

Communication Enclosures on SCL Wood Poles



1. Scope

This standard covers requirements for the communication installation of pole-mounted enclosures, and associated equipment on Seattle City Light (SCL) wood poles.

Meter installations are outside the scope of this standard.

2. Application

This standard is for SCL engineers, customers, crews, and approved contractors who design and install communication enclosures on SCL wood poles.

3. Requirements

3.1 Customer Responsibility

The customer shall be responsible for:

- Obtaining an approved jurisdictional authority permit sticker, such as Seattle Department of Construction and Inspection (SDCI), along with an emergency contact phone number.
- Installing all conduit up to the communication space or to their communication cable attachment.

- Providing an equipment bag containing materials to be installed by SCL crews above the communication space. The materials (conduit, weatherhead, and its mounting hardware) shall be capable of extending up to 18 inches below the lowest SCL secondary bracket. Equipment bag shall be secured at the location and made accessible to crews providing electrical service connection.
- Providing pre-wired coil of service wire capable of extending 3 ft beyond the weatherhead for SCL final connection.

In addition, customer shall be responsible for any mitigation when required by the Authority Having Jurisdiction.

3.2 City Light Responsibility

After final approval by SCL Joint Use Engineering, SCL crews or its approved contractor shall be responsible for:

- Installing conduit and weatherhead provided in equipment bag
- Electrical connection at the drip loop for secondary service power
- Fusing the service at the weatherhead as specified by the SCL Engineer

SCL will make every reasonable effort to notify the antenna owner of outages 24 hours in advance when possible. However, SCL reserves the right to disconnect power to the installation without prior notice when necessary.

3.3 Codes, Permits, and Approvals

All equipment and installation must be reviewed and approved by SCL Joint Use Engineering.

All installations shall meet or exceed all applicable structural, clearance, and power requirements of the latest revision of the National Electrical Safety Code (NESC), as well as SCL construction standards. In case of conflict, the most stringent requirements will prevail. This may result in a pole replacement to accommodate the installation of the enclosure and its related equipment and/or attachments.

Communication enclosures shall not be allowed on poles with the following configurations:

- Switches
- Deadends
- Three-phase transformer banks
- Terminations
- Corners

Setting additional poles in lead with an existing pole line to accommodate communication enclosures or equipment is not allowed.

All electrical service and its equipment to provide power to the enclosure shall meet all applicable requirements of the National Electrical Code (NEC), including passing inspection by the Authority Having Jurisdiction.

Permits and applications for all proposed work including installations, modifications, and relocations shall be obtained by the communication enclosure customer and shall be reviewed and approved by SCL Joint Use Engineering.

3.4 Equipment

Only one communication enclosure shall be allowed on each pole.

The maximum allowable size for pole mounted enclosures shall be 20 in W by 48 in H by 20 in D.

Communication enclosures, including all equipment, shall have a maximum weight of 750 lb.

3.5 Electric Service Requirements

If communication enclosure requires electric service:

- Customers shall have an active flat-rate pricing contract with Joint Use Engineering.
- Communication enclosures shall have an external service disconnect switch accessible to SCL lineworkers that is capable of isolating all electric service, including battery backups and generators.

Only single-phase, 120 Vac, 2-wire service will be provided.

For the Looped Radial system, maximum service entrance rating options include 10 A, 20 A, or 30 A.

For the Network system, the maximum service entrance rating is 10 A.

Fuses will be installed by SCL corresponding to maximum service entrance rating. Fuses will be 600 V rejection-type, fast-acting, current-limiting, per SCL 6855.55.

The customer shall be responsible for ensuring their equipment is compatible with SCL fuses.

3.6 Equipment Mounting

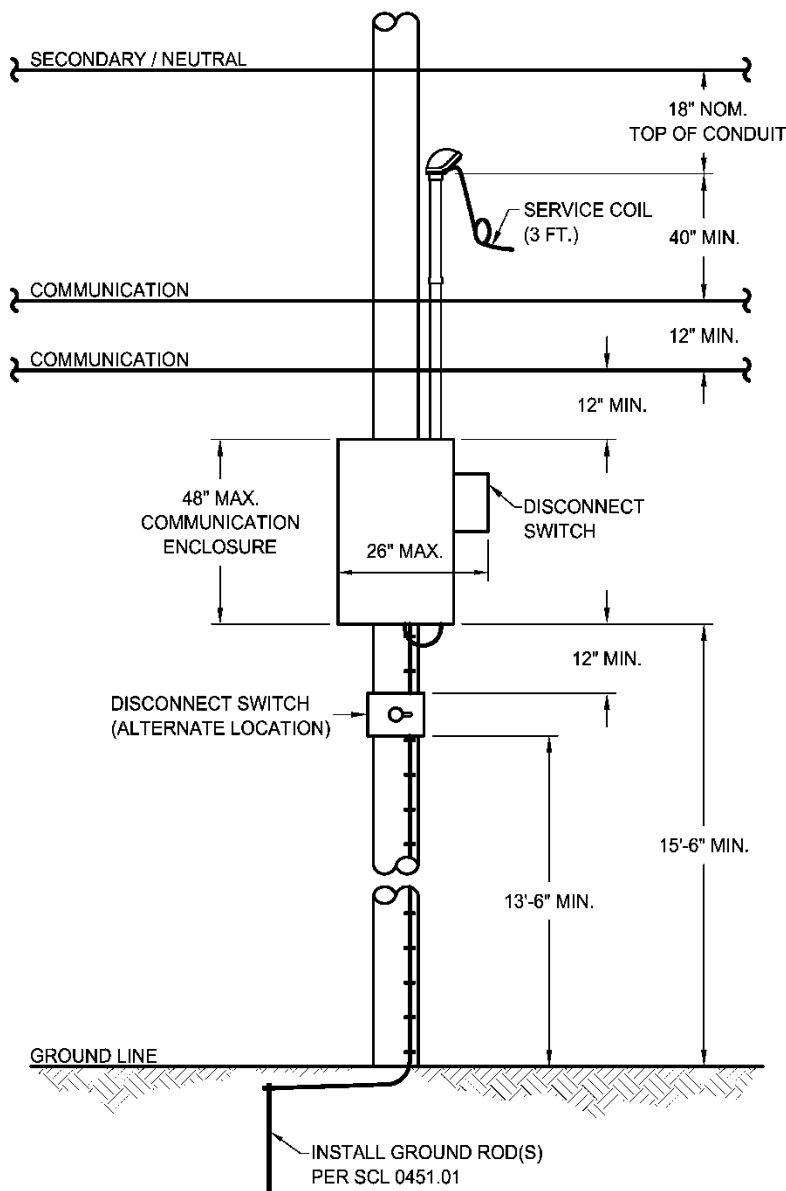
All communication enclosures shall be located on the pole below the communication attachments.

