



OVERHEAD SERVICE

GENERAL REQUIREMENTS

If you wish to have an overhead service to your home, the information in this chapter will help you.

The following is a checklist that will assist you in preparing your project for the installation of your overhead service. After you have completed these items, CLPUD will install your service line and meter (see Figure 8). The following items must be completed before CLPUD will install your new service line (in addition to those on the inside front cover):

- Make sure you're in an overhead area.
- Check to see if there are any local ordinances/covenants that prevent you from getting an overhead service.
- Contact CLPUD (see page 4) "Requesting service".
- Determine an acceptable location for your meter base (see page 5).
- Provide a clear path from that pole to your service mast.
- Install your service equipment.
- Install your service entrance conductors (leave 18 inches exposed at the weatherhead).
- Verify that your service mast height requirements have been met.
- Have the local electrical inspection agency (see page 4) approve your installation.

GETTING STARTED

After you have completed your Customer Request For Service, CLPUD will contact you to arrange an appointment at the site. At this time the location for the meter

base and service line will be determined.

Again, your meter base should be located outside, and within 4 feet of the front of your structure closest to normal public access and the pole (see Figure 3).

Another factor to consider when choosing the meter base location is what types of terrain the line will be crossing. CLPUD suggests that whenever possible you avoid service line routes that will cross your driveway. Service lines crossing driveways can be hit by vehicles and cause damage to your service equipment and even your home.

If your service line will be passing through any trees, you are required to prune those trees to provide a 3 foot minimum clearance **on all sides** of the service line. You are also responsible for regular tree pruning, and if necessary, tree removal to keep the path clear.

SERVICE MAST REQUIREMENTS

A service mast is a conduit that runs vertically from the top of your meter base up through your roof. It contains your service entrance conductors and typically supports one end of your service line. Service masts are necessary when installing an overhead service and are installed by you or your electrical contractor.

The requirements for the installation of your service mast are located in the NEC. Some of the more common methods are included in this section for your information.

Height requirements

The top of your service mast must be a least 13 feet above final grade so that the minimum

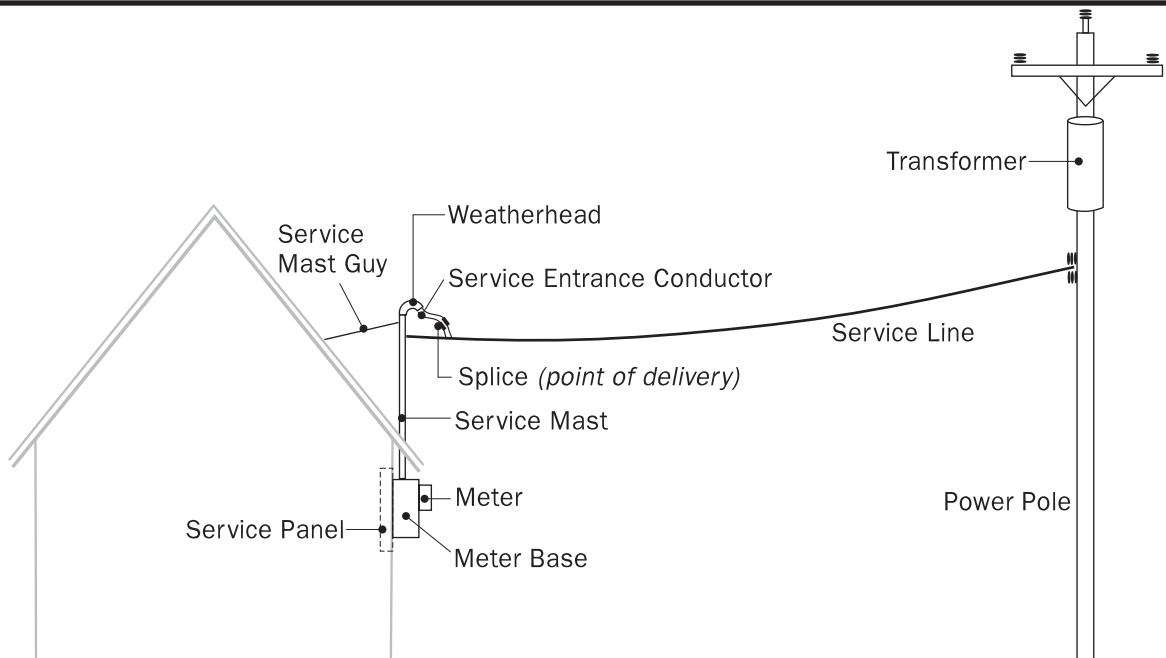


Figure 8.
Typical overhead service installation.



