
	ELECTRICAL SERVICE REQUIREMENTS FOR MOBILE HOME DEVELOPMENTS		052521
	Asset Type: Electric Metering		Function: Construction
Issued by: Quoc Hoang (QxH1)	Date: 07-15-08		
Rev. #04: This document replaces PG&E Document 052521, Rev. #03. For a description of the changes, see Page 10.			

This document is also included in the following manuals:

- [Electric Meter Work Practices](#)

Purpose and Scope

This document shows methods of supplying underground electric service to meter posts serving mobile homes in accordance with [Electric Rule 15](#) for a park that qualifies as a mobile home development as defined by PG&E.

Note: In accordance with Title 25, Article 7, Sections 1322, 1333, and 1333.5, mobile homes installed on foundation systems in locations other than mobile home parks, may be served by PG&E from overhead or underground service to the customer's equipment (service entrance conductors if overhead), which is attached directly to the mobile home. Refer to PG&E [Document 058817](#) for underground service requirements and [Documents 025202](#) and [022169](#) for overhead service requirements.

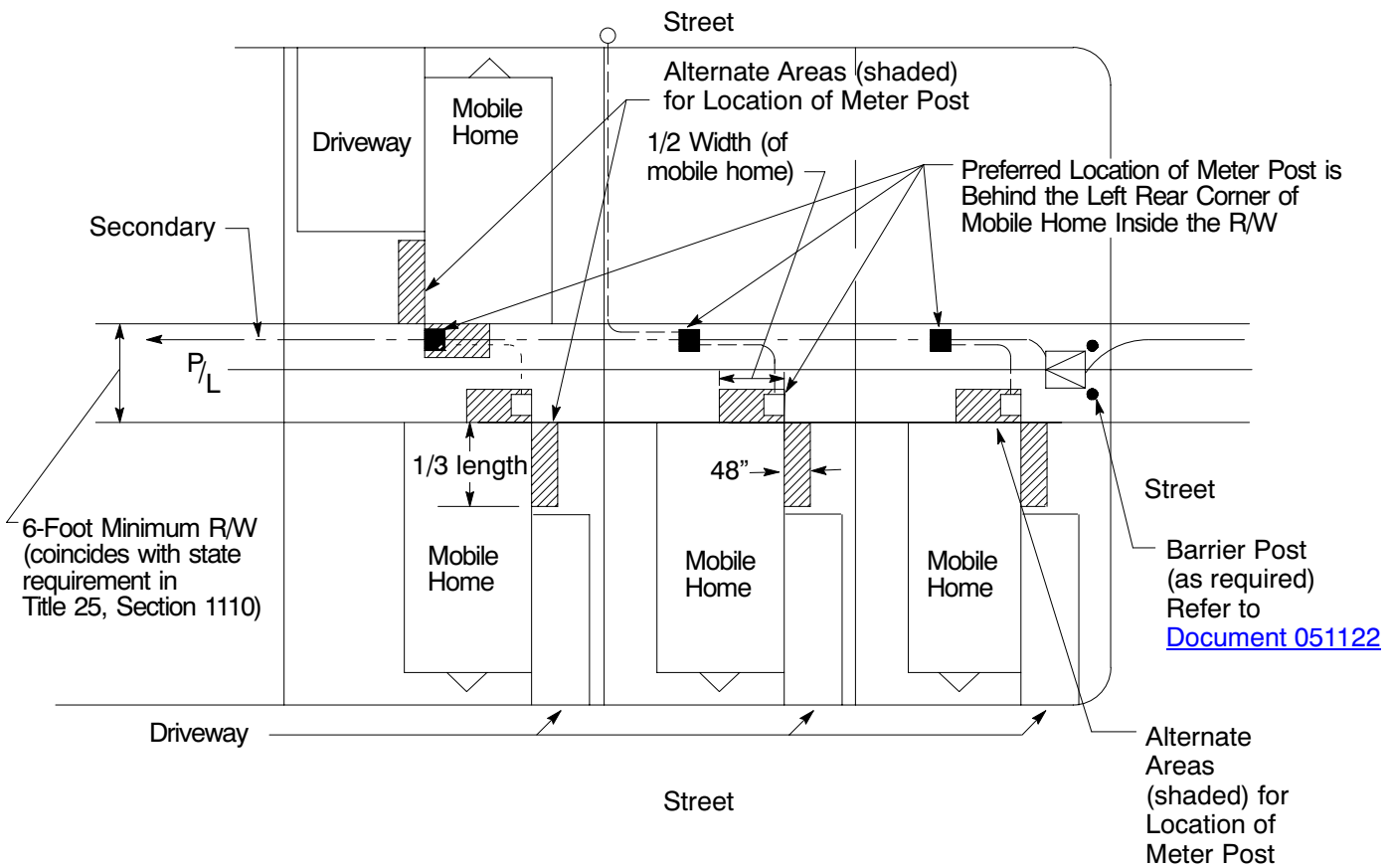
Instructions

1. The developer or his contractor shall provide all necessary trenching, secondary and service conduit (when required), and shall be responsible for the location and final grade of the utility islands.
2. The preferred location for the meter post is behind the left rear corner of the mobile home, in the 6-foot (minimum) right of way (see Figure 1 on Page 2). Alternate locations for the meter post are indicated by the shaded areas in Figure 1 on Page 2.
3. PG&E shall install the secondary and service lateral cables in accordance with [Document 040686A](#) in the *For Reference Only Manual*. Spare conduit, provided by the applicant and installed by PG&E, is to be parallel with the secondary and service cables only in trench sections where future accessibility will be a problem. The cable will extend out of the ground approximately 4 feet and conduit will extend out of the ground approximately 1 foot at the point where the service meter posts are to be set. Close the conduit end with a rigid cap.
4. In a joint trench with the gas department, the secondary main may be located in the center of the 6-foot (minimum) right of way. A 5-foot (minimum) right of way is required if a secondary or service trench must be extended along the side of a mobile home.
