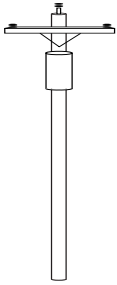
CHAPTER 2

Overhead Services



The cost for overhead service depends on the extent of special engineering required. The least complicated and cheapest situation is when a transformer is on a pole on, or near the property. If this is the case, engineering may not be required. The customer simply installs the service entrance equipment after location is approved, has it inspected, and NAED is contacted by the Wiring Inspector to have service connected.

The customer is responsible for providing, installing, and maintaining all equipment from the point of delivery except for the meter.

NAED is responsible for providing and installing the meter, completing the connections between the meter and the service conductors, and making the final connections at the point of delivery. If CTs are being used, NAED also provides the CTs and makes the connections to them and to the meter.

OVERHEAD INSTALLATION

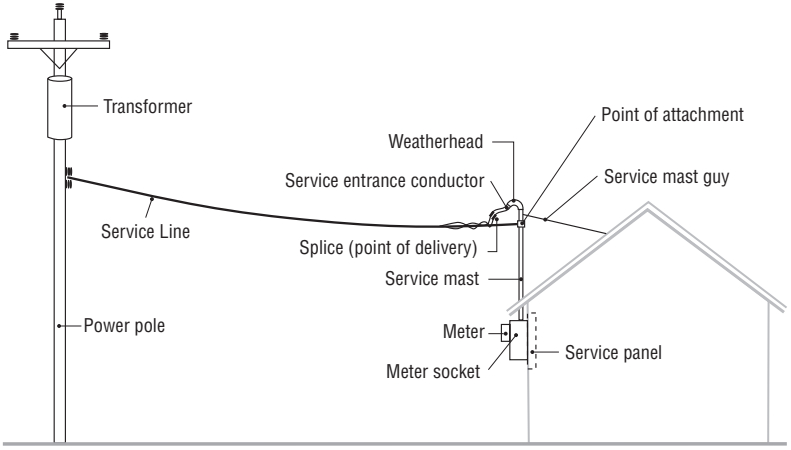


Figure 2-1

Figure 2-1 shows a finished installation of overhead service, using a service mast. The customer provides everything shown here, except the meter, the overhead service line, and the power pole and pole-mounted equipment.

After the customer installs the required equipment, NAED installs the meter in the meter socket, installs the service line, attaches the service line supporting wire (neutral) to the insulated clevis, and splices the conductors together.

Overhead Line Clearances

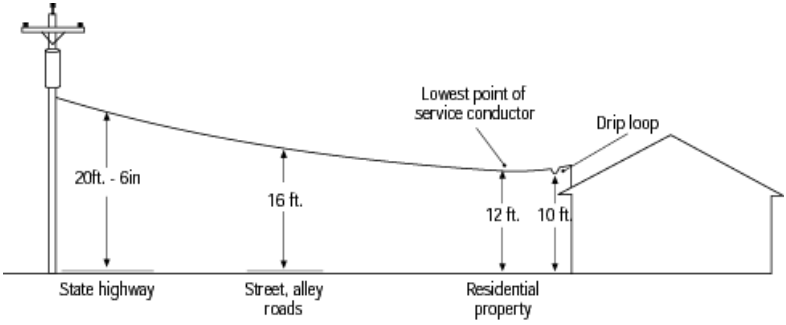


Figure 2-2

Clearances from ground

The illustration above and on the next page, show clearances under overhead lines, for the conditions most commonly encountered. For other situations and for details, see the National Electric Code, the National Electric Safety Code, or contact the electrical inspector. The customer does not install the service conductor, but is required to provide a point of attachment high enough and strong enough, to allow NAED to install the service line and maintain the required clearances.
If the span of the service line exceeds 125 feet, an intermediate pole may be required to relieve the tension on the service.

