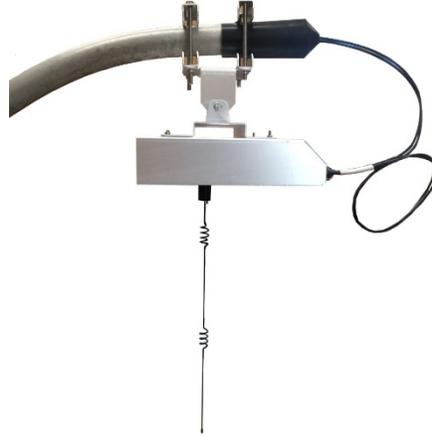


AMI Wireless Repeater and Collector Installation



1. Scope

This standard covers the information necessary to install AMI wireless repeater and collector equipment on Seattle City Light (SCL) wood poles. Installation instructions to connect the equipment to the wood pole are included, along with requirements for vertical spacing and hardware.

2. Application

This standard provides direction to SCL crews, engineers, and contractors for the installation and maintenance of AMI wireless repeater and collector equipment on wood poles.

3. Requirements

3.1 General

All work shall be performed by SCL crews or its approved contractors.

See the manufacturer's installation and user's guide for more information.

Only one repeater and collector shall be installed per pole.

The installation shall meet NESC Rule 235I and SCL construction standards. In case of conflict the most stringent requirement will prevail.

Service connections shall be weatherproofed.

All communication equipment shall be clearly marked or visible from the ground with a unique company equipment ID#.

If relocation of the AMI radio collector is necessary, SCL Engineering shall be contacted a minimum of 2 weeks prior to relocation for coordination with the proper representative.

3.2 Equipment Mounting on Pole

All AMI wireless repeater and collector equipment shall be installed as shown in figures 3.4a or 3.4b.

The 6-ft long mast arm, with a 2-ft rise, shall be installed a minimum 12 inches above the existing system neutral. If clearance conflict, then increase vertical separation as needed to meet clearance requirements.

A minimum vertical clearance of 36 inches between the primary and the antenna unit shall be maintained.

The mast arm shall be installed perpendicular (90 degree) to the system neutral, toward the street or right-of-way centerline. The mast arm shall be offset 6 inches, as needed, for clearance from any SCL equipment (guys, services, system neutral).

When location is at an intersection, the mast arm shall be mounted toward the busier street.

The antenna shall be installed in a vertical orientation to ensure proper operation.

3.3 Service Voltage

The AMI wireless repeater and collector requires a 120 V service. See SCL D13-1.

All service connections for the AMI wireless repeater and collector shall be made using parallel connector clamps.

If mounting the AMI wireless repeater and collector on an existing streetlight, a power tap adapter at the photoelectric base for 120 V service is required.

If service is from an adjacent span, a triplex service wire shall be used, with one wire serving as the messenger/system ground.

A drip loop shall be made at the point of attachment to the enclosure.

3.4 Grounding

All conductive parts of the installation on the pole shall be bonded together and grounded to the SCL system neutral conductor.