5. Maintain a 36-inch (minimum) work space clearance from the meter face and from any access panel on the enclosure. Maintain a 12-inch (minimum) clearance from other parts of the meter post to other utility equipment such as gas, water or sewer. The 36-inch (minimum) clearance for work space shown in Figure 2, Figure 3 and Figure 4 on Page 4 may be reduced to 12 inches for post designs which have the meter and all access panels (both PG&E's and customer's) located on the same side of the post.
6. After PG&E has installed the cable, and if required, the spare conduit in the trench, the developer or his contractor shall then:
 - A. Set the electric meter post in place over the cable and conduit. Position the post so the meter socket faces as shown on Page 4. Remove the pull section panel from the post to allow the cable to extend out of the post. Maintain the work space and clearances as described in Note 5.
 - B. Install and connect a copper grounding conductor from the post grounding lug to an N.E.C. approved ground electrode system. The grounding connection shall not be made to a gas piping system. The customer shall be responsible for bonding and grounding all exposed non-current-carrying metal parts in accordance with the applicable electric codes and local requirements.
 - C. Bond the service neutral termination lug to the meter post by means of a bonding screw, or by continuing the grounding conductor between the grounding lug and the neutral lug. The customer shall be responsible for

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bonding and grounding all exposed non-current-carrying metal parts. Grounding shall be in accordance with the National Electrical Code and local ordinances except that the grounding wire shall be protected against mechanical damage by rigid steel conduit or armored copper ground wire (minimum #8 AWG copper). For installation, see [Document 036670](#) Figure 1 on Page 3.

- D. Backfill around the post to provide good support, plumb and level the post, and pour the concrete base support or island. The concrete surface should be ± 4 inches below the removable pull-section panel of the meter post.
- E. Backfill all trenches, and furnish any imported backfill material required. See [Document 040686A](#) in the *For Reference Only Manual*.
- 7. PG&E shall connect the service lateral conductors to the termination lugs in the meter post, install and seal the pull section panel, and blank off and seal the meter socket.
- 8. PG&E shall set the meter upon request for service, after required permits and inspections have been obtained from city or county inspection authorities.
- 9. See Figure 1 for a typical electric distribution system layout for a mobile home development.