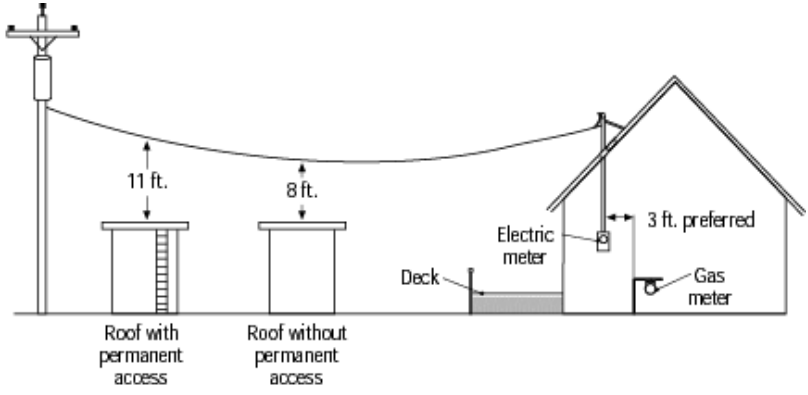


Figure 2-3

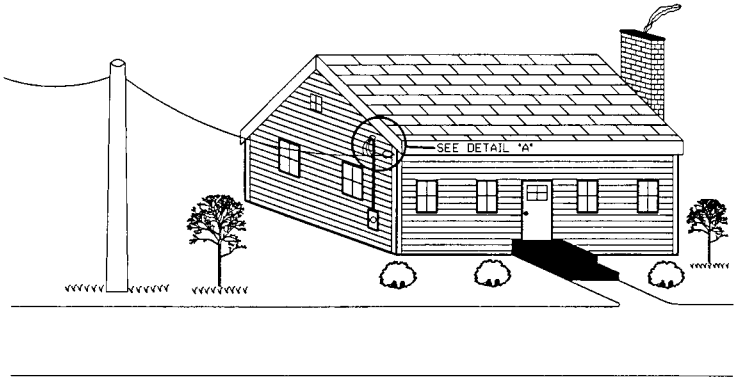
Clearances over other structures

If the service line will pass through trees, the customer must prune the trees to provide a clear path for the line. NAED is responsible for regular tree trimming, and if necessary, tree removal to keep the path clear.

If the service line will pass over brush, the customer must clear a path for NAED'S installation service personnel.

TYPICAL OVERHEAD SERVICE

An eyebolt is required on all new services to provide adequate support for the service drop. NAED will supply the eyebolt for installation by the customer. Only NAED supplied bolt or approved equivalent is allowed. Typical location will be within 6′ of the left or right front corner of the building. Fig. 2-4 shows details of a typical overhead service.



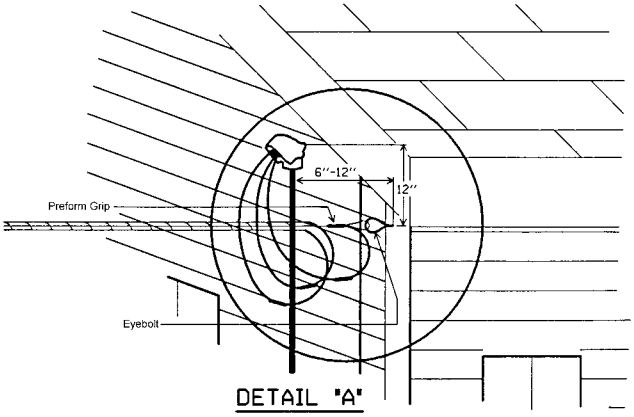
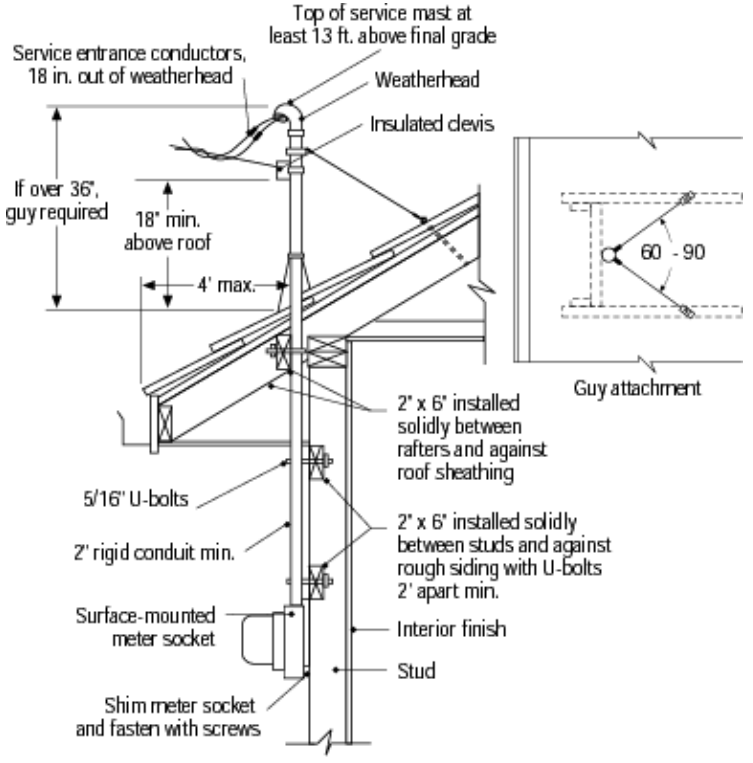


Figure 2-4

SERVICE MAST, SURFACE-MOUNT METER

Figure 2-5 shows details of a service mast, with the meter on the surface of the building. The service shall be wired to an exterior meter as shown here. The customer installs everything in the picture, except the meter.

After the customer installs the service equipment, NAED installs the meter in the meter socket, installs the service line, attaches the service line supporting wire (neutral) to the clevis, and connects the conductors together.