Figure 3.4a. AMI Wireless Repeater and Collector Installation, Side View

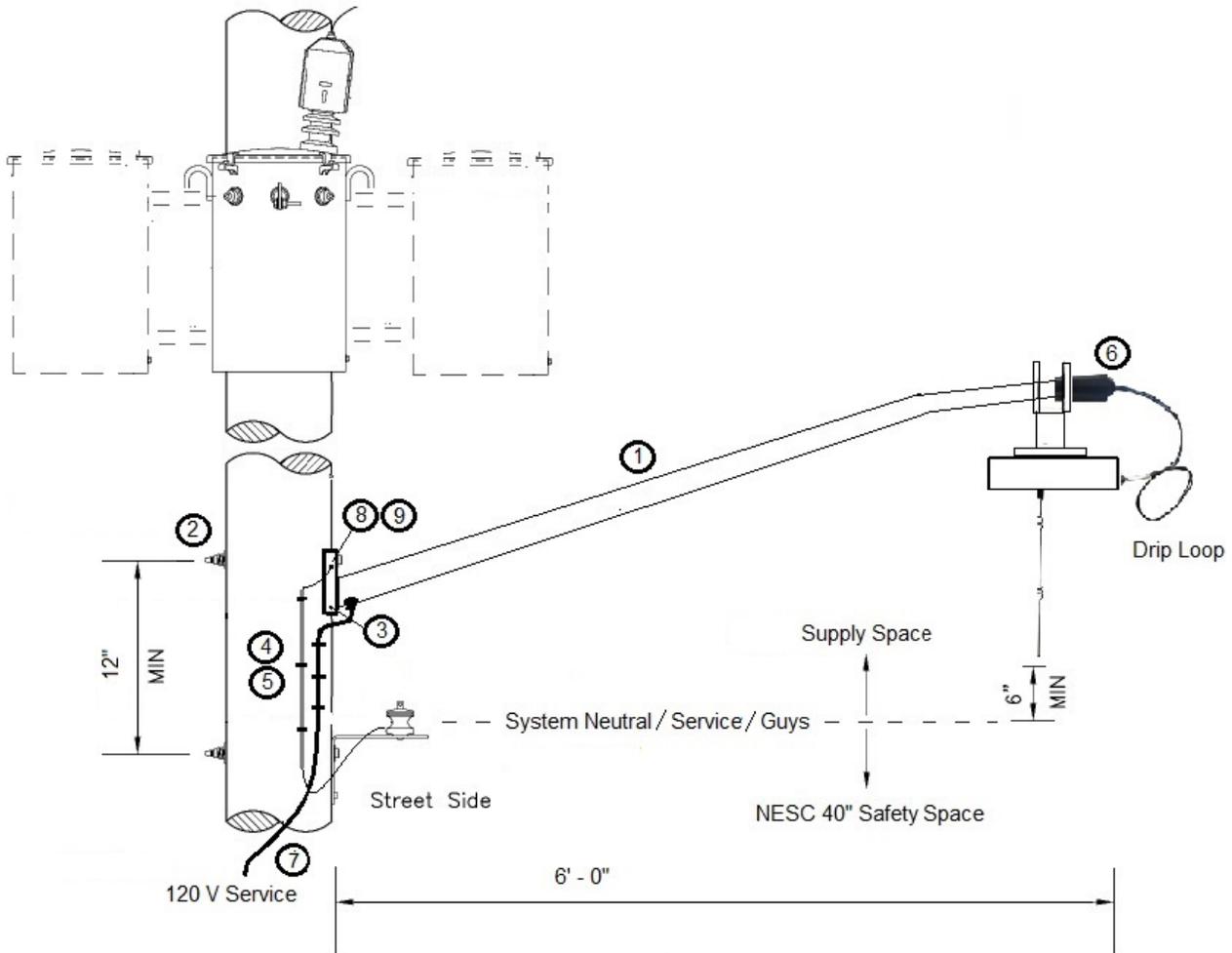
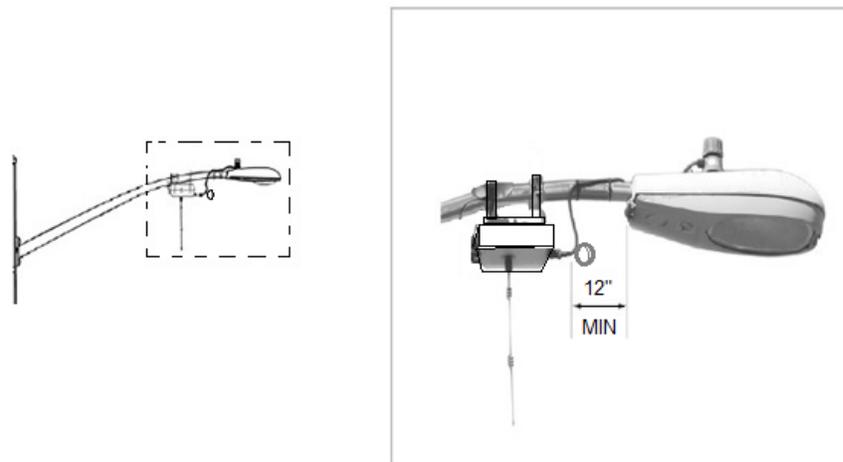


Figure 3.4b. AMI Wireless Repeater and Collector Installation, Existing Streetlight, Side View



4. Construction Notes

The AMI wireless repeater and collector is provided by Landis + Gyr for SCL crews to install.

Install the service wire prior to heat-shrinking the endcap onto the mast arm.

Install a plastic or synthetic rubber grommet at the 1-inch hole at the base of the mast arm for service wire entrance.

Secure all loose wires and jumper with zip ties to minimize flapping and entanglement.

5. Material List

Table 5. Materials for AMI Wireless Repeater and Collector Assemblies

Fig	Compatible Unit	ID	Qty
3.5a	AMI wireless repeater and collector	AMILG6500ARM	
			↓
#	Material Description	ID	
1	Bracket, luminaire, 6', aluminum, 2' rise	570502	1
2	Bolt, machine 5/8" x 16", square head	780847	1
3	Screw, lag, 3/8" x 4", fether drive	785246	1
4	Molding, plastic ground wire, 1/2"	582060	1
5	Staple, molding, 2" long x 1/2" wide	583261	6
6	Cap, heat shrink, 6.7" long, min.	737485	1
7	Connector, clamp, parallel	652020	3
8	Connector, ground, setscrew	012564	1
9	Ctl, wire/cbl, Cu, #8 AWG, 19	612277	5

6. References

Landis & Gyr; "C6500-Series (GAP) Collector Installation and User's Guide," 98-1210 Rev AD

SCL Construction Standard D13-1; "Secondary Service Details"

7. Sources

Lu, Curtis; SCL Standards Engineer and subject matter expert for 0095.01 (curtis.lu@seattle.gov)

NESC 2012 Handbook; Marne, D. J., McGraw-Hill, New York, NY, 2011

Neuansourinh, Ponet; SCL Standards Engineer, originator, and subject matter expert for 0095.01 (ponet.neuansourinh@seattle.gov)

Taggart, Ryan; Electrical Engineering Specialist and subject matter expert for 0095.01 (ryan.taggart@seattle.gov)