Figure 9.
Minimum clearances from ground.

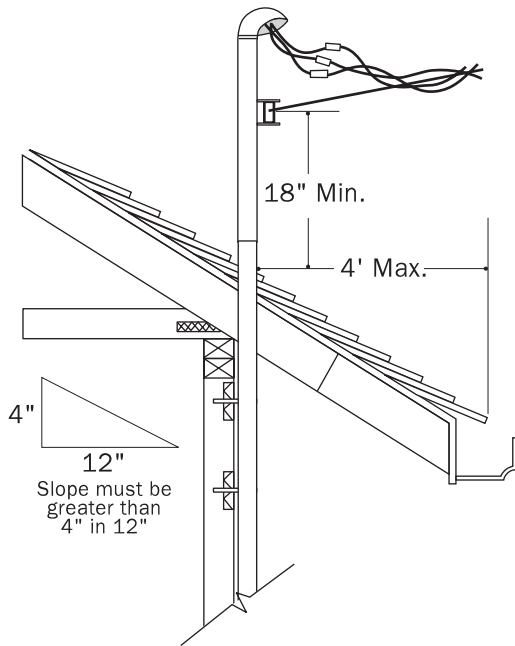


Figure 10.
Service mast clearance option. Contact your local electrical inspection agency.

clearances over your property can be maintained. Additional height may be required depending upon the location and type of structure or terrain which your service line passes over. Figure 9 illustrates some of the minimum clearances that must be maintained.

The NEC and CLPUD also require that your service mast maintain minimum clearances above your roof. The clearance required depends upon the slope of your roof, and whether or not your service line is attached to the structure. Figure 10 is one example of a service mast installation with the service line attached to the mast. This is the method preferred by CLPUD. For other options and details, consult the NEC.

Service lines passing over the roof of another structure must meet the clearances shown on Figure 11.

CLPUD can assist you in determining your proper mast height. Call our nearest service office, and ask to speak to an engineering technician.