Legend

- - - - - Service Supplying Single Top Line Post and/or Street Light
- - - - - Secondary Looped in and out of Main Line Post
- Property Line
- Meter Post (main line)
- Meter Post (top line)
- Streetlight

Figure 1
Typical Electric Distribution System for a Mobile Home Development

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10. PG&E shall design its facilities so that the short-circuit duty at the electric service entrance will not exceed 10,000 amps.
11. Mobile home posts shall have a minimum rating of 100 amps. The socket and enclosure shall be designed in accordance with PG&E [Document 051001](#) and the following:
- A. The minimum meter height shall be 36 inches when the meter is enclosed, or 48 inches if the meter is exposed.
 - B. When the meter is enclosed, the enclosing cover shall be hinged for ready access and shall have a shatter-proof reading window. When the meter is enclosed or recessed, the clearance from the meter centerline to any fixed side obstruction shall be a minimum of 6 inches.
 - C. The service cable pull and terminating section shall be covered with a sealable removable panel (or panels), extending from a fixed panel 4 inches \pm 2 inches above concrete. The removable panel shall allow full access to the service terminating lugs. Access to the service terminating lugs may be from either front or rear of the post.
 - D. Service terminating lugs shall be aluminum bodied and of the type specified on Page 7 for a main line post and Page 9 for tap line post.
 - E. Lugs for terminating the user's neutral conductors shall be located outside the sealable section and shall be designed to readily permit his neutral system to be isolated, when necessary, from PG&E's neutral.
 - F. The post at grade line shall have the minimum dimensions as specified on Page 8 for the main line post, and on Page 10 for the tap line post. A fixed panel for the final grade and concrete pour shall extend 2 inches (minimum) and 6 inches (maximum) above grade, and a minimum of 18 inches below grade.
 - G. The minimum depth of the post in the ground shall be 24 inches. The main line post shall have an opening at the base to permit a looped, triplexed, direct buried, 350 kcmil (maximum) 600-V XLP cables with two 3-inch (nominal) spare conduits; a single, triplexed, direct buried, 350 kcmil (maximum) tap circuit with one 3-inch (nominal) spare conduit; and a single 7/8-inch (nominal) streetlight conduit, when needed (see Figure 6 and Detail C on Page 8). The tap line post shall have an opening at the base to accommodate a single, triplexed, direct buried, 350 kcmil (maximum) 600-V XLP cable with one 3-inch (nominal) spare conduit and one 7/8-inch (nominal) streetlight conduit, when needed.
 - H. Adequate ventilation shall be provided to prevent moisture condensation inside the post, as required by UL414.
 - I. Any unmetereed bus going through the breaker section shall be completely covered by steel or approved plastic conduit.

References	Location	Document
Connectors for Insulated Cables		
Underground Distribution Systems	UG-1: Connectors	015251
Clearances for Supply Service Drops	OH: Services	022169
Methods of Attaching Services to Customer Premises .	OH: Services	025202
Temporary Underground Electric Service Single-Phase, 120/240 Volt, 100 Amps Maximum	UG-1: Services	036670
Cables for Underground Distribution	UG-1: Cable	039955
Trench and Installation Requirements for URD Cable ..	FRO: Conduit	040686A
Requirements for Self-Contained Meter Sockets and Enclosures Designed for Use With Underground Residential Services	Electric Metering	051001
Location, Clearances, and Mechanical Protection Details for Pad-Mounted and Subsurface Equipment ...	UG-1: General	051122
Terminating Underground Electric Services 0-600 Volts in Customer-Owned Facilities	UG-1: Services	058817

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Location of Electric Meter Post

Notes

1. Position post so that electric meter is faced toward the right of way.
2. Round off trench corners at conduit bends.
3. Set main line post directly along side of main line trench. Position post so that electric meter is facing away from mobile home, towards right of way (see Figure 5 and Detail A).
4. Alternate location for tap line post. Position post so that electric meter is faced toward right-of-way (see Figure 5 and Detail A).
5. Cable arrangement when main line post is set directly along side of main line trench (Detail A).
6. Trench depth shall be 24 inches (minimum) with or without gas service, and 30 inches (minimum) if joint with gas main.

