PORTABLE REGULATORY SIGNS.

(REV 12-11-00) (FA 6-20-01) (7-02)

ARTICLE 102-3 (Pages 106-111) is expanded by the following new Subarticle:

102-3.6 Portable Regulatory Signs:

102-3.6.1 General: This specification establishes the physical display and operational requirements for solar powered portable regulatory signs. All portable regulatory signs shall meet the physical display and operational requirements as described in the Federal Highway Administration's Manual on Uniform Traffic Control Devices [MUTCD].

The portable regulatory sign shall be activated only during active work activities and will be deactivated when no work is being performed. The sign shall be activated and deactivated by a dial-up control system to allow operation of the sign from a remote location via cellular phone or standard telephone line. The sign shall be protected by a security code.

Manufacturers seeking approval for Portable Regulatory Signs shall submit an application, Material Safety Data Sheet (MSDS) and certification in accordance with 6-1.

Only use Portable Regulatory Signs listed on the Qualified Products List.

Manufacturers providing the signs shall provide a certified test report to the Engineer indicating that the signs meets these specification requirements.

102-3.6.2 Sign Panel Assembly: The sign panel assembly shall consist of two regulatory signs as shown in the Design Standards, Index No. 600, intended to notify oncoming traffic that workers are present. The sign panel assembly shall meet the following minimum physical requirements:

(1) all nuts, bolts, washers, and other fasteners shall be of corrosion resistant material.

(2) the sign panel shall fold down and be pinned in place for towing. Maximum travel height shall be 80 inches [2 m].

(3) construct the sign panel and light housing to allow the unit to be operated in the displayed position at speeds of 30 mph [48 km/h]. Design the sign panel assembly to withstand transport speeds of 65 mph [105 km/h]. Transport the assembly in the down position.

(4) construct the sign panel such that, when in the raised position, the sign panel will have a height of seven feet [2.1 m] from the bottom of the lowest panel to the ground, in accordance with the MUTCD.

(5) provide the unit with a mechanism to raise and lower the sign panel. Provide the unit with a device to lock the sign panel in the raised and lowered position.

102-3.6.3 Flashing Lights: Provide a pair of hooded PAR 46 L.E.D. advance warning flashing lamps on each side of the top of the sign panel. These lamps

shall be visible day or night at a distance of one mile [1.6 km] with a flash rate of approximately 55 flashes per minute.

The lamp lens should be at least 5 3/4 inches [145 mm] in diameter. Smaller diameter lens are permissible if they provide an equivalent or greater brightness indication and meet the legibility criteria above.

The color of the light emitted shall be in accordance with the MUTCD. For solar powered units, the bulbs shall provide a 350 candlepower intensity for day use and an automatic reduction or dimming capacity for night use. The dimmed night operation shall provide adequate indication without excessive glare.

102-3.6.4 Electrical System: The unit shall provide automatic recharging of power supply batteries to normal operating levels. Solar array recovery time shall be accomplished in a maximum of three hours.

102-3.6.5 Battery Life: The photovoltaic unit shall be able to operate from a full battery charge without sunlight for a period of not less than ten days. The battery shall be equipped with a controller to prevent overcharging and over-discharging. An external battery level indicator shall be provided. The battery, controller and power panel shall be designed for protection from the elements and vandalism.

102-3.6.6 Controller: The controller and control panel shall be housed in a weather, dust and vandal resistant lockable cabinet. The controller shall be solid-state in design and function.

102-3.6.7 Trailer Mounted Unit: The trailer shall be equipped with Class-A lights, using a plug adapter. The trailer shall be equipped with adjustable outrigger leveling pads (screw type), one on each of the four frame corners. The trailer shall be designed to be set up at the site with its own chassis and outriggers, without being hitched to a vehicle. The trailer shall be equipped with fenders over the tires and shall be made from heavy-duty metal sufficient to allow a person to stand and operate or perform maintenance on the unit. The trailer shall meet all equipment specifications set forth in Chapter 316 of the Florida Statutes, and by such rule, regulation or code adopted by the Florida Department of Highway Safety and Motor Vehicles. The trailer shall be painted Omaha orange, Federal Standard 595-B, Number 12243.