. This prevents conduit from settling during backfill. If there is nothing below grade to anchor the coupling support strap, cut the conduit one foot above grade and install coupling support strap. Straps are required every 24 inches for exposed conduit above grade.

D. **EXPANSION COUPLING:** An expansion coupling is required for all underground services.

E. **DITCH 3 FEET DEEP MINIMUM:** Customer to open and close service ditch. Depth of ditch to be a minimum of 3 feet. Ditch must be backfilled before GLPS can energize service. Warning Tape to be installed 12 inches below finished grade. If rock is encountered and minimum depth cannot be achieved, conduit can be encased with 3 inches of concrete. Water lines cannot be installed in the ditch with electrical lines. A 5 foot separation is required. Water lines can cross electric lines as long as a minimum of 12 inches of separation is maintained. Communication lines can be installed in the same ditch as electric as long as a minimum of 12 inches of separation is maintained. Refer to GLPS "JOINT TRENCH REQUIREMENTS" located at www.glps.net or obtain a copy from GLPS Engineering Department.

F. **ELBOW:** Must use at least 24 inch radius, 90-degree elbows at GLPS pole and at meter base on structure. 36 inch radius 90-degree elbows must be used for horizontal turns in ditch. Maximum of 3 elbows (one at pole, one at structure and one in ditch) can be used. For the communication conduit, use 5.75 inch radius (standard) elbows.

NOTE: ALL REQUIREMENTS LISTED ABOVE MUST BE MET FOR GLPS TO FURNISH AND INSTALL UNDERGROUND CONDUCTORS TO METER BASE. IF THE REQUIREMENTS CANNOT BE MET, REFER TO THE GLPS SPECIFICATION "NON-STANDARD UNDERGROUND ELECTRIC SERVICE REQUIREMENTS TO A STRUCTURE".

NON-STANDARD UNDERGROUND ELECTRIC SERVICE REQUIREMENTS TO A STRUCTURE

100-200 AMP 120/240 Volt Single Phase

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NOTE: BEFORE GLPS INSTALLS ANY FACILITIES ON PRIVATE PROPERTY, AN EASEMENT WILL NEED TO BE OBTAINED

NOTE: THE STATE ELECTRICAL INSPECTOR MUST INSPECT CONDUIT/CONDUCTORS INSTALLED IN DITCH BEFORE DITCH IS BACKFILLED. AN INSPECTION PERMIT WILL BE NEEDED. VISIT THE TN DEPARTMENT OF COMMERCE AND INSURANCE WEB SITE FOR PURCHASE INFORMATION

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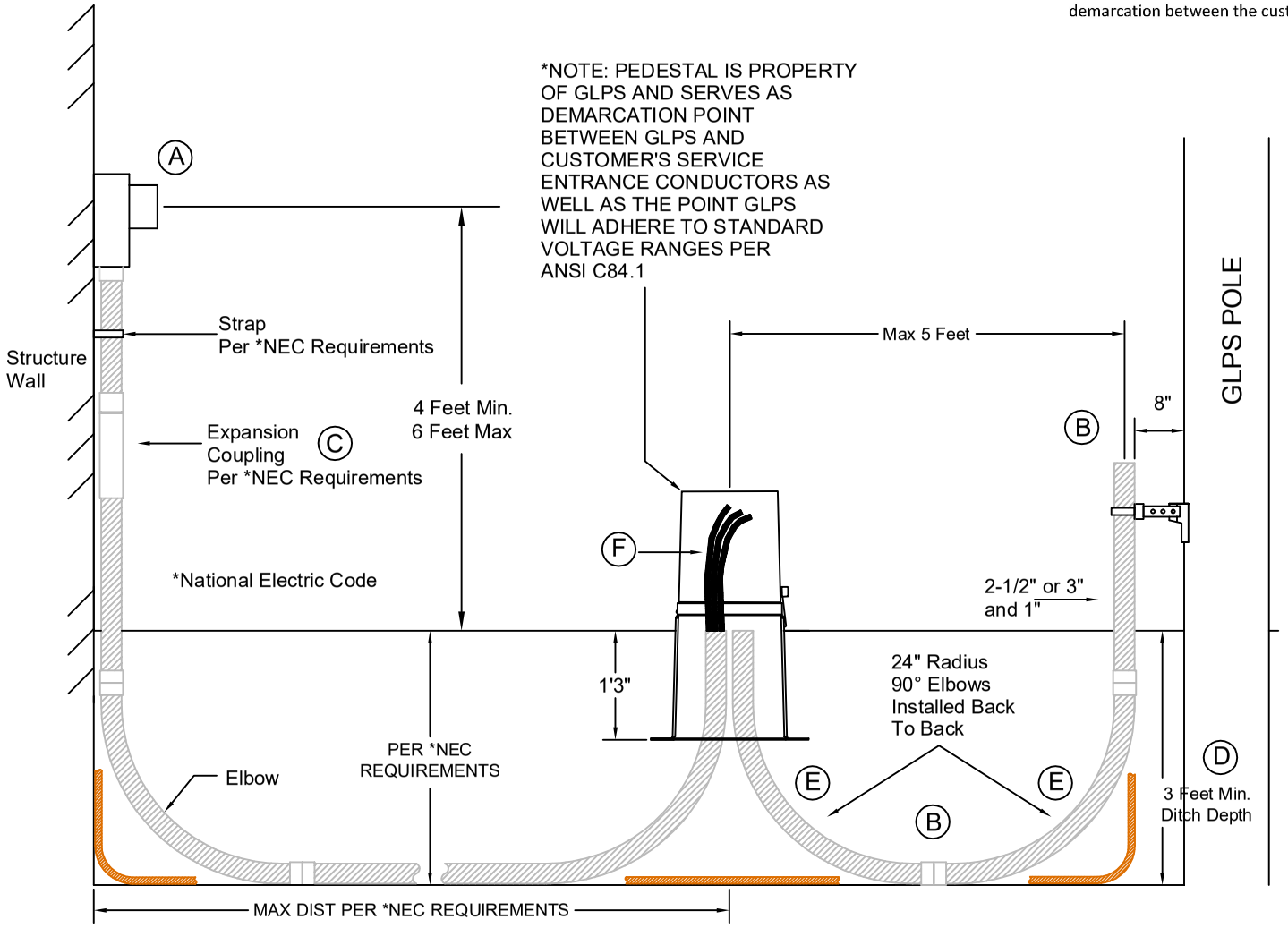
The purpose of this specification is to allow the customer an alternate method of installing an underground service if they so choose or in the case that an underground service does not meet the requirements of GLPS's "STANDARD UNDERGROUND ELECTRIC SERVICE REQUIREMENTS TO A STRUCTURE".

