

GENERAL NOTES

XLI - 625 CONTROLLER CABINET, 7.7 C.F. - Continued

1 each Thyrector (providing steady state input voltage of 150 RMS or 210 peak and providing a maximum current of 5 amps at .001 sec. pulse at 60 Hz) for lighting protection of traffic control equipment for connection across the line after the fuses and before flasher filter mounted using 150 V minimum breakdown insulated hollow rivit using #8-32 screw.

10 each 12 wire terminal blocks (Penn Union #6012 Marathon #6012 or approved equal).

3 each 4 PDT ampere 250 V A.C. Switch (Cutler-Hammer #7693, Carling Electric IL 253 or approved equal).

1 each ground bus bar with 15 ground terminal points.

The outgoing traffic control signal circuits shall be of the same polarity as the line side of the power supply; the common return of the signal circuit shall be of the same polarity as the ground side of the power supply.

The ground side of the power supply shall be grounded to the controller cabinet in an approved manner.

The cabinet shall be base mounted and furnished with two 3/4" x 16" anchor bolts for keying to a concrete foundation. A drawing showing proper construction of the cabinet foundation and method of mounting the cabinet shall be furnished with the cabinet base.

The cabinet shall be equipped with a top mounted ventilating fan 134 C.F.M. at 0.160" of water static pressure. Separate adjustable thermostat.

All cast pieces shall be clean, smooth, and free from flaws, cracks, blowholes, and other imperfections.

A flexible plastic or other insulating material is to be mounted with sheet metal screws to cover switch terminals on the police panel.

The cabinet and fan housing shall be prime coated and shall be finished with two coats of *aluminum enamel paint*.

Payment for Item 625, Signal Controller Cabinet, 7.7 C.F. shall be at the unit price bid per each, complete (in place), with all accessories and anchor bolts furnished.

XLII - 10 CHANNEL REMOTE CONTROL SYSTEM

The system shown in the block diagram on sheet no. 39 is designed to be used for traffic control. The maximum number of decoder stations to be driven from one encoder station shall be 20.

The system shall contain all solid state circuitry. contactless resonant reeds shall be used in the encoders and decoders to provide frequency selection.

XLIII - ENCODER STATION

The encoder station shall be an AM tone transmitting station with 10 encodes modules, 1 power supply, and 1 amplifier. Each encoder module shall consist of a complete oscillator with a built in resonant reed stabilizer. Each encoder shall be designed to run continuously and be connected to the transmission line by means of a switch or relay. The individual encoder output relay shall be energized only when the proper frequency tone is to be present on the line. Each module when individually keyed shall provide one control function.

XLIII - ENCODER STATION - Continued

An amplifier shall be added to provide a low impedance output and a transmit level of a maximum of 20 VRMS. The power supply shall be designed to power the complete encoder station from a 117 VAC 60 hertz power line.

XLIV - DECODER STATION

The decoder station shall consist of a ten channel decoder, a line coupling amplifier and a power supply. The ten channel decoder shall consist of ten separate *contactless resonant reeds decoders* with relay outputs. The relay output shall be a single form C contact. The line coupling amplifier shall be a high input impedance device which is designed to drive ten *contactless resonant reeds*. The high input impedance shall provide the capability of connecting as many as 20 decoder stations on one pair of 600 ohm telephone lines or the Triplex interconnect cable. The power supply shall be designed to power one complete decoder station from a 117 VAC 60 Hz. power line.

The individual decoder output relay shall be energized only when the proper frequency tone is present on the line.

The decoder station shall be housed in a NEMA 3 steel enclosure suitable for mounting on a shelf. A single MS connector shall be used to make connection to the outside of the enclosure.

Decoder Station Specifications:

- 1) Amplifier gain: Adjustable, can be set to operate with nominal per tone signal levels within the range .025 to .25 VRMS (this is a 20 DB range). The system can be adjusted to operate with telephone line losses of 0 to 20 DB.
- 2) Dynamic Range: The received tone level must remain within ± 5 DB of the nominal level.
- 3) Input impedance: 20,000 ohms nominal, balanced and isolated.
- 4) Response time: .2 sec. max.
- 5) Dropout time: 1.2 sec. max.
- 6) Ambient temperature range: -30 to +60°C.
- 7) Output control function: Relay contacts
1 amp at 115 VAC (resistive load)
.3 amp at 115 VAC (inductive load)
- 8) Supply voltage: 115 VAC $\pm 20\%$, 50/60 Hz.
- 9) Size 6"L x 12"W x 6"H

Payment for item 625 "10 Channel Encoder" or item 625 "10 Channel Decoder" will be made at the contract unit price each, completely assembled and installed in place, including all incidentals necessary to make a workable installation.