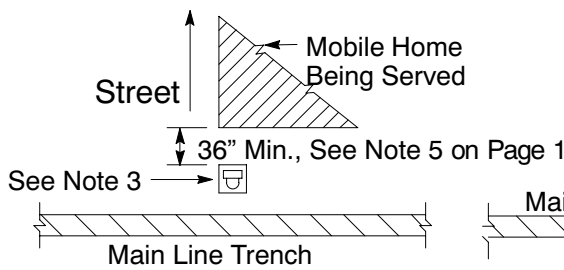


Figure 2
Main Line Post
(preferred location)

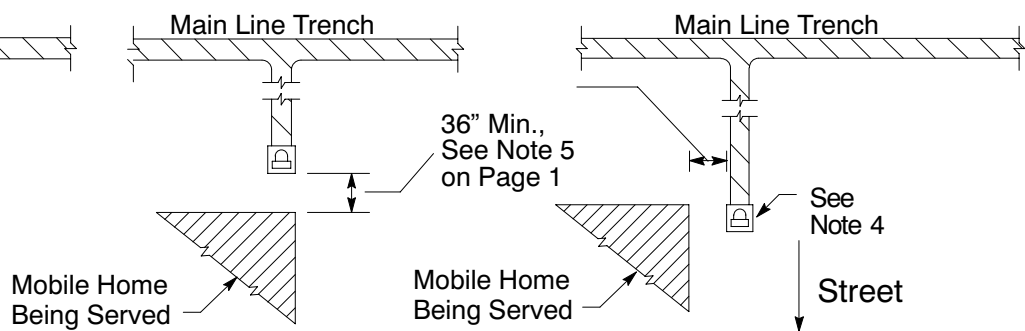


Figure 3
Tap Line Post
(preferred location)

Figure 4
Tap Line Post
(alternate location)

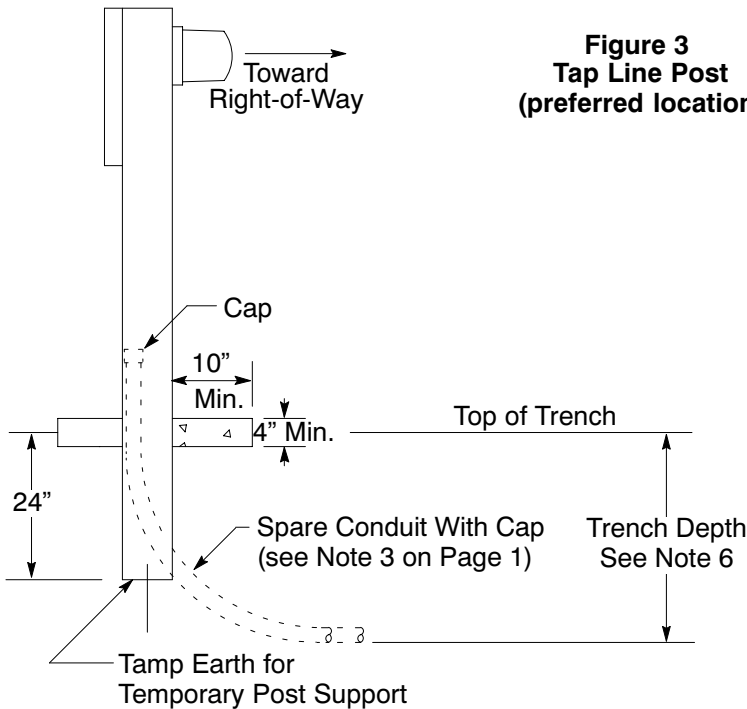
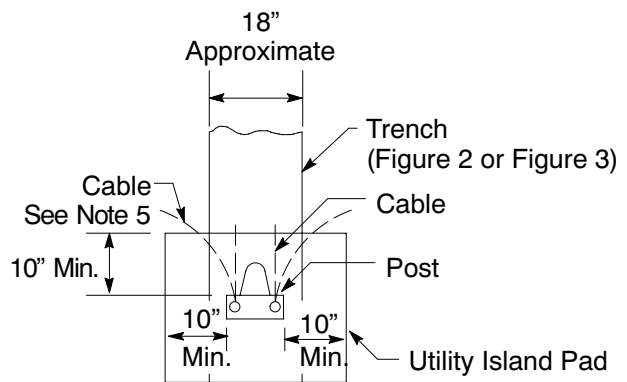


Figure 5
Main Line or Tap Line Post



Detail A
(plan)

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Material

Notes

1. It is recommended that the main circuit breakers used in the above main line and tap line posts have a 10,000-amp short-circuit current rating to insure compliance with state and local codes. These codes require that the main breaker of service equipment be rated at the available short-circuit current. PG&E shall design its facilities to supply all new mobile home customers so that the short circuit duty at the posts will not exceed 10,000 amps.
2. Unicorn catalog numbers shown in Table 4 on Page 6 are basic numbers. Main line posts must contain the letters MP-DU. Tap line posts must contain the letters MP-12A. The addition of number "2" signifies a 200-amp tap or main post. The addition of other letters, numbers, and symbols in these catalog numbers does not affect the PG&E specification and is therefore permitted.
3. Tap line post must have rear connection kit.