*If a customer chooses to install an underground electric service as depicted in the drawing, the cost the customer will need to pay before connecting is $800.

*If the requirements of the "STANDARD UNDERGROUND ELECTRIC SERVICE REQUIREMENTS TO A STRUCTURE" are not met, the customer has the option of modifying the installed conduit system to accommodate the drawing depicted in this specification. In this case the cost the customer will need to pay before connecting is $800. If the customer wants GLPS to modify the conduit system the cost the customer will need to pay before work begins is $1,500.

**In either situation above, the customer will be responsible for installing and maintaining the service entrance conductors from the meter base to GLPS's pedestal. The pedestal will be the point of demarcation between the customer's facilities and GLPS facilities.



*NOTE: 1 INCH COMMUNICATION DUCT NOT SHOWN IN ITS ENTIRETY FOR CLARITY

A. **UG METER BASE:** Meter base must be mounted a minimum of 4 feet and a maximum of 6 feet above finished grade. Meter base must be grounded National Electric Code requirements.

B. **CONDUIT:** All underground services maintained by GLPS shall be installed in conduit regardless of soil conditions. ***NO LB'S, LL'S OR LR'S ARE PERMITTED ON THE LINE SIDE OF METER BASE.***
- Customer to furnish and install conduit from GLPS pole to GLPS pedestal (see drawing). If customer wants GLPS to install, all costs are to be paid before any work begins. All joints to be glued.
- 2-1/2 inch or 3 inch UL listed Schedule 40 PVC conduit is required for the electrical service. Customer must also furnish and install a 1 inch UL listed Schedule 40 PVC conduit for future communications/meter reading. The 1 inch conduit is to be installed in close proximity and preferably in contact with the electrical service conduit. ***NOTE: THE 1 INCH CONDUIT CANNOT BE USED BY ANY OTHER ENTITY DUE TO ITS INSTALLED LOCATION. THE CONDUIT WILL NOT MEET NESC RULE 320B2c FOR MINIMUM SEPARATION REQUIREMENTS.***
- **GLPS WILL NOT ACCEPT HEATED CONDUIT REGARDLESS OF THE METHOD USED.**
- Conduit at GLPS pole to be installed in contact with GLPS stand-off bracket. If GLPS stand-off bracket is not present during installation, install conduit 8 inches away from surface of pole. Seal the end of all conduits that do not enter an enclosure.

C. **EXPANSION COUPLING:** Per NEC requirements.

D. **DITCH 3 FEET DEEP MINIMUM:** Customer to open and close service ditch from GLPS pole to GLPS pedestal unless customer wants GLPS to install, all costs are to be paid before any work begins. Depth of ditch to be a minimum of 3 feet. Ditch must be backfilled before GLPS can energize service. If rock is encountered and minimum depth cannot be achieved, conduit can be encased with 3 inches of concrete. Water lines cannot be installed in the ditch with electrical lines. A 5 foot separation is required. Water lines can cross electric lines as long as a minimum of 12 inches of separation is maintained. Communication lines can be installed in the same ditch as electric as long as a minimum of 12 inches of separation is maintained. Refer to GLPS "JOINT TRENCH REQUIREMENTS" located at www.glps.net or obtain a copy from GLPS Engineering Department.

E. **ELBOW:** Must use at least 24 inch radius, 90-degree elbows at GLPS pole and at pedestal. For the communication conduit, use 5.75 inch radius (standard) elbows.

F. **CUSTOMER SERVICE ENTRANCE CONDUCTORS:** Customer must furnish and install service entrance conductors from meter base to GLPS pedestal. Refer to the NEC for correct size and type.