



**SPECIAL PROVISIONS
FOR
WAIT TIME DISPLAY SYSTEM**

**Davis County
NHSX-063-1(68)--3H-26**

**Effective Date
November 17, 2020**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

150673.01 DESCRIPTION.

Temporary traffic signal system shall be equipped with a Wait Time Display System (WTDS) capable of providing motorists with pertinent signal information, including expected wait time. The WTDS's primary application is in one lane, bi-directional work zones that are controlled by portable or temporary traffic signals.

150673.02 MATERIALS.

- A.** The changeable message sign (CMS) as a component of the WTDS shall be 18 inches by 28 inches.
- B.** The changeable message sign shall be located at a height between 7 feet and 18.5 feet as measured from the bottom of the CMS to the road surface. The CMS shall not be located over the travelled roadway. There shall be 12 inch minimum separation between the edge of the CMS and the edge of nearest traffic signal head.
- C.** The CMS shall be powered by the battery bank of the temporary traffic signal. The WTDS shall function in traffic signal applications of fixed time operation and actuated operation.
- D.** The temporary traffic signal shall be equipped with a remote monitoring system (RMS) to expedite the return to full operational mode in the event of a system fault. The RMS shall be capable of reporting signal location, battery voltage / battery history and system fault. The RMS shall include a password protected website viewable from any computer with internet capability. In the event of a system fault the RMS shall provide specific information concerning the cause of the system fault (i.e....red lamp on signal 1). The RMS shall be equipped with a mechanism capable of immediately contacting a minimum of three previously designated individuals via text messaging and/or email upon a fault. The running program operating the temporary traffic signal system shall be available and viewable through the RMS website at all times. The RMS shall maintain a history

of the operating system in each signal including operating hours and events and the location of the PTS trailer.

150673.03 CONSTRUCTION.

A. Actuation.

When the temporary traffic signal displays a red indication, the CMS shall display a "Wait time up to # minutes". The interval displayed shall be calculated by adding the programmed red interval and the maximum green interval of the opposing signal plus the yellow interval of the opposing signal. When the opposing signal changes to red, the CMS shall display the remaining red time until the signal changes to green. When the signal display changes to green, the CMS shall display a "Slow Work Zone" message. When there is no call for service, only one signal shall rest in red.

B. Fault.

For one lane, bi-directional work zones utilizing two temporary traffic signals at opposite ends of the work zone and the WTDS, fault modes shall be set as follows. Upon system fault and as designated by the project engineer, Signal 1 shall revert to a flash red mode and Signal 2 shall revert to a solid red mode. The CMS at each signal shall display a default message as follows:

- Signal 1 (flash red): "Signal Failure / Proceed with Caution"
- Signal 2 (solid red): "Road Closed / Seek Alternate Route"

150673.04 METHOD OF MEASUREMENT AND BASIS OF PAYMENT.

When specified in the contract document, the Wait Time Display System shall be incidental to the bid item Temporary Traffic Signals.