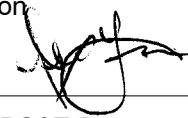
	<b>PERMANENT WOOD POST INSTALLATION UNDERGROUND ELECTRIC SERVICE</b>		<b>054712</b>
	<b>Asset Type:</b> Electric Distribution	<b>Function:</b> Construction and Design	
<b>Issued by:</b> Alex Yan (APY1) 	<b>Date:</b> 10-15-10		
<b>Rev. #07:</b> This document replaces PG&E Document 054712, Rev. #06. For a description of the changes, see Page 4.			

**This document is also included in the following manual:**

- [Electric and Gas Service Requirements Manual](#) (Greenbook)

**Purpose and Scope**

This document shows the minimum requirements for a customer-installed wood post for permanent installation of underground electric service. The service installations shown on this document are intended to serve individual customers (not mobile home parks) where PG&E-approved manufactured pedestals are not readily available. (Manufactured pedestals are preferred because they provide easier service installations and better protection of conduit, ground wire and customer's connection facilities.)

**General Information**

1. The customer shall install service conduit in accordance with this document. The customer shall install load side conduit and suitable conductors as required by local or state codes.
2. Local ordinances may include requirements in addition to those shown in this document. Consult local inspection authorities for these requirements. In areas where local ordinances require permits and inspection, these must be obtained before PG&E can establish service. Meters will be installed and energized by PG&E after the customer's metering equipment has been properly installed and after an inspection clearance has been given to PG&E by the appropriate electrical inspection authority.
3. When a service larger than 200 amps is desired, consult PG&E.
4. Service Post Installation
  - A. A permanent service installation is one which will remain for a period longer than one year, as estimated by PG&E (for temporary installations, refer to [Document 036670](#)).
  - B. Wood posts used for permanent service shall be pressure-treated for the full length. Any other process which will provide equivalent penetration and retention must be approved by PG&E. Acceptable wood preservatives are water-borne salts and pentachlorophenol. Brush application of wood preservative is ineffective for permanent posts and therefore unacceptable. Minimum dimensions of posts shall be 4" x 6" x 8'-0" long or 6" diameter x 8'-0" long. Depth of setting shall be 3' 0" minimum. A 4-inch-thick concrete pad shall be poured around the post as shown in Figure 1 on Page 3 and Figure 3 on Page 4.
  - C. Post installations shall be in protected locations, out of the way of vehicular traffic or other hazardous conditions.
5. Service Conduit and Termination
  - A. PG&E will install the underground service in accordance with [PG&E's Electric Rule 16](#). The underground service lateral will be installed, owned, and maintained by PG&E from PG&E's distribution line to the termination facility, which is normally the meter enclosure.
  - B. The customer shall provide trenching and backfill in accordance with PG&E specifications and pay any costs provided for in [PG&E's Electric Rule 16](#).
  - C. Residential service will normally be installed in conduit as shown in Figure 1 on Page 3.
  - D. Non-residential service will normally be installed in conduit furnished and installed by the customer as shown in Figure 3 on Page 4.

6. Grounding

The customer shall be responsible for bonding and grounding all exposed non-current-carrying metal parts. Grounding shall be in accordance with the National Electric Code and local ordinances except that the grounding wire shall be protected against mechanical damage by rigid steel conduit, or armored copper ground wire may be used.

7. Metering Requirements

- A. Meters will be furnished by PG&E.
- B. For residential installations, a PG&E-approved combination service termination and meter socket panel without circuit closing devices as shown on Page 3, shall be furnished, installed, and wired by the customer.
- C. For non-residential applications, a PG&E-approved combination service termination and bused-safety-socket meter box with test bypass facilities and service main disconnect, as shown on Page 4, shall be furnished, installed, and wired by the customer.

References	Location	Document
<a href="#">Underground Conduit Without Concrete Encasement</a> ..	<a href="#">FRO: UG- Conduit</a> .....	<a href="#">031793A</a>
<a href="#">Temporary Underground Electric Service</a>		
<a href="#">Single-Phase, 120/240 Volt, 100 Amps Maximum</a> ..	<a href="#">UG-1: Services</a> .....	<a href="#">036670</a>
<a href="#">Minimum Requirements for the Design and Installation of Conduit and Insulated Cable</a> .....	<a href="#">UG-1: Cable</a> .....	<a href="#">038193</a>
<a href="#">Guide for the Design of Underground Residential Secondary Systems</a> .....	<a href="#">ELS</a> .....	<a href="#">041543</a>
<a href="#">Terminating Underground Electric Services 0-600 Volts in Customer-Owned Facilities</a> .....	<a href="#">UG-1: Services</a> .....	<a href="#">058817</a>

**Table 1 List of Materials to be Furnished and Installed by the Customer  
(see Figure 1 on Page 3 and Figure 3 on Page 4)**

