

PG&E Electric Service and Metering For Communication Company Equipment and Antennas on Non-PG&E Wood Poles

SUMMARY

This document illustrates PG&E's minimum design and construction requirements to receive overhead or underground electric service, for antenna and communication company equipment, and metering equipment installed on non-PG&E (3rd party) wood poles.

Note: See the reference documents listed below for additional requirements that must be followed and adhered to.

Level of Use: Continuous Use

REFERENCE DOCUMENTS

[027911, Installation Details for Service to Pole-Mounted Communication Equipment](#)

[025055, Requirements for Customer-Owned Poles](#)

[TD-027911B-002, SmartPole Meter for Service to Pole-Mounted Communication Equipment](#)

TARGET AUDIENCE

PG&E: Includes, but not limited to, utility employees, electric construction employees, customer service representatives, service planning employees, electric estimators

Non-PG&E: Includes, but not limited to, Municipalities, Communication Companies, Electrical Contractors, Installers, and Designers

WHAT YOU NEED TO KNOW

General Information

Failure to comply with these minimum requirements will result in disqualification. No variances will be reviewed or accepted.

- 1 All PG&E construction, clearances, and metering requirements must be met to receive electric service. This includes all applicable General Order (G.O.) 95 rules. See engineering document [027911](#) for detailed requirements.
- 2 The 3rd party owned pole must be from a PG&E approved supplier and meet the minimum specification requirements (e.g. class, height, supplier, loading, etc.). Ensure the pole is tall enough to meet the minimum vertical height requirements. See engineering document [025055](#) for specific requirements.
- 3 Existing 3rd party poles must have pole loading and pole condition testing performed. Test results must be submitted for review and approval by PG&E.

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- 4 The minimum horizontal clearance from a 3rd party owned pole, and any equipment on the pole, is 10 feet from a PG&E pole and any equipment, crossarms, and wires on the pole. See engineering document [025055](#) for specific requirements.
- 5 PG&E climbing space and access to the pole is always required. Unrestricted access is required for the installation and maintenance of the PG&E service and meter at all times.
- 6 A PG&E Absolving Service Agreement is required to be signed before PG&E will provide electric service. Contact the designated PG&E Service Planning office for an application for service and explanation of an Absolving Service Agreement.
- 7 The metering equipment, PG&E electric service, communication antenna and equipment receiving electric service must all be mounted on the same pole.
- 8 PG&E will provide either a 2-wire (1-hot, 1-neutral) 120-volt single-phase service or a 3-wire 1-phase 120/240-volt service.
- 9 A 2-wire 120-volt single-phase service is the only type of service allowed to power the SmartPole meter and customer equipment.

Note: In very limited locations if an existing PG&E 2-wire single-phase 240-volt secondary system is available the SmartPole meter may be connected. These locations are not common.

- 10 A PG&E SmartPole meter enclosure unit is required to be installed unless the load exceeds 68 amps. Refer to [TD-027911B-002](#) when a PG&E SmartPole meter will be used.
 - 10.1 The customer load must not exceed **16** amps for non-transformer rated SmartPole meters.
 - 10.2 The customer load must not exceed **68** amps for transformer rated SmartPole meters.
- 11 For a 3-wire 1-phase 120/240-volt service a PG&E approved meter panel is required. See the PG&E Electric and Gas Service Requirements Manual ([Greenbook](#)) for approved meter panels.
- 12 The metering provision contained herein is an exception to the Greenbook requirements and is designed primarily for communication antenna and equipment requiring electric service.
- 13 When pole metering is unacceptable because it does not meet the PG&E criteria and requirements, the alternative method is to install an approved pad-mounted metering pedestal served from a PG&E underground service. Some examples of unacceptable situations include locations:
 - Where access to the meter is impaired.
 - Where meters may be subject to obvious traffic hazards or unsafe working conditions.
 - Where hillside pole locations render metering unsafe.