Clearances from buildings, openings, gas

A minimum clearance of 5 feet is required between

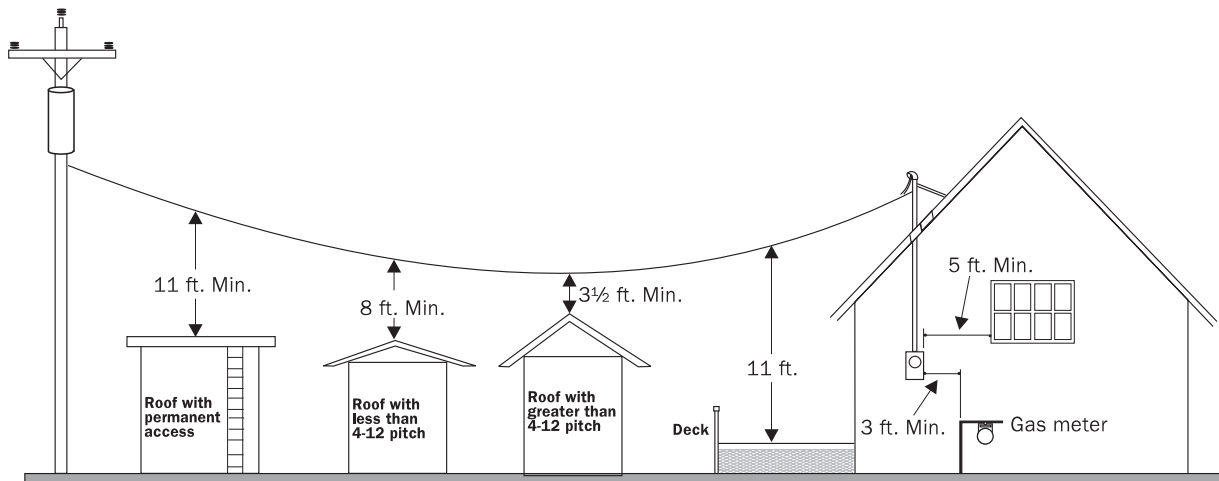


Figure 11.
Minimum vertical clearances over other structures.

service lines and windows, doors, porches, fire escapes, or similar openings.

A minimum horizontal clearance of 3 feet is required between electric service equipment and natural gas metering equipment (see Figure 11).

Additional mast supports

Additional mast supports, typically a guy or brace, are required for any service line that is over 50 feet in length. Guy and braces are installed to prevent the weight of the service line from pulling your service mast away from your home. Further information regarding guying and bracing service masts is available in the NEC.

Additional mast supports are required when:

- You have a 400-amp or larger meter base.
- Your service line is over 50 feet long.
- The top of your service mast is more than 26 inches above your roof.

See Figure 12 for an example of a service mast guy.

SERVICE EQUIPMENT INSTALLATION REQUIREMENTS

After you have determined the meter base location, the service route, the height of your service mast, and the size of your service equipment (200 amp, 400 amp, etc.), you are ready to begin installing your service equipment.

There are two ways this equipment can be installed:

- Flush mounted (see Figure 13)
- Surface mounted (see Figure 14)

Once you have installed your meter base and mast you are ready to provide and install your service entrance conductor. The service entrance conductor is the wire that is connected

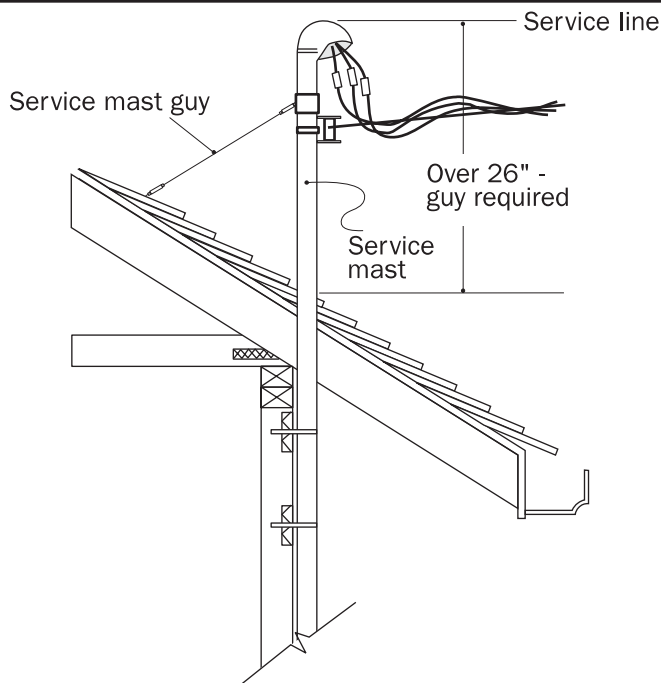


Figure 12.
Service mast guying

to the top lugs in your meter base and runs upwards through the service mast. The service entrance conductors must be sized according to the NEC and to the rating of your meter base. When installing the wire, leave at least 18 inches of it exposed at the end of the weatherhead to allow CLPUD to connect your service line to it. When you install your meter base make sure the center of the meter will be between 5 and 6 feet above finished ground level.

If you have any questions regarding the installation of your service equipment we suggest that you consult the NEC, call the inspecting agency for your area, or contact an electrical contractor.

MANUFACTURED HOMES

If you are installing an overhead service to your manufactured home, your service equipment may be installed in one of two ways:

1. On a customer-owned meter pole, or;
2. On the manufacturer installed home, if the following conditions are met:
 - The manufacturer installed the service equipment at the time your home was built.
 - Or the service equipment meets the meter base requirements listed below.