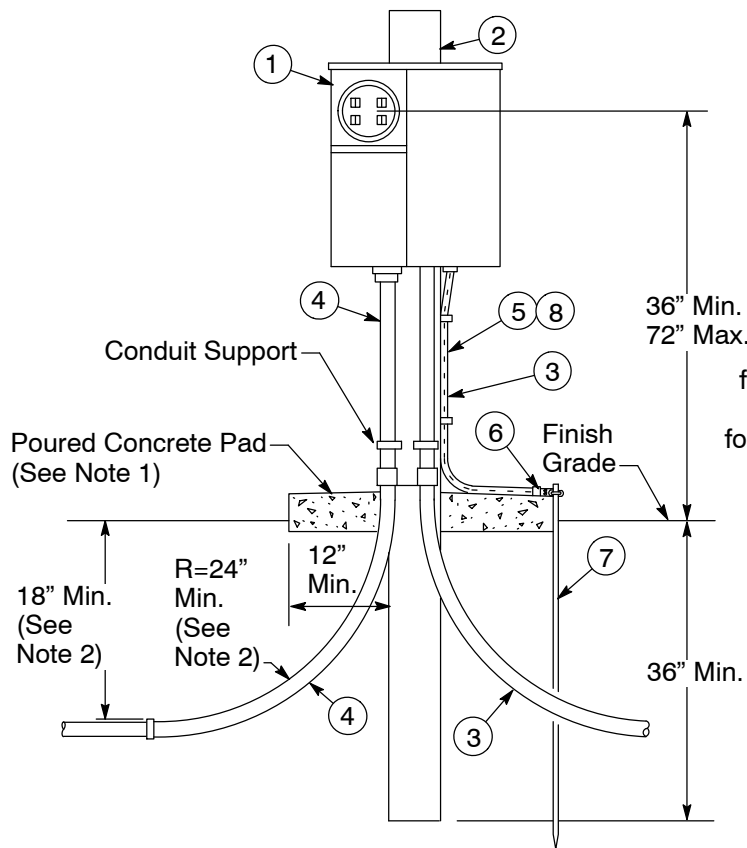
Item	Description
1	Service Termination Enclosure, Combination Meter Socket Panel (see Figure 2 on Page 3 or Figure 4 on Page 4 for details)
2	Post, 4" x 6" x 8'-0" Long or 6" in Diameter x 8'-0" Long, Fully Treated (see Note 4 on Page 1)
3	Conduit (load side), Size and Material as Required by Building Code (typically rigid galvanized steel or Schedule 80 PVC plastic)
4	Conduit, Service Riser, Rigid Steel, Galvanized or Schedule 80 PVC Plastic, 3" Minimum I.D. for #1/0 Aluminum Service Cable (see Note 6 on Page 3)
5	Conduit, Rigid Steel, Galvanized, With Pipe Strap (for bare ground wire, omit if armor clad wire is used)
6	Hub and Clamp, Grounding, to Suit Item 5
7	Ground Rod (see Note 6 on Page 2)
8	Ground Wire, Copper, Bare or Armor Clad (size in accordance with applicable electrical codes and local requirements)
9	Conduit, Plastic or Rigid Steel, for Underground Service (size as shown in <a href="#">Document 031793A</a> )

Permanent Wood Post Installation Underground Electric Service

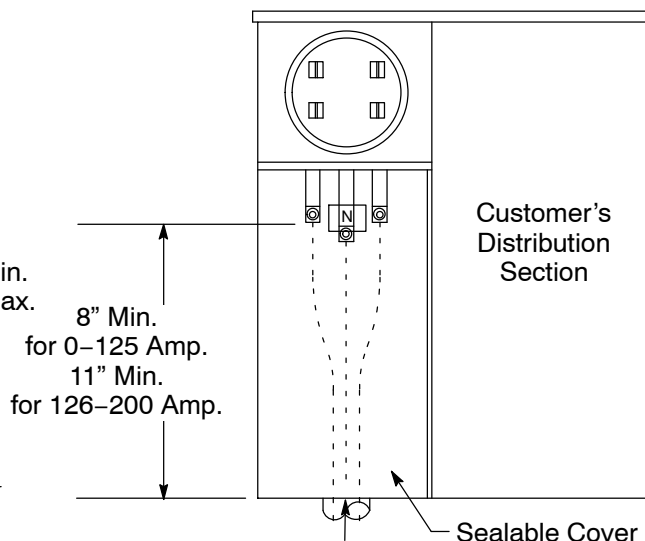
**Residential Service Only, 0–200 Amp**

**Notes**

1. Poured concrete pad shall be approximately 4 inches thick. Provide 1/2-inch slope away from post to allow for drainage.
2. Install bend in direction of service trench. To facilitate cable installation, only one 90° bend is permitted in the service riser installation. If trench is shared with gas or other utilities, consult PG&E for required increased trench depth.
3. Meter socket enclosures for residential service (Figure 2) shall not be equipped with any circuit closing device.
4. For services larger than 200 amps, consult PG&E for requirements.
5. Approved meter socket enclosures for non-residential service (Figure 4 on Page 4) shall be equipped with test bypass facilities.
6. Whenever it is necessary to install a service longer than 75 feet, the applicant must contact PG&E before ordering the service riser, conduit or, termination facilities. If the service riser and conduit called for in Table 2 on Page 4 will not accept the cable required to meet the voltage and/or flicker drop requirements, or will cause cable pulling problems, the next larger PG&E standard conduit size must be installed. This may also require a larger service termination enclosure, which must also be installed. (Refer to [Document 041543](#) for flicker and voltage drop requirements and [Document 038193](#) for cable pulling limitations.)

