

Special Specification 6123

Ethernet Switch



1. DESCRIPTION

Transport, install, and test Department-furnished Cisco IE3000 or equivalent Ethernet Switch and Power Module.

2. MATERIALS

Provide all materials not supplied by the Department necessary for the Ethernet Switch installation. All materials provided by the Contractor must be new. Provide a minimum of 30 days' notice to the Department for pick-up of Department-furnished materials. Unless otherwise shown on the plans, Ethernet Switch will be stored by the Department for pick up at location identified by the Engineer.

Ensure that all materials and construction methods necessary to complete the installation conform to the requirements of this Item, the plans and the pertinent requirements of the following Items:

- Item 618, "Conduit"
- Item 620, "Electrical Conductors"

3. CONSTRUCTION

- 3.1. **Installation.** Install Ethernet Switch in equipment cabinets in accordance with this Item and details and dimensions as shown on the plans or as directed. Maintain safe construction practices. Equipment shall be installed in a neat and workmanlike manner.

Adjustments or additions of attachment hardware, support brackets, and appurtenances may be necessary for compatibility, as shown on the plans, or as directed. All adjustments or additional materials will not be paid for directly but will be subsidiary to this Item.

Prevent damage to all components. Do not use any materials furnished by the Department on any work which is not required by and which does not constitute a part of the contract. Materials not used which were furnished by the Department must be returned undamaged to the location from which the materials were obtained upon completion of the work. Any unused or removed material deemed salvageable by the Engineer shall remain the property of the Department and shall be delivered to a designated site. Accept ownership of unsalvageable materials and dispose of in accordance with federal, state, and local regulations.

Stockpile all materials designated for reuse or to be retained by the Department within the project limits or at a designated location as directed.

Equipment to be installed at each CCTV, Vehicle Detector field site or HUB building shown on the plans may include, but not be limited to, the following:

- Ethernet Switch (provided by the Department).
- Cabling and connectors from power source to Ethernet Switch connection point as specified by the manufacturer (Provided by the Contractor).
- Cabling and connectors from telecommunications source to Ethernet Switch connection point as specified by the Ethernet Switch manufacturer when required (Provided by the Contractor).
- Communications as shown on the plans.

Make all arrangements for connection to the power supply and telecommunications source including any required permits. Supply and install any required materials not provided by the utility companies (power or communications service provider).

- 3.2. **Working Drawings.** Before fabrication submit for approval 5 prints of the working drawings for attachment of each Ethernet Switch. Show the details of any additional brackets, connections, and methods of attachment.
- 3.3. **Testing.** Testing of the Ethernet Switch is for the purpose of relieving the Contractor of maintenance of the system. The Contractor will be relieved of the responsibility for maintenance of the Ethernet Switch in accordance with Item 7, "Legal Relations and Responsibilities," after all testing is successfully completed.

After all switches have been installed, the Department will conduct approved continuity, stand alone, and Ethernet Switch tests on the installed field equipment with central, remote, and laptop equipment. A final acceptance test will be conducted to demonstrate all control, monitor, and communication requirements for 90 days. The Engineer will furnish a Letter acknowledging the final acceptance testing commencement date stating the first day of the final acceptance test. The completion of the final acceptance test occurs when system downtime due to mechanical, electrical, or other malfunctions to equipment furnished or installed does not exceed 72 hr. and any individual points of failure identified during the test period have operated free of defects. Assume responsibility only for test failures directly related to the work in accordance with this Item.

4. MEASUREMENT

This Item will be measured as each Ethernet Switch system installed and tested.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Installation of Ethernet Switch." This price is full compensation for transportation and installation of Ethernet Switch; furnishing and installing any new mounting hardware; storing the Ethernet Switch when required; testing the Ethernet Switch; replacement/repair of damaged components; disposal of unsalvageable material and for all manipulations, labor, tools, working drawings, equipment and incidentals.