



TO 1125 Weather Stations

1.0 General Information

A weather station provides meteorological data into SCE situational awareness capabilities to inform the Public Safety Power Shutoff Program. This weather station will increase real time knowledge and forecast accuracy across the SCE territory. The Weather Stations will detect and remotely transmit the following data via satellite:

- Wind Speed
- Temperature
- Relative Humidity
- Irradiance

For SCE's Transmission & Distribution applications, the Weather Station location will be selected by SCE's Business Resilience Meteorologist Team. Western Weather Group facilitates installation material to the Business Resilience team and provides field support to the following criteria:

- Tier 3 High Fire Risk Areas (HFRA)
- Tier 2 High Fire Risk Areas (HFRA)
- Wind Speed
- Weather Model/Circuit Configuration

See Pole Loading Manual (PLM) for pole loading requirements


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Figure 1125–1: Typical Installation of Weather Monitoring System

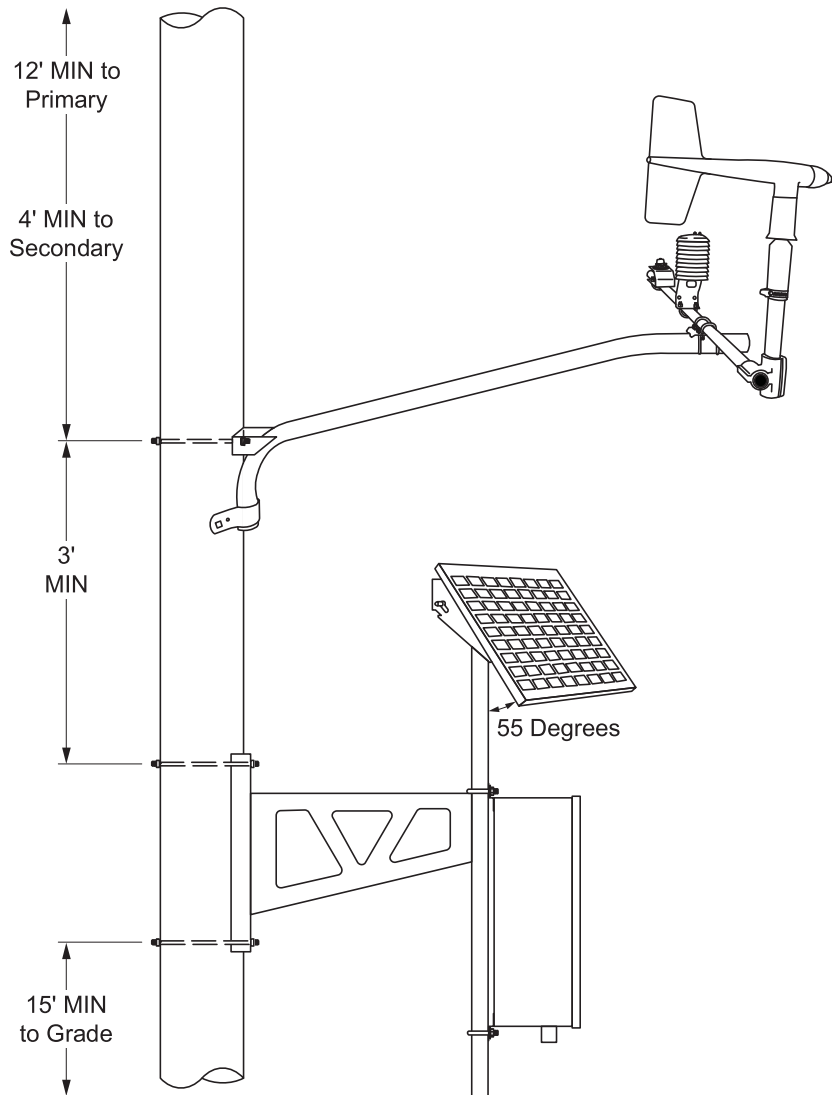


Table 1125–1: Material List

CU	SAP	Description	Quantity	Unit
MISC-O-WXSTN-1	10211724	Mounted Fixed BGAN Satellite Assembly	1	EA
	10112582	PVC Conduit (1" diameter)	10	FT
	10112990	Conduit Strap (1" Conduit Size)	8	EA
	10114092	PVC Conduit Elbow (1" diameter)	2	EA
	10118515	Street Light Arm Upsweep Bracket	1	EA
	10211408	Weather Station (Temperature/Humidity Sensor and Anemometer)	1	EA

