

## 922-T-196 CONTROLLER CELLULAR MODEM

(Adopted 02-21-13)

The Standard Specifications are revised as follows:

SECTION 922, BEGIN LINE 520, INSERT AS FOLLOWS:

### **7. Cabinet Power Supply Requirements**

The TS2 cabinet power supply shall adhere to the guidelines of NEMA TS2-5.3.5. The power supply shall be encased on all sides so that no circuitry is exposed to the user.

### **8. Cellular Modems**

#### **a. Service Provider**

*All data, power and antenna cables and all supplemental hardware shall be provided. The modem shall be compatible with the Department's current cellular carrier/provider (Verizon as of 07/2007) and the traffic control device and closed loop communications software that it is supplied for.*

#### **b. Modem Hardware**

*Cell modems shall be Airlink GX440 (4G) or similar modem with the following specifications: The cellular modem shall be capable operating in CDMA dual mode (both 800MHz cellular and 1.9GHz PCS bands), supporting both circuit switched and 1XRTT packet switched services. The operating voltage range shall include 12V and 24V DC and shall draw less than 250mA while transmitting and receiving at 12V DC. The modem shall have LED indications for power, signal status/strength, and TX/RX either separately or combined. The serial interface shall be RS232 with a DB9 (male or female) connector.*

#### **c. Modem Antenna**

*The RF antenna connection shall be a 50Ω TNC connector. The antenna shall be a low profile, puck style, flat mount dual band, (800 and 1900MHz) with low loss RG58 cable and TNC connector.*

#### **d. Modem Software**

*The modem configuration shall be editable and viewable with MS-Windows provided software or with proprietary software that is included and designed to run on a MS-Windows operating system. The software shall auto-detect connection parameters and display settings when connected.*

#### **e. Installation**

*Service and activation shall be requested or confirmed for each cellular device to be installed prior to installation. The ESN and 10-digit phone number shall be clearly labeled on the exterior of the modem. The cellular modem shall be installed, configured, and tested to allow data communication from the central closed loop software to the field master and subsequent secondary controllers, or directly to a secondary controller per the design. All data, power and antenna cables and all supplemental mounting hardware shall be installed. The modem shall be powered by the cabinet power supply from a terminal location on the cabinet back panel or the power distribution panel. A low profile*

*antenna shall be mounted externally and the mounting location includes a watertight seal. The antenna shall have no more than 3 ft excess RG58 cable in the cabinet.*

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