Table 1 List of Material for Supplying Electric Service to Mobile Home Developments

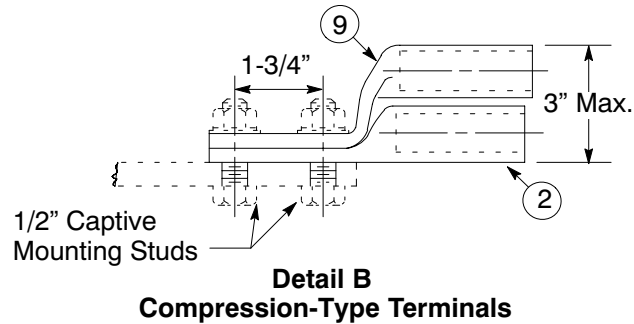
Item	Description
Material to Be Supplied by Applicant	
1	Meter Post, Main Line, or Tap Line, (as required, see Table 4 on Page 6 for the approved list)
2	Compression Connector, Straight Lug (see Table 3 on Page 6)
3	Conduit, Rigid Steel, Galvanized, with Pipe Strap (for bare ground wire, omit if armor clad wire is used)
4	Hub and Clamp, Grounding (to suit Item 3)
5	Conduit Fitting, Threaded, With Cover and Gasket (size to suit Item 3)
6	Ground Rod (see Instruction 6B on Page 1)
7	Ground Wire, Copper, Bare, or Armor Clad (size in accordance with applicable electrical codes and local requirements)
8	Conduit and Cap (as required)
Material to Be Furnished by PG&E	
9	Compression Connector, Stacking Lug (see Table 3 on Page 6)
10	Cable, XLP, 600-V (as required), see Document 039955 (see Table 2)

Table 2 Codes for 600-V Insulated XLP Cable

Triplex Cable		Conduit Nominal Size	Code
Phase	Neutral		
(2) #2	#2	-	294461
(2) 1/0	1/0	-	294462
(2) 4/0	1/0	-	294463
(2) 350	4/0	-	294372
No. 6 Duplex ¹	CIC	7/8"	298225

¹ Streetlight cable (cable in conduit)

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Material (continued)**Table 3 Data and Codes for Approved Compression-Type Material (see Detail B)**

Type of Terminal	Cond. Size AWG or kcmil	Item	Code	Manufacturer and Catalog Number				Tool Index No.
				ESP ¹	Mac	Homac	Burndy	
Straight Lug (furnished by user)	350	2	-	AHL-350-BN-TP	MLB 350-N	AL 350-NTN	YA31A3	350A
	4/0		-	AHL-4/0-BN-TP	MLB 4/0-N	SA 4/0-NTN	YA28A5	4/0A
	1/0		-	AHL-1/0-BN-TP	MLB 1/0-N	SA 1/0-NTN	YA25A7	1/0A
	#2		-	AHL-2-BN-TP	MLB 2-N	SA 2-NTN	YAK2CA-2G1	1/0A
Stacking Lug (furnished by PG&E)	350	9	303728	See Document 015251 for Approved Supplier				350A
	4/0		303729					4/0A
	1/0		303730					1/0A
	#2		303731					1/0A
	#6		303732					1/0A

¹ Electric Specialty Products Company

Table 4 Approved Meter Posts

Rating (amps)	Main Line Service		Tap Line Service	
	Manufacturer	Catalog Number	Manufacturer	Catalog Number
125	Myers Electric Products	ME2TRU/MEPH	Myers Elec. Prod.	MES-M100SE
				U3241-0-100
200	Myers Electric Products	ME2TRU/ME2PH	Myers Elec. Prod.	MES-M200SE
			MILBANK	U3241-0-200

¹ See Note 2 on Page 5.

² Tap line posts must have rear connection kits.

