

## Customer Requirements Pole Conduit Riser

**C-UG-1200**

### Application

Installation requirements for conduit risers installed on Tacoma Power poles.

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### Terms

Term	Definition
Construction Inspector	Representative from Tacoma Power T&D Construction Staff. <b>A pre-construction meeting with the Construction Inspector must happen prior to any construction. Call 253-381-3023.</b>
New Services Engineer	Tacoma Power engineering staff that provide design, cost estimates, and coordination of the commercial project.

### Responsibilities and Inspections

Construction Area	Responsibility	Inspection by
Identifying the pole and location of the riser	<i>The New Services Engineering Office</i> will work with the <b>customer's electrical contractor</b> to determine the location for the riser on Tacoma Power's pole.	Construction Inspector
Work in Road Right-of-Way	The <b>customer's electrical contractor</b> will be responsible for installing conduit in the road right-of-way per the requirements of the permitting agency. Permits to cut and restore the road and any other work in the road right-of-way <u>must</u> be obtained before work in the right-of-way can begin. A copy of the approved permit must be on site while the road work is being done.	Construction Inspector
Installation of the first ten feet of the pole conduit riser	<b>Customer's electrical contractor</b>	Construction Inspector
Completion of the pole conduit riser	<b>Tacoma Power T&amp;D Construction Staff</b>	Not needed

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### Conduit Requirements

- Conduit size shall be 2.5", 4", 5", or 6" as directed by New Services Engineer.
- Both the sweep and the first 10 feet of the riser shall be Sch. 80 PVC, gray.
- The remaining portion of the riser shall be Sch. 40 PVC, gray.
- All conduit and sweeps shall meet the requirements of the most recent edition of ASTM F512 "Standard Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation.
- The minimum radius of sweeps used in all pole riser conduit installations, unless otherwise specified by the **Construction Inspector**, shall be:

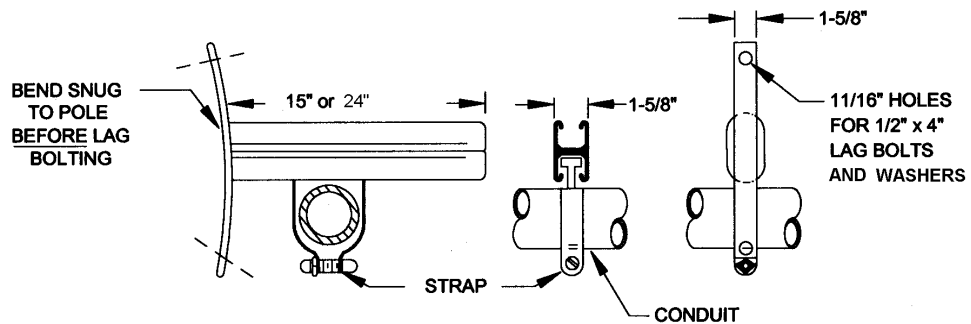
TRADE SIZE	2.5"	4"	5"	6"
Sweep Radius	36"	36"	48"	48"

### Standoff Bracket Requirements

Tacoma Power has the following requirements for standoff brackets (see Figure 1):

- Hot dip galvanized with 1-5/8" C channel, 15 to 24 inch length.
- 2-piece steel galvanized binding member clamps suited to conduit size and type. Wire clamps are not acceptable.
- Fit bracket closely to pole shape by bending straps before lag-bolting and firmly lag-bolt to pole.

**Figure 1** Standoff Bracket Requirements



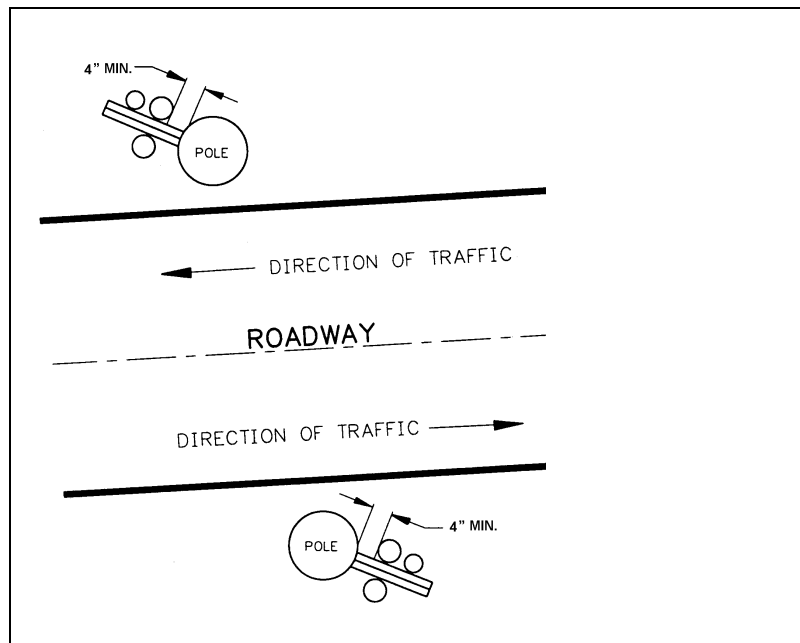
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### Installation Practices