Note(s):

1. All clearances shown specify the minimum required for installation.
2. Solar panel shall face south with a 55 degree tilt from horizontal.

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2.0 Specifications and Components

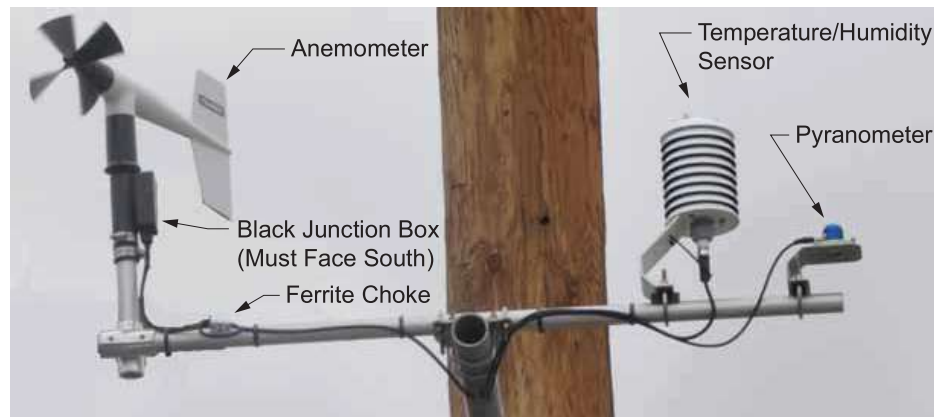
2.1 Sensors

Each weather station consist of two sensors: an anemometer (for wind speed and direction), and a temperature/humidity sensor. These sensors are used to determine local weather conditions.

The streetlight mast arm when possible should be installed in an EAST-WEST orientation, with the arm holding the sensors parallel in a NORTH-SOUTH orientation. The anemometer shall be installed by itself on one side of the arm as close to the edge as possible, with the temperature sensor installed on the opposite arm (see [Figure 1125-2](#)).

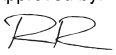
- The anemometer's small black box must be installed to face south (see [Figure 1125-2](#)). The anemometer cord shall be "doubled-up" into the ferrite choke within the first 12 inches of cable. The anemometer shall be installed at a 90 degree angle.
- All cables shall be fed through the opening on the underside of the streetlight mast arm.

Figure 1125-2: Typical Installation of Weather Monitoring System (Sensors)



2.2 BGAN Bracket (NEMA Enclosure and Solar Panel)

Each weather station is powered by a battery and solar panel. The NEMA enclosure and Solar Panel shall both be mounted to the BGAN Bracket for climbing purposes.

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**Figure 1125–3: Typical Installation of Weather Monitoring System
(NEMA Enclosure and 60-Watt Solar Panel)**



2.3 Sensor Wiring

Sensor wiring shall be installed in the hole on the underside of the streetlight mast arm, then continue through 1-inch conduit down to the BGAN bracket. A wiring diagram is provided to connect each sensor to the terminal block. Cable entrance shall be sealed to be watertight.

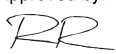
3.0 Clearances

Weather Monitoring System equipment and component installations will meet the clearances denoted in [Figure 1125–1](#), [G.O. 95](#) Rule 58.6, Rule 91.4, 94.4, 94.6, and if applicable, Rule 92.1-F2.

4.0 Install

Western Weather Group Facilitates installation material to the Business Resilience team and provides field support to the Distribution Automation crews.

For additional information contact Distribution Automation Hotline at 714-282-4325.

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