

# OVERHEAD ELECTRIC CUSTOMER OWNED SERVICE POLE

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## 2.0 PURPOSE

This standard outlines the minimum requirements for installation of an overhead electric service to a customer owned service pole having a 100 Amp, 200 Amp or 400 Amp single phase service entrance. These requirements have been established in the interest of safety to the public and the workmen, and are applicable to all customer owned service poles. NVE **cannot** establish service to poles which do not meet these requirements. **The maintenance of the customer owned service pole is the responsibility of the customer.** Overhead service is limited to areas served by an overhead electric distribution system and where not required by local ordinance to have underground services.

## 3.0 CUSTOMER RESPONSIBILITY

The customer shall furnish, install and maintain at his expense, the pole, service entrance conductors, service attachment devices/insulators, service riser conduit and weather head, service equipment, grounding and guying if required, and all other material required beyond NVE's service drop, in accordance with applicable Local, State and National codes. The pole shall be of sufficient height and construction to provide the minimum clearances.

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**4.0 NVE RESPONSIBILITY**

NVE will furnish, install and maintain, upon completion and final approval inspection of the customer pole, the service drop conductor, cable connectors for service entrance conductors and the meter.

**5.0 PERMANENT SERVICE POLE**

A service pole will be considered to be permanent when the installation is expected to remain for a period longer than one year. Permanent wood poles shall be furnished and installed by the customer. **NVE will, as a last resort and at customer's expense, set the pole, exclusive of wiring and service entrance equipment, if customer is unable to have the pole set by a private contractor.** Poles may be rectangular or circular in cross section and shall be solid (not laminated). Rectangular poles shall be a minimum cross section of 6" x 6" nominal.

Circular poles shall have a minimum top circumference of 16". The minimum acceptable length shall be 20' and must be set a minimum of 4' in the ground. A longer pole may be required to obtain the required clearances. Untreated redwood, butt-treated cedar and full treated Douglas fir are acceptable. Clearances are based on conductor temperature at 60°F (15°C), no wind, with final unloaded sag in wire or conductor.

**6.0 LOCATION**

The pole shall be placed in such a location that the **service drop will not** cross-over portions of adjacent properties. Buildings or trailers on the customer's premises shall not be crossed unless a clearance of 8' minimum can be maintained over the building or trailer. The service pole shall be a minimum of 10' from a NVE pole and a maximum of 100' for a 100A panel (75' max. in heavy snow areas). The 100 foot limitation applies for a 100 amp panel, 70 foot for a 200 amp panel and 30 feet for a 320 amp (400A) panel.