Meter bases installed on manufactured homes must:

- Be located on an outside wall of your home.

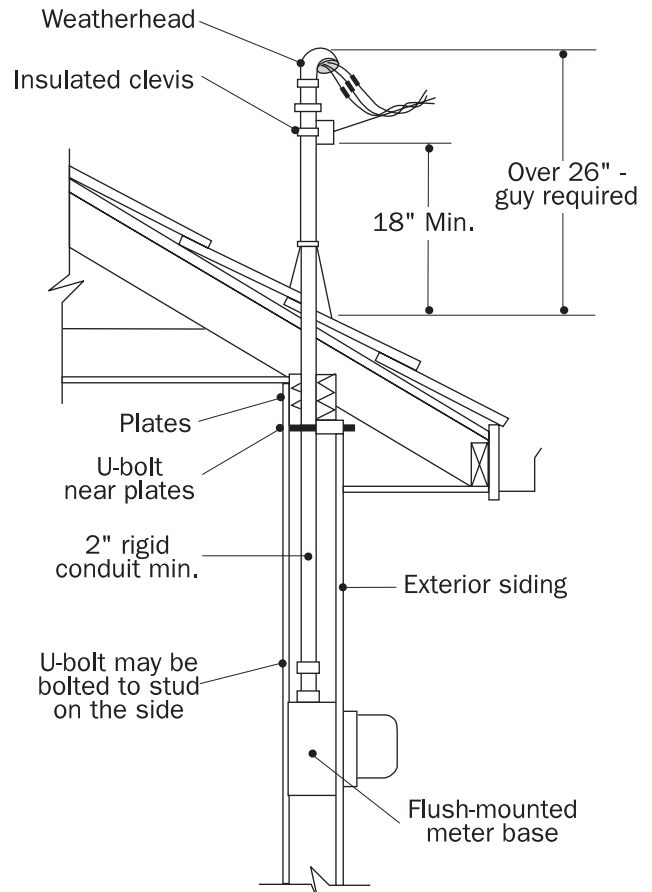


Figure 13.
Flush-mounted meter base.

- Be located on the front exterior wall, or no more than 4 feet around the corner from that front wall.
- Be between 5 and 6 feet above finished grade.
- Not be in a walkway, breezeway or carport.
- Not be in an area that is being fenced, or where decking or foliage will block easy access to it.
- Have a service mast that is at least 13 feet above finished grade (see height requirements section on pages 10 and 11).

CUSTOMER-OWNED METER POST

If a meter post is required for your project, it is your responsibility to purchase and install it. Your post must meet or exceed the following requirements:

- It must be made out of wood.
- It must be 6" x 6" minimum, or Class 6 or better round pole.
- It must be fully pressure treated.
- It must be guyed if the distance between your meter pole and CLPUD's pole is greater than 50 feet.
- It must be in an area that can be accessed by a CLPUD vehicle.

See Figure 15 for an example of a meter post installation.

Meter Post Depth	
Pole Length Overall	Proper Depth in Ground
17'-19'	4'-6"
20'-25'	5'-0"
26'-35'	5'-6"