Communication enclosures shall be located on the street side of the pole. Any deviations require the approval of SCL Joint Use Engineering.

The disconnect switch can be located on the communication enclosure, on the same side as the service conduit, or on the pole 1 ft below the communication enclosure with the approval of SCL Joint Use Engineering.

Communication enclosures shall be located on the pole as shown in Figure 3.6.

Figure 3.6. Communication Enclosure Attachment on SCL Wood Pole



3.7 Clearances

The location of the enclosure shall meet the clearance requirements as shown in Figure 3.6:

- Enclosures shall have a minimum clearance of 15 ft-6 in above ground line.
- A minimum clearance of 40 in below lowest SCL secondary hardware or conductor, including secondary drip loops.
- A minimum clearance of 12 in below any communication attachment.
- A minimum clearance of 12 in above the service disconnect switch, if installed separately.

In addition, a minimum clearance of 4-1/2 in shall exist between the enclosure and the pole.

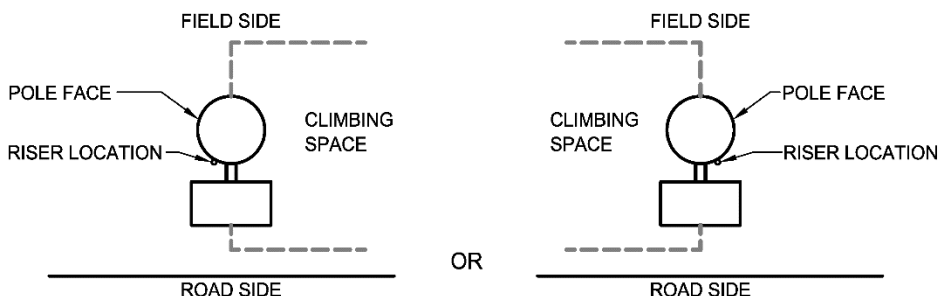
3.8 Conduit Installation

All conduits 2-in nominal diameter and over shall be installed on standoff brackets. Standoff bracket and conduit riser installation shall conform to SCL 0224.34 and SCL 0126.04 with a minimum 4-1/2 in space between the pole and the closest part of the conduit.

Conduit less than 2-in nominal diameter shall be installed on the surface of the pole in the quadrant between the pole face and the road side. Only one surface-mounted conduit is allowed per pole as shown in Figure 3.8.

The electric service conduit shall be fed continuously into the enclosure and shall be of sufficient length to reach the SCL secondary service point.

Figure 3.8. Conduit on Pole Surface



3.9 Grounding and Bonding

All conductive equipment attached to the pole shall be effectively grounded and bonded per the National Electrical Safety Code (NESC). A copper-clad ground wire, #4 AWG minimum, shall be installed from conductive equipment to pole ground using an irreversible connection. Where a pole ground rod and ground wire do not exist, the Customer shall install them to meet or exceed the requirements of SCL 0451.01.

3.10 Identification

Identification of attachments is necessary to assist in repair of third-party cables, communication cabinets, conduit risers, and other pole attachments.

All communication attachments and enclosures shall have an identification tag as specified in SCL 0093.12.

Identification tags shall be displayed on the exterior of the enclosure, in a location that is clearly visible from the ground.

Tags shall include a three-digit SCL customer identification code. Digits shall be legible from the ground.

3.11 Ownership Rights

Seattle City Light shall maintain all ownership rights of any pole approved for installation and may require that equipment be removed or relocated if it is deemed necessary for SCL business purposes.

4. References

SCL Construction Standard 0093.04; "Pole Attachments, Customer Requirements"

SCL Construction Standard 0093.12; "Pole Attachments, Identification and Tagging"

SCL Construction Standard 0126.04; "Riser Extensions"

SCL Construction Standard 0224.34; "Steel Conduit Risers"

SCL Construction Standard 0451.01; "Grounding Electrodes for Distribution Poles"

SCL Material Standard 6855.55; "Fuse, Rejection-Type, Fast-Acting, Current-Limiting, 600 V"

5. Sources

Chao, Yaochiem; SCL Joint Use Engineering Supervisor and subject matter expert for 0094.01 (yaochiem.chao@seattle.gov)

Crume, Stephen; SCL Joint Use Manager and subject matter expert for 0094.01 (stephen.crume@seattle.gov)

Lu, Curtis; SCL Standards Engineer and subject matter expert for 0094.01 (curtis.lu@seattle.gov)

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National Electrical Safety Code (NESC), C2-2012 Edition; Institute of Electrical and Electronics Engineers (IEEE), Inc., New York, NY, 2011

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