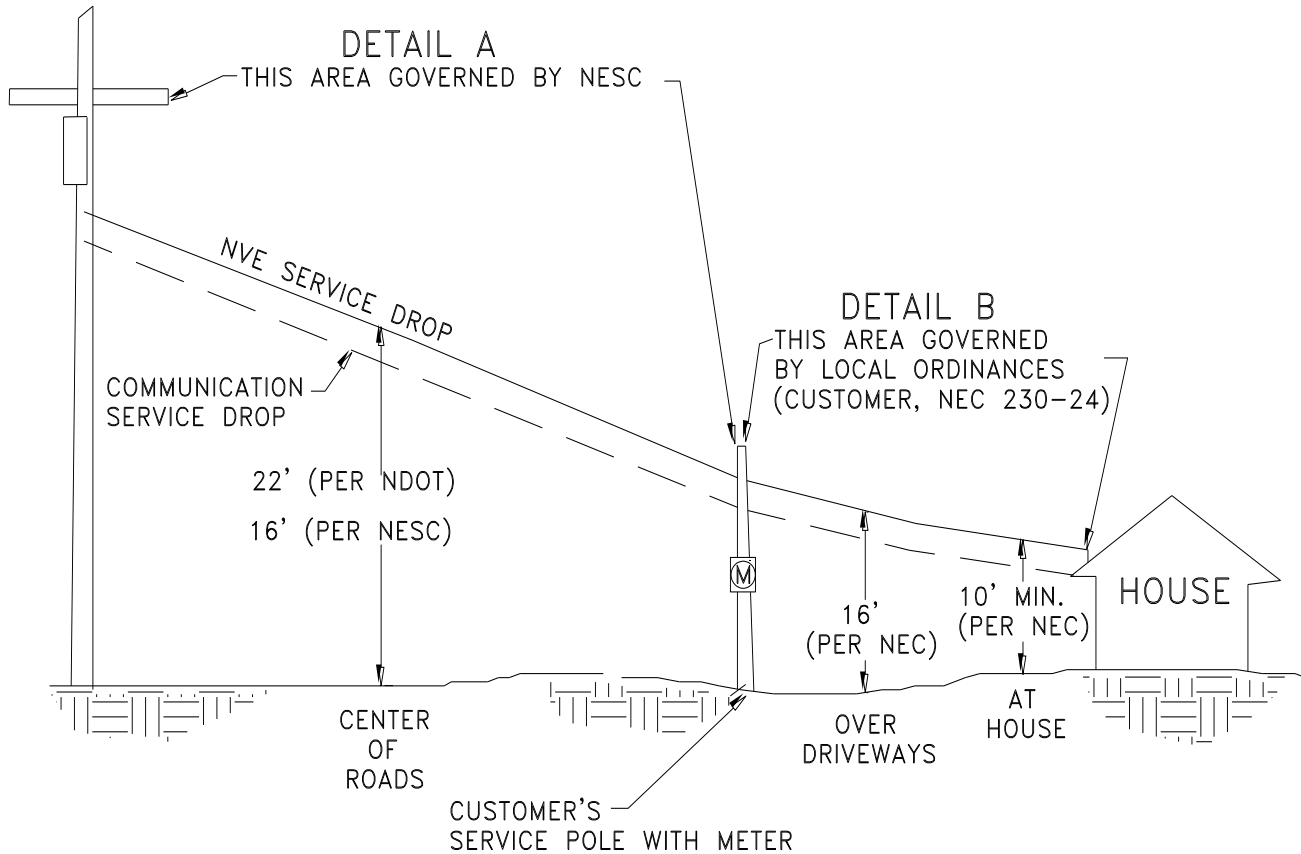
**7.0 SERVICE DROP CLEARANCES**

Service drop shall maintain minimum clearance set by NESC and/or any State, Local or National Electric (NEC) ordinances. Refer to NVE Standard CLE01T, Volume 3, for detailed information:

- A. 16' or 22' minimum over center of streets in Nevada per NESC or NDOT. See detail A
- B. 16' minimum over residential property and driveways, and those commercial areas not subject to truck traffic and other land traversed by vehicles such as cultivated, grazing, forest and orchard per NEC.
- C. For crossing over other utilities, contact local NVE office for minimum clearances.

NOTE: Elevation at point of attachment shall be such that all required vertical clearances can be maintained with allowance for normal conductor sag.

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**8.0 SERVICE ENTRANCE CONDUCTORS**

The service entrance conductors shall be continuous, without splices, and shall be of a size and type to provide not less than the minimum standard as specified in Local, State and National codes. The neutral conductor must be insulated and securely connected to the neutral terminal of the meter socket and must be continuous from the weather head to the service entrance switch. Service entrance conductors must extend a minimum of 18" from the service head to provide for the make-up of the required drip loop.

**9.0 RISER CONDUIT**

Preferred secondary riser conduit is to be "non-conductive" PVC, sch. 40, material and will be sized per the National Electric Code.