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- 14 Disconnect Switch Requirements: An approved disconnect switch must be installed and meet all the following requirements below.
 - 14.1 The disconnect switch must have locking provisions, to lock the switch in the off (de-energized) position, and that accept a padlock having a 5/16-inch lock shaft. The locking provisions must be available to PG&E at all times. A double hasp locking method is allowed.
 - 14.2 The disconnect switch must be readily accessible at all times without any restrictions. The switch will be used as part of the normal or emergency shutdown protocols required in California Public Utility Commission (CPUC) General Order 95, Rule 94.
 - 14.3 The disconnect switch must de-energize all power supplies, including back-up power, and any communication equipment emitting Radio Frequencies (RF). Signage must be attached to the switch identifying equipment it will de-energize.
 - 14.4 The disconnect switch must not de-energize the PG&E SmartMeter.
 - 14.5 The disconnect switch must be attached externally on the pole 4 to 10 feet above grade, as measured to the top of the switch enclosure and meet all clearances from metering equipment.
- 15 Signage is required describing the RF exposure and Minimum Approach Distance (MAD) for each installation. See engineering document [027911](#) for detailed requirements.
- 16 Detailed drawings must be submitted showing, but not limited to, the following items.
 - 16.1 A Single Line Drawing showing the wire sequence to all PG&E and customer equipment.
 - 16.2 Pole class, supplier, and heights above grade to all equipment and the top of pole.
 - 16.3 Radial clearances, above and below the PG&E overhead electric service attached at the pole, to all other equipment attached to the pole. Clearances to equipment attached to and supported by communication cables but not attached to the pole must also be shown.
 - 16.4 Radial clearances from the overhead electric service to any structure, pole, and/or equipment along the path of the service wire from pole to pole. Identify and label the type of structure or equipment, if any.
 - 16.5 Vertical height of the overhead electric service above grade at the pole as well as above any thoroughfares and walkable areas.
 - 16.6 Show and state if a SmartPole meter enclosure or meter panel will be installed. The quadrant position on the pole and radial clearances to other equipment on the pole. The height of the metering equipment above grade. If a meter panel is being installed provide the manufacturer, model number and ensure the meter panel has test bypass facilities.

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- 16.7 Show the radial clearances from the closest part of the metering equipment enclosure to all thoroughfares, private streets or roads, driveways, structures, trees and large vegetation, gates, or other obstructions. Indicate if the thoroughfare, street, or road has a curb, rolled curb, ramp(s), or no curb.
- 16.8 Climbing space(s) from grade to the PG&E service location.
- 16.9 Riser(s) location for any quadrant, when applicable.
- 16.10 Disconnect switch location, height above grade, and radial clearance from metering equipment.
- 16.11 Location and identification of all signage.
- 17 The PG&E overhead service must only terminate at or be attached to streetlight poles with or without an antenna installed on it. The PG&E service must not be attached to poles that do not receive service.
- 18 Only one type of service connection (overhead or underground) is allowed on the same pole.
- 19 More than one communication provider's antenna and equipment are not allowed to receive service and be on the same pole.
- 20 An underground service is required in areas designated as underground only.

