
Clearances Between SCL Overhead Distribution Assets and Bridges

1. Scope

This standard covers the clearance requirements between Seattle City Light (SCL) overhead distribution assets and bridges.

SCL overhead distribution assets include (but are not limited to):

- Conductors (wires, cables)
- Equipment carried on poles

For clearance between SCL overhead distribution assets to:

- Grounds, highways, and water surfaces, refer to SCL 0100.02.
- Non-SCL structures such as buildings, signs, and other objects, except bridges, refer to SCL 0100.03.
- Trees and vegetation, see SCL 0114.07.

For secondary service drops clearances, see SCL 0130.30.

For clearances between SCL underground assets and non-SCL structures and objects, see SCL 0214.00.

For working clearance refer to the Washington Administrative Code (WAC):

- WAC 296-155-428 and WAC 296-24-960, for qualified and unqualified workers.
- WAC 296-155-53408, for cranes working near power lines.

Transmission line clearance is outside the scope of this standard. Consult with an SCL transmission engineer for clearances to transmissions lines. These clearances are site specific.

2. Application

This standard is for SCL personnel, consultants, and contractors when designing and/or constructing overhead distribution facilities adjacent to bridges.

Bridge owners or contractors should also follow these requirements when installing their facilities near any SCL facility.

3. Definitions

Clearance: The clear distance between two objects measured from surface to surface.

Guarded: Covered, fenced, enclosed, or otherwise protected by means of suitable covers or casings, barrier rails or screens, mats or platforms, which are designed to limit the likelihood, under normal conditions, of dangerous approach or accidental contact by persons or objects. Note: Wires that are insulated but not otherwise protected are not normally considered to be guarded.

Standard Coordinator
Ponet Neunansourinh

Standards Engineering Supervisor
Brett Hanson

Division Director
Bob Risch



Secondary Multiplex: Secondary conductors of voltages of 0 – 750V meeting National Electrical Safety Code (NESC) Rule 230C3. Typically, these are triplex and quadruplex conductors spanning between poles. This does not include the service drops.

Readily Accessible: Any structure or platform that can be casually accessed by a person on foot who neither exerts extraordinary physical effort nor employs special tools or devices to gain entry.

Working Clearance: The required amount of unobstructed space between a worker and an object. This clearance may be different for qualified electrical personnel and non-qualified personnel. Consult with State Code.

4. Requirements

The clearances contained within this standard are intended to be not less than those required by the NESC and WAC. Where a conflict exists, the most stringent has been adopted.

Any situation that is not specifically addressed in this standard will require further investigation of the NESC, WAC or other applicable codes.

Clearance of overhead distribution assets carried on SCL poles to bridges shall meet or exceed the clearances requirements of Table 4.

Clearances to bridges shall be taken at its the closest point.

Where over traveled ways, roads, and highways, on or near bridges, the clearances of SCL 0100.02 apply also.

Where bridges have moving parts, clearance shall be maintained throughout the moving range.

Where permitted by bridge owner, the electrical supply cables can be run in conduit attached to the bridge.

Table 4. Clearances of wires, conductors, cables, and unguarded rigid live parts from bridges (Reference: NESC 234)

	Secondary Multiplex cables; Unguarded rigid live parts 0 to 750 V (ft)	Unguarded rigid live parts 750 V to 22 kV (ft)	SCL 26 kV Phase Conductors (ft)
Clearance with Conductor at Rest			
Clearances over bridges			
Attached	3.0	5.0	14.0
Not attached	10.0	12.0	14.0
Clearances beside, under, or within bridge structure			
Readily accessible portions of any bridge including wing, walls, and bridge attachments			
Attached	3.0	5.0	14.0
Not attached	5.0	7.0	14.0
Ordinarily inaccessible portions of bridges (other than brick, concrete, or masonry)			
Attached	3.0	5.0	14.0
Not attached	4.0	6.0	14.0

5. References

SCL Construction Standard 0100.02; Clearances Between SCL Overhead Distribution Assets and Ground Surfaces

SCL Construction Standard 0100.03; Clearances Between SCL Overhead Distribution Assets and Buildings, Signs, and Other Installations Except Bridge

SCL Construction Standard 0114.07; Distribution System Vegetation Management, Overhead, Clearances and Methods

SCL Construction Standard 0130.30; Secondary Service Drops

Washington Administrative Code (WAC) 296-155-428; "General requirements"

Washington Administrative Code (WAC) 296-24-960; "Working on or near exposed energized parts"

Washington Administrative Code (WAC) 296-155-53408; "Power line safety"

6. Sources

Lu, Curtis; SCL Standards Engineer and Subject Matter Expert for 0100.05

National Electrical Safety Code (NESC); C2-2023 Edition; Institute of Electrical and Electronics Engineers (IEEE) Inc., New York, NY, 2011

Neuansourinh, Ponet; SCL Standards Engineer and Originator of 0100.05

Occupational Safety and Health Administration (OSHA) 3433; "Cranes and Derricks in Construction"

SCL Construction Standard 0214.00; Clearances Between SCL Underground Assets and Non-SCL Structures and Objects

Washington Administrative Code (WAC) 296-45-045; "NESC Applicable"

Washington Administrative Code (WAC) 296-45-325; "Working on or near exposed energized parts"

Washington Administrative Code (WAC) 468-34-110; "Definition of Terms"

Washington Administrative Code (WAC) 468-34-290; "Vertical Clearance"