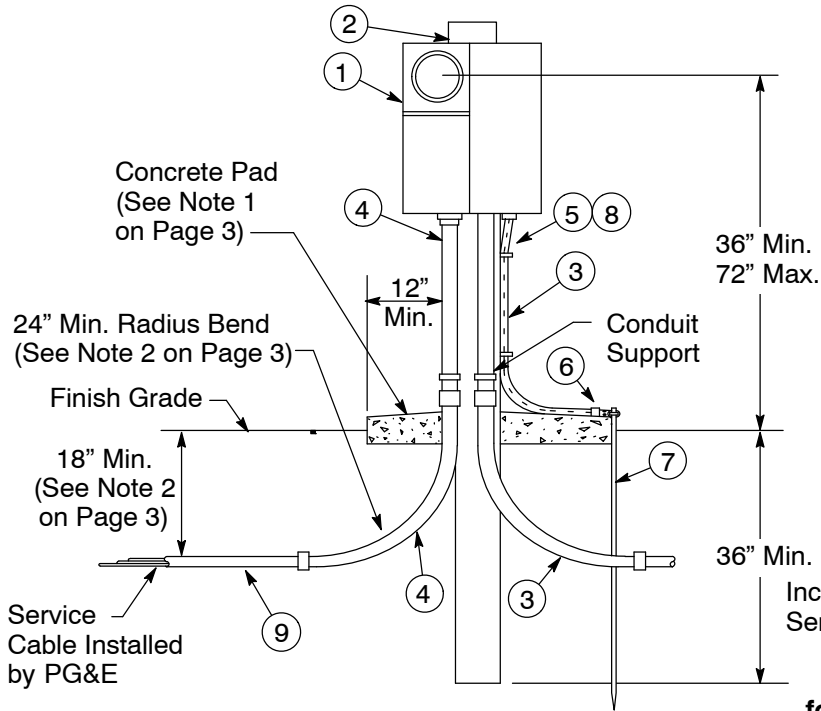


**Figure 1  
Residential Service**

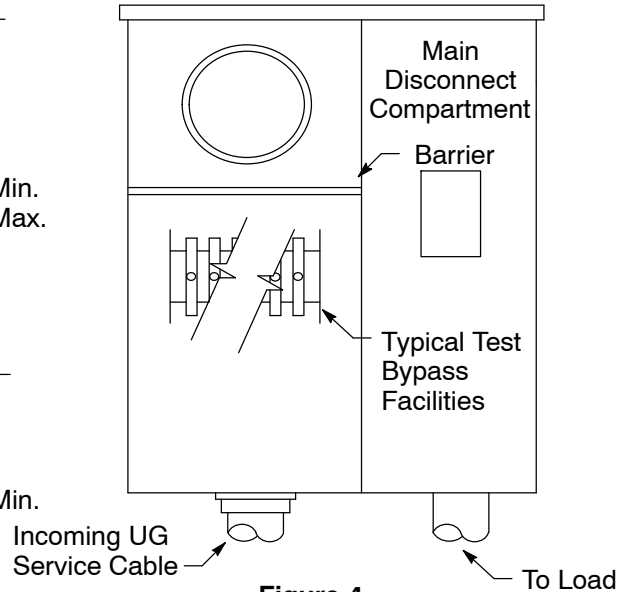


**Figure 2  
Typical Residential Combination Service  
Termination Enclosure and Meter  
Socket Panel, 200 Amp Max., 120/240 V**

**Residential and Non-Residential Service 0–200 Amp Installed in Conduit**



**Figure 3**  
**Non-Residential Service**  
**(or residential service installed in conduit)**



**Figure 4**  
**Typical Service Termination Enclosure**  
**for Non-Residential 3-Wire or 4-Wire Service**  
**0–200 Amp Maximum 0–600 V**  
**(see Note 6 on Page 3)**  
**(see Figure 2 on Page 3 for typical residential enclosure)**

**Table 2 Cable and Conduit Requirements**

Main Service Switch Rating – Amps	Conduit Number and Size (see Note 6 on Page 3)		Aluminum Cable Number and Size AWG or kcmil	
	3-Wire	4-Wire	Per Phase	Neutral
0–125	1–3"	1–3"	1–1/0	#2
126–200	1–3"	1–3"	1–4/0	1–1/0

**Revision Notes**

Revision 07 has the following changes:

1. Revised Table 2.