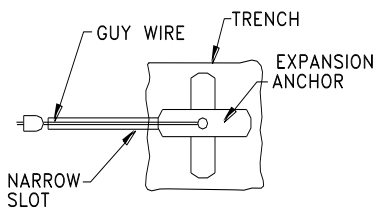
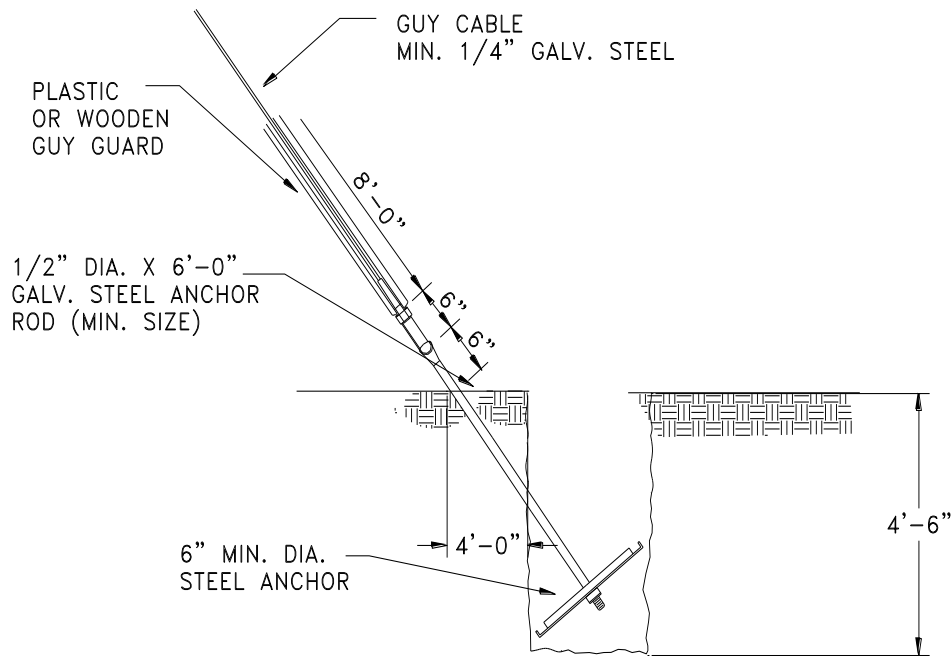
**10.0 SERVICE ENTRANCE SWITCH**

All equipment must comply with Local, State and National Electric Codes (NEC).

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**11.0 GUYING**

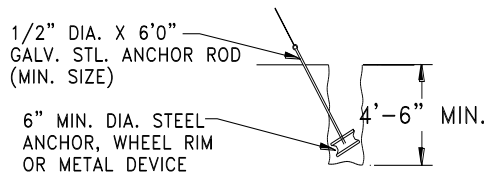
Where a service drop crosses a road, the customer's pole shall be guyed against the pull of the service wire. For non-road crossings, #2 wire will be guyed at 75 feet or greater, 2/0 wire at 40 feet or greater, and 4/0 wire will be guyed at 20 feet or greater. Guying requirements are shown below. When exposed to traffic, the guy shall have a substantial wood, metal or suitable plastic guard (guy guard), not less than 8 ft. in length, securely attached to the guy cable.



TOP VIEW

- NOTE:
1. ANCHORS MAY CONSIST OF WHEEL RIM, OR OTHER METAL DEVICE WHICH HAS A MIN. 6" DIA.
  2. WHEN REQUIRED: ANCHORS TO BE INSTALLED A MIN. OF 12'-15' FROM BASE OF POLE.

ALTERNATE



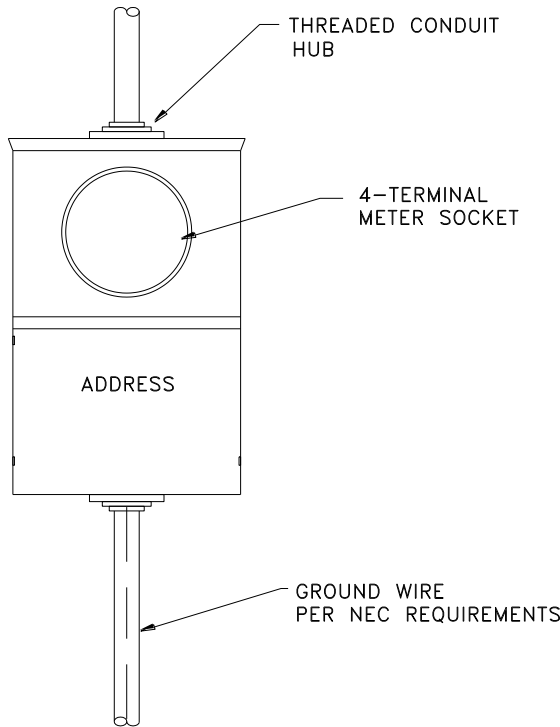
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**12.0 METERING**