Conduit Size	Service Length
2″	100′
2-½″	120′
3″	120′

Figure 2-5

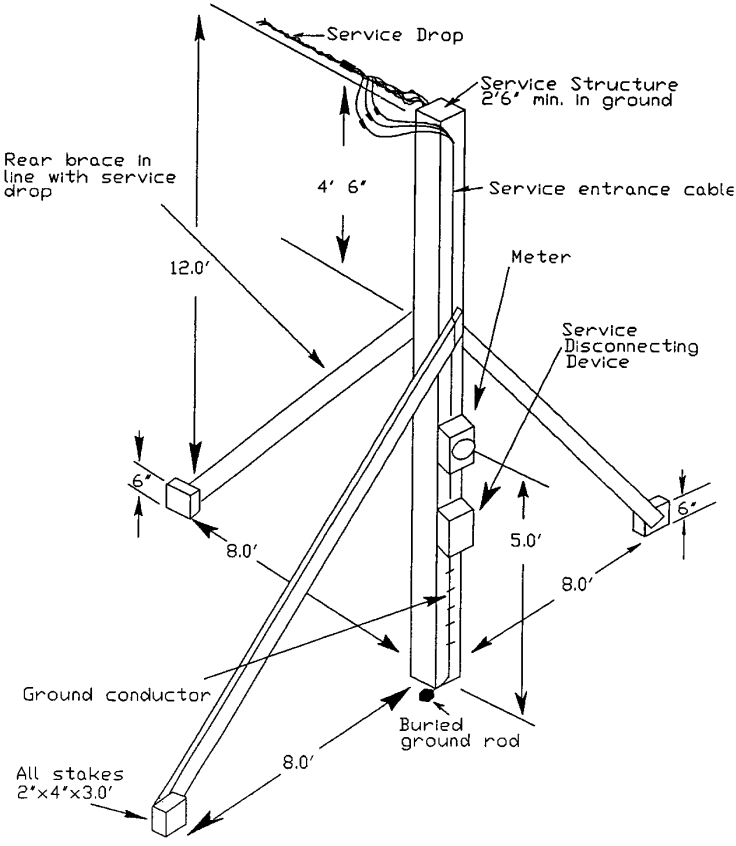
OVERHEAD SERVICE, TEMPORARY

Figure 2-6 shows a finished installation for temporary service, using a meter post. From the post, the service to the building could be overhead or underground. The customer provides and maintains:

- 6″x6″x16′ min. service structure as shown
- Service entrance cable
- Meter socket and disconnect device
- Ground rod and grounding conductor

The maximum distance from the nearest pole to the service structure is 75 ft.

After the customer installs the service equipment, NAED installs the meter in the meter socket and installs the service drop.



Notes:
All timbers to be sound
Min. of 4 – 20d nails at each joint
Where it is necessary to cross a highway, additional height and support will be necessary.

Figure 2-6

OVERHEAD SERVICE, METER POLE

Figure 2-7 illustrates an overhead service to a privately owned pole. From the pole, the service could be overhead to the building, or underground as shown here. The customer provides everything in the picture, except the meter and the overhead service line.

After the customer installs the service equipment, NAED installs the meter in the meter socket, the service drop, attaches the service line supporting wire (neutral) to the eyebolt, and connects the conductors together.

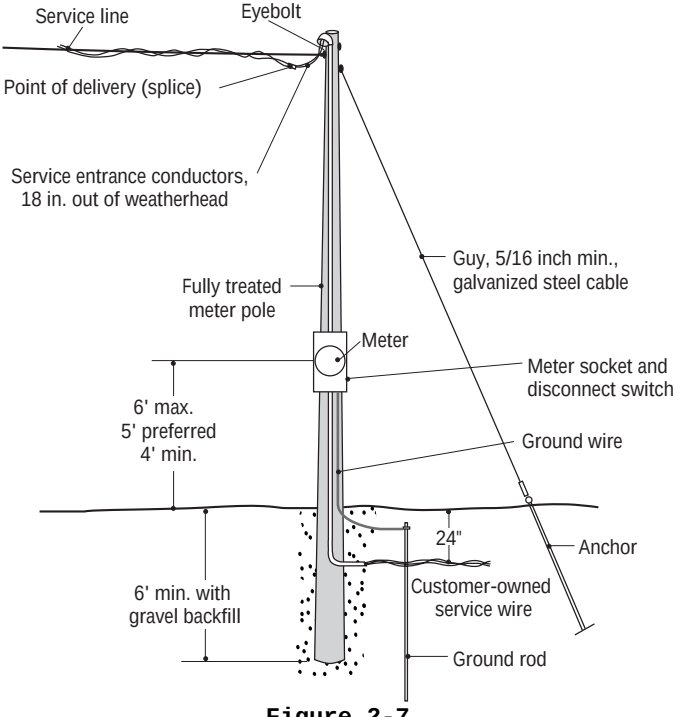


Figure 2-7

Overhead Span Distances

The maximum single-span distance the Company will run its overhead residential service drop conductors to the point of attachment for 100-200 amp service entrance is approximately 125 feet. Building heights, large conductors, the necessity for street, driveway, sidewalk crossings and other possible factors may reduce the maximum permissible spans.