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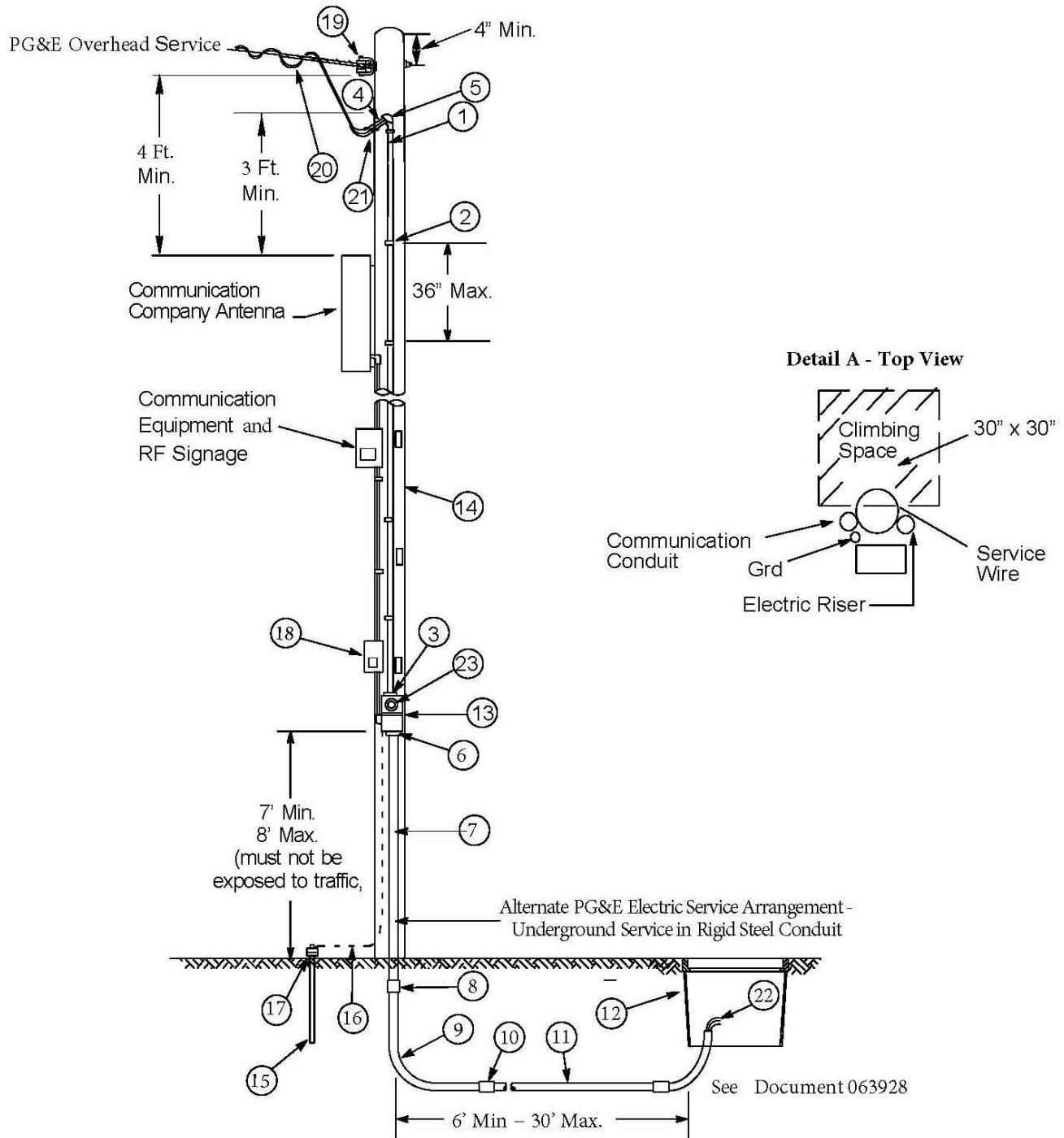


Figure 1
Overhead or Underground Pole-Metered Service Connection to Communication Equipment and Antenna

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Table 1 Bill Of Materials To Be Furnished And Installed By 3rd Party Communication Company

Item	Description
For Overhead Service	
1	Conduit, Rigid, PVC, Schedule 80, (size as required) ¹
2	Pipe Straps, Galvanized, Heavy Duty
3	Conduit Fittings, PVC, (as required)
4	Wire, 600 V, (size as required)
5	Service Weather Head, PVC
For Underground Service	
6	Conduit Fittings, Rigid Steel, (as required)
7	Conduit, Riser, Galvanized Rigid Steel, Continuous without Couplings
8	Plastic-to-Steel Adapter/Coupling, (installed below grade)
9	Conduit, Bend, PVC, Continuous without Couplings
10	PVC Conduit, Coupling
11	Service Conduit, (as required)
12	PG&E Underground Splice Box, (size as required) ²
For Overhead and Underground Service	
13	Meter Panel (Greenbook) or SmartPole Meter Enclosure (TD-027911B-002)
14	Wood Pole (By PG&E Approved Supplier)
15	Ground Rod
16	Ground Wire, Copper, Bare
17	Ground Clamp (as required)
18	Disconnect Switch

1. Use Schedule 80 for 1-1/2" or smaller, or Schedule 40 for 2".
2. The pull box is required to be installed.

Table 2 Bill Of Material To Be Furnished And Installed By PG&E

Item	Description	Document
19	Spool and Clevis, (when required)	022439
20	Service Wires, Overhead (when required) ¹	059626
21	Connector, Compression or Wedge, Overhead Service, (when required)	041010
22	Service Conductors, Underground (when required) ¹	039955
23	Meter, Watthour (062208) or SmartPole (TD-027911B-002)	-

1. 3-wire for standard Meter Panel ([Greenbook](#)) and 2-wire for SmartPole Meter Enclosure.

