

Special Specification 6158

Trailer Mounted Solar Powered Radar Speed Control Monitor



1. DESCRIPTION

Provide, maintain and remove upon completion of work, trailer mounted solar powered radar speed control monitors as shown on the plans or as directed.

2. EQUIPMENT

Provide a trailer mounted solar powered radar speed detection radar unit with light emitting diode (LED) display panel. Unit must be used by the Contractor to alert motorists of work zone speeds and excessive speed for their safety and that of the Contractor's and Department's personnel. Any unit furnished under this specification must be in good working condition.

Use equipment in accordance with the manufacturer's directions.

- 2.1. **Batteries.** Provide unit equipped with a minimum of two, heavy duty, deep cycle batteries which will power the unit 24 hr. a day for a minimum of 12 days without the assistance of the solar panels.
- 2.2. **Battery Regulator and Recharging System.** Provide unit equipped with an internal controller that regulates the amount of current delivered to the batteries and prevents overcharging. The manufacturer's standard charger must also be provided to recharge the batteries from a standard 120 VAC source.
- 2.3. **Solar Panels.** Provide unit equipped with solar panels which generates sufficient power to enable the system to continually recharge the batteries.
- 2.4. **Radar Device.** Ensure unit is equipped with the manufacturer's radar device that measures speed in miles per hour.
- Provide radar device that detects speeds of oncoming vehicles only from a minimum distance of one-quarter mile.
- Provide radar that detects speeds from 10 to 99 mph.
- Provide radar that can operate in ambient temperatures from -22 to 140°F (-30 to 60°C).
- Provide radar device that detects speeds in the stationary mode.
- 2.5. **Display Panel.** Provide a display panel that contains LED technology which displays oncoming vehicle speeds in miles per hour from 10 to 99 mph.
- Provide a display panel that consists of two characters, each a minimum of 18 in. in height. Provide a display that is amber in color and visible from a minimum of 600 ft.
- Provide a display panel that is equipped with a photocell that automatically adjusts the display for day and night operation.
- Provide a display panel that is equipped to alert motorist when they are traveling over the posted speed, either by flashing the traveling speed, changing the display color, or by "blinking" out the display.

Provide a display panel that is equipped with an operator-set high speed cutoff feature.

- 2.6. **Trailer Requirements.** Provide a trailer unit that is equipped with a heavy duty, all steel unitized or electrically welded, tubular or C-channel frames.

Ensure that the rear of the trailer is equipped with a red tail lamp, a red stop lamp, a turn indicator, and a red reflector on each side at the same level and as widely spaced laterally as practicable.

Provide a trailer that is equipped with a siren and strobe light that will alert workers of an oncoming speeding vehicle.

3. **WORK METHODS**

The unit provided must meet or exceed all federal and state safety, health, lighting and noise regulations and standards in effect and applicable to equipment furnished at the time of manufacture.

4. **MEASUREMENT**

This Item will be measured by each trailer mounted solar powered speed control monitor, furnished, installed, and made fully operational.

5. **PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Trailer Mounted Solar Assisted and Battery Powered Radar Speed Control Monitor." This price is full compensation for trailer mounted solar assisted and battery powered radar speed control monitor unit; set up; relocating; removing; replacement parts; solar panels, batteries (when required); and equipment, materials, tools, labor and incidentals.