**625 SIGNAL CONTROLLER (2 THRU 4 PHASE DIGITAL SOLID STATE TRAFFIC TIMER)

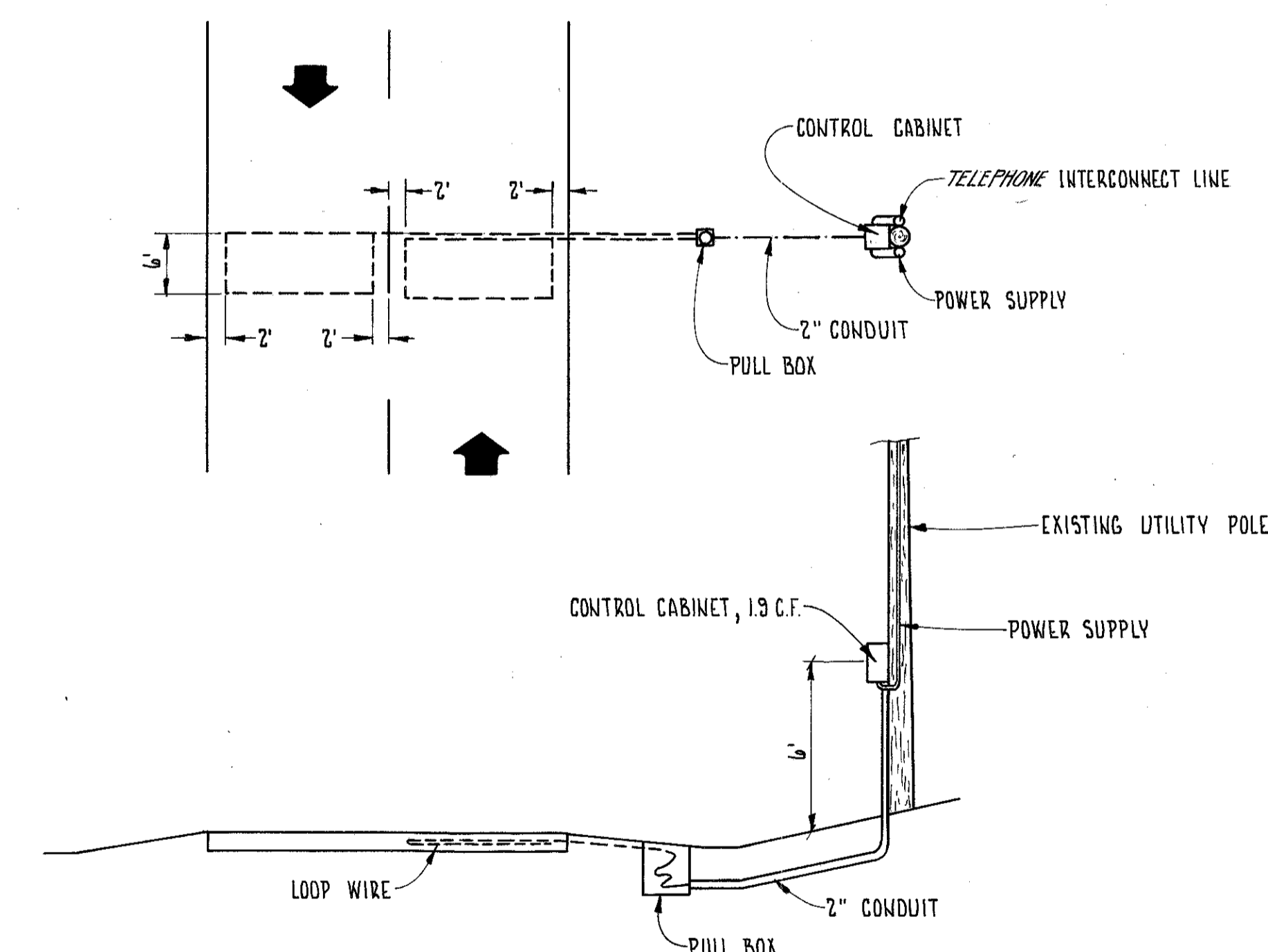
Payment for item 625 "Signal Controller, 2 thru 4 phase digital Solid State Traffic Timer" will be made at the contract price for each controller by type complete and in place, including Dial Coordinating unit, all incidentals, connections, and testing.

** See Sheet Nos. 10 and 11.

XLV - 625 CONTROL CABINET, 1.9 C.F.

The cabinet and cabinet door shall be cast, corrosion resistant aluminum alloy with integral hinges and stainless steel hinge pins. The inside dimensions shall be a minimum of 22-1/2 inches high, 13-1/4 inches wide and 10-3/4 inches deep. The cabinet shall be both weatherproof and dust-tight. The door shall be provided with a lock and two (2) keys. The cabinet shall be provided with all necessary equipment for mounting on either wood or steel poles.

Payment for Item 625, Control Cabinet, 1.9 C.F. shall be at the unit price bid per each, complete (in place), with all accessories and anchor bolts furnished.



SAMPLING DETECTOR DETAIL
(NOT TO SCALE)

NOTE: FOR LOCATIONS OF SAMPLING DETECTORS SEE SHEET No. 2.