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Main Line Service and Meter Post

Notes

1. The post manufacturer shall furnish four 1/2-inch diameter studs on each hot leg and neutral terminating bus pad for attachment, side by side, of 2-hole straight compression lugs specified in Table 3 on Page 6. These studs have 1-3/4" x 1-3/4" NEMA spacing and project 1-1/2 inch (minimum) from the bus surface. The service terminating compartment shall have sufficient depth so that stacking lugs can be mounted as shown in Figure 5 on Page 4 and a 1-inch minimum clearance can be maintained from the cover panel.
2. Distance from grade line to centerline of lowest termination stud (see Figure 6 on Page 8) shall be 18 inches minimum and 36 inches maximum. The space between terminating lugs, from lugs to sides of post, from lugs to any grounded surface, or from the lugs to the panel above shall be 1-1/2 inch minimum. Rigid insulating barriers are required and shall project 1/4-inch minimum beyond any energized parts when this space is reduced. Termination facilities may be positioned either in line or staggered, and access shall be unobstructed when all service conductors are in place.
3. Studs for attaching connectors shall be cadmium-plated steel. Cadmium-plated steel flat washers and pressure-maintaining spring washers shall be provided by the manufacturer.
4. Where service lateral conductors and customer's service termination equipment are rated more than 200 amps, PG&E will furnish and install the termination connectors. PG&E will also furnish and install stacking lugs when needed.
5. Meter height may be reduced to minimum of 36 inches if meter is enclosed or guarded by a hinged protective hood (see Note 11B on Page 3).
6. See Figure 7 on Page 10 for tap line post specified for a single service lateral 350 kcmil or smaller.
7. Width of pull section may be decreased to 8 inches (minimum) when depth is increased to provide the equivalent 44-inch cross-sectional area.

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Tap Line Service and Meter Post

Notes

1. The meter post shown on Page 10 may be used for a single service and streetlight tap only. See Page 7 for main line post requirements.
2. Termination lugs for a tap line post shall be twin #6 to 350 kcmil range, aluminum bodied pressure type for connecting a single-service lateral and a single streetlight service when needed. Lug height, measured to the bottom of the terminating lug from grade line, shall be 18 inches minimum and 36 inches maximum. The space between terminating lugs, from lugs to sides of post, from lugs to any grounded surface, or from lugs to panel above shall be 1-1/2 inch minimum. Rigid insulating barriers are required and shall project 1/4-inch minimum beyond any energized parts when this space is reduced. Terminating lugs may be positioned either in-line or staggered, and access shall be unobstructed when all service conductors are in place.
3. Meter height may be reduced to 36 inches if it is enclosed or guarded by a hinged protective hood (see Note 11B on Page 3).
4. The post shown on Page 10 may also be used for an underground service to an individual mobile home not in a park.
5. The post shown in Figure 7 on Page 10 is limited by its pull-section size to a maximum of 350 kcmil conductors.

Tap Line Service and Meter Post (continued)