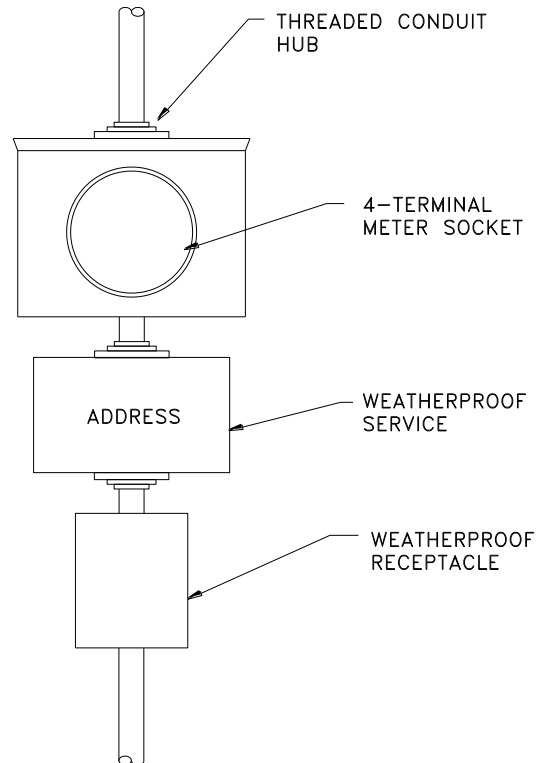
The customer shall furnish, install and wire the meter socket. *The meter socket shall face the street or point of access.* See GM0001M, Electric Metering, General, (Metering Section), Section 5.3 for label requirements.

**NOTE: ALL WIRING/MATERIAL ON LOAD (CUSTOMER'S) SIDE OF METER SOCKET MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL ELECTRIC CODES.**

120/240V 3-WIRE WITH WATT HOUR METER, SERVICE SWITCH AND RECEPTACLE IN WEATHERPROOF CABINET.



120/240V 3-WIRE WITH WEATHERPROOF SERVICE SWITCH AND RECEPTACLES.



**13.0 GROUNDING**

Ground all the exposed "non-current" carrying metal parts per NEC #250-66 requirements or other Local and State Codes.

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14.0 MATERIALS

**Material Furnished By Customer:**

1. Wood pole, length as required
2. Meter socket, main service switch.
3. Conduit, Sch.40 PVC min.  
Sch. 40 PVC min. **Steel not allowed**
4. Conduit, Customer (load) side,
5. Conduit fittings.
6. Weather Head (service head).
7. Wire, insulated per NEC requirements
8. Eye bolt 5/8" dia. length as required.
9. Washers (2): 5/8", 2-1/4" sq. - for guy
10. Guy Material: 1/4" Galv. w/ Steel Anchor
11. Grounding per NEC.

**Material Furnished By NVE**

12. Meter.
13. Service drop wire.
14. Insulator (bolted clevis, 1-5/8" bolt)
15. Service drop connectors.
16. Source wedge clamp

POLE LENGTH (FT.)	DEPTH (FT.) IN FIRM SOIL
20*	4
25	4-1/2
30	5
35	5-1/2
40	6

\*20' POLE HEIGHT NOT FOR VEHICULAR TRAFFIC USE

NOTE: PVC REQUIRED TO INSULATE LINEMAN WHILE CLIMBING POLE.

