

## **TRAFFIC MONITORING SITE MODEM.**

**(REV 5-20-99) (FA 7-20-99) (1-15)**

The following new Section is added after Section 715:

### **SECTION 747 TRAFFIC MONITORING SITE MODEM**

#### **747-1 Description.**

Install traffic monitoring site (TMS) modem in cabinet at traffic monitoring site at the location shown in the Plans.

#### **747-2 Materials.**

**747-2.1 General:** Use a traffic monitoring site modem currently listed on the Department's Approved Product List (APL) compatible with the other components installed at the location.

The approval process for equipment and/or materials used at a traffic monitoring site is covered in Section 748.

**747-2.2 Modem:** Provide a modem meeting the following requirements:

- (a) Modem Consultative Committee International Telephone and Telegraph (CCITT), V.32 bis, V.32, V.22 bis, V.22, V.21, Bell 103 and 212A,
- (b) Error correction MNP 2-4, and V.42
- (c) Data compression MNP 5 and V.42 bis
- (d) Operating voltage input of 8v DC to 24v DC or higher
- (e) Power consumption of less than three W in active mode and less than 100mW in standby mode
- (f) Dimensions of approximately 8 inches (L) by 5 inches (W) by 1-9/16 inches (H)
- (g) Weight of approximately 2 pounds, shelf mounted
- (h) Operating temperature range of minus 4°F to 158°F
- (i) Equipped with a DB-25 female connection (RS-232 config.), 2-RJ-11 phone connections, 1/8 inch female power connection
- (j) Interface speed auto-adjustable from 300 bps to 14,400 bps

Furnish and install all cables required to connect the modem to the electronics unit and telephone service junction box provided by the telephone company.

**747-2.3 Equipment Warranty:** Ensure that the Department is shown as the original owner of the components. Remove and replace any non-functioning components of the traffic monitoring site modem furnished and installed at no additional cost to the Department.

**747-2.4 Commercial Software Registration:** Ensure that the Department is registered as the end-user of software installed on the system communications.

### **747-3 Installation Requirements.**

**747-3.1 General:** Install the traffic monitoring site modem in accordance with the manufacturer's recommended installation procedure, unless otherwise specified in the Contract Documents.

**747-3.2 Telephone Service:** Furnish and install all material necessary to bring telephone service from the telephone company installed junction box to the traffic monitoring site cabinet.

### **747-4 Guaranty Provisions.**

**747-4.1 Contractor's Responsibility:** Secure all guaranties that are customarily issued by the equipment manufacturers for the specific equipment included in the Contract. Ensure that the form in which such guaranties are delivered includes the provision that they are subject to transfer to the Department, and is accompanied by proper validation of such fact. Transfer guaranties at final acceptance of the work (or equipment) by the Department.

**747-4.2 Terms:** Ensure that the manufacturers of the equipment stipulate the terms of guaranties when submitting a request to the Department for certification and for equipment submittal for construction projects. Include terms for a specified service performance with provisions for repair parts and labor, or for replacement. Provisions shall define the equipment "installation date" as the date for such guaranty to be in effect. For construction projects, the "installation date" is the first day of equipment "burn-in". For warehouse purchases, the "installation date" is the date of visual inspection approval, not to exceed ten days after delivery date.

**747-4.3 Conditions:** When guaranty is available, ensure that a written and signed guaranty accompanies the manufacturer's billing invoice. The Engineer will sign and retain the original and provide a copy to the manufacturer. If the Contractor does not comply with the terms of the guaranty, the Department may suspend the certification. Comply with additional terms and conditions as stated in purchasing agreements.

### **747-5 Method of Measurement.**

**747-5.1 General:** Measurement for payment will be in accordance with the following tasks.

**747-5.2 Furnish and Install:** The Contract unit price each for traffic monitoring site modem, furnished and installed, will include all equipment, materials, and labor necessary for a complete and accepted installation.

**747-5.3 Furnish:** The Contract unit price each for traffic monitoring site modem, furnished, will include all equipment, materials, plus all shipping and handling costs involved in the delivery as specified in the Contract Documents.

**747-5.4 Install:** The Contract unit price each for traffic monitoring site modem, installed, will include all materials and labor necessary for a complete and accepted installation. The Engineer will supply the traffic monitoring site modem.

### **747-6 Basis of Payment.**

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

Item No. 747- TMS System Communications Modem - per each