- |                           |   |
|---------------------------|---|
| <b>Quantity of Risers</b> | The total quantity of conduits on a pole for all the utilities shall not be more than 6 (six). If additional space is required for risers, contact the <b>Construction Inspector</b> .  |
| <b>Riser Location</b>     | <ul style="list-style-type: none"> <li>• If standoff brackets are already installed on the pole, the new riser(s) shall be attached to these standoffs.</li> <li>• If a riser is not already on the pole, the <b>Construction Inspector</b> must approve the riser location.</li> <li>• When practical, risers will be located on the field side of the pole, and the pole quadrant most protected from traffic. See Figure 2.</li> </ul> |

**Figure 2** Pole Conduit Riser Location Opposite of Direction of Traffic

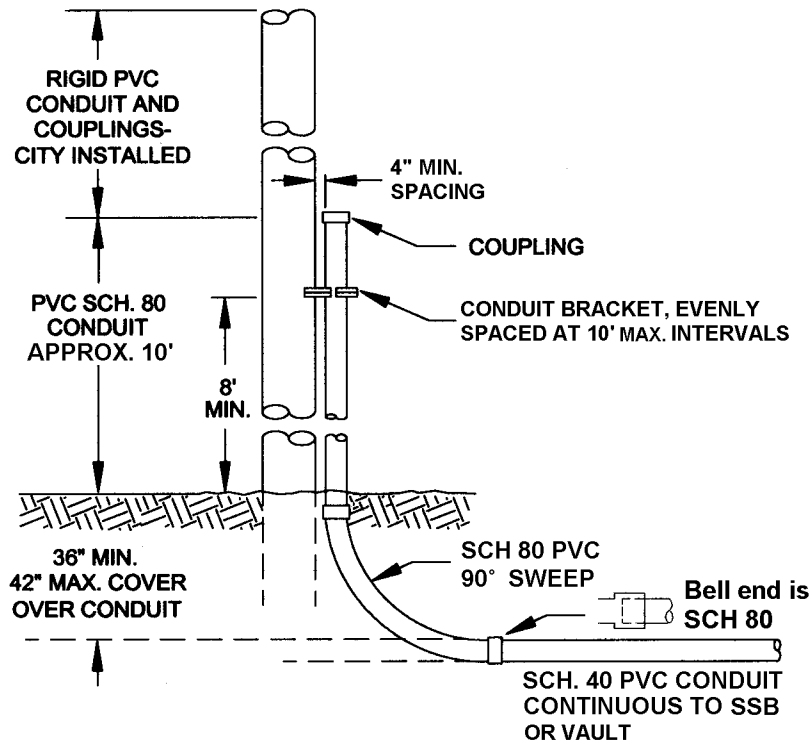


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### Installation Practices *(continued)*

Figure 3 Typical Riser Assembly



#### Construction Notes

- When excavating at the base of the pole, contact the **Construction Inspector**. No more than 1/4 of pole circumference and no more than 1/2 of the pole's buried depth may be exposed during excavation. Poles are set at 10% of the total pole length plus 2 feet.
- A full 10 foot piece of rigid Sch. 80 PVC conduit shall be the first section of conduit up the pole to at least 8 feet above the ground line.
- The lowest standoff bracket must be no closer than 8 feet to the ground, or other accessible surface.
- Conduits will be supported by brackets evenly spaced along the pole and no more than 10 feet apart.
- All conduits shall be temporarily capped with plastic caps or plugs, not tape.
- Spacing between the pole and conduit riser shall be a minimum of 4 inches.
- Maintain a 1 inch separation between risers to allow for cable locating equipment.
- If more than one conduit will be on the same side of the bracket, the higher voltage will be closest to the pole.
- The entire length of conduit riser should parallel the structure or pole, regardless of taper of the pole.