# PORTABLE CHANGEABLE MESSAGE SIGN

This work shall be according to Section 701 and the following:

Each portable changeable message sign shall be equipped with a cellular – Ethernet/IP-based digital modem meeting the following specifications:

**PHYSICAL CHARACTERISTICS**

• Weight: < 1 lb.

• Size: 3” wide x 1.1” high x 5.1" long

• Status LEDs

• RF Primary Antenna Connector: 50 Ohm SMA

• RF Receive Diversity Antenna Connector: 50 Ohm SMA

• Ethernet 10/100 Mbps Interface: RJ-45 Connector

• RS-232: DB9 DCE (1200-230400 baud)

**DATA SERVICES**

* CDMA EV-DO Rev A
* CDMA 1xEVDO Release 0
* CDMA 1xRTT
* CDMS IS-95

**ENVIRONMENTAL**

• Operating ranges: -30°C to 70°C

• Humidity: 5%-95% Non-condensing

**RF FEATURES**

• Full duplex transceiver

• Dual-band support for both 800 MHz cellular and 1.9 GHz PCS bands

• Dual band Receive Diversity

**POWER MANAGEMENT FEATURES**

• Transmit/Receive (Typ/Max) 239/270 mA

• Low power consumption

• Dormant connection: 85 ma at 12 VDC

The Contractor shall acquire the cellular carrier data plan needed to communicate to each portable changeable message sign. The Contractor shall be responsible for all fees associated with the cellular service plan.

The ethernet cellular modem shall be configured by the Contractor in order to maximize the data transmission for the area where the modem is being installed. The modem shall communicate to the Department’s local area network over the public internet protocol (IP) address procured with the modem. The Contractor shall provide the Department the IP address and communication data port of each modem one week in advance of delivering the portable changeable message sign. The IP address configuration shall be static, non-changing, and only one IP address shall be provided for the modem. All necessary cabling, antennas, and ancillary equipment shall be included in the cost of this pay item. The device’s necessary configuration software shall be made available to the Department and up to three licenses shall be included in the cost of this item. The licenses shall be valid for a minimum of \_\_\_ years.

The Department owns and utilizes NTCIP-compliant sign control software at its Traffic Management Center (TMC) at 1102 Eastport Plaza Drive in Collinsville, IL 62234. All portable changeable message signs for this contract shall be compatible and fully operational with the Department’s existing NTCIP-compliant sign control software.

When portable changeable message signs are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.