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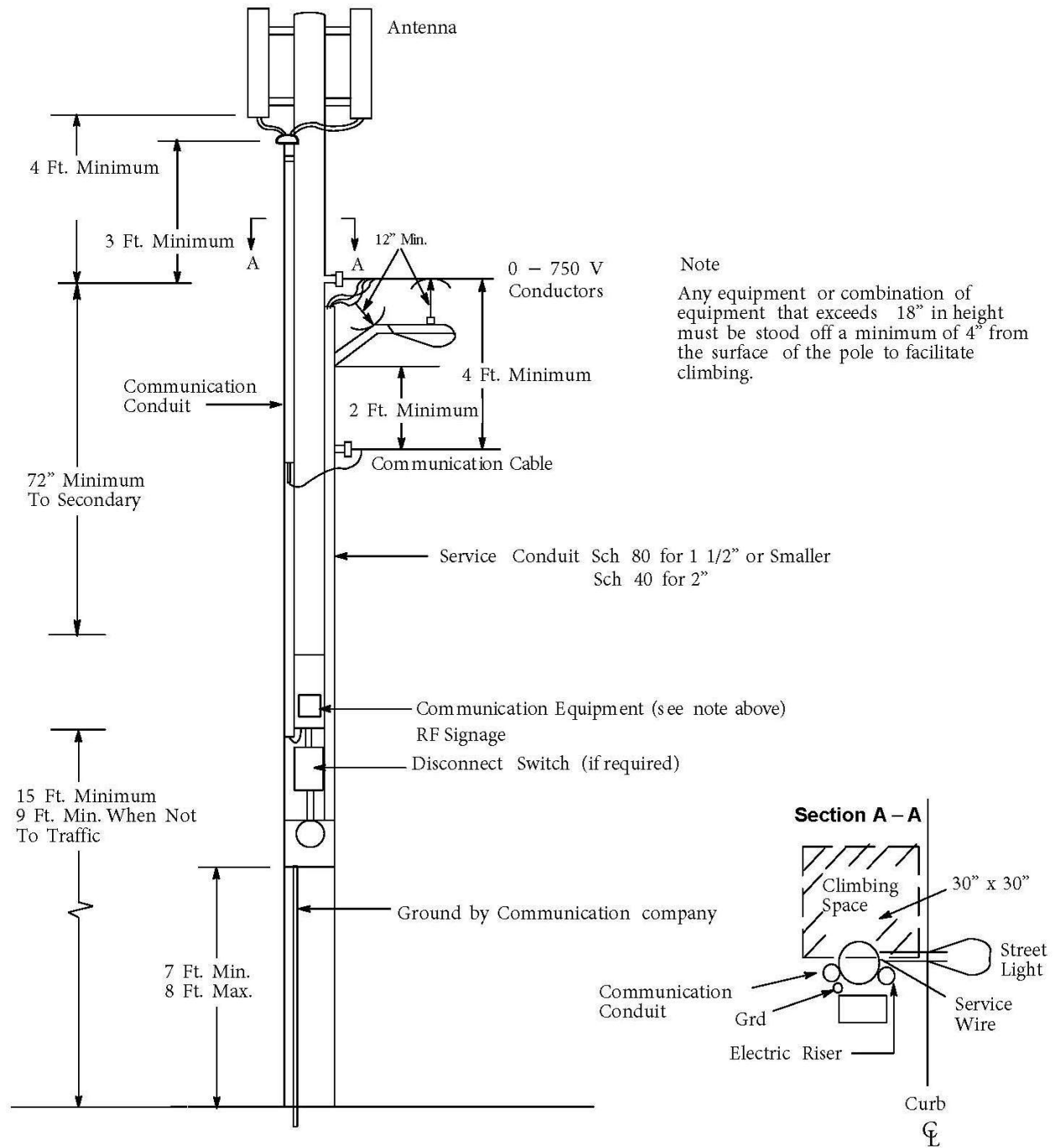


Figure 2 - Pole Top Antenna and Street Light Pole

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DOCUMENT APPROVER

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INCLUSION PLAN

There is not any inclusion plan for this document at this time.

DOCUMENT REVISIONS

1. Updated note 10
2. Added notes 17 through 20.
3. Updated the minimum clearances, in Figure 1, from the PG&E service to the antenna is 4 feet, and from the PG&E service to the weatherhead is 3 feet.