**Revise Section 630 of the Standard Specifications or this project as follows:**

## Subsection 630.01 shall include the following:

This work includes furnishing, operating, and maintaining a portable message sign panel.

## Add subsection 630.031 immediately following subsection 630.03 as follows:

**630.031 Portable Message Sign Panel.** Portable message sign panel shall be furnished as a device fully self-contained on a portable trailer, capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The panel shall display a minimum of three ‑ eight character lines. The panel shall be a dot‑matrix type with an LED legend on a flat black background. LED signs shall have a pre-default message that activates before a power failure. The sign shall be solar powered with independent back‑up battery power. The sign shall be capable of 360 degrees rotation and shall be able to be elevated to a height of at least five feet above the ground measured at the bottom of the sign. The sign shall be visible from one‑half mile under both day and night conditions. The message shall be legible from a minimum of 750 feet. The sign shall automatically adjust its light source to meet the legibility requirements during the hours of darkness. The sign enclosure shall be weather tight and provide a clear polycarbonate front cover.

Solar powered message signs shall be capable of operating continuously for 10 days without any sun. All instrumentation and controls shall be contained in a lockable enclosure. The sign shall be capable of changing and displaying sign messages and other sign features such as flash rates, moving arrows, etc.

Each sign shall also conform to the following:

1. In addition to the onboard solar power operation with battery back-up, each sign shall be capable of operating on a hard wire, 100‑110 VAC, external power source.
2. All electrical wiring, including connectors and switch controls necessary to enable all required sign functions shall be provided with each sign.
3. Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble‑shooting guide.
4. The portable message sign shall be capable of maintaining all required operations under Colorado mountain‑winter weather conditions.
5. Each sign shall be furnished with an attached license plate and mounting bracket.
6. Each sign shall be wired with a 7‑prong male electric plug for the brake light wiring system.

## Subsection 630.13 shall include the following:

The portable message sign panel shall be on the project site at least \_\_\_\_\_♦\_\_\_\_\_\_\_\_ before the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of portable message sign panels shall be the responsibility of the Contractor.

## Subsection 630.18 shall include the following:

Portable message sign panels will be measured one of the two following ways:

1. By the actual number of days each portable message sign is used on the project as approved by the Engineer.
2. By the maximum number of approved units in use on the project at any one time.

## Subsection 630.19 shall include the following:

| **Pay Item** | **Pay Unit** |
| --- | --- |
| Portable Message Sign Panel | Each |
| Portable Message Sign Panel | Day |

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**Instructions** **to** **Designers** (delete instructions and symbols from final draft):

♦ Specify the number of calendar or working days.