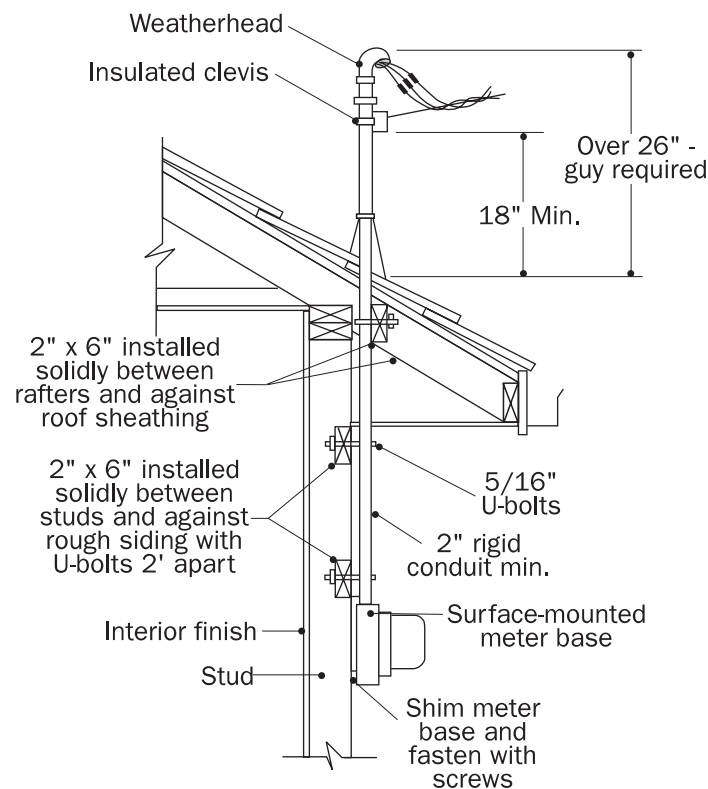


Figure 14.
Surface-mounted meter vase.

Your meter post has the same location requirements as your meter base (see page 5). However, they may be located closer to vehicular traffic with approval of your PUD Engineer. Typically they are installed within 30 feet of your home.

For additional assistance on meter post installations, contact your nearest CLPUD service office, and ask to speak to an engineering technician.

Items owned/installed by the customer (Figure 15)

1. A 6" x 6" x 16' minimum, continuous, single structure, pressure treated, firmly set.
2. Meter base with ground wire from the meter base to service neutral and an electrical permit or "green tag" attached.
3. Ground wire (per NEC) with ground wire connected to the meter base or switchbox lug and grounded to both ground rods with approved cast clamp.
4. Ground rods (per NEC, 2 required) 8' long.
5. Down guy, 5/16 in. minimum, galvanized steel cable.
6. Service entrance conductors, 18" out of weatherhead.
7. Drill 11/16" hole 6" below top of pole in line with service drop.
8. Anchor.

Items owned and installed by CLPUD (Figure 15)

9. Meter.
10. Service Line.
11. Insulated clevis.

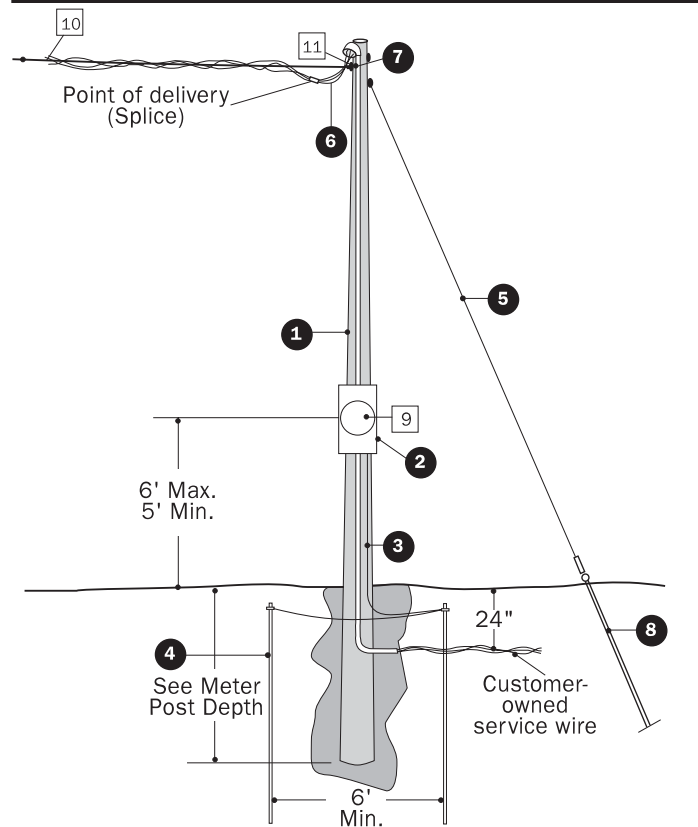


Figure 15.
Customer-owned meter pole.