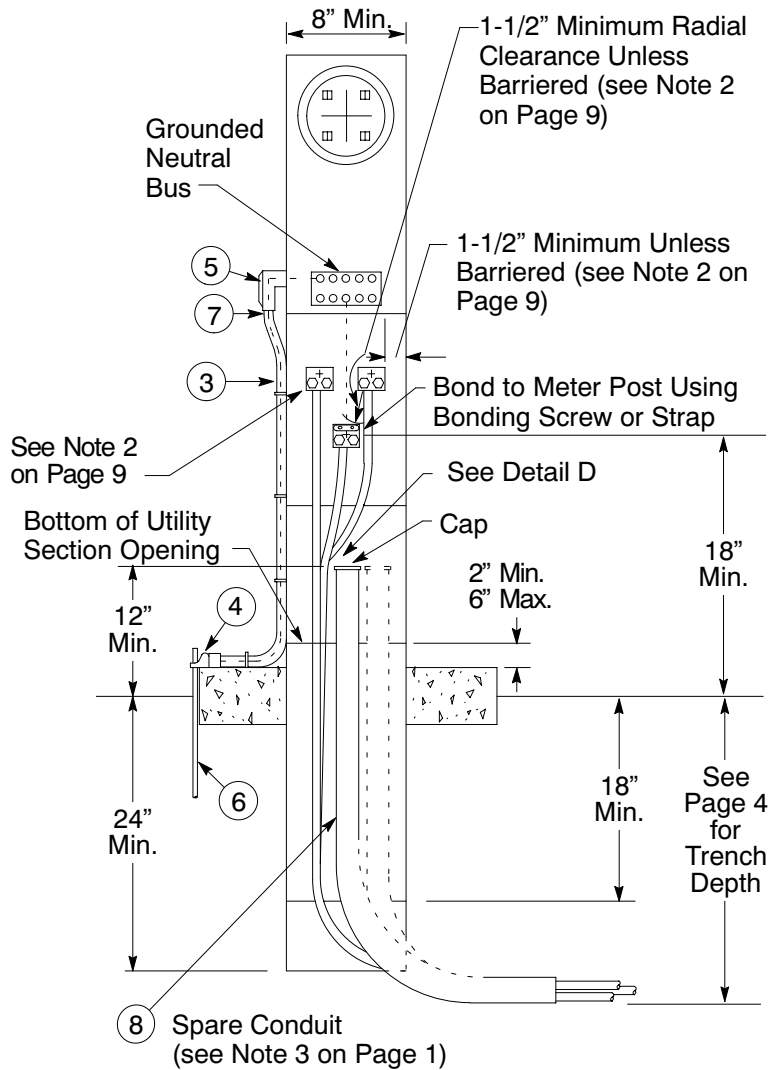
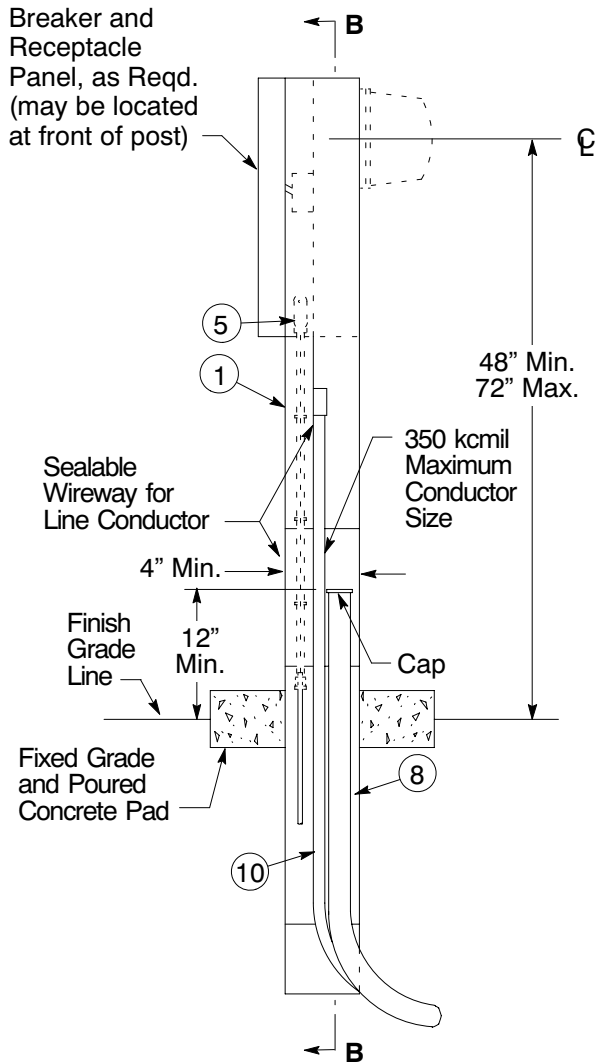
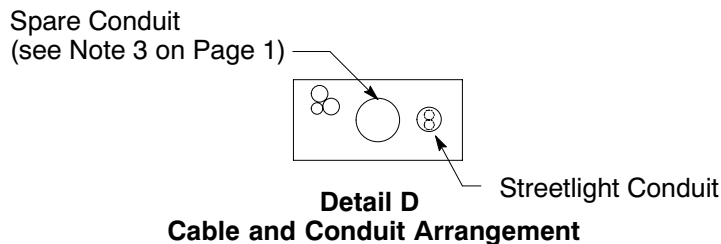


Figure 7
Tap Line Service and Meter Post

Section B-B



Revision Notes

Revision 04 has the following changes:

1. Added grounding information to Note C on Page 1.
2. Removed references to Document 031793 from Note 3 on Page 1 and the "References" section on Page 3.
3. Revised minimum and maximum meter height in Figure 6 on Page 8 and in Figure 7 on Page 10.